

# LIGHTING | SOUND *International*

ENTERTAINMENT TECHNOLOGY MONTHLY

FULL  
PREVIEW  
INFORMATION  
FOR PLASA 98  
LONDON



-MICHEL JARRE IN PARIS, JULY 14TH 1998.

PHOTO: DIANA SCRIMGEOUR

- France nurses its hangover with Jean-Michel Jarre in Paris
- Treading Water at Expo 98, Lisbon
- Pile 'em high: the Summer Festival Season
- The Fountain of Wealth at Suntec City, Singapore
- Eclipse at the Globe brings sophistication to Blackpool
- Time for a change: is this the end of the superclub?
- Pro audio giants Arbiter Group in Profile

PLASA

SEPTEMBER 1998

# the power of evolution



The ART 300 i has been created as a direct derivative from the popular ART 300 passive speaker system, offering a more traditional appearance with the complete front grille assembly.

#### Compactness and portability

The ART 300 i is designed for multipurpose use, thanks to its ability to reproduce distortion-free high-peak power levels with exceptional sound definition. This, together with extreme compactness combined with cosmetically pleasing aesthetics, will allow contracting situations within the expanding 'Multimedia' market.

The overall performance of the ART 300 i can be further enhanced by using the RCF EVENT-XEQ active equaliser/crossover. The XEQ is a half-rack unit which broadens the spectrum of applications by adding a 12dB boost at 60Hz. This will provide extra low-end punch for music applications. Furthermore the XEQ can be configured as an electronic crossover for bi-amplification with RCF Subwoofers such as the ESW 1015 and ESW 1018.

The ART 300 i is constructed within a structured 'loaded' polypropylene enclosure. With all of the internal components optimally tuned, RCF offer a light-weight, rugged and road-worthy speaker system.

#### Key Features

- 12-inch low-frequency woofer
- 1-inch new generation compression driver coupled with 90x75 polynomial horn design
- Wide frequency response, combined with high efficiency
- Twin NL4MP speakon connectors
- Hand grasp
- Internal insert for optional speaker stand
- Internal M10 threaded inserts for optional mounting hardware
- Ergonomic full front loudspeaker grille
- Road-tough construction and lightweight portability
- A complete range of accessories for stand-mounting/wall installation etc... is available

# ART 300i FOR INSTALLED SOUND



UNLIMITED SOUND

RCF Electronics (UK) Ltd.

2 Blenheim Court, Hurricane Way, Wickford Business Park, Wickford SS11 8YT  
Tel: 01268 570808 Fax: 01268 570809

# Irresistible



## Introducing the new MAC 250

Hard to keep your hands off!

*You may have tried but in the end  
you just couldn't stay away.  
Its attraction was simply too compelling  
- its power too strong to resist.  
We all know the irresistible feeling.*

And so it is with the new MAC 250, the compact version of the award-winning MAC 500, and the latest moving head profile from the world leader in intelligent lighting. How can anyone resist the features, the effects, the power, the value, or the temptation to own a MAC 250?

Look for all the irresistible temptations at the Martin booth at Plasa '98.

### **Martin News at Plasa '98:**

- *RoboScan Pro 918*
  - *SynchroZap*
  - *Case+ Wing*
  - *Exterior 600*
  - *LightJockey DMX*
  - *Martin Lighting Director 2.0*
  - *The Martin Collection*
- ...and more.*

  
**Martin**

Call: USA: Florida (+1) 954 927 3005, California (+1) 818 252 0399, Southwest (+1) 512 250 0384, Midwest (+1) 847 289 9810  
Latin America: (+1) 954 927 3005 • United Kingdom: (+44) 1622 755442 • France: (+33) 1 69 12 10 00 • Italy: (+39) 432 671 730  
Singapore: (+65) 842 3031 • Denmark: (+45) 87 42 88 88 • Internet: [www.martin.dk](http://www.martin.dk)

# NEW

products from

# BATMINK

## ... at PLASA

# X-Light SYSTEM

THE SYSTEM INCLUDES:

- 4 x Par 56 Parcans
- 4 x 300watt Lamps
- 4 x Gel Frames
- 4 x Coloured Gels
- 1 x Power Pack

(4 channels at 650watt per channel).  
All necessary connecting leads.  
1 x High quality foam lined Flightcase.

X-Light 300watt system including flightcase & stand



MANY Scanners: ONE Controller ...

# CX-5 Lite-puter



300 SCENES 50 CHASES 50 SHOWS 50 ENVIRONMENTS

# GENIUS Motorspot

This high speed moving yoke represents THE BEST AND MOST RELIABLE UNIT CURRENTLY ON THE MARKET. Applications are endless for either discos, live bands, exhibitions, presentations, ... car launches etc.



OMEGA II GOBOS



MOTORSPOT GOBOS



MOTORSPOT COLOURS



# Omega II

IDEAL FOR LARGER VENUES or where a high light output is required the OMEGA II offers EXCEPTIONAL VALUE FOR MONEY...

Gobospot



# American DJ



Shadow Smoke Machine

# MBN F-630 Foam Generator



... Is the largest production machine capable of producing ... 30 CUBIC METRES of FOAM PER MINUTE.

... and more, much more!  
See us at PLASA 98 ...  
STAND

# F46



BATMINK LTD. GLASTONBURY WAREHOUSE, SILVER STREET, GLASTONBURY, SOMERSET, BA6 8BT

Tel: +44 (0) 1458 833186. Fax: +44 (0) 1458 835320

World Class Products



World Class Service

With over £3 million stock available for immediate dispatch, A.C. Lighting has the most comprehensive range of professional lighting equipment available under one roof



Please note: In certain countries some products listed may not be available from A.C. Lighting

A.C. Lighting sells to dealers, distributors and trade professionals in over 70 countries

A.C. Lighting Ltd, Unit 3, Spearmast Industrial Park, Lane End Road, Sands, High Wycombe, Bucks HP12 4JG. England  
Tel +44 (0)1494 446000 Fax +44 (0)1494 461024

E-mail: sales@aclighting.co.uk Internet: http://www.aclighting.co.uk



new

created

700  
*by* designers

*for* designers

series

**The 700 series**

the start of an exclusive range of lighting filters created by the  
imagination of leading Lighting Designers.



# LIGHTING+*Sound* International

SEPTEMBER 1998

VOLUME 13, ISSUE 9

## 8 News in L+SI

Acres and acres of news from across the industry, plus PLASA Show previews

## 99 Treading Water

Tony Gottelier and Lee Baldock went to Lisbon to see what technological treats surfaced among the themed oceans of Expo 98

## 109 No Comment

Tony Gottelier back on the theme of mergers and acquisitions

## 110 Audio Integration

The takeover of Harman Audio UK by the Arbiter Group last year, meant the passing of UK distribution of several of the biggest names in pro audio into new hands. Paul Ireson reports

## 114 Second Take

John Watt considers the digital revolution

## 117 A Festive Season?

The early cancellation of Phoenix sent a slight shiver through the live music biz - Steve Moles questions whether there is a superabundance of events

## 121 Fountain of Wealth

Oracle Laser Production have produced a stunning multimedia display at Singapore's symbolically-constructed Suntec City. L+SI takes a look . . .

## 125 Eclipse at the Globe



Steve Moles looks at the stage show that has successfully brought a little bit of sophistication to Blackpool's Pleasure Beach complex

## 131 Time for a Change?

Are the days of the megaclub numbered? With a high-profile launch going sour and stories of others in trouble, Ross Brown asks whether it's time to think differently

## 135 On Tour

Steve Moles finds Paul Weller at an outdoor special in Victoria Park

## 138 Asleep in the Stalls

Ian Herbert finds himself without a seat

## 139 Recruitment

## 140 Trade Directories

## 146 In Profile

Steve Moles talks to the founder of Artec Consultants, Russell Johnson

# Europe's Leading Lights

The Vari-Lite

European Network

supplies the world's most  
advanced lighting systems  
for this continent's greatest  
performances.

▶ UK  
44.181.575 6666

▶ AUSTRIA  
43.1.60902

▶ BENELUX  
AMSTERDAM 31.30.242 8260  
BRUSSELS 32.16.60 76 48

▶ FRANCE  
33.1.41 14 01 00

▶ GERMANY  
49.221.59 53 080

▶ SCANDINAVIA  
46.8.654 18 10

▶ SPAIN  
34.1.616 6422

[www.vari-lite.com](http://www.vari-lite.com)

VARI\**LITE*<sup>®</sup>  
The Automated Lighting Company

©1998 Vari-Lite, Inc. VARI\**LITE*<sup>®</sup> is a registered trademark of Vari-Lite, Inc. Vari-Lite is protected by U.S. and other worldwide patents granted or pending.

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

ABC  
AUDIO VISUAL COMMUNICATIONS  
BUSINESS PRESS

# LIGHTING+*Sound* International

Published monthly by the Professional Lighting and Sound Association  
© Copyright Professional Lighting and Sound Association ISSN 0268-7429

Editor: Ruth Rossington  
Deputy Editor: Lee Baldock  
Associate Editor: Tony Gottelier  
Advertisement Manager: Barry Howse  
Production Manager: Nicola Evenden  
Internet/Editorial: Jo Boyd  
Production/Subscriptions: Sheila Bartholomew  
Advertising Co-ordinator: Jane Cockburn

Published from the PLASA Office: 38 St Leonards Road, Eastbourne, East Sussex BN21 3UT England.  
Telephone: (01323) 642639 Fax: (01323) 646905 Internet: <http://www.plasa.org.uk/> E-Mail: [info@plasa.org.uk](mailto:info@plasa.org.uk)  
No part of this magazine may be reproduced without the permission of the Editor  
The magazine is available on annual subscription  
UK £50.00 Europe and rest of world £65.00 (US\$100.00) Airmail £90.00 (US\$135.00) Single copy price £3.50 plus postage  
Editorial Advisors: Peter Brooks, Wyatt Enever, Mike Gerrish, Derek Gilbert, David Hopkins, Matthew Griffiths, John Lethbridge, Iain Price-Smith, Neil Rice.

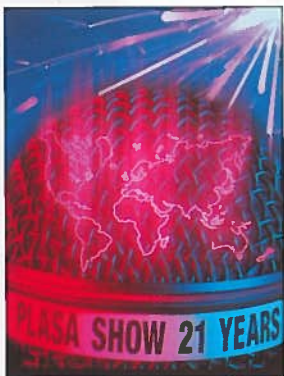
Lighting+Sound International is published monthly for \$100.00 per year by The Professional Lighting and Sound Association, 38 St Leonards Road, Eastbourne, East Sussex BN21 3UT. Periodicals class postage paid at Rahway, N.J. Postmaster: Send USA address corrections to Lighting+Sound International, c/o Mercury Airfreight International Ltd, 365 Blair Road, Avenel, N.J. 07001

PLASA  
PROFESSIONAL LIGHTING  
AND SOUND ASSOCIATION

# LIGHTING+SOUND *News* International

## Earls Court Prepares for PLASA Show

It's that time of year again, and thousands of visitors will shortly be converging on Earls Court in London for the 21st anniversary PLASA Light & Sound Show, which promises to build further upon the success of recent years with a number of enhancements. These include an even stronger presence from the AV industry on the Top Deck, with AV technologies for all applications being demonstrated in themed areas; a number of new exhibitors strengthening the presence of the pro audio sector, a special Pavilion hosting members of the NSCA (National Systems Contractors Association) from the USA and a special VIP trade mission from China.



Highlights of the four days of the show will again include the PLASA Mixing Competition, sponsored by Gemini and DJ Magazine, which takes place upstairs in the DJ Lounge on the Sunday and the World Light Jockey Championship Final, which takes place on the Tuesday night at the Hippodrome, Leicester Square, as well as many other events during and after show hours.

And don't forget that the show will again include a wide-ranging seminar programme hosted by leading industry experts. The programme begins on Monday 7th with three sessions - LAN Technologies and Live Sound (with David Karlin of BSS Audio), Voice Evacuation (with Tony Barham of Baldwin Boxall and Peter Barnett of AMS Acoustics) and The Pop Code

Review (with Keith Ferguson of the PSA, Roger Barrett of Star Hire and Tim Norman of Edwin Shirley Staging).

On Tuesday 8th, the NSCA begin with their session on Sound System Gain Structure and Equalisation (with John Murray of TOA), which is followed by Outdoor Displays - Giant Screens for Sale or Rent (with Dave Crump of Screenco and Peter Lloyd of AV Magazine), Displays for Pubs and Clubs - Making the

Systems work for Owners and Customers (with Peter Lloyd) and finally Taking Theatrical Lighting and Effects into the Architectural World (with LD Rick Fisher, Jonathan Howard of DHA and Steve Terry of Production Arts).

The final day of the show, Wednesday 9th, sees sessions on Public Address for the Non-Technical (with David Hopkins OBE of Audio Design Services), followed by Remote Source Lighting, the Future or Simply a Pipe Dream? (with Brent York of TIR Systems, Emma Dawson-Tarr of Absolute Action and Barrie Wilde of the Building Design Partnership). The afternoon will be dedicated to theatre. L+SI associate editor Tony Gottelier will chair a session which will consider the development and re-development of Theatrical Buildings for the new Millennium. A discussion from industry experts about new projects in theatre and the impact of the Lottery will feature. Each session costs £12.00, or £6.00 for students with a valid NUS Card.

## Bigger and Better

This issue of L+SI is the largest ever produced (the bags under our eyes prove it) and carries an eclectic mix of features, reviews and commentary. We have trawled the world for news of what's happening and across our 144 pages offer some of the best stories of the moment that you will not find covered better in any other industry publication...



There's detailed coverage of the **Lisbon Expo** (page 99-106) where a host of technology is hard at work behind the scenes; **Sadlers Wells** (page 14) is just two months from its re-opening and will no doubt prove to be a technical benchmark for other leading performance venues in the UK. Our news piece is a preview to



a major feature later in the year; **Heaven nightclub** (page 78), London's most celebrated gay club, relaunched last month and whilst we're saving the powder on this one for a future issue, there's a taster of what's to come; Manchester was devastated by the bomb that decimated its city centre over two years ago, and for venues like the **Royal Exchange Theatre** (page 25) it's been a long way back. L+SI will return north for the official opening later in the year, but in the meantime, we report on progress to date.





Plus, stacks more news throughout the mag...


Lighting+Sound International is ABC Accredited - No ABC, No Guarantee

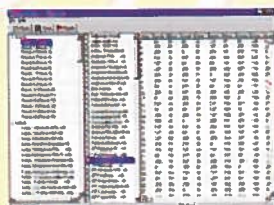
## Micro-Scope 3 by Artistic Licence

New Features available on Micro-Scope 3:

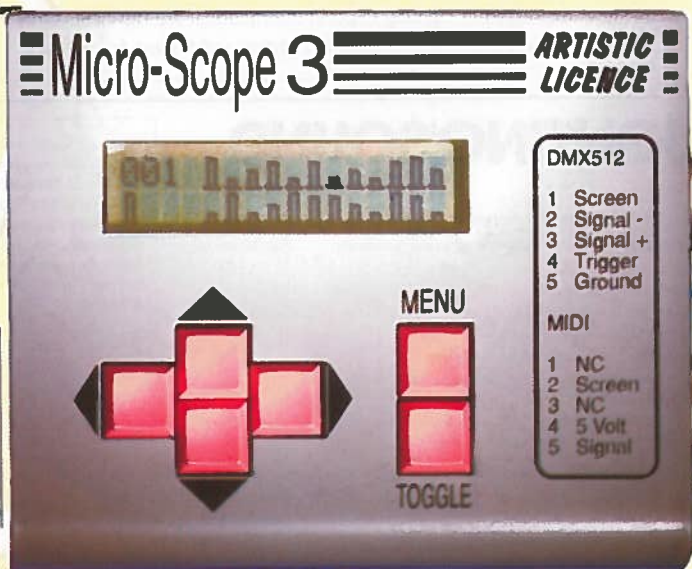
 Moving Lamp test now controls up to 24 lamp attributes.

 Lamp personality library expanded to 192 fixtures.

 PC Editor "Mic-Edit" allows custom programming and modification of all lamp personalities, presets and setup features.



## The Ultimate DMX512 Test Tool



Stand G24 at the  
1998 PLASA  
Show

Tel/Fax: +44 (0)181 863 4515 Email: artistic@compuserve.com Internet: <http://www.ArtisticLicence.com>



# Sensor

INNOVATION

ELEGANCE

RELIABILITY

DEDICATION



96 dimmers,  
96 RCDs,  
Two control modules,  
One Sensor rack.



Innovative dimming solutions worldwide — Sensor Dimming Systems from ETC.

Now Sensor is available with a custom-designed RCD built right into each dimmer channel. People-protection on any dimmer, at a price you can afford. If you have an earth fault, you lose one dimmer, not twelve. You know which circuit tripped, and why, right on your console monitor. That's ETC innovation.

Sensor is the only high-performance European dimming system with fully magnetic circuit breakers. They don't derate when they get warm. A 25 amp dimmer is always a 25 amp dimmer. And Sensor offers you up to 96 fully loaded 15 or 25 amp dimmers in a single rack.

ETC is dedicated to innovation. Call your dealer to see what Sensor Dimming can do for you.



Visit our website at [www.etconnect.com](http://www.etconnect.com)

NORTH AMERICA TEL: (+1) 608 831 4116 FAX: (+1) 608 836 1736 EUROPE TEL: (+44) 181 896 1000 FAX: (+44) 181 896 2000 ASIA TEL: (+852) 2799 1220 FAX: (+852) 2799 9325



**21<sup>st</sup>  
Year**

**SEE THE TECHNOLOGY COME ALIVE.**

**BE AT THE BIRTH OF LIGHT AND SOUND.**

In 1997, over 472 products first saw the light of day at PLASA. To to be witnessed by some 13,075 people from more than 50 countries across the world.

323 exhibitors demonstrating literally thousands of leading edge products underlines PLASA's importance as the international light and sound event.

Surely no other event is as revealing?

You just have to be there to experience it first.

**For tickets or further information call +44 (0) 171 370 8229.**

**PLASA**  
**LIVE AT EARLS COURT**  
**6-9 SEPTEMBER 1998**

Avolites are launching three new products at PLASA. The Sapphire 2000 console is a completely new desk based on the popular Pearl and Azure technology. Features include 2,048 channels, displays on memories and 100 preset faders. Also new is the Avolites Focus Finder, a small unit that can be placed on-stage which fixtures scan for to locate. The Avolites Visualiser simulation programme is also new. A combined software and hardware package, it allows users to pre-programme the rig without having direct access to the instruments, rig or venue.

#### Avolites - G4

Lamba plc will use the Capital Radio OB truck to create an eye-catching display at PLASA. Their imported GMR range have had their retail prices slashed, with the new DJ Pitch Pro and PM6:2 lining up alongside the GMR Minipitch. Lamba will also be showing a new range of imported mixers and the new V range from Cerwin Vega! along with Stanton's range of cartridges. There will be new KAM DJ products including the Red Dwarf DJ package and the HMDV-3500K karaoke machine. On the lighting side Lamba will show the HSL Win Commander II and Win Commander LITE, the scaled-down version.

#### Lamba - F54

## Hersey Platform at the National

David Hersey took the stage of the Olivier at the Royal National Theatre in August to talk about his life's work as a lighting designer. In conversation with the National's technical manager for lighting, Mark Jonathan, Hersey talked with humour about his large volume of work, ranging from operas, plays and musicals to theme parks and Las Vegas' extravaganzas, concluding with his work for the National's production of *Oklahoma!* - the set for which formed the backdrop to the conversation.

Following the Platform, the Association of Lighting Designers (ALD) hosted a reception for Hersey (sponsored by Cameron Mackintosh, DHA Lighting and White Light) in which both Trevor Nunn and Cameron Mackintosh paid tribute to Hersey's work. He was then presented with a fellowship of the ALD by veteran lighting designer and ALD chairman Michael Northen.



Pictured above are set designer John Napier, Cameron Mackintosh, Trevor Nunn, Michael Northen with David Hersey (second from right).

The Platform came on the eve of Hersey's departure to participate in the Millennium Odyssey - a 16-month round-the-world expedition involving some 50 boats, the completion of which will coincide with the turn of the millennium.

## Commons Plot Against Fireworks

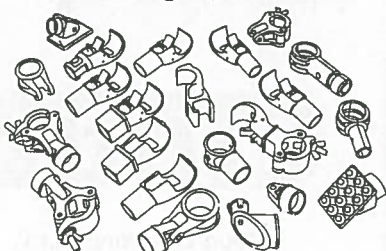
A seemingly straightforward Fireworks Bill, with strong support from industry safety groups and perceived cross-party support, has failed in the Commons. The Bill covered the import of unsafe fireworks and provided a framework for the control and handling of fireworks for the general public. The fireworks industry has been universally surprised and disappointed by the development, which has fuelled concerns over the safety of the general public during the forthcoming Millennium celebrations, as well as concerns for the long-term effect on the industry itself. The legislation, if successful, would also have given support to a range of BTEC courses in the safe handling of fireworks created by Loughborough College in association with leading industry players.

Keith Flunder, chairman of the Fireworks Steering Committee, project manager at Loughborough College and MD of Laser Hire, said: "I realise that Parliament and fireworks have got a bad history, but it is preposterous that this Bill has not been passed . . . people's lives are at risk. If the government don't act now to make the industry safe, there are bound to be accidents, followed by a public and political outcry, and the fireworks industry will be hounded out of business."

Sam Samkins, display manager at Le Maitre, added: "To say that I am extremely disappointed is an understatement . . . this legislation and the training course established at Loughborough would have given us parity with other EEC countries. In the UK we have had no nationally recognised qualifications prior to these new BTEC courses at Loughborough College, and this Bill would have reinforced their validity. It would have meant that the current situation, which effectively bars UK firework display companies from trading in Europe, would be lifted."

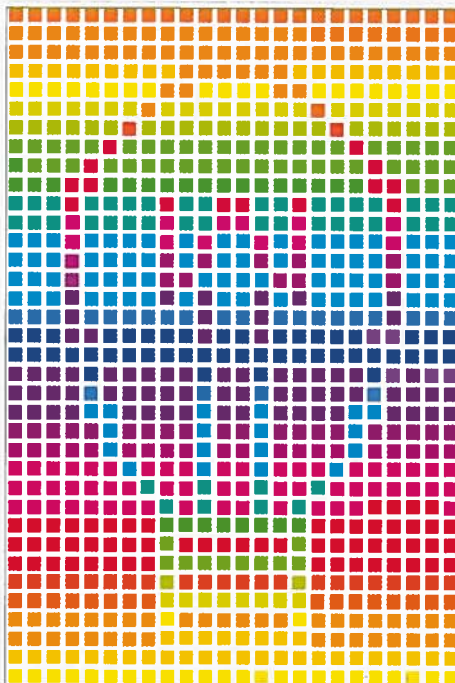
## Aliscaff

Primary manufacturers/suppliers worldwide of aluminium couplers (scaff clamps), aluminium snap hooks and many other aluminium fittings to fit either 2" (50.8mm) or 1.29/32" (48.4mm) tubes. Ask for collage of full range - Custom design work undertaken



#### ALISCAFF LTD

Unit 2 Hotspur Ind Estate, West Road,  
Tottenham. London N17 0XJ  
Tel: 0181-808 5005  
Fax: 0181-801 9851



### Colour Filters

Lee & Rosco Sheets & Rolls  
All the colours All held in stock  
Colour cutting service  
Scroller making

Now can you see the light ?

## LIGHTING TECHNOLOGY

Sales and Service to the  
Entertainment Industry

2 Tudor Estate Abbey Road  
Park Royal London NW10 7UY  
Tel: 0181 965 6800  
Fax: 0181 965 0950

Email: sales@lighting-tech.com  
Internet site: <http://www.lighting-tech.com>

# What they see



# What you get



Easily understood controls for microphone routing are just the beginning of the Matrix 4 story. This sophisticated mic/line/zone mixer provides you with everything you need to make life easy for hotel staff and others charged with the business of making things happen, smoothly. It offers 4 mic inputs plus paging, with full routing into 4 zones. Add 2 line level music inputs with source select on each zone. Add power (at low impedance or 100V) built-in or built-out, and a host of configurable pre-sets, and you have the one-box, complete solution to the needs of conference rooms, hospitality suites and multifunctional venues, everywhere. Add Cloud's legendary reliability and sheer audio excellence. Add easy interfacing with all kinds of ancillary equipment and a full set of installer adjustments which make the Matrix 4 from Cloud the installer's choice in more venues than you can shake a stick at. Add value, convenience and quality. Add Matrix 4. End of add.

## Cloud

Cloud Electronics Ltd.,  
140 Staniforth Road, Sheffield,  
S9 3HF, England.  
Telephone: (0114) 244 7051  
Fax: (0114) 242 5462

## New Home for AFM



Film and television rental company AFM Lighting has moved to brand new UK headquarters in West London. Relocating from its Alliance Road site, AFM has reinvested substantial resources into the creation of its new home which it has custom-designed and built. Open for business in August, the building features a variety of improvements to the workplace along with many new features including a demonstration studio where clients can investigate, experiment and assess new and existing products. Additional workshops, a truck park for the AFM Lighting generator/transport fleet, a separate generator support building, 10 loading bays directly accessing the 65,000sq.ft of floorspace and a 50-seater restaurant all feature at the new HQ. AFM can now be contacted at Waxlow Road, London NW10 7NU. Telephone: 0181-233 7000.

## Stagetec/Compulite Control For Belgrade

Stagetec (UK) Ltd was recently awarded the contract to supply a complete new Compulite lighting control system and dimmers to the Belgrade Theatre in Coventry which is currently being refurbished. The equipment, supplied by CCT Lighting, comprises an Ovation 4D/ME 3000-channel console and 4D full-tracking stand-alone back-up system which drives 288-channels of Compulite fully-modular digital dimming with status reporting.

The contract required an extensive array of equipment which also included elements from the award-winning CCT Freedom Range (Freedom Luminaires, Freble 600 - both fresnel and pebble, and the Freedom 800 lamp house with interchangeable 20/40 degree and 15/32 degree lens tube) and a DMX patch system and splitter. Also featured are rack mounted 2.5kW and 5KW dimmers, Martin PAL 1200 scanners, ColoRocket Scrollers, Par cans (both standard and short-nose) and a number of Starlette 1kW foursquare Cyclorama floods. The system also includes a DMX Merger to combine the outputs of the main and back-up systems together and a radio rigger's control system.

## Alpha Sings the Blues

To celebrate their move to new premises in Islington, the Mean Fiddler's Blue Note Club is hosting a two-week music festival called The Bigger Blue. London-based hire and installation company, Eskimo Noise, are providing a powerful Nexo Alpha sound system for the event.

The club occupies what used to be known as The Complex - a large four-storey building including a basement with different events going on at each level. Eskimo Noise have a long-standing relationship with the Blue Note, having rented complete PA systems to the company for various events over the years. Eskimo have supplied an Alpha system comprising six M3 mid-high cabinets, 10 B1 bass bins and four S2 subs, plus four PS-15s for use as stage monitors. The entire system is driven with Crown amplification using a combination of MA-5000VZs and MA-3600VZs.

Eskimo Noise's Neil Johannesen told L+S: "The type of music going on is very varied with a lot of dance-orientated material, so we needed a powerful system with plenty of bottom end as well as something capable of drawing out the subtleties of the more vocal music."

VENUE SERIES  
SOUND POWER  
MARQUIS SERIES

The new installation ranges from

**JBL**

PROFESSIONAL

ARBITER PRO AUDIO Wilberforce Rd, London NW9 6AX  
Tel: 0181 202 1199 Fax: 0181 202 7076 Web: www.jblpro.com

## Sadlers Wells' Prepares to Reopen

Sadler's Wells is building a new theatre that will be the most technologically advanced and versatile performance space in the UK. A landmark in theatre design, the new Sadler's Wells will harness state-of-the-art technology to open up a world of creative experience for artists and audiences alike.

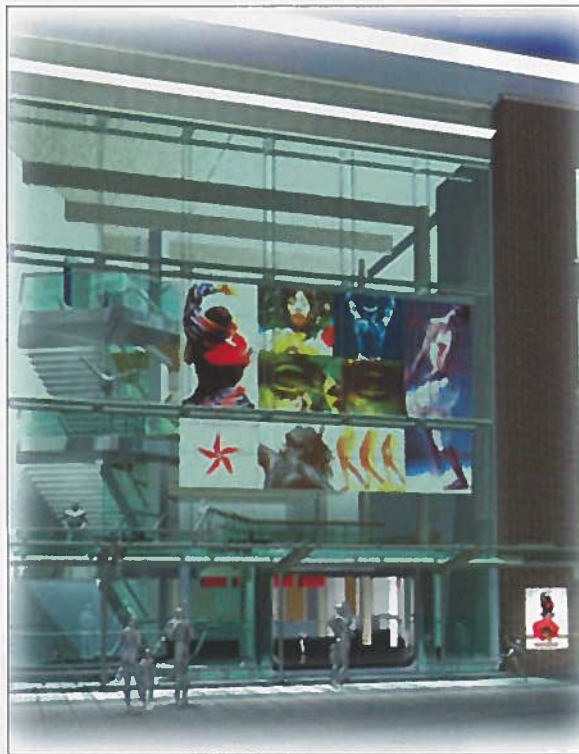
Sadler's Wells has been a well-loved feature of London's theatrical life for over 300 years. The modern Sadler's Wells was founded in 1931, when Lillian Baylis raised the funds needed to carry out the fifth rebuilding of the theatre. Under her leadership, Sadler's Wells became the birthplace of some of Britain's most celebrated companies: The Royal Ballet, the English National Opera and Birmingham Royal Ballet.

For many years Sadler's Wells has come up against a major obstacle in carrying out its vital role, largely because of the cramped and technically outdated design of the old, 1930s theatre. Leading international companies such as the Rambert Dance Company, the Frankfurt Ballet, the Mark Morris Dance Company, and Glyndebourne Touring Opera have found it almost untenable to perform on such a small stage with its inadequate backstage facilities.

In response to the fact that the modern demands of performance were outstripping what the theatre was capable of handling, the decision was taken to completely rebuild the theatre, and so in June 1996, Sadler's Wells closed its doors. The project, which when complete will have cost in the region of £48million, is being supported by a grant of up to £30 million from the National Lottery through the Arts Council of England. When the new theatre opens in October this year it will have the world-class facilities needed to accommodate the very best of the large international and British touring companies.

To achieve this, Sadler's Wells has brought together a highly talented team with a wealth of experience in theatre design and construction. Leading this team is Sadler's Wells' chief executive Ian Albery.

Together with architects Renton Howard Wood Levine they are creating a building that will be a prototype for the theatres of the 21st century. The new technical facilities include an auditorium that seats up to 1,570 people in comfort with a perfect unobstructed view of the stage and excellent acoustics; a sprung stage with a performance area



of 15 metres square and an orchestra pit for up to 80 musicians. The renovation will also take advantage of state-of-the-art lighting and sound systems, in addition to what will almost certainly be the most sophisticated computer-controlled power flying system in any British theatre.

The old Sadler's Wells had a proscenium arch of less than 10 metres - a new 15-metre wide stage and heightened fly tower will bring it into line with the world's best dance theatres. The theatre has an all-glass frontage, inside which will be a huge video screen which will not only announce the theatre's programme of performances, but will also show extracts from productions. One of the more unique features of the new Sadler's Wells will be its series of glass partitions in the foyer, which will slide back before each performance to give clear access to the theatre.

L+S*i* will run a major feature on Sadler's Wells in a future issue.





## D R E A M   B E A M

intelligent lighting  
for your universe

technobeam®  
automated luminaire

High End



SYSTEMS  
LIGHTING WORLDWIDE

because quality is always the best investment

High End Systems, Inc.: 2217 West Braker Lane, Austin, Texas 78758 USA, Tel: 512.836.2242 Fax: 512.837.5290

High End Systems, West Coast: 8200 Haskell Avenue, Van Nuys, California, 91406 USA, Tel: 818.947.0550, Fax: 818.908.8975

High End Systems Singapore Pte. Ltd.: Cencon 1, 1 Tannery Road 06-05, Singapore 347719, Tel: 65.742.8266, Fax: 65.743.9322

High End Systems GmbH: Tel: 49.8122.9903-0, Fax: 49.8122.9903-33

Pulsar will be introducing a new look for the demonstration of Clay Paky's new Stage Line products, having built an entirely new display area. Also on stand will be the latest in Pulsar's Masterpiece control system.

#### Pulsar - G46

DHA are launching the Digital Beamlight 2, a high precision, fully automated 500W moving yoke luminaire, with an integrated colour scroller and remote focus control. High quality optics produce a light output approaching that of many 1000W fixtures, while maintaining the tight spot characteristics of a 500W unit. The unit includes large, slowly rotating fans which are quiet, cooling both the scroller at the front of the unit and the focus mechanism at the back. DHA will also be launching a new range of 25 glass gobo designs, aimed at moving lights.

#### DHA - F8

## West End Theatre a Billion Pound Industry

The West End theatre industry has been revealed as an economic powerhouse, bolstering the UK economy with thousands of jobs, millions of pounds of tourist and industry spending, creating significant tax yields and a major balance of payments surplus. The Wyndham Report, published on July 15th 1998, is the first ever investigation into the scale of this blue-chip industry. Written by Tony Travers of the LSE, with data compiled by MORI, the Report shows for the first time the massive economic importance of 'Theatreland' - the other 'Square Mile' in London on which depends the well-being of hundreds of British companies.

The Report reveals that the total economic impact of West End theatre in 1997 was £1,075 million, that 41,000 jobs depend on West End theatre and further that West End theatre contributed a £225 million surplus to the UK's balance of payments in 1997. As a net currency earner for the UK, West End theatre is similar in size to the entire UK advertising, accountancy and management consultancy industries - and significantly bigger than the UK film and television industry. London remains the theatre capital of the world with more shows and bigger audiences than anywhere else, including Broadway, and the worldwide earnings of the biggest British shows dwarf those of Hollywood blockbuster films.

The Wyndham Report was commissioned by the Society of London Theatres (SOLT) to assess the importance of West End Theatre to the London and UK economies. SOLT believes that, although it is currently



SOLT Logo.

a vibrant industry, without due recognition and support, it is in danger of losing its pre-eminent position. The warning signs are there - slowing growth, too few new productions, too few young theatre-goers and a regional theatre network which has for some time been under-resourced.

How do we safeguard and encourage this major British industry? SOLT believes that it is ultimately in the power of National and Local Government and policy-making bodies to provide the stimulus to, and remove the brakes from, the future growth

of West End theatre. Policy initiatives being looked at by SOLT which could make a difference nationwide include investment in British theatres and theatre companies. The relentless series of cuts in grants in recent years to both regional and national theatre, opera and dance companies has gone way beyond any possible intentions to cut out waste and drive out inefficiency: the industry is suffering structural damage.

SOLT has also recommended that the Government simplify investment in commercial productions by clearing away the red tape that accompanies investment in commercial theatrical productions, and make the tax benefits of so doing simpler and clearer for the individual. The Wyndham Report would seem to highlight the disparity between the regions and the West End for it follows hot on the heels of the National Campaign for the Arts' findings that 33 regional theatres are £10million in debt, that ticket prices have doubled in a decade and that theatres are producing fewer plays than ever before.



**TECHNOTRONICS LTD**  
*Electronic Design & Manufacturing*



**PLASA 98**  
**STAND J56**

**PLASA 98**  
**STAND J56**

Edison House 10 Ackworth Road, Purston, Featherstone, West Yorkshire, UK. WF7 5LE.  
Tel: +44 (0) 1977 600064 Fax: +44 (0) 1977 600268





## D R E A M   T E A M

the ultimate  
creative combo

studio spot™ &  
studio color®

High End



SYSTEMS  
LIGHTING-WORLDWIDE

because quality is always the best investment

High End Systems, Inc.: 2217 West Braker Lane, Austin, Texas 78758 USA, Tel: 512.836.2242 Fax: 512.837.5290

High End Systems, West Coast: 8200 Haskell Avenue, Van Nuys, California, 91406 USA, Tel: 818.947.0550, Fax: 818.909.8975

High End Systems Singapore Pte. Ltd.: Cencon 1, 1 Tannery Road 03-05, Singapore 347719, Tel: 65.742.8266, Fax: 65.743.9322

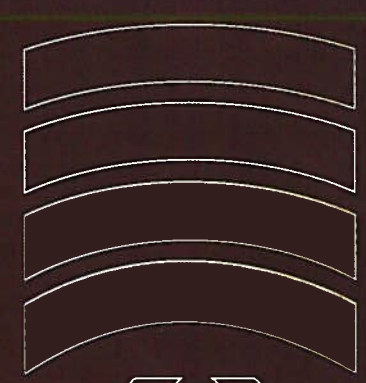
High End Systems GmbH: Tel: 49.8122.9903-0, Fax: 49.8122.9903-33

frequency: **AGILITY**  
 audio: **PURITY**  
 absolute: **STABILITY**  
 what more can you ask?

Well, how about this?

- UHF PLL synthesized system
- 64 frequencies in one 8 Mhz UHF TV channel
- Simultaneous operation of 15 frequencies in one 8 MHz TV channel
- "Channel Grip" ident tone locking system
- PC windows based control and monitoring software facility
- Multi-user memory facility (MUM)
- Choice of condenser and dynamic transducers

The U 600 UHF wireless system is the solution for all of your wireless problems!



beyerdynamic

P.S. priced: UNBELIEVABLY!

For more information or a brochure, call our freephone on 0800. 374994

Germany  
 Theresienstr. 8  
 D-74072 Heilbronn  
 Tel. (0 71 31) 617.0  
 Fax (0 71 31) 604.59

United States  
 56 Central Ave.  
 Farmingdale, NY 11735  
 Tel. (516) 293.3200  
 Fax (516) 293.3288

Great Britain  
 Burgess Hill  
 W. Sussex RH15 9TN  
 Tel. 1444 258258  
 Fax 1444 258444

France  
 7, rue Labie  
 F-75017 Paris  
 Tel. (1) 44 09.93.93  
 Fax (1) 44 09.82.33

## Arezzo Wave Love Festival



Italy's most important rock festival, Arezzo Wave Love Festival, celebrated its 12th anniversary in the picturesque mediaeval setting of Arezzo - 60km from Florence in the Toscana region - over five days at the beginning of August.

The event, which was sponsored by Tuborg, was designed to promote Italy's up-and-coming talent and the 15,000 people who attended daily witnessed some outstanding appearances on the Main Stage, Psycho Stage and in the Dhea Discoteca from Paolo Serazzi, Noisefull Loop, Goah, Cosmic Woop Domain, Funk Lab, Toubab, GTO, Dodi i Monodi, Quinto Rigo and Pseudofonia.

Whatever their designated stage, all the acts performed through a Martin Audio proprietary concert stack. Renato Fumasoli's rental company, Fumasoli Service Aosta, provided a full Wavefront 8 Compact rig, comprising 32 W8S enclosures, four of the new W8C subs, 20 W8Cs and 16 W8Ts. For stage foldback, the bands were treated to 18 biamped LE400 floor monitors, with Martin's classic floor monitor processed via the dedicated MX4 controller. The smaller Psycho stage was also blessed with a further four stacks of Martin Wavefront 8s (four W8S and four W8C) supplied by Franco Angerosa's Zoho Music Service of Turin.

## Julian Winter

Members of staff at Light & Sound Design have been shocked and saddened by the death of a young crew member, Julian Winter, following a brief fight against cancer. Kevin Forbes of LSD told L+S: "Everyone within the Light & Sound Design group is shocked and distressed at the loss of Julian. He was known as 'the gentle giant' to all of us. His brilliance shone out both professionally and personally. He will be missed immensely by myself and by everyone who knew him - he was a pal as well as a colleague. The industry has lost one of the best lighting technicians that ever lived."



IS YOUR  
**FIRE  
SAFETY  
CURTAIN  
AS SAFE  
AS YOU  
THINK?**

- Even before a performance gets too hot to handle your fire safety curtain might not be as safe as you think!
- Some older systems relying on asbestos based materials may unknowingly pose a considerable threat of airborne contamination.
- So isn't it worth finding out before it's too late?
- We've a century of experience in the business and offer you a PEACE OF MIND ASSESSMENT of your existing system - WITHOUT OBLIGATION.
- To find out more call 0181 953 3611 now and ask for DOUG HEATHER...before it's too late!

**HARKNESS HALL LIMITED**  
The Gate Studios Station Road  
Boreham Wood Herts WD6 1DQ UK  
Tel: 0181 953 3611 Fax: 0181 207 3657  
E-mail: sales@harknesshall.com



MEET US AT PLASA '98...EARLS COURT...STAND F 20

# We don't sell pizza



Freelander Lunch - Silent Associates

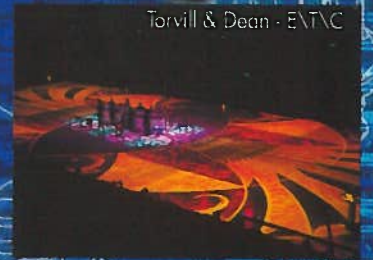
# but we do Deliver

100 Objects - Peter Greenaway



# Tasty Images

Torvill & Dean - ENTVC



pigi from

# E/T/C

A COMPLETE  
HIGH POWER PROJECTION  
SERVICE

PLASA - STAND H12

tel: 00 44 181 893 8232

fax: 00 44 181 893 8233

e-mail: etcukltd@netmatters.co.uk

# PREACHING TO THE CONVERTED?....

The same discerning audio professionals who have always relied on AKG's C747 for its superb voice intelligibility are now discovering our Discreet Acoustics Mk2 microphones; a beautifully presented modular range that embodies the same thinking and attention to detail that made the C747 such a huge success.



The range consists of five capsules and six installation microphones (5 goosenecks and 1 hanging module) which can be used in any combination for complete flexibility, allowing the ideal microphone to be put together for any application.



A phantom powered LED ring lets you check at a glance if all microphones are correctly connected and phantom power is on. Alternatively, the LED ring can be connected to an external supply in the usual way to provide a subtle "MIC ON" indication.

Two versions of gooseneck installation modules allow connection via phantom power adaptor or unterminated cable.



**DISCREET** *Modular*  
A C O U S T I C S



**LEGENDARY STUDIO QUALITY BY**



Distributed exclusively by  
**ARBITER GROUP PLC**  
 Wilberforce Rd. London NW9 6AX  
 Tel: 0181 202 1199 • Fax: 0181 202 7076 • Web: [www.arbitergroup.com](http://www.arbitergroup.com)

## Shanghai Sport

The Chinese Government has recently put the finishing touches to a flagship sports complex in the heart of Shanghai. The complex is part of a larger sports 'village' which also includes a 10,000-seat indoor arena next door and an Olympic-size swimming pool.

The sports complex, which incorporates an 80,000-seat stadium, also includes a 360-room hotel and restaurant built into the stadium's wall, a sports club, broadcast centre and OB facilities, training rooms and an exhibition hall, plus VIP rooms. It is intended that the venue host not only sporting events, but large-scale concerts also and as such its sound reinforcement system had to fulfil a number of requirements.

The system, installed by Hong Kong consultants Advanced Communications Equipment (ACE), is based around JBL Professional's HLA and Array Series loudspeakers. The two-tier package features a main system and a second PA/VA system: ACE's team of



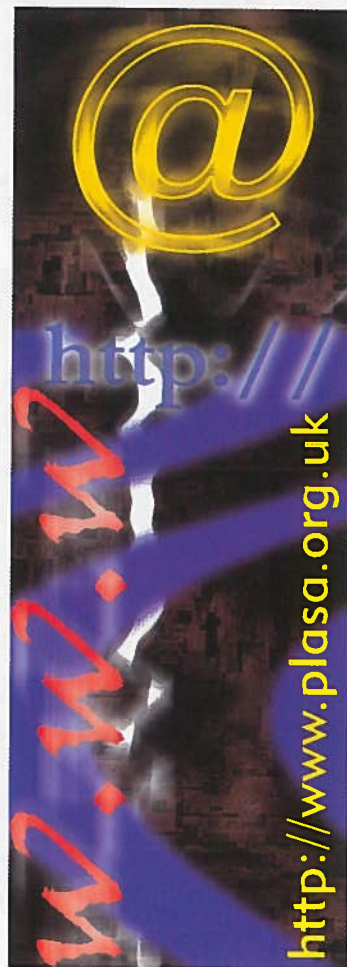
ACE's Bingo Tso (right) and Ben Lui at the Shanghai stadium.

engineers, led by Bingo Tso, configured a touring sound system with two tower clusters of JBL HLA 4895 full-range long throw devices and JBL 4897 subwoofers, flanking the stage area. Distant areas of the stadium are covered with delayed JBL 4894 Array Series speakers.

## Nexo Build Church Without Walls

Wigwam Acoustics have supplied a complete PA system to the charity Church Without Walls. CWW raised £150,000 to spend on a 40ft articulated lorry, complete with its own custom-built trailer which converts to a full roadshow with stage, lights and a Nexo PA system.

Wigwam's Ronnie Fernihough specified a system comprising eight Nexo PS15 loudspeakers, driven by five Crown MA-2400 power amplifiers. The PS15s can be set up in a multiple array for larger venues, or used singly for smaller places, as well as being able to double as monitors if required.



<http://www.plasa.org.uk>

## EU DIRECTIVES

WHO HAS THE  
SOLUTIONS TO YOUR  
COMPLIANCE  
PROBLEMS?

*If you're looking for the best possible service to solve all your compliance problems, you'll find it at ERA Technology.*

- Low Voltage Directive
- EMC Directive
- Machinery Directive
- ATEX Directive

Offering expert consultancy, testing and training, ERA provides you with a comprehensive, independent and professional service to get your product on the fast track to market.

eureka



TESTING NOS  
0053, 0512 & 1025

**ERA**  
TECHNOLOGY

All the expertise you need

CONTACT: SALES OFFICE, ERA TECHNOLOGY LTD, CLEEVE ROAD, LEATHERHEAD, SURREY KT22 7SA, UK  
TEL: +44 (0)1372 367030, FAX: +44 (0)1372 374074, E-MAIL: [info@era.co.uk](mailto:info@era.co.uk), <http://www.era.co.uk/>

EU/LSI/09

Capture your ideas!

SEE US AT  
PLASA ON STAND C3

**CompuCAD**  
by Computite

CompuCAD

## A Revolutionary 3D Lighting Design CAD Program

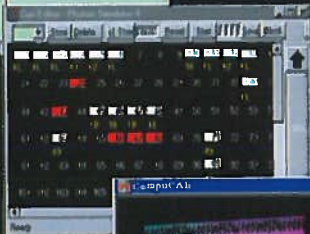


■ **Lighting Plot** - Construct your lighting plot in a full 3D environment.



■ **Conceptual Design Module** - A unique lighting design project management program.

■ **Cue Editor** - Time-saving off line editing lets you plot your show or modify cues.



■ **Design Preview** - 3D dynamic or ray trace color rendering. Use the design preview for Show and Tell at production meetings.

**UK**  
STAGETEC  
Tel: 1753 567500  
Fax: 1753 567501

**USA**  
COMPUTITE USA  
Tel: 203 271-2030  
Fax: 203 699-9704

**GERMANY, BENELUX**  
BEO  
Tel: 31 29 4413646  
Fax: 31 29 4413921

**FRANCE**  
CRYSTAL EQUIPMENT  
Tel: 01 46201833  
Fax: 01 46813423

**ITALY**  
SPOTLIGHT  
Tel: 2-76110081  
Fax: 2-744721

and 28 other distributors world wide

**C O M P U L I T E**

3 Haroshet St. New Industrial Zone,  
Ramat-Hasharon, 47279 Israel  
Tel: 972-3-5401268/9, Fax: 972-3-5401276

www.computite.com

CompuCAD NET,  
edit cues live via  
Ethernet connection.

NEWS IN LIGHTING+ SOUND INTERNATIONAL

## Unusual's Royal Appointment



Unusual Rigging's long-standing association with the Royal Tournament and its producer, Major Michael Parker, continued this year with the company undertaking responsibility for the heaviest rig in the tournament's history.

The tournament preparation period lasted two weeks with a rigging crew of 12. Initially, a 100m x 30m grid was installed, as well as a 60m x 22m end-wall and proscenium. Over the long centre line of the arena, Europe's longest single run of lighting truss - at 100m - was hung from the grid. Above the proscenium, Unusual hung the largest Sony Jumbotron screen ever used indoors, weighing close to 16 tonnes. The infrastructure included a comprehensive set of black wool serge masking and numerous mirror balls.

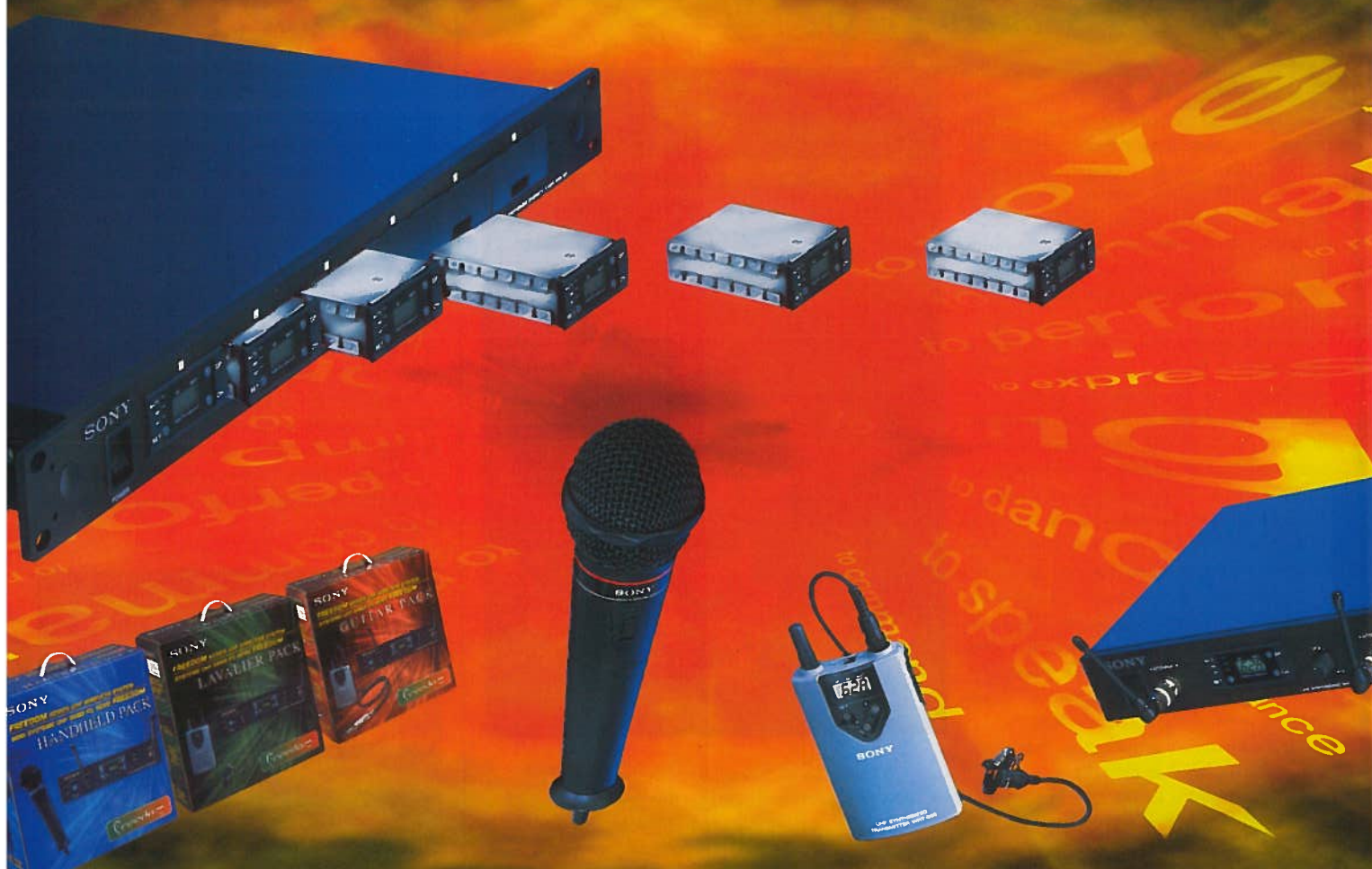
Making use of Unusual's automation specialists, the riggers used more equipment than ever for a show with 23 mechanised flying pieces varying from 25 kilos to six tonnes. Amongst these were a Gazelle helicopter, two biplanes, a Spitfire, a Jaguar fighter and a Harrier jump jet. The two-and-a-half tonne Harrier had to be lifted from the ground as if it was taking off at real speed, necessitating the installation of a large motorised counterweight system in the roof over the arena - the total assembly weighing 7.5 tonnes.

The production produced some extreme statistics. Unusual put in around 200 hanging points, used nearly two kilometres of truss, 170 chain hoists and 50 encoded motors. This constituted only part of the 12 40ft trailer loads of equipment that Unusual dispatched for the project - all of it from stock, despite the scale of the rigging requirements.

Lighting for the Tournament was supplied by VLPS/Theatre Projects. This included 24 VL2C spot luminaires for the main run of the show (although 47 were used for the first two shows, which were filmed by LWT). Conventional equipment included 974 Par cans, 72 1kW Silhouette Profiles, six Colour Arc followspots, an assortment of smoke machines and effects, seven 72-way Avolites dimming racks. The conventional were run from an ARRI Imagine, with an Artisan Plus controlling the Vari\*Lites. Lighting design was once again by Robert Ormbo, with Stuart Porter operating the board.

John Del'Nero was in the sound designer's chair, with Wigwam supplying the audio equipment. In the two corners at one end of the arena were four stacks of d&b 402 tops and subs, whilst in each corner at the other end were four Meyer MSL3s, with six Meyer USW and 650 subs positioned beneath the seating either side of the arena. The system was run through a combination of a 40-channel Yamaha PM3500 desk and a mix of d&b, Amcron and Meyer amplification, with an XTA DP200 providing the digital delay and equalisation.





# UHF Quality at VHF Prices

With its new range of Freedom wireless microphone models, Sony now offers better performance and more features for your money than any other UHF system on the market.

Take our unique WRR-801 diversity receiver, for example. Offering accommodation for six receiver modules in a single 19" rack space, it redefines the future for multi-channel systems.



Freedom is a fully synthesised, frequency agile UHF system, with additional features such as auto set-up, selectable user groups and battery status indication.

As you would expect from Sony, compatibility with our existing range of wireless systems comes as standard.

Why use VHF systems when UHF technology is now so affordable?

Call us now on 0990 331122 for more information on Freedom Wireless Microphones or complete the coupon below.



Freedom is a trademark of Sony Corporation. Sony is a registered trademark of Sony Corporation.

Please send me more information on Freedom Wireless Microphones.  Please contact me to arrange to discuss my requirements further.

Name (Mr/Mrs/Miss/Ms) ..... Job Title ..... Company .....

Address ..... Postcode .....

Tel ..... Fax ..... E-mail .....

## Soundcraft's Monitoring in Oz

In a new all-arena Australian tour of the musical *Grease*, an innovative combination of Soundcraft consoles is being used to manage an unusual stage monitoring set-up. *Grease* is playing in-the-round in venues such as the Melbourne Tennis Centre and Australia's leading sound designers Peter Ratcliffe and Wyn Milsom, plus a team from Jands Production Services, are facing substantial acoustic challenges in some of the venues.

Least obvious to the audience, but still a rare event in theatre, is the use of in-ear monitoring for key members of the cast. Peter Ratcliffe explains: "We have an unusual situation in that the FOH and monitor control set-ups are adjacent to each other on an eight metre wide platform in the arena. The monitor engineer, Bob Daniels, is mixing in-ear monitors for the performers and headphones for the band; he was concerned that, as we were using in-ears, he didn't want a performer walking on stage with their microphone on and hearing someone who just walked off in their in-ear mix. Therefore, there is just one console, a Soundcraft Series Five, to control all the monitor mixes.

"All the inputs are fed into the Series Five and each channel direct output is sent out, post-EQ and post-fade, to the channel inputs of a Soundcraft SM24. By using the mute scenes on the Series Five, you can then turn on and off the



channels which send to both the Series Five and the SM24 and create the automation that's needed to instantly mute those actors who have walked off stage for that particular scene."

## Northcott's First

The Northcott Theatre in Exeter, a registered Assessment Centre for NVQs in Stagecraft, has now employed the first person in Great Britain to pass all units of both the Theatre Lighting and Stagecraft Flying Level 2 NVQs. Russell Payne, 21, is now deputy chief electrician at the Northcott.

The theatre's chief electrician, Maurice Marshall (ABTT Theatre Technician of the Year 1997) commented: "I'm very pleased that the Northcott stuck by its in-house training programmes in the days before NVQs, when due to lack of funds, so many other theatres had left training fall by the wayside."

Having already lit productions such as *The Man Who Would Be King* and *Talking Heads*, and designed the sound for the National tour of the *Canterville Ghost*, Payne is now designing the lighting for the theatre's forthcoming production of *Dead Funny*.

## Idf Website

A new website has been launched intended to appeal to all those who have an interest in lighting. The lighting design forum, authored by lighting designer Joe Lewis and sponsored by White Light, is not intended to be a heavily technical site, but rather one where the emphasis is on design, both practice and theory. Check out the site at [www.idf.net](http://www.idf.net).

## The power to control...

500i series Pentium II consoles, working in conjunction with ShowNet nodes provide limitless control options - allowing designers and operators to communicate with moving lights, dimmers, scrollers and any DMX device over a simple low cost cable.

Unlock the real power of the console with file servers, sophisticated remote video devices and even remote printers. Multi-user and multi-console operation giving ultimate control, when and wherever you want it.



Strand Lighting Limited • North Hyde House,  
Hayes Road, Heston, Middlesex, UB2 5NL, UK.  
Tel: 44(0)181 571 3588 Fax: 44(0)181 571 3305



**Strand**  
LIGHTING



## Royal Exchange Ready to Relaunch



Refurbishment work continues on Manchester's Royal Exchange Theatre.

Photos: Joel Fildes

Following the devastation caused by an IRA bomb just over two years ago, the Royal Exchange Theatre in Manchester is in the final stages of its £30m refurbishment programme. The bomb caused widespread damage to the city centre and ripped apart the fabric of the theatre, the force of its blast causing the huge pillars inside the Royal Exchange's Great Hall to physically move.

The building effectively became a shell. Three floors had to be gutted and the theatre module itself became a steel carcass with no glass, roof, seats or flooring to the galleries. A huge hole, two storeys high had to be created in the old workshop area to facilitate the building of an additional Studio Theatre so that when general building work began, the first job was to build the walls of the new layout.

Now, two years on, the latest and most energetic phase of development work is coming to a close. With a totally revamped main stage and impressive second space - as well as an elegant new restaurant and café bar facilities, the Royal Exchange is almost ready to relaunch.

Elegant new entertainment facilities will include a sumptuous foyer with an impressive sweeping staircase leading to an exclusive oak-panelled bar and restaurant. Deep blue stained glass has been fitted to the magnificent domes in the Great Hall to shower stunning shafts of blue light throughout the Hall. The use of technological developments from NASA will provide revolutionary lighting techniques, adding dramatic emphasis to architectural features.

Central to the transformation of the Royal Exchange is The Studio - an interactive second space with a seating capacity of 120. Totally flexible, this theatrical box of tricks has been designed to match the boldness and inventiveness of the original Royal Exchange project.

Prior to the bomb, the company had launched its Second Stage Appeal, a major fundraising project, to raise matching funding for its lottery bid. This project became vital to its survival to finance major bomb refurbishment and as a result of sustained effort the company were awarded one of the biggest lottery grant awards outside London - some £23million.

The Oxford Sound Company were called in to handle the audio requirements and have specified a system configured around Meyer UPA-1Cs, UPM-2s, MSL-2As and USW-1s addressed through a Timax level and delay matrix system. Audio playback will be from Akai samplers and Denon MD machines with Yamaha and Lexicon reverbs via a Mackie 8-bus desk. Although the main elements of the lighting system are yet to be determined, Stage Electrics have supplied Strand EC90 and LD90 dimmers, together with all the socket boxes and connectors. The venue will reopen on November 30th with a production of *Hindle Wakes* by Helena Kaut-Howsen and L+SI will return to Manchester to review the new theatre at this time.



## Bose Extreme

Bar Extreme in Ipswich, has recently undergone a three-phase refurbishment of its entertainment technology installation. The refurbishment coincides with the addition of a new ground-floor extension to the venue, extending the capacity of the club to 340.

The new 'Extreme' system, which was specified by Laurie Pierce of Bose UK, delivers high quality sonic performance without distracting from the aesthetics of the interior. The main system, which delivers 122dB around the two-tier dance floor, comprises four flown Bose Panaray 502A enclosures, with two 502B Acoustimass bass units sunk into the adjacent brick fireplace, while a Bose Acoustic Wave Cannon is flown in the nearby main bar area. This main system is powered by QSC MX2000 amplifiers, and serviced by a Rane PE-17 five-band parametric equaliser.

The other areas of the club are also exclusively Bose, with 802s in both the new ground floor extension and the front bar, 301s within the upper bar-lounge, and 101s in the main entrance. All of these systems are also powered by QSC amplification, utilising Rane control and equalisation, and compressed via a BSS DPR-402 de-esser/compressor unit.

Meanwhile, Orritt Electronics, the Liverpool-based installation company, have recently supplied several Bose loudspeaker systems to the Blue Bar, a new theme bar on the Albert Dock development in Liverpool.

## Digital dimmers...

EC90SV  
Rack:01



Sophisticated signal distribution over ShowNet Ethernet eliminates costly DMX splitters and cabling. Category 5 wiring delivers your vital show information where it is needed.

 **Strand**  
LIGHTING

## Lights that move...



Using flexible DMX nodes to deliver data to moving lights. Strand control systems support 16 bit resolution for the highest accuracy. Preset focus and a host of fixture libraries make life easier



## People News

**Tom Littrell**, previously public relations manager for Vari-Lite, has moved to project director for Ignition! Creative Group, the corporate event company in the Vari-Lite International family. Littrell has a wealth of knowledge and talent that lends itself to the needs of Ignition!, and this new role will enable him to employ theatrical and creative skills previously under-used. In addition, **Jim Waits** has taken on the role of university outreach manager, replacing Brendan Quigley. Waits, with Vari-Lite for 19 years, was instrumental in the development of the University Outreach Programme.

Optikinetics have appointed **Glen Brown** to the position of regional sales manager for London and the south. Brown has been with the company for a number of years, previously as AutoCAD designer for their Trilite Structural Systems. Also new to Optikinetics is **Sharon Dunbar**, who joins the company as sales co-ordinator.

Autograph Sales, one of the UK's largest pro audio and entertainment technology specialists, announces two new staff appointments, reflecting the company's continuing growth and success.



**Gary Smith.**



**Richard Barman.**



**Diane Pender.**

**Richard Barman**, sales engineer with the company since 1992, has been promoted to a director of Autograph Sales, with overall responsibility for the company's sales and marketing. In addition, **Diane Pender** joins Autograph as sales and stock controller.

Following Bill Woods to VDC is **Gary Smith**, previously of PAG and Shuttlesound. Taking up a field sales role, Smith will be responsible for the continued development of both current and new business.

**Paul Fowler** has joined LightProcessor, and will be working alongside Graham Norman on international sales. Fowler previously worked with Lancelyn Lighting and Donmar.

**David Taylor** has been appointed to the board of directors of Theatre Projects Consultants, Inc. Taylor joined TPC in 1985 and now, as a senior project manager, he oversees and co-ordinates planning, programming, design and theatre equipment issues within the company. He has provided

set and lighting designs for many acclaimed theatre, opera, dance and television productions around the world and his technical theatre work includes productions for the Royal National Theatre, the Royal Shakespeare Company and the



# LGH Rigging Services

**Motors**

**Rigging**

**Control**

**Engineering**

**Training**

**Safety Equipment**



*LGH founded 1970*

*40 locations worldwide*

*Mainland Europe and North America*

*ISO 9000 accredited*

*Hire equipment - 50,000 items*

*Service, test & certification*

*Manufacture, engineering & design*

*Sales & training*

Three Mills Island Studios, The Island.

Tel: (0181) 215 1240



Three Mills Lane, London E3 3DU

Fax: (0181) 215 1243

NEWS IN LIGHTING+ SOUND INTERNATIONAL

English National Opera, as well as numerous West End theatres.

As part of a major strengthening exercise in the States, Strand Lighting Inc have appointed **Ernest Silva** as their new president, with immediate effect. The move will trigger a complete restructuring of the American

operation, spearheaded by a relocation of the Los Angeles-based business from its Dominguez facility to a more suitable site closer to Hollywood. Silva is a highly-qualified engineer, with a wealth of experience in running businesses in the commercial lighting and aerospace industries. He will be based in LA and will report directly to **Phil O'Donnell**, who now takes up the position of president and CEO of the Americas and Asia, with Strand Lighting Inc (Ernest Silva), Strand Lighting Canada (Donna Appleton) and Strand Lighting Asia (KK Mak) reporting to him. **Peter Rogers** will head up the production/marketing group and will also report to Phil O'Donnell. He will serve Strand Canada and



Owl's customer service team.

Strand Asia, as well as Strand USA.

ETC Europe Ltd have appointed **Liz Cecil** as a systems trainer where she will be responsible for demonstrating and training on ETC's full product range. Cecil joins ETC from Rambert Dance Company where, since 1994, she was a lighting technician working with Malcolm Glanville. Her familiarity and experience with ETC products was gained over two years operating the Obsession 600 with prototype European Sensor touring racks.

To cope with increased demand, Sussex-based Owl Video Systems has added to its customer support team. **Sue Phelan**, who has been with the company for seven years, and **Helen Fearnley** have been joined by two new recruits, **Shaun Marklew** and **Daniel Booker**. The strengthened team will be able to respond more efficiently to customer enquires and will allow Owl's team of sales managers to spend more time with dealers.



David Taylor.



Liz Cecil.

**Colours that change...**

Directly access colour and intensity from a single command. Smart, move only when told, colour attribute control eliminates gel string damage in blackouts.



**DON'T HIDE IT IN FOG ... HAZE IT!**

Half the size and half the price of existing wind machines, yet producing 70% of the output, the RE fan is the preferred alternative.

Enhance show lighting the safe, economical way with the DF-50 Diffusion Hazer.

LENNY KRAVITZ Photo by Steve Jennings



**A.C. Lighting Ltd.**  
 Unit 3, Spearmast Industrial Park, Lane End Road,  
 Sands, High Wycombe, Bucks HP12 4JG, England  
 Tel: +44 (0)1494 446000 Fax: +44 (0)1494 461024  
 E-mail: sales@aclighting.co.uk http://www.aclighting.co.uk



Showcom Audio, exclusive UK distributor of German-made Camco amps, will be showing the full range of Camco's DL and DX series amplifiers, along with demonstrations of Wincai - Camco's amplifier control software. Showcom will also be showing the 115M floor monitor from L'Acoustics. V-Dosc UK Rentals will also be exhibiting on stand, and visitors will be able to meet with Dr Christian Hill, the founder of L'Acoustics and designer of the V-Dosc system.

#### Showcom Audio - R18

Le Mark Group are launching a new special effect product - Studio Tak SE. Two new colours have been produced for use as a low-tack, reusable self-adhesive 'vertical backdrop' for use in keying-out parts of shots for digital overlay in films and television. Ultimate Blue and Green are available.

#### Le Mark - B14

## UK Light Jockey Final



This year's final certainly delivered the best of British. The final at the Ministry of Sound showcased the UK's top five LJs. All the finalists were regional winners from a starting line-up of over 60 LJs from all over the country, but as with any final there can only be one champion. After a defeat last year, former 1996 UK Champion Greg McLenahan (pictured centre) was out for revenge, resulting in a fierce battle of the Scans. Only a few points separated the concluding line-up, but McLenahan's programming of the Pulsar Masterpiece control board secured the return of his crown. Stuart Wardale (left) was runner-up and Chris Shead (right) came third.

McLanahan now goes forward to represent the UK in his first World Light Jockey Final where he will line up against Alessandro Aiello (Italy), Daniel Cardenas (Spain), Ron D Lite (Holland), Mario Hoffken (Germany) and Eric Le Guilly (France). The Final takes place at the Hippodrome in London on the 8th September during the PLASA Show.

## Whistle Down the Wind

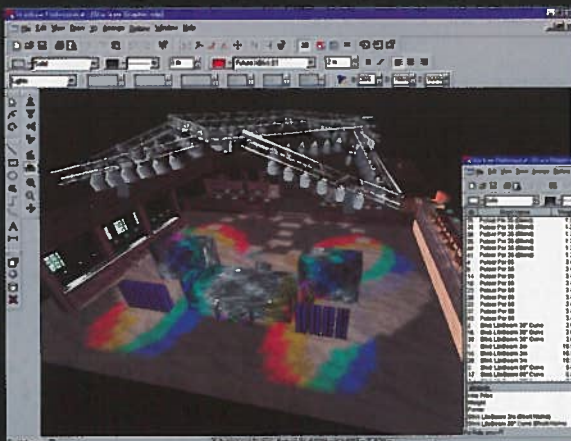
The new Andrew Lloyd Webber musical, *Whistle Down the Wind*, opened on 1st July at The Aldwych Theatre.

Having been awarded the contract in April, Theatre Projects supplied both a Vari\*Lite automated lighting rig including 10 VL6 spot luminaires and 16 VL5 Arc wash luminaires and a conventional rig consisting of over 300 ETC Source Four Profiles and six Robert Juliat 2.5kW HMI Profiles. Special lighting effects are provided by 120 Rainbow colour scrollers, 20 DHA double gobo rotators and various strobe units.

The conventionals are controlled via the house desk, a Strand Light Palette 90, and the Vari\*Lite automated lighting is controlled via a mini Artisan2 console. The lighting designer was Mark McCullough.

Due to the unconventional set, which required the up-stage crossover bridge and some of the counterweight sets to be removed in order to get it in, the lighting positions are less conventional than most productions. Assistant lighting designer Fraser Hall explains: "The nature of the set did make positioning fairly difficult. Not only did we have the vast freeway to contend with, which created a roof to most scenes eliminating the overhead rig for at least two thirds of the show, but also a BP screen up-stage and mirrored walls on both sides. This only left us two slots down stage each side and a small amount of flying space USR. This meant that we had to create positions using the front-of-house boxes in order to get light into the set, both at high and low level. Overhead we used a Vari\*Lite-led rig because again, access for focusing conventional lights was difficult and here the Vari\*Lite luminaires came into their own."

**New! Stardraw Data Library for Audio**  
9,000+ high quality symbols from 100+ leading manufacturers for only £495



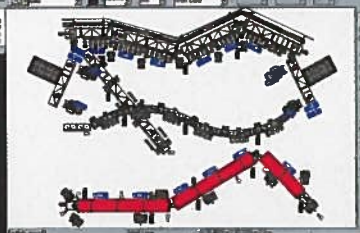
# Stardraw

The fastest way to visualise designs in 2D and 3D

See It All at **PLASA Stand No H32**

- Over 3,000 free symbols of lighting products, staging, truss, audio and video products, & more
- Powerful, professional 2D and 3D CAD drawing tools: draw absolutely anything in 2D & 3D
- Supports unlimited light sources: as many spotlight, point & directional sources as you need
- Read and write .DWG (up to R14) and .DXF files

Item	Qty	Unit Price	Total Price
1x Pulsar Pro 250	1	1,200.00	1,200.00
2x Pulsar Pro 250	2	1,200.00	2,400.00
3x Pulsar Pro 250	3	1,200.00	3,600.00
4x Pulsar Pro 250	4	1,200.00	4,800.00
5x Pulsar Pro 250	5	1,200.00	6,000.00
6x Pulsar Pro 250	6	1,200.00	7,200.00
7x Pulsar Pro 250	7	1,200.00	8,400.00
8x Pulsar Pro 250	8	1,200.00	9,600.00
9x Pulsar Pro 250	9	1,200.00	10,800.00
10x Pulsar Pro 250	10	1,200.00	12,000.00



- Automatic reporting creates complete bills of materials while you draw.
- Built for Windows 95. Drag and Drop to share data between applications.
- Unlimited text, number, gel & database attributes make powerful reports.

- Use any Windows bit-map as a Texture for realistic surface mapping
- Customizable toolbars, templates and FastKeys
- Create complex 3D objects using powerful Extrude and Spin tools.
- Stardraw Professional supports 2D and 3D



Starlite Systems Technology Ltd. - Cilona House,  
Caxton St North, London, E16 1JL, England  
Tel: +44 (0)171 511 4100 Fax: +44 (0)171 476 2922  
http://www.starlite.co.uk/news/news.starlite.co.uk  
e-Mail: sales@starlite.co.uk

**Stardraw 2D**  
New Version Available

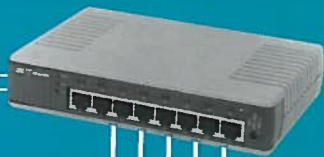
£295.00 + VAT  
30 Day Money Back Guarantee

**Stardraw Professional**

£695.00 + VAT  
30 Day Money Back Guarantee

# ShowNet connects it all...

Ethernet Hub



500i series Pentium II consoles working in conjunction with ShowNet nodes provide limitless control options - allowing designers and operators to communicate with moving lights, dimmers, scrollers and any DMX device over a simple low cost cable. Now enhanced to include Tracker™, Networker™ and CommuniquéPro™ software. Unlock the real power of the console. Ultimate control when and wherever you want it.



**Lights that move:**  
Using flexible DMX nodes to deliver data to moving lights.



**Colours that change:**  
Directly access colour and intensity from a single command.

EC90SV  
Rack:01



**Digital dimmers:**  
Sophisticated signal distribution over ShowNet Ethernet eliminates costly DMX splitters and cabling.



**ShowNet nodes:**  
Select displays, run remote faders, print hard copies and get all the information you need when you need it.



## Station to Station at Denmark's Train Club



Denmark's Train Club has a 'station to station' theme which allows visitors to go to any of its six themed bars, including London, Paris, Manhattan, Munich and Cuba. The lighting for the venue, which has been designed by Jonathan Smeeton, includes a flexible array of Martin Professional luminaires capable of covering both stage and dancefloor areas.

Seven Mac 500s and seven Mac 600s, plus eight Robocolor IIIs are used as stage lighting, switching

to dancefloor duties for the later part of the evening. The Macs are positioned on an eight-pointed star truss above the dancefloor, and can actually move backwards and forwards along the truss itself. Five centrepieces also adorn the truss, and these can be raised and lowered.

A second dancefloor features a unique stained glass dome backlit by Robocolor Pro 400s, with additional Pro 400s and Pro 518s for the dancefloor.

## Liverpool Assassins

The end of the academic year at The Liverpool Institute for Performing Arts saw a successful production of Steven Sondheim's musical *Assassins*, staged and performed in the Paul McCartney Auditorium by students on the Sound Technology and Performing Arts Degree courses. Sound design for the ambitious production was by Sennheiser Scholarship student Chris Beech.

With 12 channels of UHF (Ch 69) RF for the on-stage performers, two pit singers' mics, two shotgun stage mics, a further RF belt-pack and clip mic mounted within a dummy 1930s RCA broadcast mic stage prop, and a nine-piece band, situated behind the stage set, a considerable degree of complexity was required to configure an unobtrusive but effective degree of reinforcement and control.

FOH sound was handled by a Soundcraft K3 console, with its recallable Matrix system balancing the various submixes of the performers and instruments. Overall control of the whole system was achieved using an Apple Mac PowerBook running Opcode Studio Patches software. All devices were connected to an OMS Studio 5 MIDI interface.

Reinforcement was primarily handled by two D.A.S. RF215 full-range cabinets, either side of the stage, with a further two RF116 full range cabinets either side on the balcony level - all biamped - and two SUB 18 sub bass cabs under the stage. Additionally, eight D.A.S. Factor 5 installation cabinets were used to provide further corrective reinforcement.

# Have you mist the point...

**Does your hazer upset your performers? make your crew cough? leave a sticky mess?**

**The Atmosphere haze generator from MDG is different.**

- No residue
- No smell
- No pump noise
- Ultra fine haze
- Variable output
- Very low running cost

The haze the Atmosphere produces is pure white, has a texture like silk and hangs for hours. The machine is CO<sub>2</sub> powered and purges itself (APS) to keep the heating block free of fluid. Built like a tank and with a 5 year warranty. **The Atmosphere is different.**

MDG is in use on 19 out of the 20 shows on Broadway. Have a look at the haze and you will see why. Hire it from White light or buy it from Decoupe.

New for Plasa are the 'Touring' version of the Atmosphere and the all in one Ice fog - low fog generator.



Plasa G14

**Professional Tools from Decoupe**

Contact : Tom Mannings, Tel: 0181 885 2400 Fax: 0181 885 2423

Plaza '98  
STAND R80  
UPSTAIRS

The Laws of Physics / The Art of Listening

**EAW**  
EASTERN ACOUSTIC WORKS

One Main Street, Whitinsville, MA 01588 tel -- 800 992 5013 -- 508 234 6158 fax -- 508 234 8251 web -- <http://www.eaw.com>

Introducing the CA18 power amplifier from Crest Audio

road  
tested



Crest products are born for life on the road. Back in 1979, we began making amplifiers specifically designed for the demands of touring concert sound. Today, Crest amplifiers and mixing consoles are the first choice of leading concert sound rental companies. Now, Crest adds the all-new, 5000-watt\* CA18 to its acclaimed CA Series.

Crest Audio Inc.  
100 Eisenhower Dr., Paramus NJ 07652 USA  
TEL: 201 969 8744  
<http://www.crestaudio.com>



**CPL**  
SERIES

- 60 degree or 90 degree dispersion, passive/biampable.
- Trapezoidal enclosures available in black, white and unpainted 13-ply baltic birch
- Load-rated rigging points.

High Performance for the Contractor



<http://www.community.chester.pa.us>

**Community**

PROFESSIONAL LOUDSPEAKERS

333 EAST 5TH STREET  
CHESTER, PA 19013-4511  
PHONE: 800-523-4934  
FAX: 610-874-0190

UK Distribution by:

Sound Dept

19 Blacklands Way, Abingdon Business Park

Abingdon, Oxon. OX14 1DY

Tel: (01235) 555 622 Fax: (01235) 536 654

E-Mail: [soundsales@sound-dept.co.uk](mailto:soundsales@sound-dept.co.uk)

Y o u d e s i g n . . .

INTERNATIONAL  
MA Lighting Technology GmbH  
An der Halle 26  
33102 Paderborn  
Germany  
Tel: +49 5251 14 32-10  
Fax: +49 5251 14 32 80  
[www.malighting.com](http://www.malighting.com)  
[info@malighting.com](mailto:info@malighting.com)

UNITED KINGDOM  
Cerebrum Lighting Ltd.  
Units 4+5, Shannon Comm. Centre  
Beverly Way, New Balden  
Simey, K13 4PI  
Tel: +44 181 949 3171  
Fax: +44 181 395 6111  
[www.cerebrum.com](http://www.cerebrum.com)  
[sales@cerebrum.demon.co.uk](mailto:sales@cerebrum.demon.co.uk)

W e d e s i g n e d . . .

- a beautiful hardware control surface with high contrast TFT touch screens.
- intuitive software for logical control of up to 2048 DMX channels
- dynamic lighting control using the flexibility of motorised faders
- the most advanced member of the Scancommander/Lightcommander family



## GB Audio at Royal Lyceum



The Royal Lyceum Theatre in Edinburgh's West End has, in recent years, been restored to its full Victorian splendour, while also gaining some 20th Century touches. Edinburgh-based GB Audio has installed a Shermann sound system at the theatre, comprising flying vertical arrays of Shermann Cub 401 speakers placed directly in front of the proscenium pillars either side of stage. Each pair is angled upwards, matching the rake of the tiers of seating, enabling the sound to project to every seat without the need for under-balcony fills. The arrays, being close to the stage, also produce an enhanced stereo image.



Because of the listed status of the building, a customised flying system had to be designed which could support the array without touching a single decorated surface. Working with Ken Hughes, designer of Shermann loudspeakers, a flying frame was devised which could be manufactured at the Shermann factory in Wales and fitted quickly and easily on site.

The system is run via a 32-channel Soundcraft K3, which can be positioned in the rear stalls, gallery and control room, with comprehensive patching ability in the control room and rack room. A rack of Roland SRA800 power amps drive the system, with a range of front-end equipment from Denon, dbx, Tascam and Yamaha housed in a set of mobile racks.

The system is run via a 32-channel Soundcraft K3, which can be positioned in the rear stalls, gallery and control room, with comprehensive patching ability in the control room and rack room. A rack of Roland SRA800 power amps drive the system, with a range of front-end equipment from Denon, dbx, Tascam and Yamaha housed in a set of mobile racks.

## ABTT North Trade Show

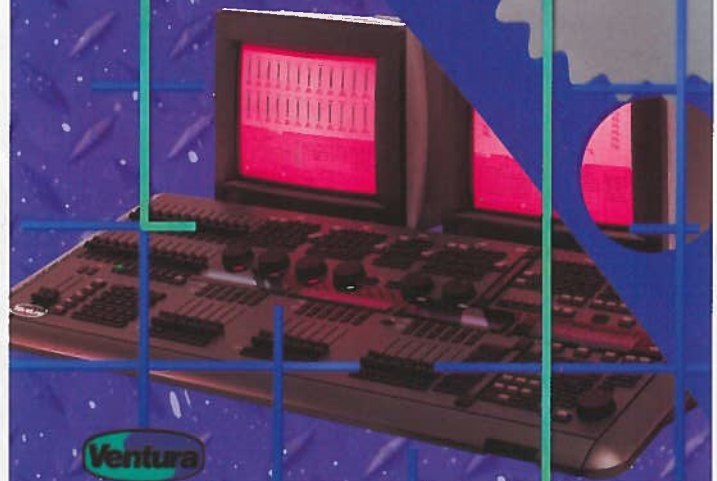
To commemorate the centenary of the publication of his definitive treatise on theatre architecture, the ABTT North committee is organising a one-day conference dedicated to the life and work of Edwin Sachs. The conference will take place on 12th November, 1998 at the George Hotel, Harrogate, starting at 11am and will coincide with the the ABTT North bi-annual trade fair which will be held at the Royal Hall in Harrogate on 11th-12th November, 1998. Exhibitor bookings are already well advanced for the event and admission is free to both the trade fair and the conference.

A biography of the life of Edwin Sachs entitled 'Edwin O. Sachs - Architect, Stagehand, Engineer & Fireman' will also be published to coincide with the event. For pre-publication details or further information about the conference write to: David Wilmore at Theatresearch, The Lodge, Braisty Woods, Summerbridge, Harrogate, North Yorkshire, HG3 4DN.

# Ventura<sup>®</sup> steps up a gear

## here's our latest version

## here's our customers' version



**Ventura**

"For the money Ventura is the best value desk around, and it's getting better and better"

Steve Hubbard - Gearhouse XTC

"I looked at other desks which claimed to be as powerful but they didn't provide the instant access, nor the ability to increase the intensity level of each HTP channel"

Graeme Sewell - Vortex Lighting

"The Ventura is quick and easy to use. It lets you do what you want to do and how you want to do it"

Alan McGregor - Lighting Designer



Howley Mill, Howley Road, Dartford, Kent  
DA2 7SY England [www.celco.co.uk](http://www.celco.co.uk)  
tel +44 (0) 1322 282 218 fax +44 (0) 1322 282 292  
email [sales@celco.co.uk](mailto:sales@celco.co.uk)  
Ventura<sup>®</sup> is a registered trade mark of  
Helvar Lighting Control Limited

NYC TAXI

3D30

DONT  
WALK

ACTORS  
SQUARE 8-26-98

# Live sound is changing



## Broadway is leading the way

Live sound designers are increasingly being asked for the impossible. Thankfully, the Soundcraft Broadway delivers.

Already working hard from Seoul to Scandinavia, Broadway combines an advanced implementation of digitally controlled analogue technology with a flexible, modular system design to take the largest and most complex productions in its stride, effortlessly providing exceptional sound quality and perfect repeatability, night after night.

What's more, it does it from a fast, intuitive and compact control surface that doesn't eat into valuable seating space.

Soundcraft is delivering the future of live sound mixing.

You'll find it all on Broadway.



**BROADWAY**

Soundcraft

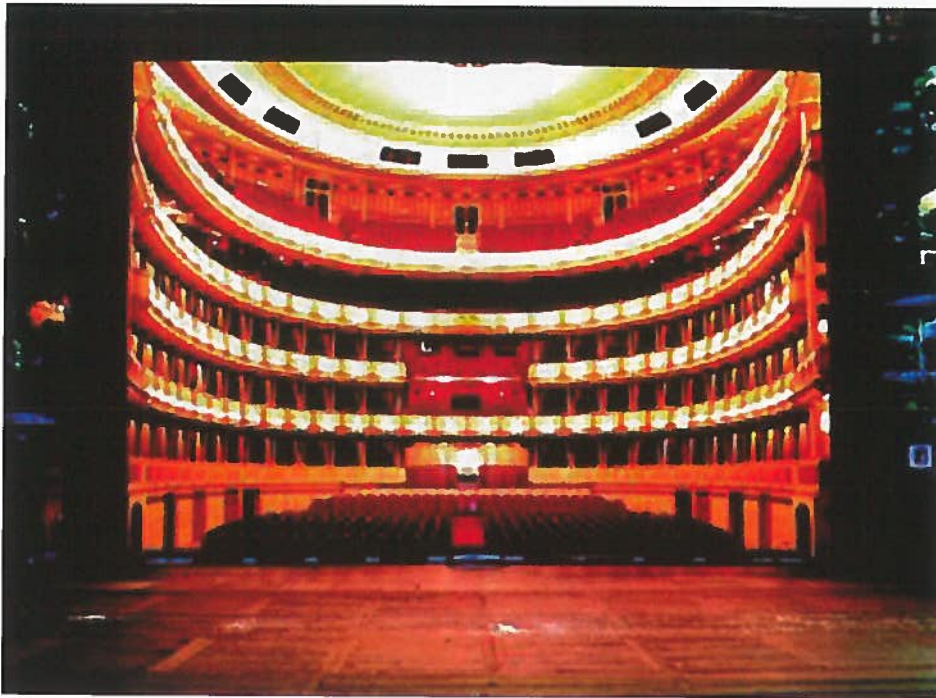
[www.soundcraft.com](http://www.soundcraft.com)

Soundcraft +44 (0)1707 665000  
Soundcraft US 1-615-360-0471

 **Soundcraft**

H A Harman International Company

## Strand 530 Upgrade for the Vienna State Opera



The Vienna State Opera, one of the foremost opera venues in the world and the home of the annual Vienna Opera Festival, has undergone in recent years a complete upgrade of its lighting and stage systems. In the first half of the decade, the entire stage mechanism and superstructure of the auditorium were completely refurbished to incorporate state-of-the-art computer-controlled hydraulic technology. Now, in the latter half of the 90s, it has been the turn of the lighting system to undergo an upgrade.

The entire installation was, by necessity, confined to the Opera House's five-week summer recess. The system installed in this time comprised 780 individual dimmer units for three, six and 10kVA and three-phase 'Nondim' switch units in 18 different dimmer boxes. The old system was replaced by an EC90 Supervisor system from Strand Lighting. All electrical cabling had to be clearly marked and re-run, while all the input and control cabling to the individual dimmer boxes and main control unit had to be completely renewed. Project manager for the installation was Strand's Bernhard Berger.

The seemingly straightforward replacement of the lighting control system presented its own difficulties. No time had been allowed in the tight schedule for saving the old lighting sets and presentations from the 12-year old Strand Galaxy system to the modern Strand 530 that was to replace it. This meant that Strand had to produce customised conversion programs to convert the complete repertoire of 120 Galaxy diskettes to the GeniusPlus software of the 530 system.

When installing the new data transfer cable it was felt unwise to rely entirely on DMX technology, with its unstable future, and so an extensive EtherNet network was installed which,

with more than 20 possible connection points around the stage area, links the dimmer room with the lighting management system and the stage. At the same time, the system was kept DMX-compatible to allow the continuing use of colour changers and faders. Considering all eventualities, the team installed the most crucial parts of the cabling system twice, and the distribution of the signal system throughout the entire Opera House facilitates lighting control from any suitable point. The installation was completed in time for the curtain to be lifted on *Les Contes D'Hoffman* (Hoffman's narrative from Jacques Offenbach), the first performance following the summer recess.

L+S spoke to Rudolf Fischer from the technical direction team at the Opera House, and Alfred Schmidl from the Austrian National Theatre Association - the two engineers responsible for the lighting upgrade.

Fischer explained the main requirements of the new system: "We have a limited view from the lighting control room to the stage, so it was important that all the fundamental control functions be displayed on the control panel itself. Furthermore, the existing colour changers needed to be integrated and the option of adding multi-function spotlight systems had to be available. Last but not least, an expansion from 48 circuits to an 800-circuit capacity was taken into account."

Schmidl continued: "We installed two 530 units, coupled to our one main control board, with a separate board as standard system back-up in case of the worst happening. We also have a Strand GSX System for the auditorium lighting. Our colour-changers, with CMY colour sets, presently run from an additional board but will shortly be controlled from the 530 system."

# DMXtra

why buy several boxes  
when one can do it all?  
10 functions in one unit:



### DMX-Merge

2 inputs, 2 outputs with overflow

### DMX-Patch

2 inputs/outputs with overflow

### DMX-Emulator

record/replay 128 DMX channels

### DMX-Safe

record/replay several scenes

### DMX-Fix

change all relevant DMX parameters

### DMX-Receive

view DMX data on LCD screen

### DMX-Analyse

measure DMX parameters

### DMX-Transmit

test your DMX equipment

### DMX-RS232

translates DMX into RS232 for your PC

### RS232-DMX

translates computer commands into DMX

Just select the function you need today

You'll never need anything else!

All this for only **£975**

## Stinger Version 2

Our multi-tasking show controller  
just got even better!

32 simultaneous shows, 8 inputs  
8 c/o power relays, 3 serial outputs  
32 DMX channels (8/16 bit)  
real-time, day-of-week programming  
program with mouse or PC

Visa and Mastercard accepted

Maris Ltd  
Unit 9C, Beechcroft Farm Ind  
Chapel Wood Road, Ash  
Kent, TN15 7HX, UK  
phone +44 1474 812999  
fax +44 1474 812777



Mad Systems, LLC  
10061 Riverside Drive #842  
Toluca Lake, CA 91602 USA  
phone (818) 601 9990

MarisEnsing@compuserve.com  
www.maris.co.uk

Soundcraft will be exhibiting a wide range of sound reinforcement consoles. The Series FIVE monitor console with eight VCAs incorporates 32 sends in a clear, intuitive layout. The Series FIVE FOH console is targeted at mid-range touring productions, as well as permanent installations. In addition, the new SM20 takes account of the continuing trend towards in-ear monitoring. It offers 40, 48 or 56 inputs into 20 outputs which are globally switchable to mono or stereo.

#### Soundcraft - G22

Gemini Sound Products will be showing their new BPM range of mixers, as well as the Platinum Series PS-700, PS-800 and PS-900 mixer. Also on show will be a new range of CD players and new look turntables, and the lighting product ranges of Lyte Quest and Ness Lighting.

#### Gemini - F58

## Small Firms Minister Opens Power Gems' HQ

Power Gems, one of the UK's largest suppliers of electronic ballasts for the motion picture and television lighting industry, is expanding its UK headquarters in Salford. Small firms minister Barbara Roche MP performed the opening of a new 12,000sq.ft office block, research and design facility and warehouse in July.

Barbara Roche commented: "Power Gems is an example of a successful small business. They have a highly motivated, skilled workforce. And they are successful because they are innovative, producing a product that is exciting as well as competitive."

Managing director Paul Tipple told L+S: "Currently we are a major provider of electronic ballasts both to Hollywood and the Indian film industry - the power behind the daylight lighting source for films such as *Godzilla*, *Titanic* and *Sliding Doors*. We are confident that our workforce is set to increase this year."



Small Firms minister Barbara Roche is shown a circuit board by Power Gems' assembly technician Brenda Swindon. MD Paul Tipple is pictured centre.

## Richmond Sound Design Forum For Discussion

Richmond Sound Design (RSD), manufacturers of sound and show control equipment, have announced the creation of a public internet mailing list specifically for discussion of the technical aspects of show control. The new list is intended as a forum for discussion of any facet of show control, providing a useful resource for advanced users and novices alike - [www.talklist.com/forms/show-control/](http://www.talklist.com/forms/show-control/).

Charlie Richmond, list administrator, told L+S: "It's a delight to host such a list. We have seen show control occasionally discussed on theatre sound and stagecraft lists, and in newsgroups. This now provides a forum for exclusive and non-partisan discussion of the field."

The Show Control Mailing List began quietly on July 31 and now has over 170 subscribers.

**CCT LIGHTING**

# Freedom

## Lighting the Way

With its numerous interchangeable options and cutting edge technology, the Freedom range can be tailored to your needs like no other lighting system.

To find out more about Freedom's uniquely flexible range of luminaires visit us on stand F34 at PLASA (Sept 6-9 Earls Court), or contact us at:  
CCT Lighting Ltd. 4 Tudor Court, Brighton Road, Sutton, Surrey SM2 5AE U.K.  
Tel: +44 (0) 181 770 3636 Fax: +44 (0) 181 643 9848 E-Mail: [office@cctlighting.co.uk](mailto:office@cctlighting.co.uk)

This award winning range, features -

- 600, 650 and 800 watt Profiles
- Condenser and Reflector Optics
- Fixed and Variable Beam Angles
- Quick Change Lens Tubes
- Fixed Angle Range 20° 30° 40° 50°
- 4 Zoom Tubes 7° - 58°
- 360° Rotating Gate
- Optional On Board Dimmers

Winners of...

**PLASA**  
AWARD FOR  
PRODUCT  
EXCELLENCE  
1996  
THE YEAR 1996



# Whats new pussycat...?

SEE US AT  
**PLASA**  
LIVE AT EARLS COURT  
6-9 SEPTEMBER 1998

*The brand new  
Commercial Sound  
DEDicated CATalogue*

*(DEDCAT) from CIE-Audio is now available, having its official  
launch at this year's PLASA Live show (Stand # T3)!  
You'll find a whole range of new products, including...*



- The new Inter-M PSR range of quality, high power, 2 Channel Stereo Professional Sound Reinforcement Amplifiers.



- The new PC range of Inter-M Stereo Powered Mixers, combining the features of a mixing desk with a high quality stereo amplifier.



- The versatile Inter-M PS range of Powered Loudspeakers; ideal for the extension of existing systems, hire installations, or as a portable system.

- The WA Series Portable VHF Wireless Amplifier Systems from Chiayo; incorporating a built-in wireless receiver, antenna, mixer, amplifier and speaker, for the ultimate portable sound system.



IN TO MUSIC..?

**interM**

*For your FREE copy, call CIE-Audio  
today on 0115-977 0075.*

**dedcat**

[www.dedcat.co.uk](http://www.dedcat.co.uk)

**CIE**

*...and remember, it's now all available On-Line in the new DEDCAT WebSite.*

selecon performance lighting

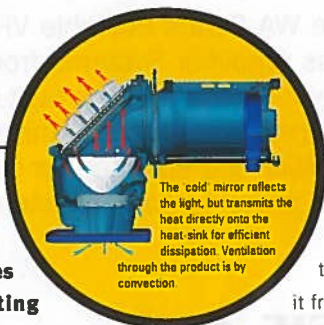


## the Pacific range

**The world's first base down axial profile delivers leading performance and operational features, cool light, and choice, creating new opportunities for performance and display lighting around the world.**

The PACIFIC range delivers the light output of traditional luminaires of twice the wattage — 600w produces the same or more light as a 1200w profile, 1000w produces the same as a 2000w. Adjustable from a centre peak to a visually flat field using Selecon's unique planetary gear system. Beam quality is "near condensor" like, with a 'whiteness' that stands out. Pattern projections are sharp and in-focus across the complete beam.

With a range that includes two Zooms, 12°–28° & 26°–50°, and four fixed angles of 20°, 30°, 40° and 50°, the PACIFIC range provides



The cold mirror reflects the light, but transmits the heat directly onto the heat-sink for efficient dissipation. Ventilation through the product is by convection.

the choice and versatility to deliver both the amount of light and the beam size you require.

Selecon's active heat management system takes much of the heat out of the light, and exhausts it from the luminaire away from heat sensitive components such as the lamp base, wiring and operational controls. The result is a luminaire that is safer and easier to use.

With precision die cast components and the latest in plastic technologies, the PACIFIC is a compact sized luminaire with all the safety and operational features you have come to expect from Selecon, including automatic disconnection of the mains supply as the lamp module is removed from the luminaire, two pattern holder mounting slots, 360 degree rotatable lens tube, interchangeable colour coded lens assemblies and lens tubes.



*"The design of the luminaire shall be such that it is not*

*possible to insert a lamp into a "live" lampholder of the luminaire. This requirement does not apply to luminaires intended for professional use."* Clause 17.6.1 of the European standard EN 60 598-1 applying to theatre luminaires.

**The PACIFIC range is fully compliant with CE requirements.**

**To trial the PACIFIC or for your copy of the PACIFIC CD and brochure contact your Selecon dealer**

**BELGIUM:** Luxilleg, phone 2 2427660, fax 2 2421154 **DENMARK:** Kunelco A/S, phone 35 822728, fax 35 824141 **FINLAND:** Foki Oy, phone 9 54956860, fax 9 54956861  
**FRANCE:** Avab Tran.AB, phone 1 42433535, fax 1 42430805 **ITALY:** Decima SRL, phone 49 8701655, fax 49 8701656 **NETHERLANDS:** Rolight, phone 53 4320644, fax 53 4301201  
**NORWAY:** Avab CAC AS, phone 22 113030, fax 22 112300 **PORTUGAL:** Cinemate, phone 1 7572357, fax 1 7592303 **SWEDEN:** Avab Tran.AB, phone 31 585200, fax 31 582999  
**SWITZERLAND:** Licon, phone 61 3113010, fax 61 3125471 **UK:** Selecon UK, phone 1425 672218, fax 1425 471398

## VLPS Light Westwood's 'Boudoir'



Daring fashion designer Vivienne Westwood had the skills of Vari-Lite Production Services London to hand at her fashion show back in June.

In order to launch her new range of perfume 'Boudoir', Ms Westwood chose The Gatcliff, a disused warehouse in Victoria (London), to stage a fashion show and party on the 25th June. The warehouse was transformed into a series of rooms including a catwalk and dining area, cocktail lounge/dancefloor and a shop display.

The dining area had 15 VL6 luminaires, 24 2k Fresnels (for the catwalk) and 20 Molefays to wash light the room. Each Molefay was gelled with a pale pink colour used especially to dispel shadows that might affect photography. The 40 tables were individually lit with pinspot lamps and 12 Source Four gobos were projected onto the walls.

In order to achieve the trashy abstract look that was needed in the cocktail area, blue and yellow colour washes came from four trusses (each with five VL6 luminaires) and 12 ETC four-bars.

A subtle effect for the shop display was achieved with a mixture of Minuettes, Codas and pinspot luminaires. Vari-Lite Production Services also externally lit the event using two 1/2k profiles with custom Vivienne Westwood gobos, six 1k HMI lamps and eight Par cans.

The equipment was supplied to clients Offshore Production Company, who co-ordinated the event. All rigging crew, mains installation, emergency lighting power and distribution for the kitchens was also handled by VLPS London. Lighting designer Paul Kutchera of VLPS London, was supported by Vari\*Lite operator Alex Moscrop and crew chief John Harris.



versatile

DS-15  
Dynamics  
series



so versatile

The DS-15 has become a unique loudspeaker system, adaptable to any sound reinforcement application, from fixed installation to PA.

Compact, easy-to-use, powerful, portable, reliable, efficient, lightweight and with an outstanding sound quality, the DS-15 has what it takes to be the most versatile cabinet on the market.

**D.A.S.**  
SOUND PRODUCTS

D.A.S Audio UK

Sennheiser UK Ltd, FREEPOST,  
High Wycombe, Bucks HP12 3BR  
Tel: 01494 551571. Fax: 01494 551549  
e-mail: info@sennheiser.co.uk

Web: www.sennheiser.co.uk

## Star Provider

Trantec will unveil the first working model of the new IEM 5000, a professional UHF stereo in-ear monitor system. Constructed in metal, in a 1U, 19in half-rack width format, it is microprocessor-controlled, with an easy-to-use data wheel. The IEM 5000 offers up to 64 frequencies in up to four banks, and is available on any UHF channel between 60 and 70 with a 32MHz bandwidth.

### Trantec - DJ 4

JEM are introducing the Stage Hazer. The DMX-compatible model is designed to deliver a wider dispersing haze and follows on from the launch earlier in the year of the smaller Techno Haze. Also new from JEM will be the Club 22 installation system. The compact smoke heads of the Club 22 can be mounted remotely up to 50m from the wall-mounted Service Module which houses a 10 litre fluid supply and twin pumps.

### JEM - E54/56



Star Hire provided stage systems for two events in June - Ozzfest at Milton Keynes Bowl and Threshers in the Park at Battersea Park. Both events utilised the StageLine SAM mobile stage system, which provides a 50ft x 40ft stage area, 29ft trim height and 12,000kg flying capacity, plus integral PA wings offering 7,000kg of PA. Star Hire also provided the main stage at Ozzfest - a 25m stage floor incorporating a 6.5m hydraulic lift, PA wings, new safe loading ramps and six trailer loading docks - as well as front-of-house towers, monitor booth, two towers for Sony Jumbotron screens, a disabled viewing platform and 40m of security fencing.

*A new star is born...*

**ARC 2 Architectural Line**



*Opera - Theatre - Event - Architectural Lighting*

PANI - Stage Lighting & Projection - Kandelg. 23 - A-1070 Wien - tel: +43 1 521 03-0 - fax: +43 1 526 42 87 - email: [info@pani.com](mailto:info@pani.com) - <http://www.pani.com>

SEE US AT  
BOOTH C18/C19  
AT PRODUCTION ARTS





**one fits all**

Where music and dance are concerned, the whole is often more than the sum of the parts.

## **The flexible solution**

You'll find just the same synergy in the new Philips Compact Source lamps (the GKV family) and the matching adaptor called The Sink™. Together, they can help you to create a perfect presentation with a higher light output on every stage.

Thanks to the versatility of The Sink™, the Philips Compact Source lamp fits virtually every ellipsoidal spotlight and PAR fitting. So you can keep your stocks of replacement lamps low. At the same time, The Sink™ ensures more efficient heat dissipation, which reduces pinch temperatures. This significantly increases the life of your Philips Compact Source lamps.

For further information, contact:  
Philips Lighting, Croydon on Fax 0181 665 5102  
or [martin.christidis@cro.lighting.philips.com](mailto:martin.christidis@cro.lighting.philips.com)



Philips Compact Source Lamp and The Sink™



**PHILIPS**

*Let's make things better.*

## Electrosonic at Reuters

Visitors to Tannoy's stand will see the new T300 SuperDual, its TX3 controller, and the TX1 controller for Tannoy i8 and CPA7 systems for the first time in the UK. The T300 is designed for a variety of applications where ultimate sound quality is essential. A completely new 12" Dual Concentric, SuperDual driver, features a double roll cambric suspension for greater low frequency dynamics control. The TX1 is an advanced electronic controller which will optimise the performance of Tannoy i8 and CPA7 speaker systems. Used in full range mode, it performs equalisation functions, extending significantly the low frequency response of the system. Tannoy will also have on show three nearfield studio monitors - the Reveal, a playback monitor, the System 600A and 800A - both nearfield monitors using 6" and 8" Dual Concentric drivers.

Tannoy - D30



Electrosonic has recently completed a number of multiscreen and videowall installations. Pictured above is a recent project undertaken at Reuters in London, where Reuters technical centre provides network management for their data network.

The specification included a display to show eight separate computer screen images from a choice of 30 inputs - which could range between VGA 640 x 480 up

to SXGA 1280 x 1024. The display can be controlled by touch screen either from within the control room, or from a visitors' gallery separated from the control room by a glass wall with PDLC 'electronic blinds'. For visitor use it is possible to use the central four screens to make one big image, and to select video sources in addition to the computer sources. Projection is by Barco Graphics 2100 LCD projectors.

**Suspension**  
**933**

# Modular Magic <sup>★</sup>

**Gooseneck**  
**915 ★ 935**

**Boundary**  
**845 ★ 847 ★ 961**

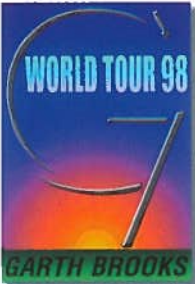
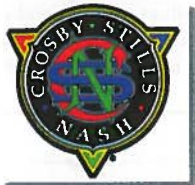
**Engineered Sound**

**a highly versatile range of miniature condensers**

with a choice of five polar patterns and a wide variety of mounting options. Engineered Sound provides unsurpassed audio quality and reliability, the perfect solution for the most critical of sound applications.

audio-technica.

Technica House, Royal London Industrial Estate, Old Lane, Leeds LS11 8AG  
Tel: 0113 277 1441 Fax: 0113 270 4836



# BANDIT STANDARD

In a series of standard Bandit criteria

Why does Bandit go to all the trouble of creating color labels to adorn every case for every performance? From up stage right to down stage center, from arena to concert hall, from Dublin to Taiwan, Bandit goes above and beyond for one reason only: Bandit cares. We care enough to believe that quality makes a difference and that good enough – isn't – whether the job lasts one day or one year. Do we have to go to these lengths to be the best lighting company in the world? Well, frankly, yes.

Bandit Lites. Where "the best it can be" is The Bandit Standard.

Worldwide Headquarters  
2233 Sycamore Drive  
Knoxville, TN 37921  
USA  
Phone: 423-971-3071  
Fax: 423-971-3072

Ithaca  
Herbert Road, Bray  
County Wicklow, Ireland  
Phone: 353-1-282-8829  
Fax: 353-1-282-8383

Unit 4C  
Portland Industrial Estate  
Hitchin Road  
Arlesey  
Bedfordshire  
England, SG1 56SG  
Phone: 44-0-1462-731-739  
Fax: 44-0-1462-731-570



**Bandit**  
LITES  
illumination worldwide

**Bandit Cares**

KNOXVILLE • NASHVILLE • SAN FRANCISCO  
LONDON • DUBLIN • HONG KONG • TAIWAN

[www.banditlites.com](http://www.banditlites.com)

With more than 10 years experience of writing software for the entertainment industry, Navigator Systems will be showing at PLASA '98 for the first time anywhere, a new product provisionally called HT Enterprise. This 'State of the Art' computer software will be a multi-site rental management package aimed at the larger corporate. The company also plan to release a new version of their rental management software Hire Track which will incorporate PAT testing and an automated diary.

#### Navigator Systems - B16

NJD will be displaying their range of lighting effects in an 80sq.m demonstration theatre. NJD's Merlin software will be in control of the light show. Also on stand will be their new range of trussing and accessories, as well as the Vortex Centrepiece, the features of which are being kept a closely guarded secret until the show.

NJD - E68

## Patents Database

With the success of the second edition of British Theatrical Patents 1801-1900, comes the announcement of a bigger, better and more ambitious project. The intention is to develop a research database of 20th century patents for both the UK and USA. The intrepid doctors Rees and Wilmore have already embarked upon the project and have made steady progress with the creation of a UK database covering the years 1901-1950.

The next phase of the project is a call to the industry to register your patent specifications on this international database. To qualify for inclusion on the database, patents must be specifically orientated towards some aspect of performance, for example lighting, staging or scenery, but specifically the theatre. Manufacturers wishing to register their patents on the database should complete multiple copies of the form given below as appropriate. It would also be appreciated if photocopies of the full specifications could be enclosed with the information. As the database develops it will form a useful quick reference database for the industry. By registering your own patents you will be making them more accessible to the industry, and you might just save yourself a lot of time re-inventing the wheel!

Country of Origin \_\_\_\_\_  
 Title of Patent \_\_\_\_\_  
 Class \_\_\_\_\_ Year \_\_\_\_\_  
 Number \_\_\_\_\_  
 Name of Patentee \_\_\_\_\_  
 Address of Patentee \_\_\_\_\_  
 Profession \_\_\_\_\_ Company (if any) \_\_\_\_\_  
 Brief Description \_\_\_\_\_  
 Full specification photocopy enclosed Yes/No

Please return this form to: Theatresearch, The Lodge, Braisty Woods,  
 Summerbridge, North Yorkshire, England HG3 4DN, Fax: (01423) 780497.

(the editors reserve the right to include or exclude patents submitted for consideration)

STAND  
NO H2

# The Fibre Optic Lighting People



Par Opti Projects Ltd,  
 67 Stirling Road,  
 London W3 8DJ, England  
 Tel: 0181-896 2588.  
 Fax: 0181-896 2599

## Leaders in Performance Technology

Lighting, Sound and  
 Communications Systems  
 for Performance Spaces.  
 Design, Manufacture, Installation.



**Northern  
Light**

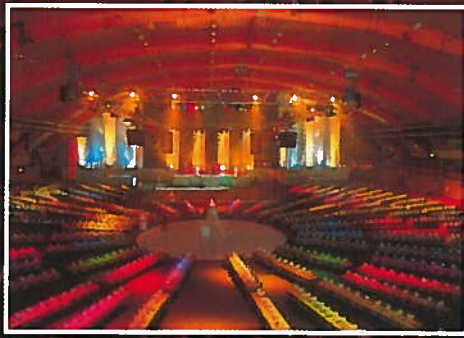
Performing Arts Technology

Edinburgh  
 Glasgow  
 London

Assembly St., Leith  
 Edinburgh EH6 7RG  
 Tel: 0131-553 2383  
 Fax: 0131-553 3296

[www.northernlight.co.uk](http://www.northernlight.co.uk)

E-mail: [enquiries@northernlight.co.uk](mailto:enquiries@northernlight.co.uk)



COURTESY OF BELSQUED AB



. LITE BOX .

. LIGHT BEAM .

. GS TRUSS .

. MINI BEAM .

. FOLDING TRUSS .

. NOVA BEAM .

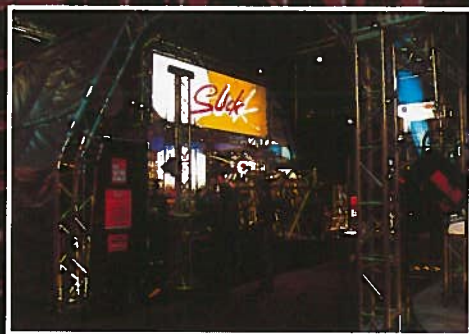
. MAXI BEAM .

. SUPER BEAM .

. MEGA BEAM .

# Slick®

A touch of distinction in the world of trussing



Slick Systems enjoys a world-wide reputation as a leading manufacturer of high quality aluminium trusses for stage and theatre lighting and sound equipment. Always innovative, always reliable and always the first choice for the discerning specifier.

Slick Systems  
Portland Street North . Leek . Staffs . ST13 6AH  
Tel 01538 372109 . Fax 01538 381315

## Rose Bruford's New Theatre In-The-Round



As one of the country's leading educational establishments offering training in the technical side of the industry, Rose Bruford College has recently opened the doors of a new purpose-built theatre in-the-round. The technical installation has been designed by theatre consultant Dorian Kelly from Illuminati in association with Phil Wigley from the college. As the type of productions is likely to be varied and innovative, the installation had to be as flexible as possible.

After over a year of negotiations with theatre consultant Dorian Kelly from Illuminati and Phil Wigley at Rose Bruford, Stageteq (UK) Ltd were appointed to supply and install the lighting system and a basic sound installation which will be augmented at a later date. A number of different products were considered for the stage lighting dimming and eventually the recently launched Light Processor Paradim<sup>e</sup> digital dimmer packs were chosen.

These offer the usual range of features expected from a digital dimmer, but the function which swung the balance was the facility to store lighting scenes in the dimmers and access these from remote panels via the analogue input socket. The original design called for a separate houselight and working light control system, but utilising a single Paradim<sup>e</sup> pack to perform this function represented a considerable cost saving and added greater flexibility as it can also be controlled from the lighting desk.

A total of 28 Paradim<sup>e</sup> hard-wired dimmers have been installed, 27 for the main stage lighting providing 162 channels of 10A dimming and an additional pack for the houselights. Internally-wired lighting bars and socket outlet boxes have been installed on all sides of the auditorium at four levels, all with 16A Ceeform sockets and providing a total of 340 socket outlets, 114 of which are wired direct to dimmer outputs and the remaining go through a Weiland patch bay.

After trying out a number of different control desks, the college opted for the latest Computite Micron 4D/ME console as this offers complete flexibility with 2,000 channels of control for generics, moving lights or scrollers with full



support for Ethernet, internal hard disk for continuous on-line back-up and two monitors. A range of luminaires have been supplied including 85 Par 64 cans and 25 CCT Minuette Fresnels which will be used alongside the college's existing lantern stock. The steelwork originally installed as part of the building structure was altered to provide additional hanging positions in the centre of the lighting grid, while still ensuring student safety which is obviously paramount in a building of this type within an educational establishment.

The budget at this stage wouldn't run to a full sound installation, so initially two pairs of JBL Eon 15P and one pair of Eon Subs have been supplied for the main PA and four pairs of Eon 10P powered speakers for effects. The facility of having built-in amplifiers for the speakers was the primary reason for choosing these speakers, as apart from the price advantage, for theatre in-the-round it provided an easy solution for locating speakers virtually anywhere in the building.

The intercom system had to be as flexible as the rest of the installation and this involved the provision of a Metro Audio dual-channel intercom system incorporating a wireless base station and two wireless receivers to cope with the plethora of different entrances, exits and technical areas in the building.

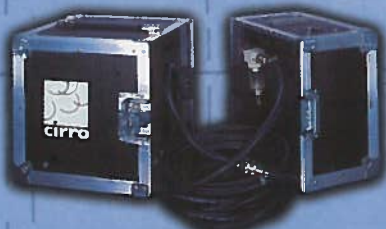
The installation was carried out by Stageteq within a very tight time scale to accommodate the students' end of year productions which were supervised by technical advisor Jackie Staines. The building proved to be as flexible as planned and a varied range of new and existing productions were

## CIRRO MIST SYSTEMS

PLASA STAND D22  
LEADING LIGHTS IN

NEW  
Strata CS6

Higher output mist machine transforms lighting effects for television, live events, or an atmospheric film set.



### Unique features

- ★ Sealed tank for transport
- ★ Output silencer
- ★ Compact two part system (hose not supplied as standard)

### Cirro MK3

Fine consistent mist for large film studio's, arena or stadium concert tours.



- ★ Radio remote
- ★ Removable tank

The Cirro systems are COSHH tested and use a pharmaceutical grade fluid.

VISUAL TECHNOLOGY

FOR SALES INFORMATION, PLEASE CALL

CIRRO LITE (EUROPE) LTD

3 Star Works, Salter Street, London NW10 6UL  
TEL: 0181 964 1232 FAX: 0181 964 3134



*Wybron is Expecting.*



*Join us in celebrating our new arrival.  
September 6-9  
PLASA, Earls Court, London  
Booth EP35*

**Do you ask for products really powerful, reliable and supported by a great technical assistance? The only answer is SGM.**



foto Blow-Up - Pescara - Italy

**Contact SGM or your local dealer for the complete info catalogue.**

**SGM**  
LIGHT TECHNOLOGY

General Catalogue

**SGM**  
LIGHT TECHNOLOGY

Via Pio La Torre, 1 - 61010 Tavullia (PS) - Italy  
Tel. +39 (0)721 476477 - Fax +39 (0)721 476170  
<http://www.sgm.it> • [info@sgm.it](mailto:info@sgm.it)



## 21st Century Lighting for Royal Festival Hall

The Royal Festival Hall, in the midst of London's famous South Bank Centre, is one of the most important centres of contemporary live performance in the UK.

The RFH hosts events 364 days of the year, many of them one-offs, spread across its six sites. Three halls - The Royal Festival Hall, The Queen Elizabeth Hall and The Purcell Room are complemented by The Ballroom, plus the two open air sites - Level Two Terrace and Jubilee Gardens - collectively offering a venue for every conceivable type of performance. The RFH's production schedule is thus constantly varied, diverse and challenging, encompassing everything from performance and physical art to conventional concert hall-style recitals and rock concerts. It also has two resident orchestras - the London Philharmonic Orchestra and the Philharmonia.

Head of production, Nigel March, has been at the RFH for five years. During that time, he has noticed a marked change in audience perceptions of what constitutes a 'good' production as the twentieth century draws to a close. "People expect well constructed and more exciting, thought-provoking visuals," he explains. "Even when it's a classical concert." Additionally, specifications from visiting shows and productions have become increasingly technically demanding.

March was convinced that the RFH had to move with the times, and started a campaign to upgrade the somewhat dowdy existing lighting rig, which was very much steeped in concert-hall traditionalism. The idea was to enhance this with a new system that would see them through to the opening of the new century and beyond.

After exhaustively researching the available options, March's proposal was given the green light by the Festival Hall's Board of Directors and he was free to proceed with his purchases. The RFH is now the proud owner of two Avolites Diamond III consoles, Strand 520 and Strand 530 consoles, 30 Martin MAC 500s and 20 MAC 600s.

Commenting on the control desks, March adds: "What I really needed were desks that combined all the functions of both types of board - traditional theatricality with hands-on directness - so the only option was to buy two of each!" The



Above, the new rig at the RFH and below Nigel March, production manager at the RFH.



Avolites console he found perfect for active, intuitive live control of fixtures. It also works like clockwork with the MACs and is quick and simple to programme. The RFH are also taking two 72-way Avolites ART dimmer racks.

Historically, the RFH has always used Strand consoles, and the familiar theatre-based cue-by-cue-by-cue operational structure was essential. Disk compatibility with other Strand consoles was

also an issue, as many shows programmed elsewhere on other Strand consoles come into the building. Furthermore, many of March's team of operators and engineers are already Strand trained. The Strand consoles were supplied via David Howe at White Light.

As far as the moving light element was concerned, March wanted a luminaire that the RFH could own. He looked at many types of fixtures before plumping for the MACs, which he found were quiet and came recommended by the many LDs whose opinions he canvassed. The MACs are on a lease-buy package with full 24 hour support arranged through Jan Brown.

March reveals that all companies - Avolites, Martin and White Light - bent over backwards to help him put together the deal. His 24 crew will all be training, rotationally, throughout the month of August at the various manufacturing company facilities as well as on site at the RFH.

The first show on which the new equipment was used was the Serious Summer jazz festival, which featured a week of performances from illustrious names such as Baaba Maal, Take 6, Hugh Masekela, Ladysmith Black Mambazo, Buddy Guy, et. al. It will also be used on the D'Oyly Carte's production of *The Mikado*.

## Let The Conductor Take Control



- Timecode
- MIDI
- DMX
- RS232
- RS422
- RS485
- Contact Closures
- Analogue Voltages
- Infrared

**AUTOGRAPH SALES**  
sound distribution for europe

Synchronise events across a huge variety of equipment and situations with The Conductor. The universal control and entertainment automation system that interfaces multiple operating standards and communication protocols.

UK Master Distributor  
102 Grafton Road London NW5 4BA UK  
Tel: +44 (0)171 485 3749  
Fax: +44 (0)171 485 0681  
sales@autograph.co.uk  
http://www.autograph.co.uk

A.C. Lighting Ltd. will, once again, be showing a wide range of brand new products at the PLASA show. The new Echelon lighting control console from Jands features the acclaimed Wholehog II operating software inside a smaller console. The award-winning WYSIWYG V3 software will be shown for the first time and Flying Pig Systems will be debuting the new remote control for the Wholehog II lighting control console. Both Spotlight and Manfrotto, from Italy, will be showing new additions to their lantern and grip ranges of equipment.

#### AC Lighting - G18/G20

A.C.E. are introducing a number of new smoke and haze products, including the Standard and Professional ranges and a line of Par cased smoke machines. Finally, for specialist applications, they will show a smoke machine the size of a cigarette packet.

#### A.C.E - B41



## ENO Opt for A&H's DR128

LMC Audio Systems recently supplied the English National Opera with an Allen & Heath DR128 digital installation mixer. The ENO, based in the London Coliseum, is Britain's only full-time repertory opera company and one of the world's few operatic ensembles.

Head of sound Philip Ashley had been searching for a more efficient way of distributing the specialised foldback and communication element required. The DR128 is a 12-input, 8-output unit able to combine gain, level and mix functions with gates, compressors and both graphic and parametric eqs, so squeezing great processing power into only 2U of rack space. Custom configuration through WinDR Software allows quick and flexible system design and once configured there is no requirement for a PC during operation. Ashley told L+SI: "I didn't need a great deal of inputs, but I required a large number of outputs, and without purchasing a custom-made mixer this seemed impossible. That was, until I was introduced to the DR128."

Pictured left are Iolo Pierce of LMC Audio Systems (left), Martin Daley of Allen & Heath (centre) and Philip Ashley of ENO with the DR128.

## EFX PLUS<sup>2</sup> 454™

Announcing a revolution in affordable moving effects for "Source Four™".

- Attaches to any "Source Four".
- Two planes of linear motion.
- Make ripples, water, flames, rain, etc.
- DMX speed and direction control of two large format wheels.
- Lightweight-only 5 lbs.
- Maintains use of template slot, shutters and barrel rotation.
- Silent operation (no fans).
- Uses all "Source Four" lenses.
- RPM Range: 0-2.5 RPM.

**CITY**  
**THEATRICAL**  
I N C

752 EAST 133RD STREET BRONX, NY10454  
Tel: +1 (718) 292 7932 Fax: +1 (718) 292 7482

Visit Our Web Site <http://www.citytheatrical.com>



See our complete line of accessories made specifically for "Source Four"....

"Source Four™" is used with the permission of Electronic Theatre Controls



# Stage COLOR 1200

# Stage ZOOM 1200

# Interchangeable.

# Stage COLOR 1000

# Stage COLOR 575

# The show light.

# Stage COLOR 300

# Stage LIGHT 300

# Ultra-compact.



**JUST A FEW MINUTES TURNS A WASHLIGHT INTO AN EFFECTS LUMINAIRE OR VICE VERSA.**

#### 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.

Trust Clay Paky to come up with an entire family of high technology moving-body luminaires. Advanced features include a revolutionary system which lets you transform the great Stage Color 1200 washlight into a Stage Zoom 1200 effects projector in just a few minutes, or vice versa. All Stage fixtures feature 8 or 16 bit control of their 450° pan and 252° tilt angles, automatic repositioning following accidental movements and a convenient moving-body lock system for easy transport. This family of luminaires gives you a unique 50 degree aperture, letting you create fantastic washes of perfectly uniform light even when working close up. Other exclusive new features in the 1200 and 575 washlights include 4-colour mixing (CMY + Amber) – giving a vast range of special pastel tones, and a GTC system for gradual variation of colour temperature.

Clay Paky Stage Line: innovation and traditional reliability to suit your every need.

**Distributor United Kingdom**

**PULSAR LIGHT OF CAMBRIDGE Ltd**  
Henley Road - CAMBRIDGE CB1 3EA  
Tel. +44 (0) 1223.366798 - Fax +44 (0) 1223.460708

**CLAY PAKY s.p.a.**  
Via Pascoli, 1 - 24066 Pedrengo (BG) Italy  
Tel. +39-035-654311 - Fax +39-035-665976  
Internet: [www.claypaky.it](http://www.claypaky.it)



**PROFESSIONAL SHOW LIGHTING**

Smoke Design are introducing a new range of aroma machines - aimed at a range of applications including museums, point of sale, theatres, clubs, shops and theme parks. There are four models available, and up to 25,000 different aromas.

#### Smoke Design - C35

A new national sales distribution company representing Selecon luminaires and LSC control and dimming products, will make its first appearance at PLASA 98. ELX will be hosting the world debut of the new Pacific Cool Light from Selecon which features Active Heat Management (AHM). The workhorse of the range, the Pacific 26-50, will also be on show, and, making its first appearance in Europe, is LSC's new ePak digital dimmer.

ELX - F14/H10

## Tannoy in The Tunnel

Big Beat, owner of Glasgow's most prestigious nightclub The Tunnel, has chosen a Tannoy SuperDual sound system to maintain the Tunnel's edge in the Scottish city's thriving and demanding club scene. The new dance floor system consists of 12 Tannoy T300 12" SuperDual speakers (plus two T300s as DJ Monitors), complemented by six Tannoy B950 sub-bass cabinets, each containing twin 18" bass drivers, which extend the bandwidth of the system down to below 30Hz. Extra high impact is added to the bass by an additional four Tannoy B400 horn-loaded bass bins.

After auditioning numerous loudspeaker/amplifier combinations, Big Beat's own in-house sound and light experts, in close collaboration with suppliers and installers Northern Light, eventually decided on the above Tannoy sound system, powered by Crest Audio amplification. The spec also includes a Pioneer DJ mixer, a Formula Sound AVC2 automatic volume control unit, Soundcraft Spirit Live mixing console, Klark Tek0.nik quad compressor/limiters and XTA DP226 digital loudspeaker processors.

One important part of the design brief was to fly the mid/high loudspeakers of the sound system, eliminate the existing 'dead areas', and create a more even and coherent area of coverage where the club's atmosphere can be experienced by all patrons, not only those on the 'hot spots'. All of this had to be achieved with a system physically smaller than the previous one. The club's owners no longer wanted a substantial part of the dancefloor taken up with intrusive 'black boxes'. Sound systems set up in this way invariably need to be run at extremely high levels in order for the sound coverage to reach the furthest reaches of the room, making sound levels close to these 'stacks' uncomfortable.

## Sound for São Pedro



The 800-seat Teatro São Pedro, founded in 1917 and the second oldest theatre in São Paulo, Brazil, has recently benefited from the installation of a new sound system from Dutch manufacturer Stage Accompany.

José Nepomuceno of Acustica & Sonica was responsible for the project, and chose the Stage Accompany system for its clarity and high quality speech intelligibility. The system featured eight Performer P27 mid-high cabinets, eight B15 bass cabinets, four Entertainer E24s, two PR3 amplifier racks (with six PPA 1200 power amplifiers), four SA1600 amplifiers, four SA2310 graphic equalisers, four Leader L24 floor monitors and two Champ C29 full-range cabs. All the loudspeaker cabinets are loaded with SA's Ribbon Compact Drivers.

## VISION<sup>TM</sup> LIGHT ENHANCER 200

*When you need to see the light...  
Not the fog*

The light you project onto a stage can only be seen by the audience when reflected by surfaces. Most of the light travelling through the air is unseen - wasted. The Vision LE200 creates microscopic size particles of food grade mineral oil which are suspended in the air forming a fine mist. Almost undetectable, the particles reflect the light, enabling the audience to see the projected beams without the distracting fogging effect of conventional systems. The mist is harmless and due to the size of the particles requires far less fluid than conventional 'Smoke Machines'. Best of all, the Vision Light Enhancer is priced with the budget-conscious in mind.

- Now with increased output and fluid level window
- 110v Model also Available



A.C. Lighting Ltd, Unit 3, Spearmast Industrial Park, Lane End Road,  
Sands, High Wycombe, Bucks HP12 4JG, England  
Tel +44 (0)1494 446000 Fax +44 (0)1494 461024

E-mail: sales@aclighting.co.uk Internet: <http://www.aclighting.co.uk>



# Sensor

INNOVATION

ELEGANCE

RELIABILITY

DEDICATION



96 dimmers,  
96 RCDs,  
Two control modules,  
One Sensor rack.

The world's most elegant high performance dimmer — Sensor Dimming Systems from ETC. Elegant electrical and mechanical design makes Sensor uniquely easy to install and maintain, saving you time, and money. It saves space too — Sensor is the highest density high performance dimming system in Europe.

Sensor is completely modular. Plug-in dimmer and electronics modules provide endless system design possibilities, and service is simpler than on any other high-level system.

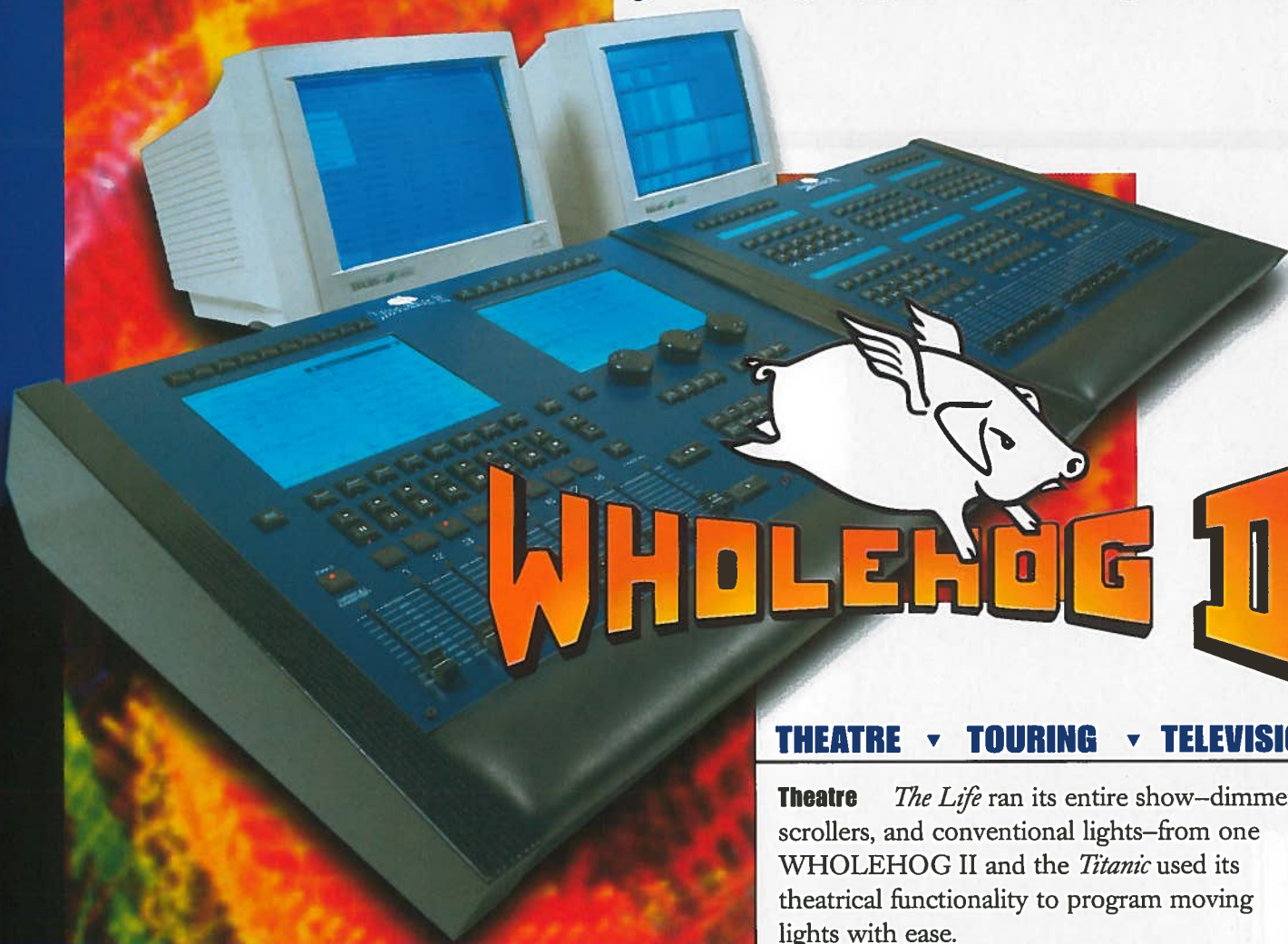
ETC is dedicated to elegant design. Call your dealer to see what Sensor Dimming can do for you.



Visit our website at [www.etcconnect.com](http://www.etcconnect.com)

NORTH AMERICA TEL: (+1) 608 831 4116 FAX: (+1) 608 836 1736 EUROPE TEL: (+44) 181 896 1000 FAX: (+44) 181 896 2000 ASIA TEL: (+852) 2799 1220 FAX: (+852) 2799 9325

# Why Be Limited By Your Desk?



## WHOLEHOG II<sup>®</sup>

### THEATRE ▾ TOURING ▾ TELEVISION

**Theatre** *The Life* ran its entire show—dimmers, scrollers, and conventional lights—from one WHOLEHOG II and the *Titanic* used its theatrical functionality to program moving lights with ease.

**Touring** *Sting* integrated the entire light show—from dimmers to moving lights—on the WHOLEHOG II while *Michael Jackson* used it to control 8 different types of moving lights.

**Television** *The 1996 Academy Awards* and *Eurovision Song Contest* both used the WHOLEHOG II's powerful programming tools and flexible playback options to get quick results.

**The WHOLEHOG II  
controls any show**



FLYING PIG SYSTEMS

Visit our website at [www.flyingpig.com](http://www.flyingpig.com)

### Distributed by AC Lighting:

Europe

America

Tel +44 1494 446 000

+1 818 707 0884

Fax +44 1494 461 024

+1 818 707 0512

or call your local dealer

## PLASA Gives DHA a Sporting Chance



OK, so our photographs of the event are not that good, but what you can just make out (above) is the PLASA dream-team scoring yet another run, whilst the DHA team fumble for the ball. Below right, a somewhat sodden DHA team return to the clubhouse for an early bath. Shame.

A rather unusual event took place recently on a small field in the heart of Jevington, a quaint village in East Sussex. Members of the PLASA staff lined up against a crap (sorry, crack) team from DHA Lighting for the first ever PLASA Stoolball Challenge. Stoolball is a typical Sussex game, not dissimilar to cricket (though certainly not as boring) which involves a mixed team of 11 running themselves ragged in a vain attempt to either get the opposition out or beat Brian Lara's run rate, before departing to the pub - the real object of the exercise. The stakes on this occasion were exceptionally high and involved some hard bargaining on the ad front depending on the eventual outcome.

Sometimes there are good losers and sometimes there are poor losers so we're not going to shame the rubbish team by printing their names here, but what we will tell you is that the game took place



on PLASA's home ground, that PLASA fielded part of the team that had recently finished second in its division (average age - 21) and that not one member of the DHA Lighting team (average age - 54) had ever played stoolball before.

If anybody in the industry would like to challenge the PLASA team to a game of Stoolball then don't bother - we're far too good! By the way, look out for DHA's ad on page 75.

## APRS Cancels Autumn Show

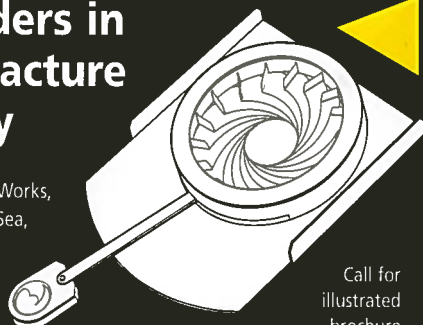
The APRS (Association of Professional Recording Studios) has cancelled its Audio 98 show which was to take place at Olympia in November. According to the APRS, the move follows feedback from exhibitors who felt that the show would further complicate an already hectic international schedule and who also expressed concerns about the effects the economy was having on business. The Association has decided to focus instead on providing a recording industry forum: seminars and workshops are already being planned, complemented by presentations of recording products in demonstration or masterclass settings and the APRS Awards Dinner at London's Cumberland Hotel. The main APRS exhibition will be held in the summer of 1999, a return to its traditional time-slot.

# WILKES IRIS

World leaders in  
Iris manufacture  
and supply

Wilkes Iris Co Ltd, Widco Works,  
London Road, Bexhill-on-Sea,  
Sussex TN39 3LE

Tel: 01424 217630  
Fax: 01424 215406



Call for  
illustrated  
brochure

# Global Economy

With manufacturing in the United Kingdom and the United States, we create innovative solutions to meet your demands for high quality products, competitive pricing and on time deliveries - anywhere on the planet. Contact TOMCAT today and find out why choosing the right company makes a world of difference.

**TOMCAT**  
STAGING, LIGHTING AND SUPPORT SYSTEMS

UK Tel: +44 (0) 151 482 3100  
UK Fax: +44 (0) 151 482 3111

[www.tomcatglobal.com](http://www.tomcatglobal.com)



Amptown Lichttechnik are introducing a number of new products, including the Controlite Washlight with integrated motorised barndoors, the Controlite Posifog Mk II smoke machine, the slimmed-down Controlite Washlight Junior and the Moving 4-Lite (4 x Par 36) also from Controlite. Also on show will be the established PML Washlights and the positionable fan system distributed in the UK by Lightsform Trading as 'Stormshaper'.

**Amptown - C22**

Acoustic Sound Systems (ASS) are exhibiting their Spektra range of cabinets which were first shown at PLASA 97. There are two new additions to the range - the SPM12 and SPM15 floor monitors - which now complete the Spektra family. Also on show is the Reflekta range.

**ASS - B30**

## Sarner International Completes Polaria

London-based Sarner International has recently completed Polaria - a new and highly unusual attraction, situated deep inside the Arctic Circle at Tromso.

Polaria is part of what is understood to be one of the largest Polar establishments in the world, where over 300 personnel will be based. The research establishment is housed in a large sea-shore building, designed to resemble a glacier sliding into the sea. The project is intended to be both educational and entertaining, featuring several zones. These include an exhibition area with hands-on interactivity, a 150 degree super-video theatre, a walk-through visitor



experience and several other display areas including a recreation of an Arctic research station with real-time monitoring from remote sensors.

As most people will be visiting in the summer, Sarner has included an Arctic winter scene featuring real water, floating icebergs, permafrost, snow storms, an animatronic polar bear and an Arctic coastal region.

For a stunning recreation of the world-famous Northern Lights, the company has developed a method of projecting moving images onto a specially layered screen producing a realistic three-dimensional effect.

## Short Courses at Derby University

*The School of Engineering at the University of Derby has just been approved as the Steinburg Training Centre for the Midlands. This working partnership coincides with the University's range of summer short courses which are supported by Steinburg and offer access to their latest products. Each course is aimed at the professional/vocational user and will be based at the Green Lane Studio or in the new Digital Audio Lab at the Kedleston Road site. Both facilities have been built to support the department's existing BSc(Hons) in Music Technology and Audio System Design and BA(Hons) in Popular Music and Music Technology. Based on these degree courses, the School of Engineering will offer the basic operational skills required to work in a recording studio to high end, hard disk recording techniques.*

*The University will also be running a series of Digital Sound Recording lectures throughout the year. For further details contact Stephanie Marsland at the University of Derby, telephone: (01332) 622798.*



# The Fresnel

fresnel

plano convex

pebble convex

111.2 - 212.5kw tungsten

700w MSR, 1 - 2K HQI

high build quality and performance

independently rotating barndoors

simple box construction

pretty pink writing

PLASA G14

**professional tools from robert juliat**



# Typical

**SEE US AT PLASA  
STAND R80**

## *The NEW KF400a powered loudspeaker: A natural extension of EAW's design philosophy*



- > **VA™ Technology** The world standard for arrayability and performance – applies advanced horn-loading concept to true three-way loudspeaker design. The cone-loaded midrange horn's flare follows a complex mathematical function, not straight lines.
- > **New Phase Plug** The first example of EAW's next generation of phase plug designs. Coherent summation of the wavefront in the horn throat enhances both the smooth sound character and arrayability of the system.
- > **Close Coupled Power™** CCP™ precisely matches the amplifier design to the specific system's driver/horn/enclosure characteristics to provide substantial headroom with total reliability.
- > **State-of-the-art Protection Systems** Real-time current/Voltage monitors apply complex compressor/limiters and soft clipping circuitry for virtually transparent protection that does not change the tonal quality, even when the system is driven to the highest output levels.



*Separating the power unit (center) from the control module (left) makes the CCP module upgradable for such advances as remote monitoring. Variable intensity LED's on the rear panel indicate the presence and level of applied protection systems.*

- > **Ideal for Distributed Designs** No more amplifier/processor racks or their problems. Loop-through audio chain allows for the immediate creation of arrays from a single audio feed.
- > **Simplified Set-Up** Place loudspeaker systems to meet your SPL and coverage requirements, deliver audio and AC feeds, and enjoy the results.
- > **Serviceability** Access many elements of the Close Coupled Power Module simply by removing the back panel. When necessary the CCPM can be removed as a self-contained unit.



**Free Interactive  
Multimedia catalog  
on CD-ROM**  
Fully navigable  
Recommended products  
Nominal data

Call or e.mail us at  
[litperson@eaw.com](mailto:litperson@eaw.com)  
to receive yours.

In many ways, the KF400a powered loudspeaker system is nothing new. It's another example of EAW's commitment to total system engineering.

This is not "an amp in a box." The KF400a's Close Coupled Power Module is custom engineered to optimize these specific drivers and horns in this specific enclosure designed for use in a specific range of applications.

Which is the same philosophy that went into creating our Close Coupled Processors. And our passive filter networks. And every loudspeaker system we've ever made.

Because it's the system that makes sound. And now EAW – pro audio's premier system integrator – has put the power into the system.

*The Laws of Physics / The Art of Listening*



Howard Eaton Lighting Ltd (HELL) will be showing a number of new products including the DMXrelay, a 12-way rack-mounted, DMX-controlled relay unit for switching 10 to 16 amp loads, aimed at rental, touring and installation markets. Also on display will be the DMXswitch and Switch HP - DMX controlled switches for strobes, auxiliary equipment or individual amp loads. Finally, the new DMXiris is a motorised trim for Source Four fixtures.

#### HELL - D8

Opus Audio Developments will be showing their Opus Integrated System. The System includes Opus own dedicated systems controllers, cables, amplifiers and a wide range of speakers for custom applications.

#### Opus - R72

## Autograph Sponsors Donmar Season



Autograph Sound Recording are sponsoring the season of summer cabaret at the Donmar Warehouse entitled Divas at the Donmar, which stars Barbara Cook, Imelda Staunton and is the UK debut for the Callaway Sisters, who kicked off the season on 10th August.

The Donmar features many times in Autograph's 25 year history, firstly as landlord when the company needed central London storage space. In no time at all 'The Old School' room in Earlam Street (originally used to teach the kids from the cast of *Oliver!*), became Autograph's studio, recording sound effects for productions such as the 1974 stage show of *Dr Who & The Daleks*.

After the Donmar was refurbished in 1992 it became one of London's most innovative production spaces - with Sam Mendes at the helm. *The Fix* was the last show Autograph worked on at the Donmar, in 1997, co-produced by Cameron Mackintosh, and nominated for several Olivier awards, subsequently winning one.

## Marquee Break For The Border

Marquee Audio have designed and installed the complete entertainment package for Break For The Border's extravagant newly-built, three-level venue in Leeds. The contract was worth in excess of £100,000 and having worked extensively on improving the technology at Break For The Border's London operations last year, Marquee became favourites to service the new venue.

"Once the company had engaged our services we set up extensive demos," explained Marquee's managing director Spencer Brooks. "This enabled them to make decisions, and the fact that we ended up choosing a combination of RCF, Tannoy and Turbosound speakers emphasises that we will specify what is appropriate for the application."

The three storeys of the building are assigned to different functions - a dance and bar area in the basement; restaurant area on the ground floor - with Pioneer videowall projection - and a first floor balcony restaurant. Sanyo 25" monitors are used throughout the building and Marquee's complex video design also includes a Kaleidolight system with PC control of an Elca video switcher.

All lighting in the basement and ground floor area is from the Abstract catalogue and includes *Futurescan III's*, *Colour changers* and a *Galactic Moon* (run through a dedicated controller) with 16 Par 56 lanterns on lighting bars, controlled by a *LightProcessor Q12* 12-channel desk.

Pearl 2000 combines compact dimensions with plenty of power, offering full moving light control for up to 120 intelligent fixtures.

The new Pearl 2000, coupled with the award winning Graphics Tablet allows the user optimum speed and creativity.

# Pearl 2000



**2,048 Channels**  
**120 Intelligent Fixtures**  
**240 Dimmer Control Channels**

UK TEL: +44 (0) 181 965 8522 • USA TEL: 001 423 938 2057



15 playback masters to control 450 memories, chases or cue stacks

Colour VGA output fitted as standard

MIDI and Bass, Mid & Treble sound to light triggers

Shape Generator for instant creation of patterns & effects

Theatrical style keypad channel selection and playback control



## Dual Imagery For Chicago



The current summer tour of long-time music heavyweights Chicago uses a new lightweight scenic effects system from Los Angeles-based UV/FX Scenic Productions. The 40ft by 80ft backdrop and the front scrims (which weigh just 96lbs) were designed and painted in their invisible dual image style, which allows the stage to have one look under normal lighting and a completely different look under UV lighting. Lighting designer Ian Peacock is using 16 Studio Color fixtures and 19 Cyberlights from High End Systems, to add to the range of looks for the backdrop.

## Murphy's Maker Breaker Circuit

The Philanthropist and Firkin in St Albans, Hertfordshire, has become the latest Firkin venue to undergo a complete sound system refurbishment by Marquee Audio.

The refit coincides with the recent 'Murphy's Maker Breaker Circuit', which featured bands including Electrasy (who have since been signed to Geffen following appearances on TFI Friday, MTV and The O-Zone, but still regularly play at the Firkin!), Radiator and Huckleberry. Jointly sponsored by Murphy's, Melody Maker and EV Audio, the two-month tour took in many other major towns and cities over the length and breadth of the country. Further 'Maker Breaker' tours are already in the pipeline for spring 1999.

The installation at the Philanthropist & Firkin comprises a quality array of equipment, with a DDA CS-8 24-channel console, EV loudspeakers including four MTH-1 and four MTL-1 enclosures, together with a rack of processing which includes Klark Teknik graphics and a combination of Yamaha and Behringer processing.

## 'National Day' Singapore

Barely three weeks after the prestigious PALA show, Singapore demonstrated its own prowess in the realms of lighting and sound with a celebration of its National Day.

Singapore-based Chiap Seng Productions (CSP) and their sister company Song Chew Electrical make easily the largest contribution to the event - two massive structures of truss and lighting at the 60,000 capacity Outdoor Stadium. CSP already own a Total Fabrications six Tower outdoor roof, parts of which are integrated into the Stadium display. "But," admitted Winston Goh, director of TF Asia, "even their resources were stretched by this ambitious project. Set into the stands the two structures are trimmed to a full 15m at the front, a more modest 6m for the rear, standing on six towers each."

The finished structures were actually erected in late June and stand throughout the summer. With lighting exposed to the elements for such a lengthy period, servicing is an important consideration. Thus the larger main grid is constructed from TFL's folding Catwalk Truss which allows safe and easy access to underslung lamps. "Some 90 metres of Catwalk truss was needed," said Goh, "which prompted CSP to buy 36 lengths of the truss, plus a further six 18inch TFL roof towers to support it." The lesser grid, constituting over 100 metres of Triangular Folding Truss, is all made from CSP stock.



# Azure 2000

The Latest  
Stunning  
Creation!



Console

**The Azure 2000 offers power.**

More channels, fixtures, memories and programming tools at a price you can't resist.

2048 Channels of power for Nightclubs, TV Studios, Live Concerts, Theatrical Productions and Events combining automated and generic lighting control.



19" Rack

UK:  
TEL: +44 (0)181 965 8522 • FAX: +44 (0)181 965 0290  
USA:  
TEL: +1 423 938 2057 • FAX: +1 423 938 2059



**UV SEMINAR!**

PLASA '98  
WESTMINSTER ROOM  
EARL'S COURT

MONDAY  
7TH SEPTEMBER

GENERAL SESSION  
11AM TO 12.30PM

TUTORIAL SESSION  
1PM TO 5PM

**FREE!****HOW THAT WE HAVE YOUR ATTENTION...**

Welcome to the world of Ultra Violet!  
The seminar is open to all, but pre-registration for the tutorial session is requested.

**General session:**  
Covering all the aspects of UV lighting: Special Effects and the many different applications for film, developing technology.

**Tutorial session:**  
Provides in depth hands on training in the use of these cost cut and profitable products. Materials will be provided. A card for any screen or list!

CO-HOSTED BY  
TMB ASSOCIATES  
&  
WILDFIRE, INC

PLEASE CALL TMB ASSOCIATES  
FOR ADDITIONAL INFO AND REGISTRATION

**TMB ASSOCIATES**

PRODUCTION SUPPORT SERVICES

138 The Malvern Way, East Street, Birmingham, Midlands, B11 9PL  
Tel: 0121 2547672 Fax: 0121 2547671 <http://www.tmb.com>

**£2m Development for Sailors, Newquay**

The latest £2m phase of development at Sailors in Newquay has increased the venue's capacity to 2,000. Local suppliers PSD Electronics have added further Martin Audio loudspeaker enclosures to the extended bar and conservatory at the venue.

The new equipment is distributed into a number of zones. The front of the pub is divided into three distinct areas: in zone 1, the old enclosures have been replaced with six of Martin's small EM 15s (housing the 5" ICT driver) and EM 150 sub bass. Zone 2 has four EM26s, and zone 3 (the DJ area) has four EM 56s and a pair of Wavefront 2 x 15 S2 subs. Finally, at the rear of the pub are a pair of EM 26s.

Martin Audio equipment is also found in the nightclub itself: the four existing Wavefront 3 cabinets have been retained, but are now underpinned by a pair of WSX sub enclosures concealed under the floor. Six EM 76s have been installed at balcony level, with a pair of EM 26s providing under-balcony fill. The second dancefloor, at balcony level, now has the two WS2 subs which were previously on the main floor. The systems in all the top dancefloor and off-dancefloor areas are managed by multiples of Martin's EMX 1A system controllers, while the main dancefloor system is controlled by a combination of WX3 and WX3As.

**Armageddon in Madrid**

A whole contingent of British contractors lived through Armageddon twice on a hot night in Madrid on 15th July. Disney's film company Buena Vista International (BVI) premiered the new disaster movie 'Armageddon' with a huge outdoor screening for an audience of 5,000. The screening was preceded by a seven minute recreation of Armageddon by a Spanish pyro company that involved the demolition of buildings by dynamite, huge gas jets, drums of burning petrol and a good few fireworks as well.

Organised by the Madrid and London offices of BVI, the UK contractors were co-ordinated by production manager Andy Peat. The projection quality was superb, with a 7kW Xenon projector supplied by Bell Theatre Services projecting a 70mm film onto a 24m x 12m screen built by Star Hire. The special effects soundtrack was serviced by over 100kW of audio.

Dimension Audio were the main audio contractor supplying Turbosound Flashlight clusters for the main left, centre and right feeds, and 11 additional Meyer stacks around the audience to deal with the surround feeds. The three main clusters, weighing over 5,000kgs, were cantilevered out above the screen, 65' above the ground.

**New Formula**

Pro audio equipment manufacturer Formula Sound Ltd have formed a new company - Formula Apex Ltd. Under the joint venture between Formula Sound and Apex Sound Services, well-known in the leisure industry, Formula Apex will design and market equipment manufactured for the leisure industry and badged under the Apex brand name.

Tony Cockell of Formula Sound told L+SI: "We have been looking at the leisure industry for some time and we knew of Apex as a customer and were impressed by some of their recent products. They are looking for manufacturing expertise and backing to promote some potentially excellent products and a joint venture between the two companies satisfies both our needs." The two parent companies will continue to operate individually, with Apex concentrating more on the installation and service contracts of its own and Formula Apex products.

**Your Window of Opportunity**

Ready

**PLASA**  
 LIVE AT EARLS COURT  
 6-9 SEPTEMBER 1998  
 STAND **D28**

**X-Frame**<sup>TM</sup>  
 MediaMatrix<sup>®</sup>

**T**he newest member of the MediaMatrix<sup>®</sup> family, the X-Frame<sup>™</sup> is the perfect blend of power and simplicity. In essence, the X-Frame is a small-scale MediaMatrix mainframe. With two inputs and four outputs (expandable to ten inputs and twelve outputs) analogue and two channels of digital inputs and outputs, the X-Frame is unrivalled at controlling small and medium scale installations.



**T**he software contains over 5000 different audio processing devices that you can use in any configuration, plus the complete freedom to design you own. Even better, it's packed with hundreds of pre-designed audio systems, such as boardrooms, theatres and auditoriums so that you can be up, running and in control from the moment you get it. If all that wasn't enough, it sounds great as well.

**Designing and implementing an audio system that puts you in control has never been easier.**

THE SOUND OF EXPERIENCE<sup>SM</sup>

VISIT US ON THE WEB [www.peavey.com](http://www.peavey.com)

Peavey Electronics Limited • Great Folds Road, Oakley Hay, Corby, Northants, NN18 9ET, ENGLAND  
 Tel: +44 (0)1536 461234 Fax: +44 (0)1536 747222 E-mail: [mediamatrix@peavey-eu.com](mailto:mediamatrix@peavey-eu.com)



**PEAVEY**

ARCHITECTURAL ACOUSTICS<sup>®</sup>

Owl Video Systems will stage an impressive performance at PLASA. The display will include the SDV 1300 digital projector, Seleco projection cube and monitor videowalls, as well as the Tetrart Staging System and the award-winning Seleco SVP 350 video projector, in addition to the range of Sanyo and Thomson monitors.

#### Owl - A10

Audio Technica are showing a number of new products, including the long-awaited AT4060 vacuum tube microphone, which combines the engineering standards of the 40 Series, with vintage tube technology shown for the first time in the UK is the FreeWay mic system, the ATW1900 series - introduced to the USA at the start of the year and now introduced at PLASA with full European accreditation - and the ATW7000 series of multi-channel UHF wireless mic systems.

#### Audio Technica - H16



## Le Maitre in Moscow

A & T Trade of Moscow have supplied The Bolshoi Theatre with the following Le Maitre products: four LSG with G300s, four G300 and four G150 smoke machines.

The LSGs and G300s are used in the stage show to create a waterfall effect from about nine metres high (the waterfall width is 16 metres). The G150s are used to create the effect of a 'Cloud of smoke'. Le Maitre's Low Smoke Fluid is used in both cases.

## Heart 'n Soul Lottery Award

Heart 'n Soul, the UK's leading disability arts group, were recently awarded a lottery grant which facilitated the purchase of a complete PA package via the London branch of LMC Audio Systems. Formed in 1986, Heart 'n Soul, based in South-East London, aim to develop and promote learning disabled culture in popular and positive ways through performance, training, outreach programmes and media. The main performance company comprises 12 performers with learning disabilities who work closely with four professional musicians. A multi-purpose PA package was required that would be manageable and easy to operate: therefore it included products such as a 32-channel Soundcraft Spirit 8 FOH console, a comprehensive range of outboard equipment, Tannoy T12s as on-stage foldback wedges, plus Martin Audio W8Cs and W8CSs powered by Lab Gruppen amplifiers.

Visit PLASA and see Zero 88's newest stars...

**ALCORA**

and

**ELARA**

plus the newly developed

**Sirius**  
Off-Stage

off-line editing package.

Zero 88 at PLASA. We'll see you there!  
Stand F2, 6-9 September 1998.

zero 88

Zero 88 Lighting Ltd, Usk House, Llanfrynnon Park, Gwent NP44 3HD, U.K.  
Tel +44 (0)1633 838088, Fax +44 (0)1633 867880  
e-mail: sales@zero88.com, www.zero88.com

**NEW FOR PLASA 98**

## USED FLIGHT CASES FOR SALE & HIRE

Lowest Prices in the UK. Over 200 cases in stock.

### All Guaranteed

Roadtrunks from	£100.00
Hinged lids from	£40.00
Removable front & rear panels from	£40.00
Lift-off lids from	£60.00
Rackmounts from	£40.00
Lift-off fronts from	£60.00

We also wish to purchase used flight cases.

**FOR STOCK LIST Tel: (01827) 60009**

# A Family Tradition Continues



## Our Latest Addition...**SKYTRACKER**<sup>TM</sup>

Strong International<sup>TM</sup> proudly expands its family of entertainment lighting products with one of the best known names in xenon searchlights....Skytracker.

With its "special event" atmosphere and billion candle power brightness, Skytracker is a bright new addition to the family.

**Want to light up the sky?** Call Skytracker. Visit our website for more details or call 1-800-936-6832.

---

YOUR **LIGHT SOURCE**  
Strong Entertainment Lighting



**XENOTECH** SEARCHLIGHTS • **SUPER TROUPER** FOLLOW SPOTLIGHTS • **NOCTURN** ULTRA VIOLET VISUAL EFFECTS  
**SKYTRACKER** EVENT LIGHTING

In the dark about which lights to use? Call our 800 number or visit our websites: [XenotechUSA.com](http://XenotechUSA.com) [Strongint.com](http://Strongint.com) [Skytracker.com](http://Skytracker.com)

North Hollywood Office:

7348 Bellaire Ave. North Hollywood, CA 91605 Ph: (818)-255-0620 Fx: (818)-255-0626

paradigm (pàr'e-dim') noun - An example that serves as the pattern or model for the rest.

# paradim<sup>TM</sup>e

QPACK DIGITAL DIMMER

SEE US AT PLASA  
STAND E8

Setting the  
standard in  
digital dimming.



- Fully digital design
- Circuit breakers
- DMX512 and Analogue protocols as standard
- LCD display
- Scene and standby memories
- Selectable dimming curves
- 6x 10A, 6x 16A and 6x 25A models
- Single, 3 phase, Star and Delta
- Internal effects generator
- Easy internal access
- Processor controlled thermal management system
- DMX and self test functions



Hardwired, socket outlet and touring rack variants.



 **LightProcessor**<sup>®</sup>  
BRINGING TECHNOLOGY TO LIGHT

11 Fairway Drive, Greenford, Middx, UB6 8PW, UK Tel: +44 (0)181-575 2288  
Fax: +44 (0)181 575 9678 Email: info@lightprocessor.co.uk Internet: www.lightprocessor.co.uk



## Luxor's Imagine in Las Vegas



Garrett Caine, creative director of Thomas Gregor Associates, designed the intricate lighting system for the spectacular new show - *Imagine, A Theatrical Odyssey* - at the Luxor in Las Vegas. A brand new 1,200 seat \$27m facility, the Luxor Theater was built specifically for this Dick Foster Production. The biggest challenge Caine faced was working in a theatre that was not complete. Caine's team videotaped the rehearsals during the day and worked on the lighting at night. Although *Imagine* will run for a year or more, Caine created a permanent in-house system that is flexible enough for any shows that follow. "We used a variety of lights including High End Cyberlights and Studio Colors in order to guarantee flexibility in the theatre."

*Imagine*, which opened to critical acclaim, takes audiences on a journey through time. The 90-minute show is divided into three acts that are set

to music performed by a live orchestra. Audiences are transported from a mysterious lost world to an undersea garden, and finally to a futuristic world. Mystical illusions, floating undersea gardens, dancers, acrobats and bungee jumpers are just part of this show. The subtext of images in the imaginary worlds presented on stage - earth and fire, water and sea, space and future - allowed for a wide range of 'looks'. As with any magic show, lighting is very important. Caine worked closely with the director and illusion designer to place light where it was needed. "There are techniques that must be used in order to enhance the show while being careful not to reveal the illusions," said Caine.

Thomas Gregor Associates creates attractions for live performance, theme parks, retail developments and gaming establishments and develops integrated audio, video, lighting and show control systems.



"Products designed better by experience"  
For Hire or Sale

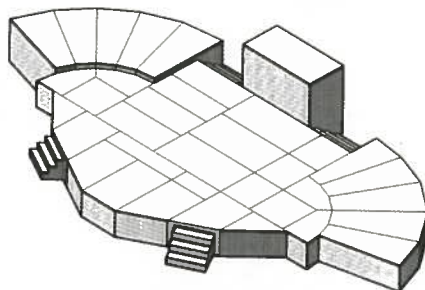
Wind Machine



Bubble Machine

Tel +44(0) 1454 615723  
Fax +44(0) 1454 615724  
email: uksales@MTFX.com  
Web site: www.mtfx.com

## Alistage



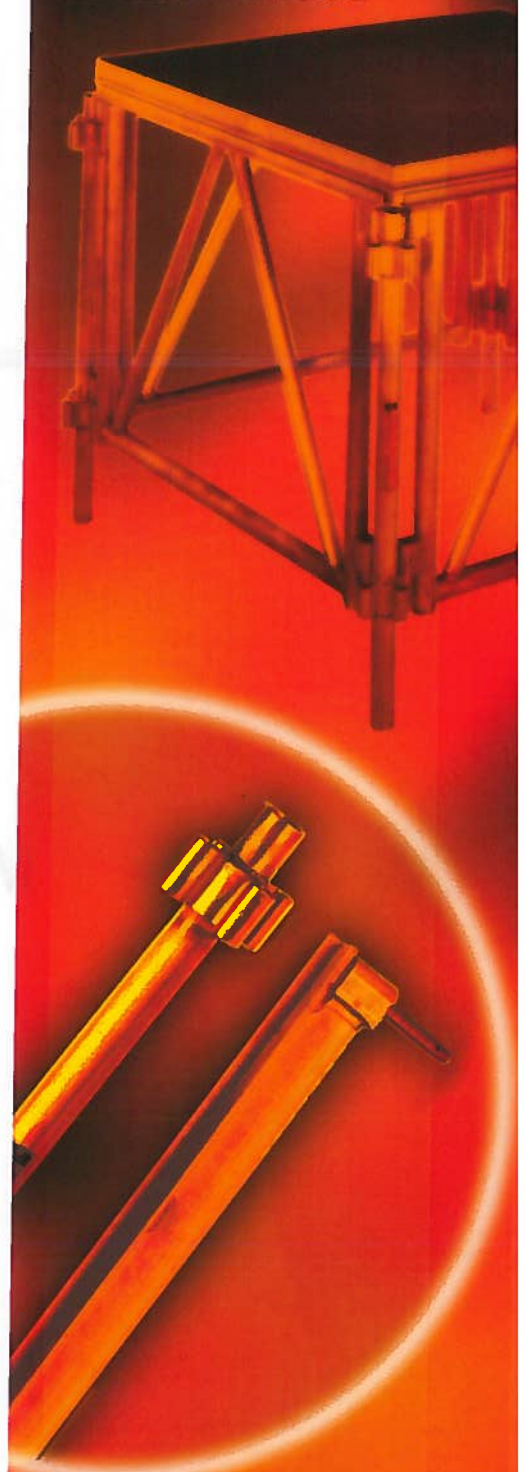
The extraordinary...  
(or the ordinary...)  
available for sale and hire.

Unit 2 Hotspur Ind Estate - West Road,  
Tottenham - London N17 OXJ

Tel: 0181-808 5005

Fax: 0181-801 9851

TOTAL  
FABRICATIONS



## Arena Stage Deck

- Standard 800kg/m load rating
- Modular system consists of 4 basic components
- Fast easy assembly, no tools required
- Adjustable working height from 1.5m - 2m
- 4ft x 4ft, 5ft x 5ft and 1.5m x 1.5m modules as standard
- Special variations & accessories available upon request

U.K. OFFICE

Tel: +44 (0) 121 772 5234 Fax: +44 (0) 121 772 5231

U.S.A. OFFICE

Tel: +1 (805) 676 3322 Fax: +1 (805) 676 1616

ASIA OFFICE

Tel: +(65) 352 5586 Fax: +(65) 356 3665

e-mail: info@totalfabs.com

Internet Address: http://www.totalfabs.com

JAT+T  
FABRICATIONS

REPLY IN LIGHTNING SPEED INTERMEDIARY

Luxor 2 Imagine in Las Vegas



## More than just a box



**The Martin Experience**



Century Point, Halifax Road, Cressex Business Park, High Wycombe, Buckinghamshire HP12 3SL, England.  
Telephone: +44 (0)1494 535312 Facsimile: +44 (0)1494 438669 Web: [www.martin-audio.com](http://www.martin-audio.com) e-mail: [info@martin-audio.com](mailto:info@martin-audio.com)

## Transtechnik Reach 30



Transtechnik are celebrating their 30th anniversary this year. The German manufacturer of lighting and control systems and studio automation, well-known in the theatre and television markets, began in a small Munich apartment in 1968, where founder Wilhelm Sterff and two colleagues began manufacturing relay testing devices for medical and defence applications. An early core market of the company, which is still a major part of their operations today, is the manufacture of on-board power supply units for electric train carriages (their units are aboard the Heathrow Airport Shuttle Express). Yet another diverse string to the company bow exists in the field of test systems and components for the aviation industry.

Their break into broadcasting came in 1972 with an introduction to studio technology from Bayerische Rundfunk, Bavaria's state broadcasting company, and from there, the company was quick to move into developing electronic lighting control systems, backing digital technology from the very beginning.

The company made real advances in the 1980s, when Sterff recognised the possibilities of improving converter technology by using high-performance semiconductors that were becoming available. A year of development work was spent bringing the new product line up to scratch, and the product design blazed a new trail with a low-loss variety of compact and lightweight converters. Now at the age of 30, Transtechnik employ over 340 employees at three locations in Germany and four abroad, including Transtechnik Corp USA, which has 50 employees.

## Loughborough's Future Gallery

Loughborough University was the setting recently for an unusual exhibition aimed at demonstrating the creative power of artists using new technology. For the setting of the exhibition, Drama lecturer Christine White wanted to create a futuristic, high-tech feel, while at the same time acknowledging the historical tools of art, and retaining an element of the organic to relieve what she terms "the white heat of technology." The exhibition, titled Gallery of the Future and having an 'Under Construction' theme running throughout, was inevitably to include a number of sound sources. "It was important to have a cohesive aural environment," explained White, "so I chose to build a water feature."

Condenser mics were used to pick up the sound of the water, as it flowed over elements of Trilite trussing. While DHA's cloud gobos played over the waterfall, the sound of the trickling water was reinforced throughout the gallery by 16 Bose 101s placed at close intervals to one another, creating a relaxing atmosphere very different from the usual feel of the gallery space. For the construction of the exhibits, Trilite trussing again became the focus, providing a clean and modern element to the displays.

Because of the nature of many of the exhibits, the gallery had to be kept reasonably dark. For one display, the Digital Garden, this was especially important, as spectators had to walk through the scenic computer screens making up the 'garden' and experience the light of the animations playing over the screens. This required the blacking-out of the whole exhibition space, while low-lighting the Trilite to allow people to see their way around the space. A pair of Clay Golden Scans were then used to project gobos around the floor and ceiling of the space to attract the attention of the visitors. Sound reinforcement for the Digital Garden exhibit and for the separate Video Room was also from Bose. Four 802 speakers in hanging cradles were flown around the Digital Garden, while two 802 speakers and two 302 bass units powered by Crest FA 2401 and 901 amplifiers were used in the Video Room.

# POWER Link

## ABSOLUTE POWER



- ✓ 5 Different Colours and Location Keys to prevent the possibility of accidental cross mating.
- ✓ Dead front contacts to prevent the risk of accidental touching.
- ✓ Multipoint contact ensuring minimal power loss
- ✓ 400 A Continuous Current Rating
- ✓ IP67 waterproof (mated condition)
- ✓ Secondary locking on cable male
- ✓ 500 Vac Insulation resistance
- ✓ Skin top cable clamp.

### New address

Via di Tor Cervara, 173 - 00155 Rome - Italy  
 Tel. +39 - 6 - 227251 r.a. - Fax +39 - 6 - 22725225  
 Internet: [www.pronet.it/link](http://www.pronet.it/link) E-mail: [link.pro@iol.it](mailto:link.pro@iol.it)



# To *fog*



**JEM ZR12-AL**

# ...or to *haze*?



**JEM Techno-Haze**

The choice is yours...

JEM offers two very different effects generators, for one very ordinary price.

The ZR12-AL is a compact, powerful fogger, combining traditional design principles, with JEM's legendary reputation for quality.

The Techno-Haze truly is a design innovation. Its effect is virtually invisible, yet no less dramatic; while JEM's design expertise has created their "Dispersal Chamber"-eliminating almost all residue.

Whichever effect you wish to convey, JEM can dramatically enhance your lighting, creating an intense atmosphere, or an atmosphere of intense drama...

# that *is* the question.



**"fog the planet"**

**JEM Smoke Plc,**

Wale Road, Industrial Estate, Boston Road, Spilsby, Lincs, England PE23 5HE.

Telephone: +44 (0)1790 754050

Fax: +44 (0)1790 754051

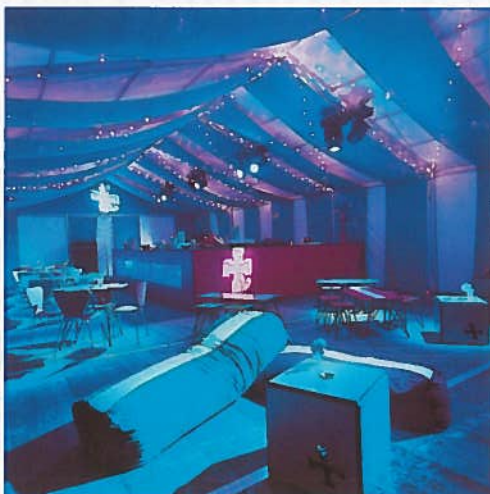
E-Mail: [smoke@jem.prestel.co.uk](mailto:smoke@jem.prestel.co.uk)

Internet: <http://www.jemsmoke.com/>

## LightProcessor Kick Back with Rizla

A LightProcessor QCommander has been in control of lighting within the popular Rizla Café promotional area that has been touring the summer's major festivals. This provided a chill-out haven for those needing respite from the exhausting activities of sampling modern festival culture.

The whole production package for the area, including an 18m x 9m marquee, sound system and trucking was supplied by Bristol-based rental company Fineline. It was set up by the company's Simon James and tech'ed for the latter part by Rob Watson. The Café interior was designed by Igloo in Manchester and included custom-constructed Rizla furniture. Lighting included eight Mac 600 washlights, two Mac 500 profiles with Rizla gobos, 10 Par 16 Birdies for work lights above the bar and merchandising areas, and six strings of fairy lights in the roof - all of which were controlled by the QCommander. A video projector also



showed a loop of old Rizla footage. Other ports of call included Ashton Court, Womad, the Megadog Beach Festival and V98 in Chelmsford.

## Tomcat Hoist and Rigging Workshops

Tomcat UK are beginning registration for their 1998 Hoist and Rigging Workshop, which will focus not only on hoist troubleshooting, theory and design, but also on rigging practices and truss use and theory.

Tomcat's Mike Wells, Columbus McKinnon's Jim Krull and Rocky Paulson of Stage Rigging will lead the various sessions. The workshop will be held at Tomcat UK Ltd in Bromborough, Merseyside on Friday, September 11th through to Sunday, September 13, 1998.

For further information contact John James at Tomcat UK Ltd, telephone 0151-482 3100.

Some major surprises are promised from new boys on the pro audio scene. Leaf. A new brand name. Force G joins the pro audio 3G brand and the other pro DJ Titan brand, all of which are now encompassed under the Leaf umbrella. New products include install and MI-style live and broadcast mixing consoles from 3G, new freestyle and traditional DJ consoles from Titan and a new range of Force G entry-level DJ consoles - and budget amplification.

### Leaf - A24

EMO, manufacturers of a wide range of professional audio and electronic equipment, are showing their latest additions at PLASA 98. These include the C-600 series (16A and 32A) mains distribution panels featuring Ceeform-style connectors for mains inlets.

### EMO - H18

# ALUMINIUM

- TUBE, BAR, PLATE & SHEET FROM STOCK SUPPLIED TO LIGHTING & THEATRE QUALITY STANDARDS
- STANDARD & SPECIAL EXTRUSIONS FROM STOCK
- DRAFTING, DESIGN & TECHNICAL SERVICES
- OUR PRODUCT KNOWLEDGE IS OUR STRENGTH
- WE SPECIALISE IN THE PRODUCT YOU NEED, WHEN YOU NEED IT, AT A COMPETITIVE PRICE

**CAD STOCK**  
DESIGN AND METAL  
LIMITED

57b, Heming Road • Washford Industrial Estate  
Redditch • Worcestershire  
Tel: (01527) 521537 • Fax: (01527) 524439  
E-Mail: 101622.1026@compuserve.com

Star RATS offer the highest quality rigging equipment, personnel and services for entertainment and corporate events.

# STAR



RIGGING AND TECHNICAL SERVICES

For more information contact:

Star Rigging & Technical Services Ltd  
Milton Road Thurleigh Bedford MK44 2DG  
Telephone 01234 772288  
Fax: 01234 772278  
Quoting Ref. No. LSI98

**PLASA**  
LIVE AT EARLS COURT  
6 - 9 SEPTEMBER 1998

See us on stand J18

CM Hoists (1/2, 1 & 2 ton)

Control

Rigging

Truss

Fully Insured Riggers

Technical Consultancy

Load Sensors

Safety Equipment

The only thing we can't rig is your opinion

# The Chroma-Q colour changer,

*with compliments like these...*

**Peter Aarinson, Bally's Hotel, Las Vegas:**

We have around 160 Chroma-Q color changers installed in the Jubilee show. We run around 500 shows per year in a heavy pyro smoke and fog environment. Our Chroma-Qs have performed flawlessly every day. Our only maintenance consists of periodically blowing them clean with compressed air.

**Kevin Forbes, General Manager,  
Light & Sound Design Ltd:**

The 200 Chroma-Q colour changers we own are one of the best rental investments we have made.

**Vin Holme, Senior Production Manager,  
Stageworks Worldwide Productions:**

We turn them on at the beginning of the Hot Ice season at *Blackpool Pleasure Beach* and then turn them off at the end - they just work, two shows a day for six months solid.

**David Milly, Theatrical Lighting Systems:**

I purchased the very first Chroma-Q units ever produced and I must admit, I don't treat them very well. When I use them on tours I don't even store them in cases; I just hang them on fixtures stored in pre-rig truss. They work reliably and being able to store them in this way saves my crew critical time every day.

**Bryan Raven, General Manager, White Light:**

By purchasing over 150 Chroma-Q units we have expanded the number of our clients who have access to colour changer technology tremendously.

**Peter Miles, The Boss, Spot Co.:**

The Chroma-Q gives customers of The Spot Co. a lot more show for their money. Consistency, reliability and ease of use makes it great for us too.

*...isn't it about time you found out more?*

*Setting New Standards in Professional Colour Changing*

A.C. Lighting Ltd.,  
Unit 3, Spearmast Industrial Park,  
Lane End Road, Sands, High Wycombe,  
Bucks., HP12 4JG, UK

Tel +44 (0)1494 446000 Fax +44 (0)1494 461024  
E-mail: sales@aclighting.co.uk



<http://www.aclighting.co.uk>

A.C. Lighting Inc.,  
5308 Derry Avenue, Unit R,  
Agoura Hills, CA 91301,  
USA

Tel +1 818 707 0884 Fax +1 818 707 0512  
E-mail: sales@aclighting.com

## Laser Hire on the Up

Keith Flunder, managing director of Laser Hire Ltd, underwent some unusual training to ensure the smooth running of Birmingham 2000 theatre project's show for visiting G8 delegations.

The production by the Spectrum Drama theatre company took place at the Rock Face Climbing Centre, and included scenes with rock climbers scaling 80ft walls. Flunder, together with four of his crew, underwent a training course qualifying them to belay the climbers. The company managed the complete AV production, including soundtrack, projections and stage management. The show was one of the first outings for Laser Hire's new Pangolin graphics PC system which can create a storyboard of complete presentations, animated sequences and bespoke images.

## Reform Club Refurbished

Fern Audio will supply and install the sound reinforcement facilities for Brasserie St Pierre's new restaurant. The Manchester-restaurant used to be the home of the Manchester Reform Club. The refurbishment into a stylish restaurant/bar is being carried out by brothers Bernard and Francis Carroll at a reputed cost of over £850,000.00.

Fern are installing a multi-zoned system using a total of 30 Fern frs 106 cabinets and four sb 114 sub bass units. The construction process is currently being filmed for a fly-on-the-wall documentary by Granada, to be networked later this year. Fern are also responsible for the lighting design throughout the public areas.

## PLASA HQ Hosts Members' Open Day



PLASA's new Head Office in Eastbourne (pictured above - PLASA occupy the third floor, not the whole building) was the scene for an open day for PLASA members at the start of August, when the premises received their official opening. A number of PLASA members made the journey to the south coast, and were given a chance to meet and speak with members of staff and the PLASA Executive Committee and find out more about the day-to-day running of the Association and PLASA Publishing.

The move to new offices, which took place at the end of last year, has given the PLASA team the advantages of a modern, open-plan, purpose-designed office. The Association is currently working on expanding its range of services for members and is also developing closer ties with the DTI and policy making bodies to better represent its members.

Cirro Lite Europe will be showing their range of mist systems, most notably the two-part Strata C56 and the Mk 3. Also on stand will be the 40k and 70k Lightning Strikes and Kino Flo fluorescent systems.

### Cirro-Lite - D22

Decoupe are showing the new Cameleon Telescan 6kW HMI image projector which features double 75 image cassettes and dichroic colour mixing. There will be a new touring version of the Ivanhoe 2500W followspot from Robert Juliat and MDG's range of fog generators.

### Decoupe - G14

Denon will be showing their industry standard club CD player, the DN-2000F Mk3 and DN-2500F, along with the world's first ever twin DJ MiniDisc recorder - the DN-M2300R and the DJ MiniDisc recorder - the DN-M2000R.

### Denon - H42

Award Winning

# SNOBIZ

- Biodegradable
- Melts Like Snow
- 3-D Flakes
- Non-Static

Little Blizzard



Hurricane II

## The Dream Team

for evaporating snow effects

# Ultra Violet Snow

Available In  
UV PINK & UV BLUE

# CITC

2100 196th ST. SW #138 • LYNNWOOD, WA 98036 • USA  
(425) 776-4950 • FAX: (425) 776-5129 • WEB: www.citcf.com

Star Hire offer high quality technical services to the event industry

# STAR



# HIRE

If you would like to hear more about our services and receive a FREE copy of our video contact

Star Hire (Event Services) Ltd  
Milton Road Thurlough Bedford MK44 2DG  
Freephone: 0800 7314523  
Fax: 01234 772272  
quoting ref. no. LSI98

**PLASA**  
LIVE AT EARLS COURT  
6 - 9 SEPTEMBER 1998

See us on stand J18

Mobile Stages

Constructed Stages

Ground Support & Special Structures

Indoor Staging

Sound Systems

Temporary Fencing

Movie Screens

Corporate Visions

Plus many more services

"Engineering Entertainment"

SEE US AT  
LASA ON STAND C3



Ovation 4D

CompuCAD



Micron 4D

Spark 4D

# COMPULITE®

## Integrated Lighting Control

Main Office  
Compulite R&D  
3 Haroshet St.  
Ramat Hasharon, 47279  
Israel  
Tel: + 972 3 5401268/9  
Fax: + 972 3 5401276

BENELUX, Germany  
BEO  
Tel: + 31 294413646  
Fax: + 31 294413921

France  
Crystal Equipment  
Tel: + 33 01 46804883  
Fax: + 33 01 46813423

U.K.  
STAGETEC Ltd  
Tel: + 44 1753 553522  
Fax: + 44 1753 553122

Finland  
HED COM  
Tel: + 358 9682 866  
Fax: + 358 9682 8489

Italy  
Spotlight  
Tel: +39-2-76110081  
Fax: +39-2-744721

USA  
Compulite  
Tel: + 203 271 2030  
Fax: + 203 699 9704

and 30 other distributors world wide

w w w . c o m p u l i t e . c o m



## The End Goes for More Thunder at a.k.a.

Bristol-based loudspeaker manufacturer Thunder Ridge have returned to London nightclub The End, owned by artist, producer and DJ, Mr C, to install an additional sound system, this time at the club's new, adjacent restaurant and bar - a.k.a.

When The End opened in late 1995, the Thunder Ridge system (supplied by Sonix Concert Sound) was praised by Mr C as the best he had ever heard (see L+SI January 1996). It is no surprise then that the company were straight back in the frame when it came to the opening of a.k.a.

The new venue, designed by architect Douglas Paskin of Paskin Kyriakides Sands, who worked on the original club design, includes five of Thunder Ridge's new Eclipse loudspeaker cabinets, which are loaded with a 15" driver plus 4" compression driver, and offer variable dispersion characteristics. Low-end comes from four of Thunder Ridge's V-Sub 1000 enclosures, a velocity-ported bass device, while the Thunder Ridge/PSL combination used in The End continues at a.k.a with the use of PSL's new VE Series amplifiers (1200 and 2400 models). Music is sourced from a variety of formats, as well as relayed music from The End, is selected on a Crestron touch-screen control system via RS 232, linked to two BSS Soundweb 9088 processing units.

Thunder Ridge are exhibiting at PLASA 98, and can be found on stand K26 and in the Cromwell Suite, where they will be holding system demonstrations by appointment only.

## Jazz at Kew



No - it's not the Blues Brothers, it's Dave Cartwright and Phil Norfolk of Lighting Technology at Kew.

The annual series of Jazz concerts at Kew Gardens have become a regular fixture in L+SI's summer season thanks largely to the generosity of hosts Lighting Technology Projects who have a major role to play in the successful staging of the event.

Something of a veteran at the Kew performances, LT Projects have co-ordinated all aspects of this outdoor production for seven years now, and 1998 was as flawless as ever with LTP's Bruce Kirk designing the lighting for both the stage and Kew's Temperate House behind. The stage lighting featured a bevy of Parcans with a dozen Mad Lighting QScans (the former run through an ETC Expression desk, the latter through a LightProcessor QCommander) whilst the Temperate House was lit with a mixture of Irideon AR500s and discharge colour floodlights (again run from the ETC desk). Concert Sound provided the audio elements based around an EAW KF850 system with a Yamaha PM4000 performing FOH duties.

Clay Paky will be launching a new range of moving body fixtures, delivering performance levels and features designed to meet the needs of a wide variety of applications.

### Clay Paky - G46

A manufacturer of professional audio signal processing equipment, BSS will be launching a new graphic equaliser, the FCS-966, which is compatible with all sound applications.

### BSS Audio - S34

SCV London will be demonstrating the new sample sequencing product from Sonic Foundry, ACID. This allows the user to record, edit and sequence audio samples whilst all pitch or tempo shifting is handled automatically in real time. A selection of software and hardware from SCV London's other UK distributed lines will also be on show.

### SCV - J22

**LODESTAR plus**

the ultimate flying machine

**PCM**  
Prenton Way,  
Prenton,  
Wirral  
L43 3DU  
Telephone: +44 (0) 151 609 0101  
Fax: +44 (0) 151 609 0200

**PCM**

## Principal Staging

The portable system with a difference.

## Principal Furniture

Tel: 01869 324488

Fax: 01869 324012

e-mail : jemass@nildram.co.uk

BBC TELEVISION - THAMES TELEVISION - ROYAL VARIETY SHOWS - GRANADA TV

WEST END TOURING - HOTELS - DISCOS - OPERATIC

**PW Enterprises Ltd**

**Starcloths - Drapes - Sound - Lighting**  
Unit 11 Chelsea Fields Industrial Estate  
278 Western Road, Merton, London SW19 2QA

PW Enterprises Ltd are THE Starcloth company. Managing Director George Wetherill is the original designer of modular Starcloths. His vast theatrical experience and design flair have been used to stunning effect throughout the entertainment and leisure industry.

For more information contact George, Perry or June on  
Tel: 0181-646 6131 - Fax: 0181-646 5983

**WE'RE RIGHT BEHIND YOU!**

LIVE - MICHAEL BUREL SERVICES - CARLTON TV - TRADISHOWS - CLUBS/MARQUEES

Stage One Creative Services will be at PLASA 98, promoting their range of services. Recent projects include the staging for the hand-over of Hong Kong, the Opel Astra launch, the travelator for the British Pavilion at Expo 98, and the production of sets for Disney's media launch of 101 Dalmations.

#### Stage One - T48

Audio Projects are introducing a new range of amps from Carver. The PXM series will be available in three models - PXM 250, 450 and 900. Features include high pass filter, DC protection, clip eliminator, input sensitivity and LED indicators. They will also be showing a range of products from Furman, including the PB-48 and PB-480 modular patch bay systems, the HDS-6 and HR-6 headphone distribution system/remote mixer, and the PQ-3 parametric equaliser/instrument pre-amp.

#### Audio Projects - T16

## An Unlimited First Year

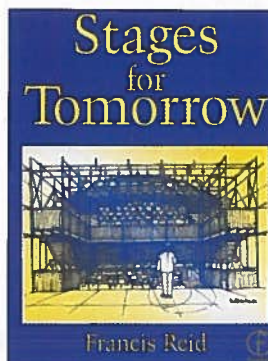
Lighting Unlimited was formed just over a year ago, to bring a high quality lighting service to the corporate market, and has enjoyed a successful initial period of operation. As part of the worldwide production services specialist, the Gearhouse Group, the company have concentrated on the quality of their equipment, service and creativity, with similar investment in staff - drawing experienced personnel from theatre, live music and corporate events backgrounds.

Projects undertaken during that first year have included conferences, product launches, corporate events and exhibition stands - all of which have drawn on the company's lighting design and project management team and in-house CAD facilities.

Based in an 8,000sq.ft premises in north-west London, Lighting Unlimited have an extensive computer-controlled and fully flightcased stock, with theatre luminaires including all the major manufacturers' moving lights such as the increasingly-popular Starlite Mk5, and Clay Paky's moving mirror units.

Control is all DMX512, packaged in dedicated touring rack systems with on-board mains distribution, and including control units from ADB, Avolites, Celco, Pulsar and Zero 88, to cover any size of lighting rig - moving or generic. On top of all this, the company also stock a range of trussing, from manufacturers ranging from Slick Systems to Genie Industries.

## Stages for Tomorrow



With his new book *Stages for Tomorrow*, Francis Reid, the well-known theatre lighting designer, lecturer and writer, has produced a unique insight into the technical theatre industry, putting the knowledge of the theatre professional into context in a readable and approachable style.

The book charts the key developments of live performance technology this century, and bravely offers a view of where the future lies. It covers every aspect of staging a live performance, from its relationship with photographic and digital media, old and new, to factors affecting the architectural design of buildings which house performances of ephemeral art. The technology of staging styles is covered, with ongoing engineering solutions for scenery, light and sound. The book also examines developments in costume design, marketing and training.

Francis Reid will be signing copies of *Stages for Tomorrow* (£14.99) during the forthcoming PLASA Show. The signing will take place on Monday 7th September from 2.30-3.00pm on the PLASA stand - F1. The second edition of Reid's *Discovering Stage Lighting* will also be available at the show. A wide selection of industry titles will be displayed on the PLASA stand in its dedicated technical book area.



**TECHNOTRONICS LTD**  
*Electronic Design & Manufacturing*



**PLASA 98  
STAND J56**

**Edison House 10 Ackworth Road, Purston, Featherstone, West Yorkshire, UK. WF7 5LE.**  
**Tel: +44 (0) 1977 600064 Fax: +44 (0) 1977 600268**

The logo for DHA Lighting, featuring the letters 'DHA' in a stylized, bold font. The letters are white with a blue shadow effect, set against a dark blue background that resembles a night sky with a bright light source.

Proudly Presents for .....

**PLASA**

LIVE AT EARLS COURT  
6-9 SEPTEMBER 199

Digital  
Beamlight 2

**With supporting roles played by newcomers:**

The Dimdat DC Controller  
A Redesigned Fibre Optic Light Source  
The Robert Juliat Double Gobo Rotator

**and introducing....**

A Cast of 25 Glass Gobo Designs

**NOW SHOWING AT PLASA STAND NO F8**

DHA Lighting Ltd • 284 - 302 Waterloo Road • London SE1 8RQ • Tel: +44 (0)171 771 2900  
Fax: +44 (0)171 771 2901 • e-mail: sales@dhlighting.co.uk • website: www.dhlighting.co.uk

## Cinevideo Puts Sennheiser to Work

Cinevideo's newly established Broadcast Audio Division has been doing extensive work in the field with its large stock of Sennheiser radio microphones. The broadcast hire company is Europe's largest and with the latest delivery of EM1046-based systems, can currently field up to 28 channels of Sennheiser RF, with either SKM5000 hand-held or SK50 belt-pack transmitters.

A number of recent high profile assignments include hiring in a Sennheiser system to resolve a critical RF problem for GMTV earlier this summer when they decided to take the whole show out on location for the first time. OB provider Telegenic solved the problem by hiring in a 14-channel EM1046 UHF system from Cinevideo. Other satisfied clients for the Sennheiser systems include John Clements, sound supervisor at Carlton 021 who used them to provide commentary, for



Dave Hawker of Cinevideo with the Sennheiser system.

both Sky and ITV, from the extremely RF-congested FA Cup Final, and sound supervisor Andy Rose who used them whilst filming Coming Out Party for Channel 4.

C Audio will launch the GB 402tx and GB 602tx, indicating that these popular amplifiers now have THX approval. On these versions the controls will not be user-accessible. Once the levels have been set by the installer they will be 'locked' behind a tamper-proof cover. Meanwhile, the SRX series will now benefit from the option of a computer remote control system. This will allow auto detection of each or any SRX model in the network, channel muting, channel level control and output level metering. Finally, C Audio also expect to launch a range of lightweight, 2U amplifiers.

C Audio - E34

Formula Sound have been in business 25 years this year and will be celebrating the event with a party on their stand. A number of new products will be on stand, as well as all their existing range.

Formula Sound - E26

## Award-Winning WYSIWYG Grows

WYSIWYG, the award-winning software package that incorporates three separate programs to provide the user with a complete paperwork, drawing and visualisation system for their lighting design, is proving popular with a wide range of companies and individuals.

Vari-Lite Production Services London have recently purchased a system to complement their existing WYSIWYG programming suite, whilst Southampton Guildhall and the BBC in London and Glasgow are both using the lighting design software package. Individual lighting professionals such as designers and programmers Durham Marengi and John Sinden are among the first people to purchase units for their own personal use.

ARE YOU  
NETWORKED?

[www.LightNetwork.com](http://www.LightNetwork.com)

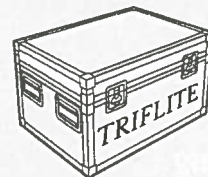
### LIGHTING CONSUMABLES & ACCESSORIES

RB Lighting Ltd

LAMPS  
COLOUR CALLS  
CUSTOM GOBOS  
TAPES  
BATTERIES  
CABLES  
CONNECTORS  
HARDWARE  
PYROTECHNICS  
ROSCO PAINTS

0181-977 9665

Unit 10, Teddington Business Park, Station Road,  
Teddington, Middlesex, TW11 9BQ. Fax: 0181-977 5687



## TRIFLITE CASES

Custom Made Flight Cases  
Polypropylene Cases  
Padded Bags

TEL: 01633 869 142 FAX: 01633 869 155

a division of TRIFIBRE CONTAINERS INTERNATIONAL LTD

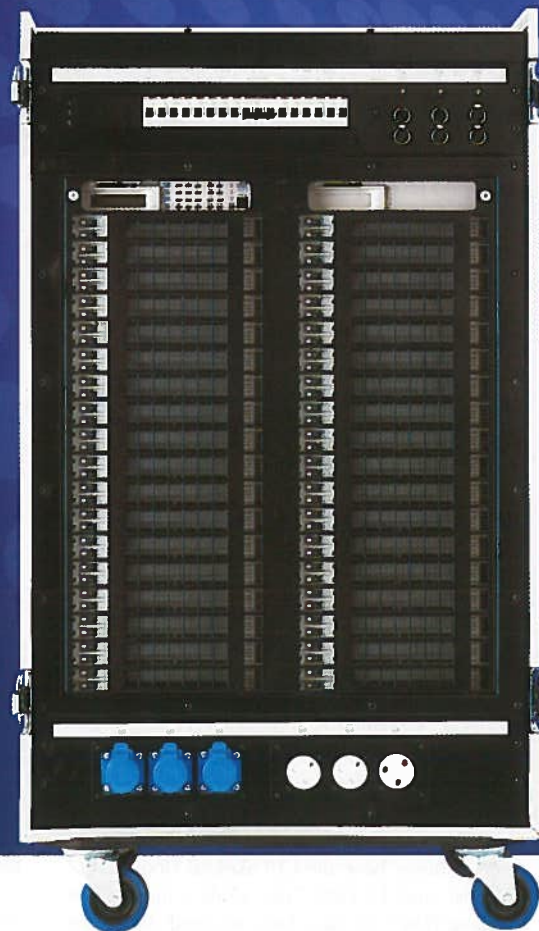
# Sensor

INNOVATION

ELEGANCE

RELIABILITY

DEDICATION



Sensor CE Touring Rack.  
48 or 72 dimmers,  
Four wheels.  
Built for the road.



96 dimmers,  
96 RCDs,  
Two control modules,  
One Sensor rack.

With nearly a million high-performance Sensor dimmers in service, in installation racks and touring systems, you'd expect us to get a lot of service calls.

We don't.

ETC's patented SCR modules contain robust, high current devices that virtually never fail. And Sensor's elegant design significantly reduces component counts and internal connections — weak points for most other systems.

And now, ETC introduces the European Touring Rack — Sensor reliability on wheels, for touring professionals. Dimming for when it absolutely, positively, mustn't go wrong.

ETC is dedicated to reliability. Call your dealer to see what Sensor Dimming can do for you.



Visit our website at [www.etcconnect.com](http://www.etcconnect.com)

NORTH AMERICA TEL: (+1) 608 831 4116 FAX: (+1) 608 836 1736 EUROPE TEL: (+44) 181 896 1000 FAX: (+44) 181 896 2000 ASIA TEL: (+852) 2799 1220 FAX: (+852) 2799 9325

US Patent # 5,252,058 IIS and international patents pending

**SUBJECT:  
QUALITY BRANDED LAMPS**

**DO YOU  
STILL  
PAY TOO  
MUCH...?**

Replacement bulbs from:

**OSRAM  
PHILIPS  
G.E.  
WOLFRAM  
USHIO  
RADIUM**

MULTI - LITE,  
international wholesaler  
for quality branded lamps with  
worldwide express delivery service.

Excellent direct access to  
all major European brands.  
Best possible prices!

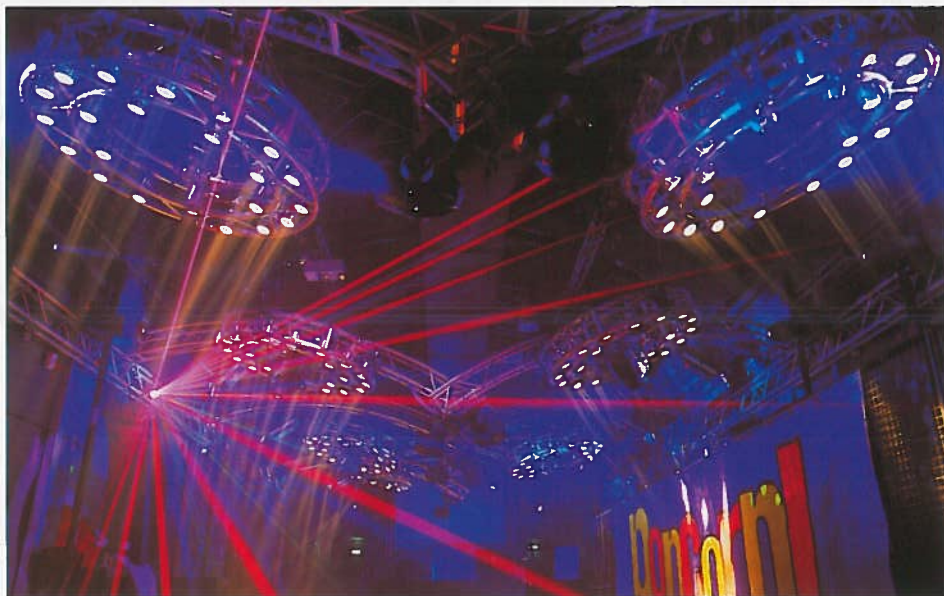
**BY THE WAY:**  
We supply immediately from stock!



**MULTI - LITE  
GERMANY**

Jenfelder Str. 74 - D-22045 Hamburg  
Tel.: +49 40 66 99 300 - Fax: +49 40 66 99 30 99  
e-mail: info@multi-lite.de  
Internet: www.multi-lite.de

## Technical Package is Heaven Sent



London's most celebrated gay club, Heaven, has undergone a complete refit of all rooms and bars in the building. Pure Productions handled the technical spec for Heaven's owners, Virgin Clubs and Hotels, overseeing all the lighting and audio elements of the installation. The lighting package is a combination of High End and Martin Professional effects lighting with Avolites control, whilst the audio is almost exclusively Turbosound and Crest. The audio contract was worth £240,000 to Jon Trotter's London-based Electracoustic, who have enjoyed a long association with servicing the club's requirements. The club was originally fitted with a TMS system in the late eighties.

This time around, Trotter returned to the successful Turbosound/Crest formula, skilfully reworking some of the old componentry into a vibrant new design based around Floodlight Skeletals. The aim was to provide consistency and uniformity throughout, with dedicated live and disco systems in the main room.

Three Turbosound Floodlight systems have been commissioned. In the main dance area, Electracoustic have sited 18 Skeletal Floods (TFL-760Hs) and 14 TSW-718s, while a further five existing TSW-124s have been reconed. These are arranged into six clusters of various sizes (four-cluster Floods either side of the stage, three-box clusters further back in the centre and the remaining two clusters set either side at the rear). The bass speakers are set under the stage - sitting in concrete bunkers which are floated on an acoustic membrane to control sound emission to the rear. Other Turbosound enclosures can be found on the stage itself - where their classic TFM-

300 and TFM-330 floor monitors are in use, while DJ reference monitors are provided in the form of a pair each of TMS-2s and TMS-5s. The main sound system is tuned and configured differently for live and disco modes. When the system converts from disco to live reinforcement, the full stage PA is activated while the centre clusters then rotate to provide a delay (of around 45ms) and the speakers at the rear are disabled entirely.

Judicious system management comes via six XTA DP226 six-way digital controllers, one assigned to each speaker stack, which provide the facility for built-in delays. The DP226 is MIDI and RS232 addressable and allows different EQ and delay settings to be stored for disco and live use.

The power engine has been provided by Crest 'P' Series amplifiers for the past five years, but Virgin requested a comparative analysis with other proprietary brands. Given Crest's sonic quality they ultimately saw no reason to break the continuity. Hence 45 CA and P Series products were brought in to provide a total of 70 amplifiers: CA 18s are running the TSW 718s, CA12s the Floodlight low-mids and the P4601s the high and high-mids.

Meanwhile, other areas of the club, the secondary disco known as the Star Bar, for instance have also been the subject of refits, again with Turbosound speakers providing the mainstay. In addition to the sound system, Virgin spent over £60,000 sound-proofing the rear wall and doors prior to the refurbishment, and this process has continued throughout the refurbishment.

*L+S will get to Heaven before the month is out and will run a major feature in a future issue.*

**photo: Nik Milner, courtesy Pure Productions**

## PCM Add Third Motor School

PCM has added a third two-day Motor School to its post-PLASA training week which runs from 14th to 18th September. PCM's Motor Schools are free of charge and consist of an intensive two-day exploration into the practical usage of the CM Lodestar hoist and all associated issues including health and safety and electrical theory. Additionally, this year, two of the Motor schools will include a half-day concentrating on trussing. There are still a limited number of places available, and anyone interested should call Debbie Jones on 0151-609 0101, or visit Stand E30 at PLASA for further details.

# CLAIR BROTHERS USES POWERLIGHT™



**"100% RELIABILITY"  
"GREAT SOUNDING!!"**

This spring, Clair Brothers Audio added the QSC PowerLight™ 2.0HV to their touring inventory for use with their 12AM Series monitors. During their busy summer touring season Clair received positive feedback on the PL 2.0HV's great sound and, best of all, experienced no field failures. With remarks like these and the backing from a company who's been supplying power to top professionals for over 30 years; it's no wonder the PowerLight™ 2.0HV is shaping up to be a great amplifier for Clair Brothers.

**"HEAR THE POWER OF TECHNOLOGY"**

## PowerLight™ Features

- PowerWave™ Technology
- Neutrik "Combo" (XLR & 1/4") and barrier balanced input connectors
- Stereo/bridging/parallel mode switch
- Advanced thermal protection
- Computer Control Data Port
- "Touch proof" binding post output connectors
- Variable speed fan
- Power standby control
- Clip Limiters (user defeatable)
- Detented gain controls with 2 dB steps for easy resetting
- DC, sub audio and thermal overload protection
- Patented Output Averaging™ short circuit protection
- Full LED status arrays



"PowerLight", "PowerWave", "Output Averaging," and "Hear the Power of Technology" are trademarks of QSC Audio Products, Inc. "QSC" and the QSC logo are registered with the U.S. Patent and Trademark Office.

**QSC™**  
**AUDIO**

[www.qscaudio.com](http://www.qscaudio.com)



HW International,  
167-171 Willoughby Lane,  
London N17 0SB

**FREEPHONE TO RECEIVE OUR PRO AUDIO CATALOGUE NOW!**

**0800 7311990**

FOR THE FULL STORY ON QSC AND  
INFORMATION ON OTHER QUALITY PRO AUDIO  
EQUIPMENT FROM HW INTERNATIONAL,  
CALL OUR FREEPHONE TODAY!



**THREE-SIXTY**

# WHAT GOES AROUND



In 1985 FAL launched the Polifemus, which would pan and tilt a par can through 360°. Now in 1998 FAL launch the Three-Sixty, a projector with colours and gobos that can pan through 360° and tilt through 300°. Time and technology may change but what goes around comes around - perfect movement from the FAL Three-Sixty.

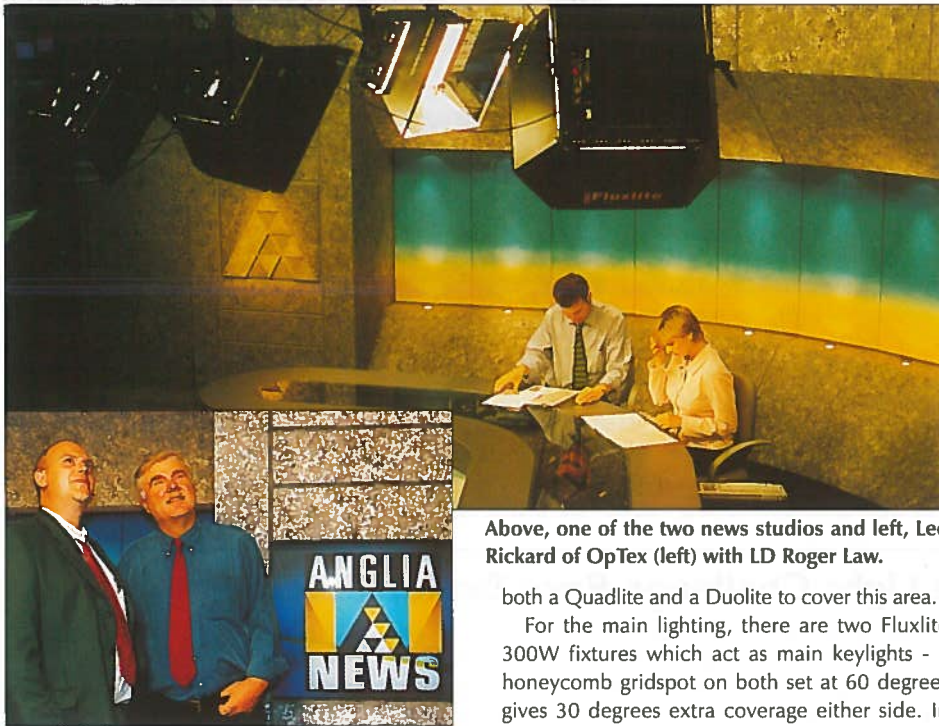
# ... COMES AROUND



**f.a.l.**  
The Light Masters



## Anglia Launches Two News Studios



Above, one of the two news studios and left, Lee Rickard of OpTex (left) with LD Roger Law.

When Anglia Television decided to split its news coverage of the region into east and west, it also embarked on an ambitious programme to upgrade its facilities to provide two new purpose-built dedicated news studios. Roger Law, the resident lighting director (a rare breed these days) was presented with the task of sourcing the most appropriate equipment for the studios. Because the rig was to be fixed, he decided to go the route of cold fluorescent lighting rather than tungsten, and to help him in this he turned to North London-based OpTex, and in particular Lee Rickard, who specified a mainly Balcar rig, primarily because the lights have internal DMX and high quality colour temperature.

The news studios, both identical, are relatively simple set-ups with the majority of presentation direct to camera. A row of Balcar Duolites and four Duolite fluorescents with phase-control dimming dress the set. A single Quadlite illuminates the larger piece of flattage, whilst an ETC Source Four is focused on the Anglia logo behind the presenters. As there is also the possibility that a presenter may move to the videoscreen to the right of the set, Law has rigged

both a Quadlite and a Duolite to cover this area.

For the main lighting, there are two Fluxlite 300W fixtures which act as main keylights - a honeycomb gridspot on both set at 60 degrees gives 30 degrees extra coverage either side. In addition, a further two Quadlites act as fill. Because this is a four camera set-up with up to four potential presenters at any one time, Law cannot rely on normal portraiture lighting, and has instead to ensure at least 180 degrees of coverage. Behind each of the four presenting positions Law has opted for a DeSisiti 500W Magis Fresnel (the only non-cold lights in the studio) to soften the edges of the presenters, a task complicated by the fact that the desk at which they sit has glass inlays to allow them to view monitors set into it. For Law, keeping reflections off the glass proved to be nothing short of a nightmare, the solution to which came not with the lighting, but by adjusting the positioning of the monitors and tilting them.

The studio is also used for the recording of a Watchdog-style programme and for this Law rigged a spare Duolite as fill light and an old 2k Tungsten, together with a DeSisiti Magis backlight. At the rear of the studio is a Chroma-Key area where Fluxlite and Quadlite combine for the fill, with another Magis for backlight. Law chose an ETC control system for the studios. Just under 400 5kW Sensor channels have been installed, controlled by an Expression 2X console with a graphics tablet and Remote Focus Unit.

## UNIVERSAL FIBRE OPTICS OPTICAL GOODS MANUFACTURERS

Fibre Optics manufacturer's in both glass and plastic.

Harnesses made for starcloths to museums.

Universal can fulfill your requirements with items mostly ex-stock.  
0.75mm, 1mm, 1.5mm and 2mm rolls of plastic ready for despatch.  
Lightsources from 75wTH to 150w metalhalide to give that extra light.

Price and delivery kept to a minimum.

**LONDON:**

**Tel: 0705 138 4112 Fax: 0181 789 2192**

**THE NORTH:**

**Tel: 01890 883416 Fax: 01890 883062**



# TOTAL FABRICATIONS



## XO Truss

Ideal for conference or exhibition use

Special high strength aluminium alloy

Approximately 25% stronger than standard equivalent

High lustre finish

Light weight approx. 5kg/m

3 standard sizes available  
305mm sq., 305mm triangular or 520mm sq.

Turnbuckle or fork end connectors available as standard

Awarded product of the year at LDI '97

**U. K. OFFICE**

**Tel: +44 (0) 121 772 5234  
Fax: +44 (0) 121 772 5231**

**U.S.A. OFFICE**

**Tel: +1 (805) 676 3322  
Fax: +1 (805) 676 1616**

**ASIA OFFICE**

**Tel: +(65) 352 5586  
Fax: +(65) 356 3665**

Amongst exhibitors attending the show for the first time is Barco who will be showing for the first time in the UK its DMD (digital mirror device) cubes. Barco is also supplying the PLASA AV theme bar with 508 CRT projectors.

#### Barco - T43

Martin Professional will be introducing new products, including the MAC250, a compact version of the MAC 500 moving head profile spot. Other products being launched include scanners, controllers and followspots.

#### Martin Pro - E54/E56

Pioneer will be exhibiting their range of DJ equipment that comprises mixers, turntables and other accessories. Top name DJs and industry figure heads will be on the Pioneer stand during the exhibition, demonstrating and discussing all aspects of the equipment and its benefits.

#### Pioneer - D40

## Valencia Spectacle

German laser display specialists Lobo were involved with the opening ceremony of The Ciudad de las Artes y las Ciencias, Europe's largest urban culture and leisure complex, which is situated on the former river-bed which winds through the south of Valencia.

Working with multi-media artist Albert Ripoll I Coca, and Valencia-based Caballer Pyrotechnics, LOBO were given just one-and-a-half weeks to complete the project. The laser system totalled an enormous 57W of white-light power, consisting of eight laser projectors, four of which were water-proofed and positioned in a large lake, and 30 mirrors around the site. The complex, designed by architect Santiago Calatrava, includes a 'cultural palace' - an auditorium with over 5,000 seats, a science and technology museum and an oceanographic museum which is being built inside the lake, and will include restaurants and other attractions connected by submerged glass tunnels. One of the most striking buildings is the Hemispheric, a 50m high, 90m wide building resembling a human eye, and containing a combined IMAX cinema and planetarium.



## White Light Challenge Rose Bruford Students

As part of its ongoing support of the next generation of lighting designers, White Light has introduced three new bursaries for students on the three-year BA (Hons) degree course in Lighting Design at Rose Bruford College.

The awards will be given to three students entering their third year who create the best design proposals for a fictional lighting project. The procedure has been designed with two aims: to encourage the students to create a high quality design and also to let them experience two major elements of the real world of lighting design - the written proposal and the face-to-face 'pitch'. The students will first be asked to submit a written proposal to light a London building, a pop song, a musical number or a scene from a play, all within a fictional budget. Successful applicants then expand their idea into a full design proposal which they will present to a panel of professionals in December. The panel will include John Simpson and Bryan Raven of White Light, Chris Toulmin of Modelbox, Nigel Morgan of Rose Bruford, lighting designer Rick Fisher and production manager Roger Neate.



# Slip Way Tape

Keeping your cables clean and seen

*Slip Way is a simple and effective method of securing and identifying temporary cables and fittings, without leaving residue on removal.*

*Slip Way is a special self-adhesive cloth tape that has an under laminate of tough yet flexible polypropylene. Made in such a way as to leave a self-adhesive strip on each side only.*

*The puncture resistant inside centre is adhesive free forming a 'sheath' that holds cables secure yet allowing freedom of movement.*



*Slip Way's adhesive will operate in a range of exterior or interior conditions vertical or horizontal.*

*Perforations have been designed into the tape at 30cms intervals making Slip Way easier to tear and economical to use.*



**Have you tried the hump yet?**

Le Mark Group,  
24-25 Stephenson Road,  
St Ives, Huntingdon,  
Cambridgeshire  
PE17 4WJ England  
Telephone: +44 (0) 1480 494540  
Facsimile: +44 (0) 1480 494206  
Email: lemarktvs@aol.com  
Internet: http://members.aol.com/lemarktvs

# USED EQUIPMENT SALE

Everything LESS than 6 months old

## Video

Barco Data 2100  
Video Projectors  
Video Wall Monitors  
& Controllers  
Laser Disc Players  
Alcorn McBride  
Digital Video Machines  
& Bin Loops  
UPS Power Supplies  
Power Distribution  
Systems

More...

## Lighting

Technobeams  
LCD Controllers  
ETC Source 4  
Ellipsoidals  
Strand Hilite 23  
Profiles & Fresnels  
MR16 Profile Spots  
PAR 60, 36 & 16  
ETC Smartpack  
Dimmers  
Fibre Optic Sources  
Trilite 100 & 200 Series

More...

## Sound

JBL Control 1  
JBL Control 30  
JBL Control 23  
JBL Amplifiers  
Microphones  
CD Players  
Sound Consoles  
Graphic Equalisers  
Radio Microphones  
Show Control

More...

For our comprehensive list of equipment

Fax: +351 1486 3514

Email: [info@fortesystems.bc.ca](mailto:info@fortesystems.bc.ca)

or consult our web site [www.fortesystems.bc.ca](http://www.fortesystems.bc.ca)



COME AND SEE US AT  
**PLASA**  
LIVE AT EARLS COURT  
6-9 SEPTEMBER 1998  
STAND G46

# FREE WORLD FINAL TICKETS!



Be our special guests at this year's World Light Jockey Contest Final – **for FREE!!** Featuring contestants from six countries, this competition is the **only** international contest recognised throughout the lighting industry.

**... AND FREE BEER TOO!!**

Come and see us on STAND G46 at PLASA to collect your **FREE** drink voucher. Take advantage of our special offer and come along to support your country!!

**@ 9.00pm**  
**8th SEPTEMBER**

*Hippodrome*  
the home of the  
**UK's biggest lightshow**



The 'World Light Jockey Contest' is organised by Clay Paky & Pulsar and supported by the media illustrated.



# SOUND REINFORCEMENT JUST GOT BETTER



## THE NEW T12 FROM TANNOY

If you've wished for a loudspeaker that sounds superb, goes seriously loud without distortion, works as well on voice as on heavy rock, can be used for live sound reinforcement, foldback or permanent installs, really looks the business and yet doesn't require you to be Mr. Universe – then wish no more. Check out the T12. Tannoy's renowned Dual Concentric™ point source sound quality in a compact, unique design that makes it suitable for a wide variety of applications.

T12 – just one of the range of better sound reinforcement speakers from Tannoy.



# TANNOY®

professional

Tannoy Ltd., Professional Division, Coatbridge, Strathclyde ML5 4TF, Scotland • Tel: +44 (0)1236 420199 • Fax: +44 (0)1236 428230  
prosales@tannoy.com • www.tannoy.com

Yes, I want better sound reinforcement, send me information on the Tannoy T12 Dual Concentric™ loudspeaker:

Name: ..... Company: ..... Postcode: .....  
Address: .....

## Van Halen on Tour



Lighting designer Howard Ungerleider chose lighting predominantly from High End Systems for the world tour of Van Halen III, which began recently in Australia. Ungerleider, known for his designs for Queensryche, Rush and Tragically Hip, among others, was asked to base his design on a circus theme with a 'dark' side. For inspiration, he turned to architectural lighting techniques, other 'dark' circus shows such as Cirque du Soleil, and themes from black magic.

Ungerleider explains: "I had designed the system on a seven-spoke structure. Imagine seven trusses coming off a centre hub, with two of the trusses shorter than the other five. Each truss had articulation, so the whole truss can travel up and down on a hinge."

The tips of each truss are also hinged, resulting in a computer-controlled 35-motor system. The 'circus tent' feel to the show is provided by a mesh between each truss arm. The lighting package, provided by lighting contractor Westsun of Toronto and supplemented by Spot-Light Systems of Auckland and Gearhouse Lighting of Melbourne, consisted of 35 Cyberlights, 36 Studio Colors, 45 Dataflash AF1000 strobes, two F-100 foggers and a Status Cue lighting console, all from High End. Also included were 41 VL6s from Vari-Lite, 128 Pars with scrollers, 60 ACLs with colour changers and 12 ETC Source Fours.

## Turbosound Impacts on Gearhouse

Gearhouse Systems Ltd, the installation arm of Gearhouse Group plc, have recently specified Turbosound systems at a number of UCI multiplex cinema developments at Basildon, Surrey Quays and their flagship site, the new Trafford Centre in Manchester.

The systems comprise 14 Impact 80s, six of which are flown inside the 'show' drum with two TSC-618 sub-bass enclosures, with eight further Impact 80s flown either side of the drum as surround units. The systems are powered by Crest CA-6 amplifiers and controlled via Allen & Heath DR128s, enabling two distinct operating levels. When the system is in pre-show mode all the Impacts are set at the same level, and when 'show-time' mode is activated, the drum audio increases and the surrounds decrease. This alerts the customer to the show, which is based around advertising and trailers. With UCI looking to implement a new 'experience' concept to their foyer areas, Gearhouse were asked to design and supply the whole audio-visual system. Chris King of Gearhouse Systems, who specified the audio systems told L+S: "With UCI looking for a system that the customers could clearly see, Gearhouse chose the Impact range not only for its superb sound, but also for its looks. The Impacts are just perfect for the job, every time."

Gearhouse Systems have also recently supplied and installed a Turbosound system to the Barracuda Bar in Brighton, the system comprising flown Impact 50s in both chill-out bars, and Impact 121s and 180s in the live performance area.

STAND 126

# ADASTRA

## PLASA SHOW

SPECIALS

For the full effect...

New!

Series 2000 Mixer Amps

- Balanced Inputs ■ 5 Zone Selection
- Remote Chiming

A2060

60W

A2120

120W

A2240

240W



New!

A3240 Slave Amplifier

Plus

- A75 'PA Centre'
- CM3000 Conference System



New!

- Speakers
- Megaphones
- Mic. Stands
- Cables etc.

AND TO CELEBRATE OUR FORTHCOMING  
50 YEARS IN BUSINESS

REDUCED PRICES FOR

New-Style A55 & A56

MIXER AMPLIFIERS

NEW CATALOGUE NOW AVAILABLE

# ADASTRA

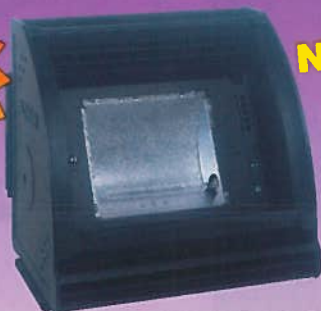
Hille Business Centre, 134 St Albans Road,  
Watford, Hertfordshire, WD2 4AL UK

Tel: (+44) 01923 248888/9 Fax: (+44) 01923 254607  
eMail: info@adastra-electronics.ltd.uk  
Web: www.adastra-electronics.ltd.uk

ALWAYS AVAILABLE... ALWAYS RELIABLE

Internationally recognized  
for innovation and  
engineering excellence!

# ALTMAN



**NEW!**

### FOCUSING CYC™

- Ground or hanging this one unit solves your cyclorama problems.
- Adjustable light distribution
  - Accepts T3 thru T8 lamps, 120 to 240 volts
  - UL and cUL approved

An extensive array of impressive lighting products and accessories for all your film, video and theatrical needs. Halogen and Metal Halide for theatre, studio, location and still photography.

**We have it all!**



**NEW!**

### UV-705 BLACKLIGHT

- Compact self-contained unit
- Floor standing or hanging
- Intensity adjustment



### FRESNELS

High intensity with soft edged controlled lighting.

**QUALITY  
RECOGNIZED  
AROUND  
THE WORLD**



### EXPLORER

**FOLLOW SPOTS**  
A complete range for every requirement and budget.



### MICRO SERIES

Small but strong. Perfect to highlight pictures and small areas. Track mounted optional.

### MICRO FLOOD



### ELLIPSOIDALS/ SHAKESPEARE

State-of-the-art engineering for superior performance at lower operating cost.

S6-20



### ZIP STRIP

### BORDERLIGHTS

Engineered for quality, designed for efficiency.

# ALTMAN HAS IT ALL!

THE QUALITY OF LIGHT

Altman Stage Lighting Company, Inc. - 57 Alexander Street, Yonkers, NY 10701

914-476-7987 • 212-569-7777 • Fax: 914-963-7304 • Web: [www.altmanltg.com](http://www.altmanltg.com)

For pricing and product availability anywhere in the continental U.S. call directly to the dealer nearest you:

1-800-4-ALTMAN (425-8626)

## Clay Paky at Kouros



The new Kouros Centre in Athens is a multi-purpose complex with facilities for a wide range of events, ranging through theatre, live music, discotheque, conferences and exhibitions. The main room can be configured as an auditorium or a banqueting hall, and includes a large stage. The lighting includes four 1200W Clay Paky Golden Scan HPEs above the stage, which cover performers and sweep out onto the dance floor, with two Stage Scans installed on the left and right of the hall, used for both on-stage and dancefloor coverage, while front-of-house is a Shadow QS-LT followspot, with 1200W HMI lamp. The lighting system is backed up by three Golden Fog 2000 smoke machines, also from Clay Paky. Further Clay Paky fixtures are to be included in the spec in the near future.

## LCI Wins Business in China

In the face of strong international competition LCI, the London-based provider of large-scale spectacles has secured a major contract to supply the Yunnan Tourism Group Co Ltd. The project centres on the 'Stone Forest' an area of natural beauty some 80km from Kunming.

LCI will be creating a walk-through experience and a purpose-built 56-seat simulation theatre. The company will also supply a lake show, and a tranquil garden area with atmospheric sound and lighting effects. The overall concept is based on local folklore, in particular the legend of Arshima. The installation will include three giant water screens, video projection, architectural illumination, dancing waters, and an extensive surround-sound system. Considerable use will also be made of fire and pyrotechnics.

Brett Salmon, LCI's project director told L+SI: "Several months ago we were commissioned by Yunnan Tourism Group Co Ltd to develop a creative concept for enhancing the Stone Forest. We are delighted that they have embraced our ideas and chosen LCI as the sole supplier. Our brief was to help attract more tourists into this area and we believe that the total experience we create will put the Stone Forest on the map as a world class tourist destination."

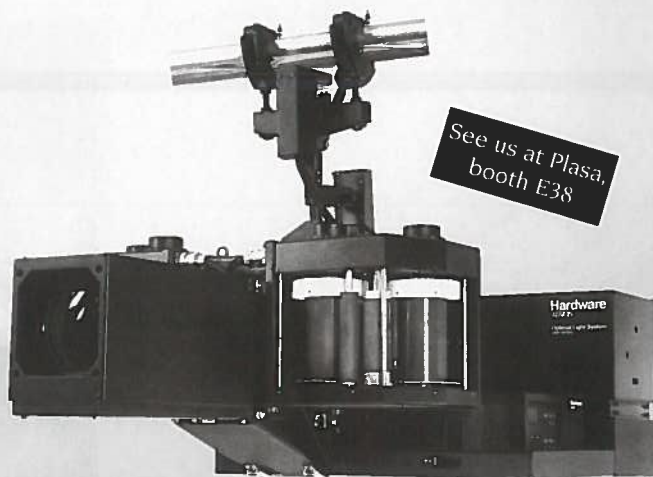
**Slick™**

*A Touch of Distinction in the World of Trussing™*

*The strongest  
most comprehensive  
trussing range  
available*

Portland Street North, Leek, Staffordshire ST13 6LA, England  
Tel: 44 (0) 1538 372109 • Fax: 44 (0) 1538 381315

## A new state of the art in high power projection



The Hardware Xenon 7000 watt Optimal Light System (patent pending) offers significant innovations:

- 80 % more light on the screen
- unmatched image quality
- advanced high definition projection lenses: 105 mm, 140 mm, motorised zoom 220-500 mm, 60 mm dome lens...
- new versatile double scroller and single scroller
- motorised hanging device in trusses - pan 270° and tilt 45°
- rotatable scroller
- the unique performance of the Universal Digital Controller (UDC):

DMX 512 compatible, the built-in computer system of each UDC allows full control over the motorised devices: scroller, automatic slide changer, zoom, rotatable scroller, pan and tilt ... with a full 24 bit resolution.

**SALES AND  
RENTALS**

**Hardware  
Xenon**

UK : Hardware For Xenon Ltd / 140 Clayton Road / Hayes / Middlesex UB3 1BB  
Tel 44 181 848 13 87 / Fax 44 181 848 11 35

FRANCE : Hardware SA / 126, avenue Pablo Picasso / 92000 Nanterre  
Tél 33 1 47 76 00 29 / Fax 33 1 49 06 07 13  
E-mail HWXENON@aol.com

GERMANY : Hardware Deutschland GmbH / Claudiastrasse, 5 / 51149 Köln  
Tel 49 2203 18 16 83 / Fax 49 2203 18 16 84

USA : Hardware Xenon Inc. / 919 Isabel street / Burbank - CA 91506  
Tel 1 818 557 0716 / Fax 1 818 557 0996  
E-mail HWXENONUS@aol.com

# magic!



Your customer is stunned. Everything they have requested, you are able to provide. Just like that.

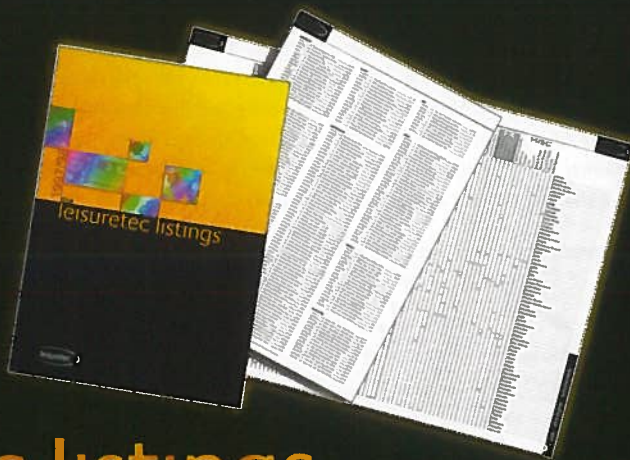
It is in fact a simple trick with the Leisuretec Listings up your sleeve, or under your counter.

Amaze people with ex-stock availability from your invisible warehouse.

The Leisuretec Listings contain over 1,200 products from more than 70 manufacturers.

All supported by technical experts and all available pronto.

Give your customers **more** choice and give yourself **more** buying power!



## the leisuretec listings

it means we **NEVER** sell to end-users!

leisuretec

LEISURETEC DISTRIBUTION Ltd **Distributors of Professional Sound Lighting and Special Effects Equipment**

Call 01525 850085

Unit L3 Cherrycourt Way Stanbridge Road Leighton Buzzard Bedfordshire England LU7 8UH



## Blues Brothers Tour Ends

Last month saw the end of the 'The official tribute to the Blues Brothers' tour and with it the final use of the VL1 spot luminaire. Starting in 1991, the tour ended on the 25th July this year and has featured the VL1 luminaire throughout its seven year run. The VL1 was the first ever automated luminaire and revolutionised the market back in 1981 with its unique motion and colour changing abilities. It was used as part of the Series 100 system on many major rock and roll concerts, most notably on the Genesis tours.

The original lighting designer for the The Blues Brothers, Patrick Woodroffe, is proud to have kept the VL1 spot luminaire in service for so long, despite there being newer Vari-Lite systems on offer.

"The VL1 luminaire and Series 100 system have been incredibly reliable. They have proved a good testing ground for the successive young lighting professionals that have passed through the show over its run."

Mary Webb, Vari-Lite operator and technician, joined the Blues Brothers tour for what she assumed was a four month stint. She ended up staying with the show for five years, still using the VL1 luminaires! "Although the lights are old, it was still nice to give the range of audiences the Vari-Lite experience. The local crews all over England and Europe have also been very supportive of them and I am very happy that they have been able to entertain thousands of people for so long."

Pictured right, Brian Croft managing director of VLPS Europe, presents a Golden VL1 spot luminaire to Mary Webb, Vari-Lite operator/technician at The Churchill Theatre, Bromley.



## Industry Leaders at LIW 98

Senior personnel from key leisure industry companies will be at this year's International Leisure Industry Week (6th-8th October, NEC, Birmingham).

They will be participating in LIW's Leaders in Leisure programme - a series of presentations on topics such as service standard, product development, managing growth and branding, that will run alongside the three days of the show. Among those participating are Andrew Tear, chief executive of the Rank Group, Neil Goulden, managing director of Allied Leisure, Derek Robson, board planner at Levi, Disneyland Paris's Didier Ghez, Tom Hackwood from Online Magic and Ken Robinson, operations director of The New Millennium Experience Company.

For a full copy of the programme call the LIW ticket hotline on (01203) 426515.

Sound Dept, as new UK distributors of EAW, will present a range of new touring and contractor products from their key suppliers. Crest will be launching the X-Monitor - a dedicated, fully-featured monitor console alongside the Pro II Series, which will encompass a number of popular Crest models, commencing with the 8002, and incorporating PowerLok circuit design. EAW highlight the KF400a/KF940 - as well as the new, improved JS Series and the MK Series. The KP1000 is an active three-way full-range system in a trapezoidal enclosure and will be flown above the new KF 940 - a 2 x 12" horn-loaded subwoofer for use in arrays of four or more modules. Community will launch the XLT54 fully-horn-loaded subwoofer. This is designed for portable SR and DJ systems as well as for fixed installation in venues requiring extreme bass output. Also new from Community will be the WET Series, engineered for survival under extreme environmental conditions.

### Sound Dept - R80

Mad Lighting will be displaying their full range of products including the new Q range of effects. Developed for the installation market and professional end-users, the Q-Scan will form the core of Mad's lightshow. These will be supported with Series 2 Scans, Stars and colour changers. The now established DJ series will also be on show, with the latest additions, the Scan 411HP and the Star 311HP.

### Mad Lighting - J7/J8



PROFESSIONAL SERVICE

EQUIPMENT HIRE, SALES,  
SERVICE AND INSTALLATION

HILLAM ROAD, CANAL ROAD  
BRADFORD, BD2 1QN

TEL: 01274 370966 • FAX: 01274 308706

<http://www.musicco.co.uk/musicco/>



Stage COLOR 1200

---

Stage ZOOM 1200

**Interchangeable.**

Stage COLOR 1000

---

Stage COLOR 575

**The show light.**

Stage COLOR 300

---

Stage LIGHT 300

**Ultra-compact.**

TRUST CLAY PAKY TO COME UP WITH AN ENTIRE FAMILY OF HIGH TECHNOLOGY MOVING-BODY LUMINAIRES. ADVANCED FEATURES INCLUDE A REVOLUTIONARY SYSTEM WHICH LETS YOU TRANSFORM THE GREAT STAGE COLOR 1200 WASHLIGHT INTO A STAGE ZOOM 1200 EFFECTS PROJECTOR IN JUST A FEW MINUTES, OR VICE VERSA.

ALL THE LUMINAIRES IN THE STAGE LINE HAVE 450° PAN – THE WIDEST ANGLE CURRENTLY ON THE MARKET – AND A 252 DEGREE TILT ANGLE. YOU CAN CHOOSE 8 OR 16 BIT CONTROL FOR ALL THE FIXTURES. A VERY PRACTICAL FEATURE IS THE AUTOMATIC REPOSITIONING FOLLOWING ANY ACCIDENTAL MOVEMENTS AS WELL AS A CONVENIENT MOVING BODY LOCK SYSTEM FOR EASY TRANSPORT. WITH THEIR NEW-CONCEPT FROST FILTERS, THIS FAMILY OF LUMINAIRES GIVES

YOU A GREAT 50° APERTURE, LETTING YOU CREATE FANTASTIC WASHES OF PERFECTLY UNIFORM LIGHT EVEN WHEN WORKING CLOSE UP.

OTHER EXCLUSIVE NEW FEATURES IN THE STAGE COLOR 1200 AND STAGE COLOR 575 WASHLIGHTS INCLUDE 4-COLOUR MIXING (CMY + AMBER), LETTING YOU GENERATE NOT JUST THE COMBINATIONS AVAILABLE FROM NORMAL 3-COLOUR SYSTEMS, BUT A VAST RANGE OF SPECIAL PASTEL

TONES AS WELL, AND THE GTC SYSTEM FOR GRADUAL VARIATION OF COLOUR TEMPERATURE.

CLAY PAKY STAGE LINE: INNOVATION AND TRADITIONAL RELIABILITY TO SUIT YOUR EVERY NEED.



**JUST A FEW MINUTES TURNS A WASHLIGHT INTO AN EFFECTS LUMINAIRE OR VICE VERSA.**

#### 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.

Distributor United Kingdom

PULSAR LIGHT OF CAMBRIDGE Ltd  
Henley Road - CAMBRIDGE CB1 3EA  
Tel. +44 (0) 1223.366798 - Fax +44 (0) 1223.460708

CLAY PAKY S.p.A.

Via Pascoli,1 - 24066 Pedrengo (BG) Italy  
Tel. +39-035-654311 - Fax +39-035-665976  
Internet: www.claypaky.it



PROFESSIONAL SHOW LIGHTING

# CHAIN MASTER

## 1-ton RIGGING-LIFT

**WHO** BEATS THE WEIGHT?  
BEATS THE SIZE?  
BEATS THE SILENCE?  
BEATS THE PRICE?



- MANUAL CONTROLLERS
- COMPUTER CONTROLLERS
- RIGGING ACCESSORIES
- HOISTS FROM 250 TO 5000 KG

**PLASA**

6 - 9 SEPTEMBER 1998  
R 58 - TOP-DECK

- Extreme quiet gear mechanism - 62 dB (A) 1 m
- Extreme small design - 375x130x260 mm
- Extreme light design - weight without chain = 29 kg
- Extreme synchronus movement - speed = 4 m/min (50 Hz)
- High quality DC brake = guarantee for precise motor stop
- Compatible to all contactor controllers
- Safety factor of 6 : 1 for the chain and the gear
- Power 400 V / 3 ph / 50 Hz (other voltage possible)
- Chain bag, 1 m cable with CEE-16/4 plug,
- 18 m chain (7 x 22 mm), additional chain possible

**CHAINMASTER BÜHNENTECHNIK GMBH**

GERMANY-04838 EILENBURG, UFERSTRASSE 23 · TEL. + 49-(0)3423 · 69220 / FAX + 49-(0)3423 · 606903 + 692221

MORE INFORMATION AT: [WWW.CHAINMASTER.DE](http://WWW.CHAINMASTER.DE)

# BASTILLE DAY

*France celebrated July 14th still seemingly hung over from the excesses of the 12th. Steve Moles was in Paris to see how the show held together*

By now the glory that was France and the images of that country's ecstatic rejoicing, will be but a distant memory. No doubt though that we all still remember, and with some shame, how the English blotted their copy book at Marseilles. How fickle the mind - the bad retained, the good quickly forgotten - except that is for childhood memories of summer. Somehow they always seemed longer and sunnier.

Thus, the celebrations staged by the French, and, in this particular instance, the concert by Jean-Michel Jarre on Bastille day, may quickly fade. They do, however, hold a deeper significance for us all, not least for the model they might provide for celebrations at the end of next year. The significant thing for everyone in the service industry is that, by mutual consent, this was a poorly organised show that thankfully held together by good luck and a lot of busking, and was carried by the momentum prevalent at the time.

It was poorly organised because Camus, Camus, who can normally be expected to pull off something on this scale with nary a shrug of their Gallic shoulders, were under siege. They had their two other main acts out touring - Johnny Hallyday and Michel Sardou - and suddenly Jarre was a ship without a rudder. "They are not on the scale of RW Productions," commented LD Gary Westcott, "they don't have those kind of in-depth resources."

It's not beyond the realms of possibility that December '99 will find normally efficient and effective UK production organisations similarly stretched beyond capacity. Secondly, and despite the huge presence of non-French service companies attending to the needs of this show, the fact that the host country was in the midst of a jamboree, meant the conduct of the show-build and realisation was scrappy to say the least. In a nutshell, people were either too hung-over or more interested in having a good time than making this work smoothly. A situation we also might expect in 18 months time.

That said, the 400,000 who attended generally had a good time, even if they did boo en masse for the rappers and DJs (frankly I've not heard so much booing since attending the Vienna Opera). Twigga and Doddoo, a poor



man's Run DMC, were wholly inappropriate for what was a family audience). But ponder this - the setting in front of the Eiffel Tower was the equivalent of performing in just about the largest thoroughfare of any major city, but located in a more densely residential zone.

The concert lasted until 12.30am, was easily a consistent 100dBA and the audience, who were a real mix of young and old, black, white and brown, came well supplied with alcohol - there was even a sizeable splattering of Brits. Despite which, and in defiance of the huge crush, there were no outbreaks of violence, no unruly behaviour, no examples of drunken loutish aggression, and no-one seemed to object to the noise. There's a lesson in maturity from a society we are often less than complimentary about.

## LIGHTING AND VIDEO

As for the show, beside the huge live audience (note: when the citizens of Paris stormed the

Bastille back in 1789, 400,000 people would out-number the city's entire population) this concert also went out live on Radio, the French TV music channel M6, and was recorded by Fuji International Productions for broadcast in Japan and for possible sales to other countries. (ITV were in negotiation at the time.) The Japanese connection is easily explained; billed as co-headline, but really an integral part of Jarre's amorphous band, was Tetsuya 'TK' Komuro, that well-known master of all things widdly, widdly, flange and float, in the Far East.

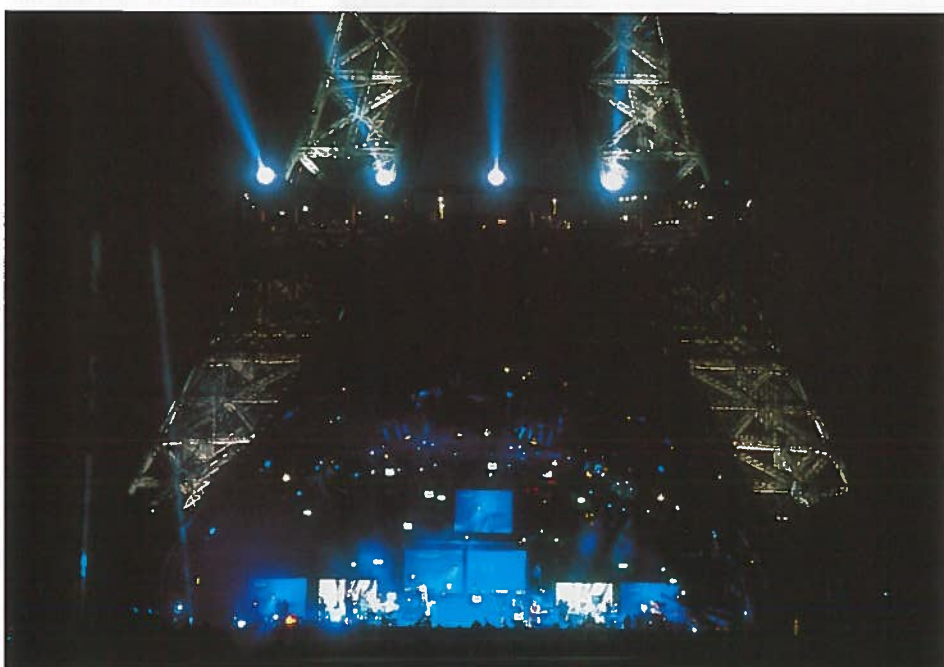
This also meant that the good citizens of Paris didn't have to foot the entire bill for the show - how come the papers keep telling us the Japanese economy is bankrupt? The TV presence was as huge as the show itself. Paul Weber from Entec, who because of his lengthy association with Fuji TV was brought in to lighting direct for camera, reported 15 cameras from Fuji (all British-manned) plus others. Jarre also had a minicam mounted into his spectacles for close-ups of those magic fingers.

Weber's contribution was to maintain a working light level for the cameras, something that saw dozens of Cadenzas strung across the front of stage and

ARRIs dotted on stands about the band. Lighting for television is often the blight of live shows and many an LD complains bitterly about it: "I still run into LDs who dig in their heels," said Weber. "'I'm going to do my normal show for the punters and you'll have to deal with it,' is the usual refrain."

Which happily, on this occasion, could not be further from the truth. LD Gary Westcott was more than content: "I had a great show and it all went really well." And Weber agreed: "The most co-operative designer I've ever worked with." Westcott, of course, spent two years working for a French TV company before becoming Mr Fast Fingers of R'n'R intelligent light programming, and coincidentally had just completed a seven-week stint with a TV show in New York, so his TV brain was already fully engaged.

From a live audience viewpoint it has to be said that both men's positive assessment was correct - lighting the show went very well and the additional keylighting made no difference



to the look of the presentation. Jarre's music is fairly consistent, although not devoid of light and shade (in a metaphorical sense that is). This meant that Westcott was able to provide a steady application of light and colour to the stage which made the white keylight less obtrusive. Secondly, there was a lot more to this show visually than just what was happening on stage - the whole of the Eiffel Tower was lit for most of the evening, and surrounded by scanning beams of xenon searchlights.

The non-stage lighting is a good example of where the poor organisation manifested itself by a general indifference. Jarre's artistic director, Christian Bourrett, was only able to work on the application of these 'architectural' lighting effects in the few hours of darkness during the night preceding the show (this was mid-summer remember). The monumental fireworks show he had to choreograph was even worse.

He spoke with the head of pyro' just five hours before curtain up to discuss a two-hour performance punctuated by several pyrotechnic events and rounded off by a 25 minute fusillade of heavy artillery that wouldn't disgrace a bad night on the Somme. Why? Because delay after delay was caused by some anally-retentive bureaucrat holding too tightly to the purse strings. While Westcott was travelling in on a plane from New York, Kevin Forbes, back at LSD's HQ in Birmingham, received a call (this on the day the trucks were due to load-out) advising him of a 20% reduction in the lighting equipment. So, just the five Edwin Shirley trailers on this occasion.

"By the time I arrived in Paris, £15,000 had been knocked off the budget," said a suitably chagrined Westcott. Worse was to come. Much of the infrastructure for the show - stage, roof and delay towers (provided by Stageco) - was a left-over from the Three Tenors concert the night before the World Cup final, as was the audience lighting, generators and various other bits and pieces. It appeared that most of this gear was left, almost by default. It's not a bad idea to re-use what's already there, but no allowance was made for the fact that much of the equipment would need to be tinkered with - at the very least - to accommodate what was a completely different kind of show.

It was in this area that Camus, Camus were let down: stage and production management either didn't exist or was castrated by not being in control of the budget. So, when five truck loads of lights from LSD turned up, there was not a single spreader beam in the Stageco roof to rig a lighting point from. Load-in was so hampered that lighting programming only took place the night before the show, instead of across two evenings. "We knew it would be tight," said Bourrett with Gallic sang froid, "but with just six hours of darkness it was close - just 15 minutes for each song. But that's one of Gary Westcott's most impressive abilities - he is an expert at understanding the desk. Thus, on the night of the show, he was operating with one hand while programming new cues with the other. Fantastic."

Things weren't a lot more comfortable for sound. Jarre's house engineer Renauld Letang, reported that musicians he knew nothing about on the afternoon of the actual performance appeared from nowhere to perform. A fact

confirmed by Horst Hartmann on monitors who was able to gleefully inform them that he had no more channels left to deal with them.

But back to lighting. Westcott's design was simple enough. He'd plenty of experience of the Jarre's music, having lit last year's tour, and indeed had worked with Bourrett on and off since 1979, so he knew what was expected. "Much of the show is about the Arkaos video and the requirements of Fuji TV," noted Westcott. His basic tool was six of LSD's Mega-Mags, the huge 36 x Par 64 colour changers, first seen on the Rolling Stones in 1990. "I need plenty of strong wash, something that looks big to the huge crowd, and something on which to hang moving lights for the actual show." Thus the six pods were festooned with Icons, Studio Colors, Boblights, Diversitronics strobes (in tandem) and a Telescan. All the lamps that don't come with in-built colour changing had an LSD Mag of one size or another fitted to them, even the strobes.

This was one of the reasons that saw Dave Maxwell, fresh from his success with Eric Clapton in the States, holding fort at an Avolites Diamond II running all conventional lamps, whilst Gary Rees operated three separate Colour-Mag desks, behind him. When you add in Telescan control, Westcott had a busy evening keeping everyone 'on show' while flicking back and forth in consultation with Weber and Bourrett.

There was plenty of other lighting around the roof and on the stage, Cameleon providing another 16 Telescans, LSD with more Icons, Molemags, strobes, Studio Colors and Boblights than you could shake a stick at. But it's Westcott's earlier comment on the Arkaos system that gives away the force majeure to the light show. With Jarre's self-admitted lack of rock showmanship (he is no Mick Jagger), this performance requires a bigger than normal visual element: Jesse Djeep of Arkaos provides that in-depth, feeding images to seven Barco screens on stage (from E\T\C Audiovisuel) and the seven pairs down the length of the Champ de Mars, strapped to the delay towers.

This was simultaneously both a success and a failure. Successful because what Djeep did with this high-powered, real-time effects and graphics tool, was keyed directly into Westcott's MegaMag jumbo paint brush and complemented it exactly. If you were amongst the first 50-60,000 punters then what you saw on stage was a coherent blending of video and lighting that made a whole lot of sense. Further back however, into delay tower land, it was not so good. The screens were too small, too detached from the stage to adequately convey the interactive images fed to them, and besides which, for the first few songs (and that's an hour or so with Jarre songs) the power kept tripping out, making for a wholly unsatisfactory experience.

What Djeep did on stage was masterful, hardly more than a glimpse of the actual performers 'au naturel,' all was coloured, spun, and mutated in a constant visual whirr. The video tapestry he wove was as dense as the music and Westcott's lighting. Thus, video was a complete blend, neither dominating nor being dominated by any other element of the show. The only way this could have worked off stage, down the Champs de Mars where the



majority of the distant crowd were, would have been to use huge screens - a pair of what U2 had out last year wouldn't be far off the mark.

The screens also gave some difficulty to Weber in his job, although the seven screens ranged across the stage appeared as bright and colourful to the naked eye as the lighting, this was, of course, far from the truth for the cameras. Thus, if Westcott hit with a major open white, or brought all his guns to bear at once, then the screen image disappeared off camera. Luckily, it was something Westcott rarely did - as Weber said, "The most cooperative LD."

#### SOUND

In essence, the audio show is characterised as a rave. Although it wouldn't do to call it that, the advance posters did draw attention to the techno, ambient guest stars. That's one of the reasons the crowd booed so much. Jarre has - not unnaturally in view of his musical derivations - embraced the whole ambient techno' genre with open arms. Unfortunately, a good 75% of the audience were definitely of the pre-rave era. His front-of-house mixer Renault Letang is evidence of that 'club' orientation, being a young engineer entirely in tune with the ethos of taking what the musicians provide and mixing it constantly to produce a fluctuating aural musical canvas that ebbs and flows. It all sounds rather incongruous when put in context of a huge Clair Brothers/Audio Rent S4 rig: Raves? Clair Brothers? I don't think so. But this is, of course, more than that - Jarre is an established artist. Techno' for grown-ups might be more the idea. Rappers and DJs apart, his spirit of adventure must be credited - it did work, and the fact that most of the crowd stayed the course bears this out.

"The thing is," said Letang, "it's like there are four or five different artists, and each is playing a re-mix of a Jarre song. Then there is Jean-Michel and TK, two band leaders, if you like. There is so much changing all the time that the only constant throughout the show is the percussion. Two drummers - one acoustic and one electronic - play all the songs."

Fortunately for Letang, the core show was well rehearsed. Letang had spent the previous fortnight with the band in a studio, but the variance still took some dealing with. "The levels are all over the place," some of the old original samples being wildly over the top, "and some of the instruments are antiques, full of hiss and crackle, so I have to use a lot of noise gates and filters." Otherwise Letang has a Ramsa 840 and Midas XL4 out front, an H3500 he uses for a bit of flange and a brace of SPX for various spatial effects, with which he pushes the image around with a touch of delay from time to time. (Audio Rent used telephone cable to run signal across the several kilometres to the various delay towers. Presumably this worked quite well, because these cables are designed to carry weak signals long distances. I don't know, you work it out, there was certainly no quality compromise).

"They provide the melody whilst I find holes in it and then let the rhythm poke through," was Letang's rather prosaic description of his art. In performance, the mix was aggressive and rhythm-dominated, but there were things that he could not deal with. Even an engineer of Letang's undoubted ability would be hard pressed to respond when some hooligan starts playing a new keyboard part 15dB louder than the general stage level. This gave some wild jarring moments (no pun intended) to an otherwise smooth blend. The converse was also true, as Letang pointed out: "Some of the musicians have never played to a crowd of this size before. They are scared, and because of that, the level of their instruments might be really quiet."

While Letang was at least familiar with the artist and the rehearsed performance, Horst Hartmann on monitors was not. "His regular monitor minder is handling Sardou," said Hartmann. Now we see what Westcott meant about Camus, Camus not having those in-depth resources. "This is the first time I've worked with him," he said with considerable aplomb. A measure of Hartmann's professionalism is his unflappable nature on the day of the show, but he has good reason; while elsewhere there was a degree of chaos, the



monitor system is entirely about control. "I have two Yamaha PM4000Ms linked together into 22 outputs - 11 stereo pairs. Everyone is on in-ears except the DJ, who, because he has to cue his records off headphones, has a pair of Clair 12AMs," as, coincidentally, does Hartmann, who likes to have some feel, despite doing much of his job on his own set of ear plugs.

There are eight channels of Garwood, plus two hard-wired sets of phones for the two drummers. Hartmann bypasses the Garwood

limiters, preferring to use Apex Dominator IIs. Like Letang, he also has a couple of SPX machines for vocal effects - Jarre does sing (sort of) occasionally, but otherwise effects all come from the band themselves. Only Jarre and the bass player are using Garwood moulds, the rest are on Sony 565s and 888s.

His biggest problem is the variation Letang alluded to earlier: "I don't have to worry about effects and processing cues back to the band, but I only have in the region of 10dB to play with in the in-ears before they clip. Some of the

keyboard dynamics are so enormous, and the click tracks vary greatly - some are recorded years ago and are all over the place." Despite which, he was smiling as jovially after the show as he was before.

Not like Letang, who'd endured a complete FOH power failure in the middle of one number, and loss of contact with half of his extensive delay system for much of the first hour of the show. C'est la vie, as they say.

The truth is, there were more politics floating around this show than turds in the River Seine, and for all the wrong reasons. Whatever the total budget it was poorly distributed, the fireworks finale must have cost a six-figure sum (in sterling) and lasted over 25 minutes. Whatever you think about fireworks, they are a limited visual expression: as with lasers (although the effects can be amazing), after 15 minutes you've seen enough. They are not a creative medium in themselves - as a performance stage or a TV screen might be - they are simply an effect. Thus after 15 minutes of aerial Armageddon, the main effect the fireworks had on the crowd was to give them a stiff neck.

It broke my heart to see so much money go up in smoke when it could have been more usefully spent buying time for the hard-pressed sound, lighting and technical people, and to put polish on where polish was due. This begs the question, have ITV bought the show? Well probably, yes - by all accounts the video footage taped by Fuji was first class - et plus ca change?

photos: Diana Scrimgeour

THE **Contour** 12  
DIGITAL DIMMING RANGE

**The Complete Package**

**The Versatile Dimmer**

The locking patch was great. We set the rack up at the start of the Tour and never had to look at it again. It was totally reliable.  
Peter Canning, L.D. Elkie Brooks U.K. Tour 1998.

**zero 88**

Zero 88 Lighting Ltd, Usk House, Llantarnam Park, Cwmbarn, Gwent NP44 3HD, U.K.  
Tel +44 (0)1633 838088, Fax + 44 (0)1633 867880.  
e-mail: sales@zero88.com. www.zero88.com.

## The Contour 12 Dimmer

### ► Reliable

- Mains connection fault tolerant.
- Automatic voltage and frequency selection.
- Soft start anti-flash system.
- Twin microprocessor controlled fans.

### ► Informative

- Visual user feedback.
- Phase monitoring LEDs.
- Dual output indicators.
- No menu's - single button functions.
- Built in test and diagnostic facilities.

### ► Serviceable

- Common field servicing needs only a screwdriver.
- 4 screws to gain complete access.

## Touring System

### ► Key Features

- Locking mains patch with test sockets.
- Integral isolated DMX splitter.
- Optional power loop through.



supraorbital rectus m. - supports the eyeball structure - which is especially important when eyes are subject to intense visual stimuli, such as anything seriously projected - because otherwise the eyeball may pop out of one's head - like in cartoons.

levator palpebrae superioris m.

eyeball

levator rectus

infraorbital rectus margin

infraorbital oblique margin

cornea - admits more light when exposed to visuals created using large format projection - which gives the brain more stuff to process, which makes nerve endings tingle, which in some cases is highly addictive.

optic nerve - connects to the brain - allowing the rest of the body to have as much fun as the eye taking in all the amazing things possible with large format projection.

To buy or rent the best in large format projection systems call +44(0)181-896-1777

PRODUCTIONarts

See what we can do.

# PHOENIX

INNOVATION

&

IMAGINATION

ALL



LDI98!

Take technology into uncharted territory at LDI98 where innovation and imagination meet! It's a high-tech exploration of the latest breakthroughs in lighting, audio, staging, rigging, pyrotechnics, lasers, software and special effects. And a look at the newest design parameters for performing arts, themed environments, clubs, concerts, cruise ships, industrials, corporate events, sports facilities, restaurants, retail, film, television, and architecture. With over 300 international manufacturers and distributors. 200,000+ square feet of exhibit space. Three days of exhibits. Four days of professional workshops. Intensive pre-show conferences and technical training.

## DON'T MISS IT!



[www.etecnyc.net](http://www.etecnyc.net)

Sponsored by: *Lighting Dimensions, Theatre Crafts International, Sound & Video Contractor* and *ESTA—Entertainment Services & Technology Association*

Together with these other INTERTEC®/PRIMEDIA Publications; *Millimeter, Broadcast Engineering, World Broadcast News, Video Systems, Mix, Electronic Musician* and *Shopping Center World*

PLEASE SEND ME MORE INFORMATION ABOUT **LDI98**

Exhibiting

Attending

Name \_\_\_\_\_

Title \_\_\_\_\_

Company \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_

Country \_\_\_\_\_ Zip \_\_\_\_\_

Phone\* \_\_\_\_\_

Fax\* \_\_\_\_\_

E-mail \_\_\_\_\_

\* Include country and city codes.

LDI98 • Intertec Trade Shows & Conferences • 9800 Metcalf Ave. • Overland Park, KS 66212 USA • 1-800-288-8606 or +1-303-220-0600

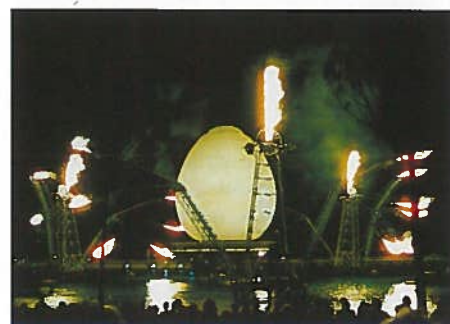
Fax: +1-913-967-1900. For programming updates as they occur, call FAX-ON-DEMAND at 1-800-601-3858 or +1-732-885-6723.

# TREADING WATER

*Tony Gottelier and Lee Baldock went to Lisbon to see what technological treats surfaced among the themed oceans of Expo 98*



**Above, a frame from Mark Fisher's animated concept video, showing action from Acquamatrix and, right, three views of the real thing.**



We don't know whether it was cobble fatigue, the heat, the theme or the fact that this was a B version in the World Expo league, but Expo '98 certainly seemed to lack inspiration by comparison to the previous event in Seville.

This somewhat jaundiced view may have been influenced by the press office on the site who were, shall we say, less than helpful - no, they were positively obstructive as well as being ill-informed. This is not an altogether unusual occurrence at such events in this magazine's experience, and it does make the whole thing a lot tougher than it needs to be. After all, even in Portugal they must realise that journalists do their best work in the bar!

While the above may go some way to explaining why the exhibition is falling well below target on its attendance figures, with little chance to recover, we suspect that the theme of 'The Oceans, A Heritage for the Future' is a really tough one to sell to the public. And anyway, how many different ways are there to look at the seabed? No, this felt more like a school geography trip, not that the motivation isn't worthwhile, nay important, nay vital to our future, but how many people really want to spend their leisure time saving the planet, let alone submerged? After a while, and all those trips to the bottom of the Ocean, and you really felt as if you were drowning.

On top of that, the site simply isn't that appealing, despite the fact that it is an attractive dock reclamation. With the exception of the Portuguese and their Macau associates, all the national pavilions are relegated to faceless boxes which form the basis of a new Trade Show Centre which is part of the residual legacy from the venture in terms

of infrastructure. It was the big Theme Pavilions that attracted the most attention, and also delivered the best value.

But then again, maybe we were at the point of a big dynamic surge in terms of the visual technology at the time of Seville, irrespective of the architecture. Nevertheless, there were some peaches concealed under the piecrust, and we leave you to judge these for yourselves. Large format video made an initial appearance, as did the first DLP digital projectors, it was just unfortunate most of the design planning had been carried out prior to the arrival of these new technologies.

As they are the host country we will start our journey circumnavigating the world either on, or under the water in 80 hours, with the Portuguese Pavilion. This is one of the independent buildings on the site. It was designed by architect Eduardo Souto de Moura and its most notable external design feature is the sagging concrete roof span of the open space between the two building elements, which must be intended to look like the draped roof of a rudimentary lean-to tent, as if a piece of cloth is stretched between a wall and two tent poles. The span in this case is considerable, and provides a welcome space for the massive queues which developed despite the overall poor attendance to the site as a whole.

This was one of the few shaded waiting areas provided at Expo'98 - Souto de Moura must have had an inspired premonition that throughput would not be as smooth as the organisers had anticipated. Wait times outside were up to one hour: in 40 degrees of heat, that's all you need. The managers claimed

capacity of 18,000 visitors per day, but were clearly struggling with half of that.

Inside, one quickly discovered the cause of the waiting, firstly because this was an exceptional show and worth waiting for, and secondly, because the public is no longer satisfied with a museum type walk-through, there has to be a substantial entertainment element to sugar the pill, and this means a stand-still element as far as traffic is concerned. The first part of the 'show', the overture in fact, is a series of animated screens, with lighting effects designed by the taller 'arf' of Arf & Yes, Ignace D'Haese, and with sound by Patrick Demoustier of EML, now part of Vari-Lite, who also supplied the lighting - 41 VL6s, 75 ETC Source 4s, 12 High End DataFlash and four F100 smoke generators, all run from a Jands Hog. EML also supplied the sound for the Portuguese Pavilion shows, sourced along with the projection from Doremi Labs video players, in the form of their own EMT loudspeaker system, run from a Yamaha 02R and overseen by engineers Wim Jans and Glenn Mollemans.

The participation of the above may give you a hint that this show was not entirely realised in Portugal. In fact, though the script and concept



**The Utopia Pavilion, home of the Oceans and Utopias show.**

were put together by a Portuguese team, the group included the Belgian doctor turned video producer who had volunteered for the role of realising the script. Johan Schelfhout, who trades under the name of Maverick, which may well be a subconscious, eponymous description of the man himself, was responsible for networking the production of both the video and the AV equipment. Naturally, he turned to known sources in his home country.

Thus, the animated video, which is the centrepiece of the first act of the three elements which make up the total presentation, was put together by Trix, a subsidiary of D&D Audio-Visual (previously the parent company of EML) and delivered at the coal face using three Barco 9200 light-valve graphics projectors. This animation, called *A Viagem* (The Voyage), was a brilliant example of a mélange of blue-screen and animation, combining live action with 16th century artwork. The scene opens with a naïve painting, which we assume to be the dockside in Lisbon: suddenly all the figures come to life and it becomes clear that we are going on a long sea journey for which the preparations are in hand. After a typically hazardous journey, the surviving vessels of the fleet land somewhere in Japan and the animation takes on a distinctly oriental flavour as the scenography shifts to the Namban screens produced by Japanese artists recording their impressions of the first European visitors to the Islands - the news magazines of their time. The 'big-noses' are seen virtually as aliens from another planet, as indeed they must have seemed at the time. The whole was realised by Trix on three Silicon Graphics workstations. The split screens were a case of necessity being the mother of invention, the viewing area being supported by a series of interfering columns.

Act Two featured a computer-generated 'virtual' movie based on the recovery of the artefacts found in the wreck of the *Nossa Senhora dos Mártires*, which floundered on rocks at the entrance to the Tagus estuary in 1606. This was portrayed on a concave circular screen using six interleaved images generated by Barco projectors. The format was very attractive, but whether in an attempt to convince us that we are really under water or because the projectors were underrated, the overall look was rather gloomy, a complaint

that came up again and again elsewhere. Act Three brings us back to the late 20th century and on, with a look at the future and the preservation of the oceanic environment.

On an Expo world tour, it is a short hop to Macau. Macau is to follow Hong Kong back into Chinese sovereignty in 1999, and is keen to ratify its image in the West prior to the hand-over date. The heart of the exhibit is a wide-screen video presentation promoting life in Macau, produced by The Visual Connection and designed by Met Studio, while DJW Audio Visual supplied and installed the AV hardware. The nine metre wide screen, also used in conjunction with programmed lighting and slides, displays a film originally produced on 35mm film, which requires three Sony VPH-D50 CRT multiscan projectors, each displaying one third of the whole, using Sony's PC-6000SE new soft-edge processor to blend the images. Most people would say that the result is seamless and a credit to this Sony technology in overcoming problems of inconsistent brightness, colour shading and hot spots in the overlapping areas. This pavilion also had a well-executed kaleidoscope videowall, a la Epcot, which successfully created the illusion of sucking visitors into it.



**The USA Pavilion, complete with High End Systems Technobeams, Optikinetics K2s and self-generating iceberg.**



**The winding, perspiring queue for the Virtual Reality Pavilion.**

In the Geography of Expo we can now divert to the several Theme Pavilions - Knowledge of the Seas, Oceans, Future, Utopia and others including Virtual Reality (a simulator ride based on the myth of the lost city of Atlantis), all of which infers that if you had webbed feet, this would be the place to spend your summer.

Oceans is a huge and wonderful aquarium, claimed to be the largest in Europe, and designed by Cambridge Seven. The only downside is that this is a zoo for fish, which generally don't care, but if you also include seals that may be a different matter. We saw one displaying decidedly obsessive behaviour. Nevertheless, this will be terrific draw and a great inheritance to the people of Lisbon long after the exhibition has been swept away.

Knowledge and Future are only separated by their titles, one looking at discovery and research, the other at conservation. RGB Video Installations did the AV engineering for Knowledge of the Seas and, as Electrosonic's Spanish distributors, used large quantities of ESLINX and some ESTA equipment to achieve this. (They also AV-ed the Spanish, Venezuelan, Chilean and Algerian national pavilions, using an 84-monitor IMAGMAG videowall synchronised with over 100 ES France/Kodak ESF5050 slide projectors using ESLINX as the show controller in the latter).

Future's central feature is a 3D auditorium show called 'The Threatened Ocean' based on slides and lasers designed by Lightspeed Design Group. The rest of the AV is by Electrosonic, but this time in association with their Portuguese dealer Techniaudio, who also supplied sound and video playback systems for numerous other pavilions. The central part of the pavilion, called 'a walk into the deep blue', is actually a huge glass ceiling representing the surface of the ocean, above which Martin Roboscans provide a number of effects under the control of a Celco Navigator, while ripple machines create waves controlled by an ESLINX, which also handled the show control of numerous sound and video inputs throughout the rest of the building. Meanwhile, ESF5050 slide projectors with automated Planetarium Slew Mirrors sweep the walls with images of fish and other sea creatures. The AV program for Deep Blue was produced by Altomedia in Paris.

The Utopia building sits like a giant beached



# Fusion dims all things known to man



## well, almost!

By combining the digital dimming engine from the field proven Fusion® Wall Mount dimmer with an all new front end in a compact 3U high, 19" rack enclosure, Celco are set to re-define quality dimming at an affordable price.

Featuring 12 channels of either 10A, 16A or 20A the Fusion® Rack Mount offers 100% duty cycle capability and control of both tungsten, non-dim and inductive loads such as neon, fluorescent and low voltage; User selectable dimming curves; soft filtering (virtual long rise time); voltage stability; MCB protection; Analogue and DMX control inputs; DMX address selection by pack or individual

dimmer channel; various programmable back-up safety states and three phase or single phase operation.

Sounds complicated? Not a bit of it! Celco's User and Super User programming modes enable a rental company to standardise on a single dimmer for both advanced and 'no-nonsense' applications without compromise. What's more, being only 3U high Fusion dimmers can replace existing packs without fuss.

And the price? A lot less than you would expect for a dimmer that would grace any tour rider.

Call Celco now to discover the benefits of Fusion® dimming for touring or installation applications.



Celco  
Hawley Mill, Hawley Road, Dartford, Kent  
DA2 7SY England Web: [www.celco.co.uk](http://www.celco.co.uk)  
tel: +44 (0) 1322 282 218 fax: +44 (0) 1322 282  
292 email: [sales@celco.co.uk](mailto:sales@celco.co.uk)  
Fusion® is a registered trademark of Helvar Lighting  
Control Limited.

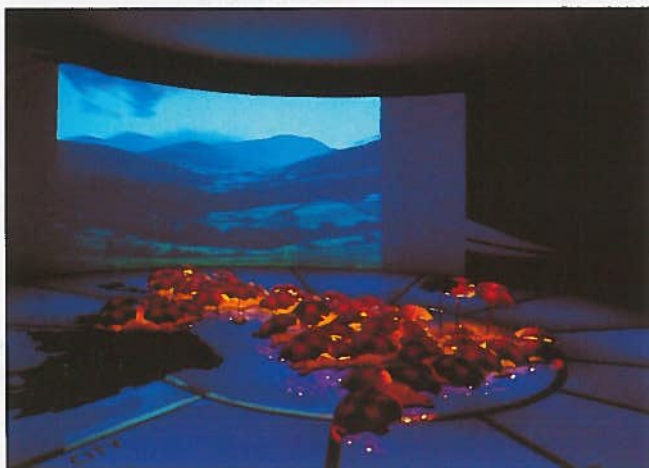


On the British Pavilion, produced by HP:ICM, with lighting design by Adam Grater of DHA, the 'Bubble Up' display (top) and the 'Creative Island' display (below).

whale in the middle of the site, its exterior anonymous with absolutely no signage or other guidance to the public. However, if you do go to Expo, don't be put off by this unenticing facade, this is definitely one of the peaches referred to earlier. It houses one of the two substantial events at Expo which have benefited from the creative input which is becoming uniquely and strangely French/Canadian: there must be something in the water in Quebec - witness Cirque du Soleil.

The building houses a 5,500sq.m, 12,000-seat arena intriguingly built with massive and gorgeous wooden trusses at the perimeter, and is intended to be the lasting architectural monument to the Expo, when it becomes a sport and concert stadium afterwards. The covered area, which is big enough to house a football pitch, is roofed in zinc-quartz which is part of an energy-saving concept for which it is claimed a saving of up to 50% has been achieved.

The show, called *Oceans and Utopias*, though it seemed more of a surreal interpretation of Genesis verses 1 to wherever, appears to have been a collaboration between the Canadian T'as d'Beaux Yeux (which we take to mean, 'you have such beautiful eyes'), who designed the technology, and the French production company Juste Pour Rire ('just for a laugh'). The show was created by Francois



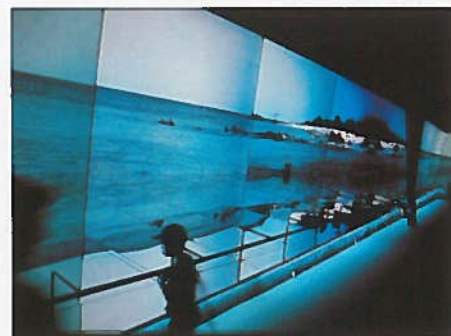
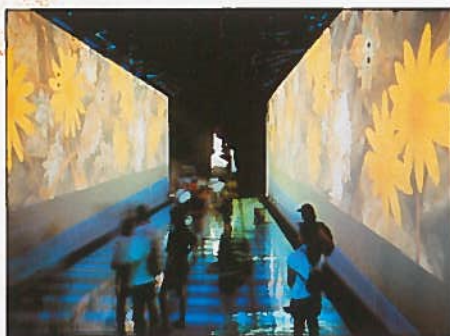
Confino and directed by Philippe Genty, both based in France.

We are not going to begin to describe the show, it's just too wacky - suffice to say that it required several complex mechanical systems. In particular, Philippe Genty wanted the ability to fly actors without relying on typical cable systems. He wanted them to be able to flip and rotate in all directions as if floating, and to simulate weightlessness. TBY, who describe themselves as cultural engineers, which we thought rather charming, solved the problem by bringing in California-based Magicraft who designed a motorised dolly travelling on 40m long steel tracks running from stage right to left, anchored to the floor behind. The dolly is

attached to an articulated arm with a rotating device at the end to which the harnesses are attached. The XYZ, as it was inevitably nicknamed, allows the performers to rotate in all directions and is capable of travelling at speeds of 1m per second. The arm is concealed from the audience in black velour. This show is realised by a whole series of similar mechanical devices including a modified golf-cart, an elevator, a custom-made bungee and DMX-controlled fans by Sapphire Staging of Toronto which are used very effectively together with lightweight fabrics to simulate the sea during the show.

Much of the illusion is created by stagehands working under the stage: there are 10 traps in the 30m x15m surface, the structure of which was produced in Canada by Scene Ethique. StageCo built the complicated grid and rigging system for the complementary and complex overhead action, which proved a tricky problem in view of the wooden roof trusses which are susceptible to changes in temperature and humidity. Lights were designed by Gaëlle de Malglaive and they included 26 2.5kW HMI Telescans, eight 6kW HMI Telespots, 22 Diafora Molefays, 14 Juliat 2kW ellipsoidals and 16 T8 strips, four Svobodas and 26 Pars with Christie scrollers plus their foggers. Projection equipment was by ETC, with imagery by Jean-Michel Quesnes. See this show if you get the chance, it's a must.

The Virtual Reality feature is a little unusual in this scenario in that it is a stand-alone and separate commercial entity in which the visitor queues in the sun, and remember this is serious sun, only to find that they also have to pay an additional fee to enter the experience. The queuing is exacerbated by its low throughput of only 400 (or was it 600?) per hour. I have heard of people lining up for two hours for this attraction, to the point where the operators were forced to hand out free bottles of water - what on earth, or under the sea, would they have done if the site had been enjoying full capacity? They were obviously caught out by the pull of the magic words 'virtual reality', though the experience itself struggled to deliver against its promise. In fact, this was one of the commercial pavilions, another being Swatch which was actually much more amusing (and accessible), masquerading as a Location Based Entertainment. VR was sponsored by Portugal Telecom, who cleverly



Above, left to right: three Pavilions with an Electrosonic presence - Algeria, Chile and Venezuela.

Visit  
our stand  
D/60, Hall 14/2  
at Photokina

High performance video.

High performance graphics.



## Mix to the Max

Display video and graphics on a videowall at the same time without compromise? Your choice of analog or digital control interface driven from your PC or direct from Vector. display devices.



With Vector™ you can.

The new Image Control processor from Electrosonic has been engineered to mix and display the most stunning presentations ever seen on the 'big wall'.

Large images of breathtaking quality. A dynamic mix of eight different sources with impressive effects. An intuitive

All this with video and real-time graphics – Mix to the Max!

Vector has already been given the seal of approval by the people who matter most – our customers, many of whom have worked closely with our team at each critical stage of its development. To see for yourself, contact us now.



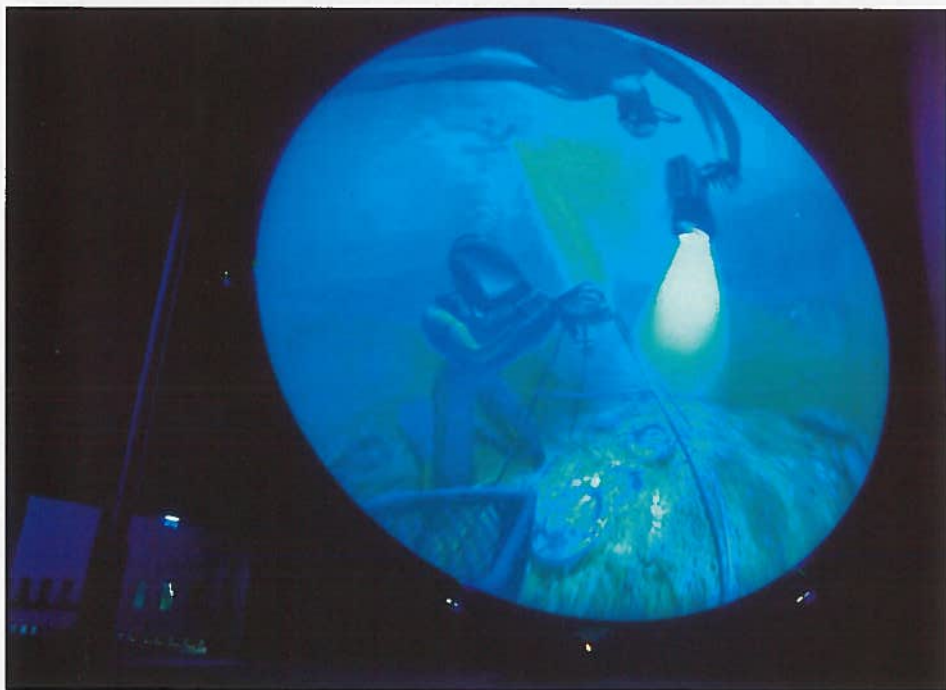
**ELECTROSONIC**  
image control

Electrosonic Limited, Hawley Mill, Hawley Road, Dartford, Kent DA2 7SY.  
Tel: (01322) 282247 Fax: (01322) 282215 [www.electrosonic.com](http://www.electrosonic.com)

Vector™ is a registered trademark of Electrosonic Ltd



**The Portuguese Pavilion. Above, six interleaved images from Barco projectors produce the image on this concave circular screen, and below, prior to the viewing of 'The Voyage' multiple projections set the scene before the main screen is revealed.**



kept their cost to a minimum by bringing in such an outside commercial operation, but will have hoped to gain the techno-kudos nevertheless. It didn't fool us guv.

There was a potentially interesting globe-shaped videowall in the pre-show ante room. This is followed by a 40-seater simulator ride (courtesy of Simex for the ride and Tube Images for the computer-generated imagery) for the journey to Oceania - a lost civilisation long since submerged not a million mythical miles away from the lost city of Atlantis. From here on, it was downhill all the way, if you'll excuse the pun. Despite contributions from Straylight Corp, Alternate Realities and more from TBY, the whole experience became a bit of a yawn, as we shuffled around in various subterranean caverns with occasional updates on the script from our aquanaut guide, or attempted to get some stimulation from yet another piece of technology disguised as an artefact which failed

to deliver. Innovitech, and its subsidiary Metaforia Entertainment, plan on rolling-out this concept at other locations, and I am sure it will be very successful, in the short term at least. We just hope that all those people who queued in the sun were not as disappointed with the present reality of VR as we were. (If they had known that they could have had a very similar experience for nothing in the German pavilion, they probably would have been a trifle agitated!)

As mentioned, the national pavilions were, shall we say, failed to deliver, the highlights being the previously-mentioned German Pavilion and the French Pavilion which we thought had dealt with a difficult subject in a particularly effective way.

We note that lighting design was by Jean-Yves Morvan of Caméléon, so there were plenty of Telescans in evidence, and sound-wise we particularly liked the way that tiny

Bose Acoustimass loudspeakers were installed at ear level on slanting poles within each exhibit, to ensure that you got the right message crystal clearly. Croatia provided a 360°, nine-screen AV show using Sèleco's - now reborn as SIM2 Multimedia - brand new DLP projector - the SDV 1300, which is a three DMD type with a 500W xenon lamp, for which 1300 ANSI lumens output is claimed. The USA was untypically laid back, but they had a central atrium which featured a light show with 16 each of High End's Technobeams and Optikinetics' K2 projectors sweeping the inevitable fish around the perimeter wall. The best thing here was the self-generating iceberg (drawing solely on moisture from the atmosphere) which attracted a lot of interest as a touchy-feely item, if you didn't mind the frostbite. They also had some great ripple lights of unknown origin which, if the maker would like to make contact, one of your hacks would be pleased to spec into a lighting design he is working on.

Optikinetics, incidentally, had their K series projectors and Trilite trussing in a number of other areas, including the Olympic, Russian and Namibian Pavilions (all supplied by Portuguese distributors Luz E Som and installed by Forte Systems), the Mexican Pavilion (supplied by Teletec of Mexico), the European Union Pavilion (supplied by Lighting Technology) as well as the Eritreian and Panamanian and European Union Pavilions and the La Nao building (supplied by Spanish agents Laco 88).

The UK made a good attempt at tackling the problem of throughput with a travelator (courtesy of Shipley-based Stage One Creative Services), though our long trading relationship with the Portuguese through the consumption of the ancient brew, has clearly not endeared us sufficiently to the locals, who weren't exactly beating a path to the door. Electrosonic was the systems integrator for the AV, lighting design was by Adam Grater at DHA and the whole was a HP:ICM production. Again a Celco Navigator was in use with the ESLINX as the show controller calling the cues on MIDI. Artistic Licence provided lighting control for the Pepper's Ghost and another sponsored feature in the pavilion using their Scroll-Control.

Large format video was certainly a notable feature of Expo'98, with material that previously would have required film now being presented on JVC-Hughes ILAs or Barco high power LCD projectors. Aside from those already mentioned, Korea, Spain, UEA and Venezuela took the plunge. The Canadians and Chinese stayed with 35mm film, while the Japanese offered a 3D movie experience.

Enough of the 'song contest' aspect, let's get back outside and check out the nightlife. There are several outdoor stages at Expo'98, typically delivering weird and generally unapproachable entertainments after dark. Avolites scooped the pool with these, gaining the contract to supply 14 Pearl 2000 and three Diamond III boards via Phlipppo Showlight, the Belgian rental house. Local support was provided by Cinemate, Avolites' distributor. However, the biggest stage of them all was sponsored by Sony and consequently slipped



# LIGHTING TECHNOLOGY



*Wish you were here!*

For the best in Lighting  
Technology, visit stand J7  
and enjoy the sunshine!



**PLASA '98**  
**STAND J7**



The Lighting Technology Group, 2 Tudor Estate, Abbey Road, Park Royal, London NW10 7UY.  
Tel: +44 (0) 181 965 6800 Fax: +44 (0) 181 965 0950 E-mail: [sales@lighting-tech.com](mailto:sales@lighting-tech.com) Internet: [www.lighting-tech.com](http://www.lighting-tech.com)

through Showlight's clutches, the lighting contract going to Access All Areas who are the authorised Series 300 Vari-Lite dealer in Portugal - although it still sports a Diamond III console.

The Sony Plaza, as it is called, which can accommodate more than 8,000 people, is dominated by a Jumbotron screen above the stage to relay live action from the performance. Naturally, the rig is dominated by Vari-Lite kit, 20 VL5s and 30 VL6s, plus a raft of conventionals, including loads more K2 projectors from Optikinetics. Vari-Lite Production Service's Jon Cadbury was the senior co-ordinator.

Sound-wise, the entire site has been equipped with Meyer Sound loudspeakers, in what is the largest ever single deal in the history of the company. In all, around 450 Meyer speakers are involved in Expo 98 - representing three 40-ton truck-loads of kit. The brunt were supplied from Meyer's French distributor, Dispatch, with stocks all over the world being raided to make up the shortfall. Rather fittingly, the MSL-5 system for the Oceans and Utopias show in the Utopia Pavilion was supplied by Solotech of Canada, whose clients include Cirque du Soleil. The furthest source to be drawn on, however, is Korea, with Avix Trading supplying a self-powered surround-sound system for the Korean Pavilion.

Included in the order, which must have made some mouths water at Meyer, are over 300 of the company's new self-powered UltraSeries speakers, along with various other Meyer lines, self-powered and otherwise.

Naturally, for an event where Meyer speakers are providing sound reinforcement for up to 70 shows per day, the deal doesn't stop there. A round-the-clock support team is in place for the duration of the Expo, with personnel drawn from Dispatch, Portuguese company Audio Pro Live and Meyer Sound Europe.

The Sony Plaza constitutes the greatest concentration of Meyer speakers on the site, comprising a mixture of UPA-1s paired with USW-1P subwoofers, and MSL-4s paired with PSW-2 subs.

So to the finalé, the now mandatory water show, here called Acquamatrix, which takes place in a dock forming a sort of harbour area. The main elements consist of three skeletal metal towers (a cross between a colliery shaft winch and a dock derrick) with six articulated 'bat-wing' arms which rise from the water and spit flames like surreal dragons; a tight-rope bicycle stunt and a gigantic inflatable projection screen in the shape of an egg have 'Mark Fisher' writ large all over them. Sadly, as in Seville, commercial considerations prevented him from seeing it through, so the mantle passed to Yves Pepin's eca2, which takes the production credits.

StageCo built the steelwork, which also included the central island that supports the egg (which when inflated is 30m high and 24m wide, plus the three bridges to the main masts. The egg, which gobbles 9,000 cubic metres of air in 60 seconds, was made by ATC in Brittany and houses six ETC PIGI roto 360 projectors, and one vertical PIGI, to back-project onto the



**Top: the kaleidoscope videowall in the Macau Pavilion (photo: The Visual Connection). Below, ABBA tribute band Björn Again, with Jumbotron, in action on the Sony Plaza stage.**

skin of the 'oeuf gonflable'. Fisher was obviously obsessed with ovoid shapes in 1997 when he presented this concept to the Expo organisers in the form of an animated video with a soundtrack by David Toop. After all, this was also the year of U2's lemon. Toop stayed on board to the culmination.

The pyro (typically the show climaxed with 160 flashes in 60 seconds) was provided by Froup F and included the 'sea dragons': three flame machines capable of 15m projections, and 18 delivering 8m long flames. We could feel the heat from our vantage point. Lighting, designed by Alexandre Coelho, and supplied by SPL, was controlled by a Wholehog II and included eight Xenotech Britelight 7ks, 36 Arenas, 12 Molefays, 30 Dataflash, six Martin Mac 500s, 48 Par cans, an HMI 2500 followspot and 89 submersible 1ks.

For Acquamatrix, the waterfront sound system consists of five MSL-4 self-powered cabs and three 650-P subs set on a barge in the marina. Back in March, prior to the opening of the Expo, a team of Meyer engineers had to thoroughly test this system in location, to ensure that the sound levels would not disturb the animals housed in the Oceanarium. We're sure the seals are eternally grateful for this - at least they can carry out their frantic loop-the-loops in their pools in peace and quiet.

Don't leave the site without visiting the extraordinary Oriente railway and metro station, another legacy to the people of Lisbon from the Expo, which is probably the most striking architectural design on the site, from the Spanish architect Santiago Calatrava. If only the Brits would do something as stunning with the Light Railway and Jubilee stations in



Greenwich . . . dream on! If you have rented a car, take a drive over the new Vasco da Gama bridge which links Lisbon with Montijo - 13 kilometres away across the mouth of the Tagus.

Amidst all the talk of corruption, and the unexpectedly low attendance in Lisbon, it was hardly surprising to read that the next world Expo in 2000, which will take place in Hanover (of all places), is already struggling, despite being a full Category A world expo. Under the headline 'Germany's Millennium Exhibition Set to be the Disaster of the Century', the Sunday Times reported that the future of the Expo hung in the balance last week after its management was accused of incompetence by a government expert, building contracts were dissolved, the architect of the German pavilion walked out, and it emerged that only five out of the 12 necessary sponsors had been secured. While it is comforting to know that even the Germans are in a pickle over a millennium exhibition, there must be a question as to whether Expo 98 is not only the last of the century, but the last one ever?

*The writers are grateful for additional material provided by Bob Simpson of Electrosonic, Vincent Brie of TBY, and Mark Fisher.*

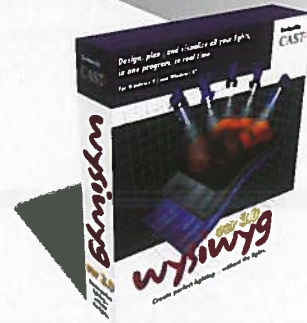
1997 LDI Award - Product of the Year  
 Download a full demo version and a free  
 copy of WYSIPAPER from [www.wysicad.com](http://www.wysicad.com)

# Design

# Plan

# Visualize

all of your lights,  
 in one program,  
 in real time.



The industry-standard lighting visualization software has just turned 3. It's now the most complete software you can buy for light planning, programming and real-time visualization. Why try to make other CAD, paperwork, and visualization software work in harmony when WYSIWYG does it for you.

Best of all, WYSIWYG allows you to add functionality as your needs grow:

**WYSIPAPER, WYSICAD & WYSIWYG:**

Windows 95/NT - Menus, dockable floating toolbars, mail and internet integration, unlimited undo/redo, multithreaded, Direct3D, context sensitive help.

Paperwork - Integrated tabular view of fixtures and accessories with data entry, sorting, filtering, detail levels, support for scrollers, multi celled cyc units, etc. Free form spreadsheets.

Patch - Grid view of instrument patch, drag & drop patching.

Multiple Report Functions.

Extensive Library - Fixtures, accessories, scrollers, truss, gobos, gels, set pieces.

Fully customisable user profiles.

**WYSICAD & WYSIWYG:**

CAD - Layers, scenes, views, DWG, DXF, groups, hot keys, command line, object snap, extrude, break, divide.

Presentation Views - Arrange plans, sections, title blocks, keys and reports on any size paper.

Symbols - Auto uniting, quick numbering, attribute editing.

Theatre Tools - Borders, legs, pipes, flats, risers, focus positions, focus charts, pipe topes.

Rendering - Real-time 3D shading.

**WYSIWYG:**

Real-time Visualization - Intensity, colours, gobos, movement, iris, shutter, lens, zoom, focus, CMY mixing, scrollers and gobo/colour wheels with half and continuous slots, motor speed.

Ethernet Interface - Run it on a laptop!

AutoFocus - Set pan/tilt, colour, gobo, iris and intensity on an AutoFocus-compatible console by pointing and clicking on your plot, buddy system doubles the speed of focusing in symmetrical rigs.

# wysiwyg ver 3.0

Create perfect lighting... without the lights.

Developed by:

**CAST** lighting

Worldwide  
 Distribution  
 by:

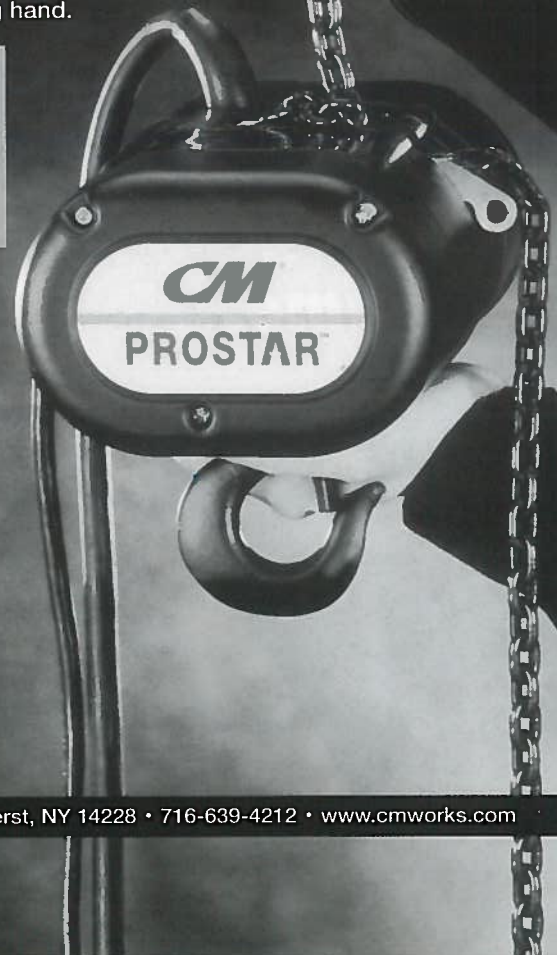
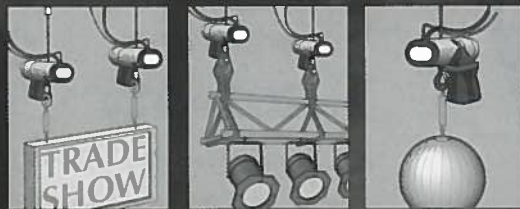


**A.C. Lighting Inc. USA**  
 5308 Derry Avenue, Unit R  
 Agoura Hills, CA 91301, USA  
 Tel: 818-707-0884 Fax: 818-707-0512  
 Email: [sales@aclighting.com](mailto:sales@aclighting.com)

**A.C. Lighting Ltd. UK**  
 Unit 3, Spearmast Industrial Park, Lane End Road,  
 Sands, High Wycombe, Bucks HP12 4JG. England.  
 Tel +44 (0)1494 446000 Fax +44 (0)1494 461024  
 Email: [sales@aclighting.co.uk](mailto:sales@aclighting.co.uk)  
 Web: <http://www.aclighting.co.uk>

# Let's have a big hand for this little baby.

**CM Prostar™** It's not the size of the venue, it's the size of the job. Light – just 14.5 kgs – and little, CM's new Prostar hoist is ideal for smaller clubs and stages. It hangs in there lift after lift, just like our super-reliable Lodestar®. It will operate nonstop for 30 minutes at full rated load. It's available in 136 kgs and 272 kgs rated load capacities. It's now available for use with standard Lodestar controllers. And it's made in the U.S.A. Fax 1-716-695-0122 for more reasons why our little Prostar deserves a great big hand.



# No Comment . . .

Tony Gottelier

**T**wo weeks holiday without English newspapers and it's amazing what's gone on in such a short time when you come to review the news. My technique is to get the newsagent to save only the weekend papers in the hope that they'll provide a broad spectrum of what has gone on the week before. This time it didn't work and I found myself bemused. The Cabinet reshuffle took place while I was away, and now I haven't a clue who's got which job. You would have thought that at least there would be some comment against a list of appointments, but nothing. The only thing I know for certain is that Frank Field has been put out to grass. Not only that but, despite the fact the real harvest is in full progress as I write this, the muck spreading had already begun. A week is, indeed, a long time in politics!

**M**y piece last month on PRG seems to have caused a bit of a furore. I had a long and friendly conversation with Steve Terry following publication, the gist of which is pretty well summarised in his letter which is printed on page 21 of last month's L+SI. It is my experience that when such amalgamations take place it is never too long before ego plays its part and everyone falls out acrimoniously. Is anyone suggesting that there are no egos in the entech industry?

**A**dditionally, the 'suits' and the 'creatives' do not sit happily alongside each other: Light and Sound Design will have plenty of previous knowledge of that one. It was for this reason that I made my 'fade to grey, if not to black' remark. I genuinely hope that I am wrong - we need people like Steve as independent spirits in this industry, not ones obliged to tow a party line. I accept that there is no boardroom full of 'big business executives' at present, but for how long? While Steve Terry and Nick Jackson will be there to resist the worst pressures, it would be unusual for shareholders to be sympathetic to the aspirations of the staff, let alone the customers.

**I** agree that PRG is not a colossus in the context of other industries, though in this case it will be a Leviathan in our small pond. These things are comparative, but perhaps conglomerate would be a better description. The big question is that, having acquired several businesses at the absolute top of their market, where will the extra business come from to pay the estimated \$14 million annual interest on the junk bonds? I am also curious as to how Steve squares the statement in his letter that PRG's structure will allow it "to satisfy the market's ever-increasing demand for new equipment and technology . . ." with his later remarks that, "market trends over the last five years have left the pot of 'creativity money' pretty lean in a great many companies . . ."

and, 'the economics of the lighting rental business have changed profoundly'. If it's an expanding marketplace how has that been allowed to happen?

**W**hat I do accept is that there is a big shift going on in the market place at present. One major player in the concert and rock industry in the UK told me this week that there has been a marked shift in their customer base this year, with touring taking very much a back seat. A report published this week from the record industry (see below) confirms this. It follows that rental rates are also softening - whether amalgamation is the answer, is the big question. I am not going to bang on about this anymore - I am looking forward to meeting all the players involved during the PLASA Show and will report back to you in due course.

**T**he comment above about significant contemporaneous changes in the industry is borne out by the sixth Record Industry Annual Survey produced by Media Research Publishing. This report concludes that it is increasingly rare for recording artists to sustain chart careers over long periods. Q: What about the Rolling Stones, Phil Collins and Elton John? A: Five years ago almost half of the top 50 albums were by artists who had been around for 10 years or more, but by last year this had fallen to just 7%. And conversely, the new bands are not taking up the slack.

The report highlights a significant drop in the number of bands surviving from one year's charts to the next. Of course, that is the rub, because an ever-faster turnover of young bands who just grab the quick buck and then vanish into oblivion, is not going to feed our businesses for the future. PLASA members would be well advised to keep a close watch on these shifts in emphasis with a view to

potential changes in direction for their businesses. The shock waves will doubtless affect us all. We must ensure that we are not sucked into the undertow.

**A**s you may have gathered by now, I am nervous about the implications of mergers and acquisitions, so something else I read in the weekend's papers also got me going. There is a suggestion that Rank's nightclub estate may be up for sale. Furthermore, it is suggested that the most obvious candidate to acquire this lot, lock-stock-and-beer-barrel, is First Leisure. This would give the combined group a virtual monopoly of large-scale high street and out-of-town discotheques. Can that be a good thing for anyone else other than the shareholders? I very much doubt it. The only hope is that the resultant homogenous corporate outlets will provide an opportunity for some creative private entrepreneurs to step into the gap. Actually, there are some hopeful signs that this is already happening in advance of any potential merger taking place. I am thinking of the likes of Café de Paris, Cream and Big Beat. Let's hope that they can realise their ambitions without falling for the 'cheque book opportunism' of one of the majors.

**F**inally, I wonder, in the aftermath of the new Drugs Misuse Act, if it is significant that some, admittedly limited, research carried out by my own company to find out where young professionals are going for their evening leisure in London these days, turned up a long list of 'live' bars and not a single discotheque?

*Tony Gottelier is chairing a seminar on developing and redeveloping theatres for the new Millennium on Wednesday 9th September during the PLASA Show*

FRANCIS REID WILL BE SIGNING COPIES OF STAGES FOR TOMORROW (£14.99) DURING THE PLASA SHOW. THE SIGNING WILL TAKE PLACE ON MONDAY 7TH SEPTEMBER FROM 2.30-3.00PM ON THE PLASA STAND - F1. THE SECOND EDITION OF REID'S DISCOVERING STAGE LIGHTING WILL ALSO BE AVAILABLE. A WIDE SELECTION OF INDUSTRY TITLES WILL BE DISPLAYED ON THE PLASA STAND (F1) IN ITS DEDICATED TECHNICAL BOOK AREA.



**WHITE LIGHT**

**Lighting Hire and Sales**

London  
Tel: 0171 731 3291  
Fax: 0171 371 0806

North  
Tel: 01422 839 651  
Fax: 01422 839 773

[www.whitelight.ltd.uk](http://www.whitelight.ltd.uk)

# AUDIO INTEGRATION

*The friendly takeover of Harman Audio UK by the Arbiter Group last year, and the creation of Arbiter Pro Audio, meant the passing of UK distribution of several of the biggest names in pro audio into new hands. Paul Ireson reports*



**Above, Arbiter Group headquarters in Wilberforce Road, London and head of Arbiter's pro audio division, Dave Karlsen.**

With its takeover of Harman Audio UK last year, the Arbiter Group consolidated its position at the top of the UK music industry. The statistics are impressive - a £35-36m turnover this year, the second-largest distributor in the country after Yamaha, and a business that goes deep into consumer channels. But as well as simply expanding the company, adding around 30% to its turnover, absorbing Harman meant a challenge for Arbiter, as it meant moving into pro audio in a way that it never had before.

Adding the Harman portfolio to Arbiter's list of brands has brought on board several big names - JBL, C Audio, AKG, dbx - and involved the acquisition of a major new facility in Harman's old Borehamwood premises. Following a two-month conversion, its 33,000sq.ft is now dedicated to warehousing, distribution and service facilities.

The approach of the Arbiter Group to its new responsibility has been to integrate it rather than simply take it over. By moving sales and support to Arbiter's Hendon HQ, a proper level of integration and control can be achieved, though this has been a major undertaking.

## A LITTLE HISTORY

Arbiter has always been a family business. Chairman Ivor Arbiter sits on the board with son-in-law Andrew Landesberg and financial director John Wheeldon. The company is closely associated with the Fender name, and with the creation of the karaoke market in the UK. With the acquisition of Harman Audio UK, Arbiter Pro Audio was created within the



Arbiter Group, reflecting the fact that the company would have to address different needs and markets than those dealt with by Arbiter's existing, more MI-based structures. But there was a strong feeling that in order to build on Arbiter's expertise in distribution, the new product lines, and the staff of Harman-that-was, had to be integrated in the overall company structure.

The division is headed by Dave Karlsen, and as he sees it, they're now well on the way to achieving the immediate goals of integration. "In effect, we've swallowed a nine or ten million pound company, and totally absorbed it into what we do within nine months of taking over. That's meant a lot of problems in terms of computer systems - obviously they ran different systems, and it's important to standardise that - and we've taken on about 10 new people who've had to learn new jobs."

With the creation of Arbiter Pro Audio, the Arbiter Group now employs around 150 people: 40 or so make up the Pro Audio group, among whom are familiar names like Bruno Wayte (Head of the Sound Reinforcement division within Pro Audio) and Max Lindsay-Johnson (Head of Studio Broadcast), and a legion of service, purchasing, telesales, marketing, support and repping staff. This compares with Harman UK's 33 employees at the time of its absorption. "We've invested in extra staff rather than losing people," points out Karlsen, "and retained the Borehamwood centre for service and distribution. But it was important to give the staff there a much better computer system to be able to analyse and track jobs.

"It takes a vision, and a real commitment to do this, to follow it all through. I've got new staff on whom I don't expect to get a return on our investment until well into next year. They have to go on training courses, and they need to know everything about all the products. We sell 20,000 different items, and ship around 125,000 items per year."

Sheer quantity of product is not the important thing, however. "The vital thing for any distribution-related company is the question: 'is the product any good'," says Karlsen. "We've got that, without a doubt, but then a lot of companies have great products. The next thing is the service. We know where we want to be, and what we want to do for our customers, but the two haven't got together on a regular basis yet. We're 60-70% of the way there."

This is an area where Arbiter expect to be able to improve on Harman's performance. "Our feedback from customers said that, under Harman, questions weren't being answered. We couldn't take the existing system and expand it, because it obviously had some problems. We couldn't just put some more people in and do more marketing, and expect things to sort themselves out. Yes, we have put people in, and yes, we have increased the marketing activity, but at the same time we've developed the product lines to be more focused on the markets they're in. It's more about infrastructure than anything else.

"What our customers really care about is have we got it, and can they have it. Those two questions are very simple, but they're not necessarily very easy to answer when you're talking about lines with so many products. AKG, for example, has over 550 different products. JBL has over 2,000, from a bracket to a huge cabinet, and even the bracket can make a difference to whether an installation goes smoothly or not. We're trying to get in place systems so that the questions can be properly answered."



**Guy Hawley (JBL), David Karlsen (Arbiter), Doug Daniels (JBL) and Bruno Wayte (Arbiter) pictured left with JBL's new Installation Series at its recent launch in London and right, inside Arbiter's Wilberforce Road headquarters.**

Apart from anything else, it is the right infrastructure that will enable Arbiter to maximise the potential of its staff. "We've got lots of very capable people, but we need systems that are right for the markets we're in, and for the company. That's what's taking the time. Also, new staff have to learn their jobs. We'll get there, and we'll get there fairly quickly - before the end of the year."

#### **FOCUS ON THE MARKET**

The new infrastructure organises the efforts of Arbiter Pro Audio to reflect areas of business that their customers are in. "We took the existing sales team and made it more focused," explains Karlsen. "Whereas before it was by brand, now it's by market. Some staff are concentrating on the live market, but contracting and installation is separate, and Studio Broadcast is separate. We have sales people specific to each market, though of course some dealers overlap, and some aren't in all markets."

By and large, the different Harman brands come under particular divisions, though it's not quite that simple. "AKG and dbx basically come under Studio Broadcast. But those brands also go into MI stores, so we have to reflect that. On the Sound Reinforcement front, JBL and C Audio are our main brands - but they also end up in installed sound, cinema and touring. They go across a lot of markets."

The different markets get separate support teams, with specialists within them for each brand, allowing the strengths of each brand within that market to be maximised. "Those people are there so we can answer all customers' questions and meet any requirement. That usually doesn't result in sales for months, but it's an important part of customer service. The sales team is there to service our customers' day-to-day needs, whether it's 'I need this tomorrow', or 'I'm doing this job in six weeks time.'"

For major projects, the strength in depth of the support staff is considered important both by Arbiter and their customers. "A good example would be the Odeon Leicester Square [recently re-fitted with a new sound system based around the biggest of JBL's 5000-series cinema speakers and the subject of a future feature in L+S]. We knew in January that the work would be done in June, but there were all sorts of things that had to be right. Our

acousticians had to be involved, for example, and I would tend to suggest that not many distribution companies have those resources," says Dave Karlsen. "It's all very well having the sales team there, but the market isn't just about sales today. We want to build the team so that the customer can get a technical answer or a sales answer quickly and easily - and we've got enough resources to do that."

Because of the considerable cross-fertilisation between markets, it's important that staff know the product ranges well, and that the company's management can keep track of everything. "Some MI dealers do installations, installers might do studios, a studio dealer might sell software, and software is sold into consumer channels. Then consumer channels sell karaoke equipment, which also goes into installations. It makes it terribly complicated from a management point of view, but it's well under control, and it's a necessary complexity - to get the most out of the brands."

Long term commitment is also important. Even though the live market has been quiet for some time, Dave Karlsen points out that "I've got people who are out there talking to the market. We've got to represent the brands to the best extent we can."

Given that Arbiter is approaching the whole Pro Audio field by markets, one has to wonder which they see as the most important for future growth. "That's a key question - especially as we're very much perceived as an MI company, and that's obviously a core part of our business. But we set up that part of the company and got that structure right years ago, and the work now is to grow new markets and grow new business for us. There are only so many music shops in the UK - and in Europe - that we can sell to, so the pro audio business is very important to us. We're 125% committed to growing this part of our business, to the point where we're possibly over-investing today to build our future."

"Of the Pro Audio areas, I think contracting and installation probably has the biggest growth potential, because it covers everything from a single pub to a major install - L+S readers well know the size of project that you can be talking about. That's the area that JBL have invested time and effort in recently, and we always try to see ourselves in the place of the manufacturer. If that's where they're putting their resources, that's where we go."

#### **BIG IS BEST**

One of the strengths of the Harman brands, as Karlsen sees it, is that the sheer size of the Harman Group means that not only can they invest in brands when required, but it enables them to plan ahead. "The one thing we don't have to worry about is whether they'll be around tomorrow. We're involved with software also, in the MI field, and we've had three companies disappear on us this year alone. I know JBL will be here tomorrow and I know that AKG and C Audio will be here tomorrow. That makes quite a difference when you're making decisions on investing in staff."

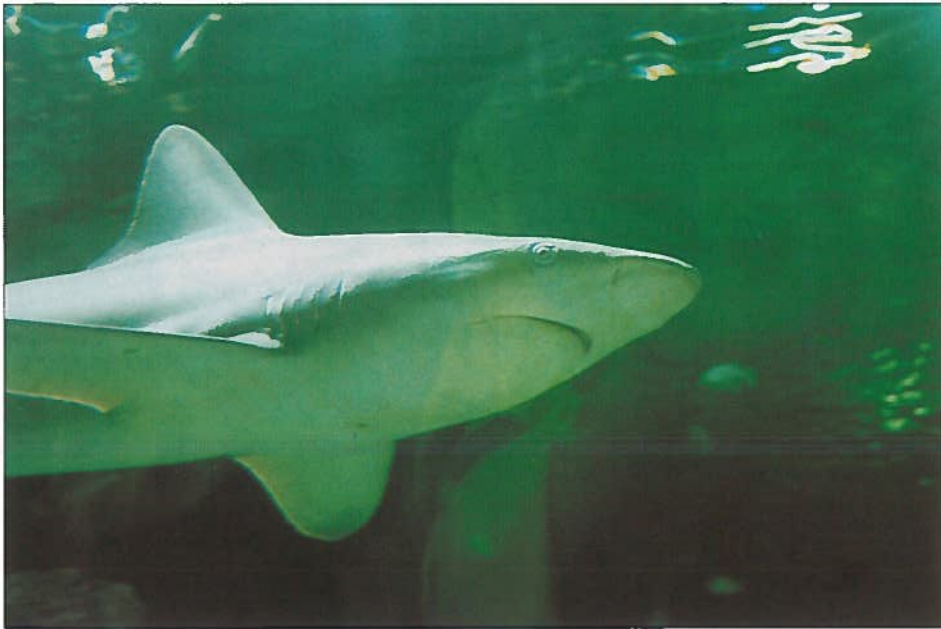
JBL's recent product changes get a nod of approval from their new distributor. "Focusing the brands, and the ranges within the brands - the changes might not seem dramatic, but for a speaker company of that size to make those kind of decisions is a very big step forward. And the amount of growth alone in JBL last year would make them one of the top 20 companies in the audio world - so we're very happy to invest in them. dbx is a great example - I think they're probably the fastest-growing Harman brand, because they've invested to be able to go out and make great products. AKG is also moving in the right direction - they've become much better at positioning their products, from a pricing point of view, but they're still retaining the quality of design and manufacture."

Investing heavily, though, as Arbiter is in Pro Audio, surely has dangers in the context of a national and international economy that is looking more recessionary all the time. This is not a view shared by Arbiter. "What can we do?," says Karlsen. "We can't influence it, so we just do what we can with what we've got, all the time. But I think it's the undiscussed policy of the company that we diversify, so we're not dependant on any one market."

#### **A EUROPEAN PERSPECTIVE**

The current investment that Arbiter is making in Pro Audio deals with the present, but what of the future. Naturally enough, especially given that the Arbiter Group has been involved in the Benelux countries for some time, there's an eye on Europe. Where does Dave Karlsen see Arbiter going over the next, say, five years?

"Five years is a good period to look at. We have to handle what we've got now, and handle it better, and that'll take a little while."



**Shark and JBL-infested - the Blue Planet Sea Life Centre. In the panel - the technical spec.**

Another three months to get it working, and a year to improve. We want people to deal with us because we're a good company to deal with - not just because we've got good products.

"But ultimately we want to be the largest distribution company in the world - that's a big goal, but then we're involved in a lot markets. We're in consumer electronics-based business - through Dixons, for example, and that's a business that can be developed. There's a strong cinema business. We're making inroads into football stadiums - West Ham is the latest one. Ideally we'd be in all the different markets, in every country in the world. But Europe would be a good start, and we're way off that the moment."

Ironically, the very strength of the growth in Harman brands is one of Arbiter Pro Audio's biggest problems at present. "The thing is, all the brands are growing like mad," explains Karlsen, "and that catches out dealers who are used to asking for things now. We have to project six months ahead, and if business grows by 30% over a three-month period, it'll throw your purchasing projections right out. But, of course, no dealer rings up and says how many of a particular product they'll need every month for the next six months. Hardly anybody gives us projections - they just ask us on the day. The answer is increased production, which Harman are investing in. JBL have built a new factory in Cornwall, and C Audio have moved factory twice this year to keep up. But we don't want to sit here blaming suppliers, it's just part of the picture."

#### THE BOTTOM LINE

Acquiring Harman UK was, as Karlsen is quick to admit, an easy way for Arbiter to become a big player in UK pro audio. "We purchased our way into the market, but that isn't enough. We want to earn our position by service and quality, and we're on the road to that. Looking at market size, we're one of the top 10 audio related companies in Europe, and one of the top five in the UK on turnover, but we want to be there because of service. That'll keep us there, and keep us going. If we can deliver good products properly, we'll build faith in the brands, and in us."

#### ARBITER IN ACTION

##### *Blue Planet Sea Life Centre, Runcorn*

Brian Smart of Smart Technologies explains how AKG and JBL fitted into his installations at this major aquarium near Manchester: "We installed a good deal of computer and traditional audio equipment at Blue Planet. All the audio and radio equipment is based around a central AV room, with two Allen & Heath digital mixers at the heart of everything.

"The speakers are all JBL - Control 23s, 25s and 28s - except where we needed to use some special flush-mount or waterproof speakers. It was quite an easy choice, as I've been a JBL fan for years. Blue Planet wanted quality speakers so JBL was the obvious choice.

"In the main Aqua Theatre - which is set out like a theatre or cinema, but with a big window into the main tank instead of a screen, and an AKG radio mic provided for the presenter, as well as a special link to divers in the tank - there are JBL speakers all around the various themed exhibition areas. There are a lot of sound effects, of birds, frogs, running water and so on, which really bring the areas to life.

"In the Northern Latitudes area, there's air conditioning to make it really seem like you're in a Scottish glen. Then in the Tropical Latitude areas, we're using Steinberg Cubase VST running on a PC, not just for sound, but also to trigger effects via the MIDI tracks. There's a MIDI lighting controller that runs strobe lighting effects, and a switch to control pump valves that create rain over the tank. Then for the thunder sound effects there are four Control 25 and 28 speakers, plus an SB2 sub-bass unit. It makes for excellent theming.

"In the main areas, the presenters use AKG radio mics, and where presentation is less important, but they need to roam around more, they use a portable, shoulder-strap speaker and mic from Addabox.

"If it had been an office installation, it would have taken four to six weeks to complete. But once all the artificial rock for the tanks had gone in, it made a huge difference. We needed divers to take cables into tanks and under displays, if we couldn't get in before the basic rockwork was done!"

#### Northern Latitudes

Network PC with 4-channel sound, Samson 4-channel amp, 4 x JBL Control 23 speakers

#### Tropical Latitudes

Network PC with 4-channel sound, Samson 4-channel amp, 2 x JBL Control 25 speakers, 2 x JBL Control 28 speakers, 1 x JBL SB2 sub-bass unit

#### Rockpool and Raypool

Samson 2-channel power amp, 4 x JBL Control 23 speakers, 2 x AKG UHF radio mic systems

#### Main Aqua Theatre

4-channel Samson amp, 4 x JBL Control 25 speakers, AKG radio mic

#### Tunnel

AKG radio mic system with remote antennae, 20 x Audio Design ceiling-mount speakers, 4-channel Samson amp

#### Café/Foyer

4 x JBL Control 23s, 2 x JBL Control 25s

#### Comms Room

2 x Allen & Heath DRT28 24

#### ARBITER IN ACTION - 2

##### *West Ham Football Club, London*

Tom Baker of TG Baker Sound, one of the UK's leading installers of audio equipment for sports stadia, talks about building a new system for West Ham FC: "The spec from the club was very complex, but one of the important things was that it should achieve, over the L45 of the ground - which was 91dB - six to 10dB above that to be intelligible. We managed to achieve that with the efficiency of the drive units and the cabinets we designed, and also have 6dB headroom over and above that.

"We'd actually originally planned to use TOA drive units, but we couldn't get them in time. We tested the JBL drive units and were very happy - they perform very well and we'll probably be using them again. Also, Arbiter's service was good, in terms of delivery, and they very quickly put together the cabinets that we'd designed. They were very professional.

"The cabinets are 4-way designs, with two bass drivers and two CD horns. The horns are all oriented slightly differently, to suit the geometry of the individual stands in the stadium, and there are 19 clusters of four speakers in all.

"Each cluster is driven from a 240W amp, and everything is completely battery-backed, both the HF and LF. Upgrading the audio system meant adding four new racks of amps, as well as using existing amps.

"The club are delighted with the system - the board danced up the terrace when they heard it! What we achieved was a system that's pretty flat from 100Hz to about 8kHz, and has excellent intelligibility. We can point to an STI [Speech Transmission Index] 0.56 generally, and in some stands it's 0.65 or 0.67. What we were asked for was a system better than 0.5 at 95% of listener positions.

"Sound in stadia is a lot more important since the Taylor report. Pre-match entertainment is all part of spreading out the period that people come into the ground."



# Four Reasons For Not Turning This Page

## 1. Easy to sell

Sell the speakers that sell themselves! SOUNDSPHERE™ loudspeakers' unique appearance is sure to arouse your customers' interest. SOUNDSPHERE™ speakers come in six standard colours with custom colours available, so they can blend in-or stand out-in almost any environment. And best of all, SOUNDSPHERE™ loudspeakers are easy to demonstrate.

## 2. Easy to install

Save time and money while providing superior sound! SOUNDSPHERE™ loudspeakers come ready-to-install right out of the box. And, because you will often need fewer speakers for distributed systems, and as few as one speaker for central systems, you can have excellent sound with minimum installation time.

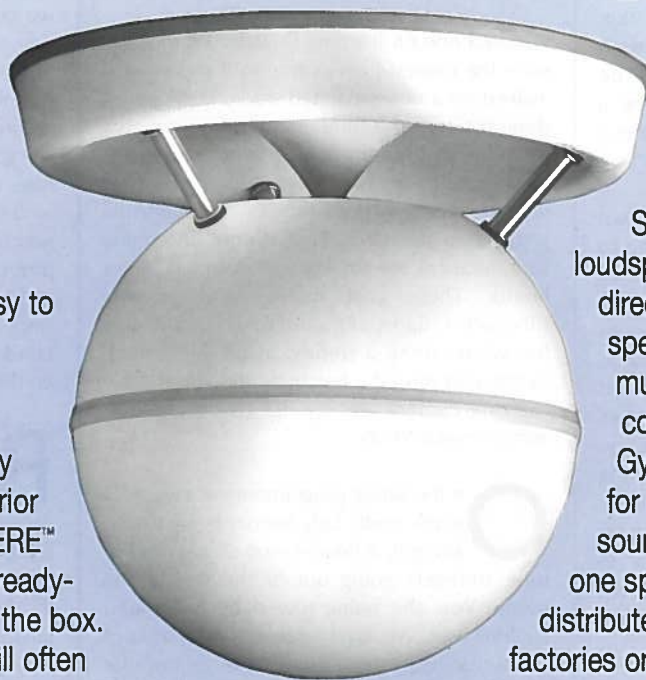
## 3. Full technical support

Our engineers can help you with project design! We offer full technical support to our customers. Our courteous, knowledgeable staff will answer any questions our customers

may have about SOUNDSPHERE™ loudspeakers. We even offer Computer-Aided Design assistance to help our customers to provide the correct system for their customers' needs.

## 4. Cover larger areas with fewer speakers

Superior sound with less total expense! SOUNDSPHERE™ loudspeakers are omnidirectional, so a single speaker will cover a much larger area than a conventional speaker. Gymnasias and churches for example get full, rich sound often using just one speaker. While distributed systems in factories or superstores typically require just one small SOUNDSPHERE™ loudspeaker per 3000 - 5000 square feet for clear and crisp sound.



Now you see why SOUNDSPHERE™ dealers keep coming back. It's a good thing you didn't turn the page too quickly.

*For information on the complete line of SOUNDSPHERE™ speakers, call or fax today!*

# SOUNDSPHERE™



*The best sound around™*

## SOUND PARTNER

P.O. BOX 50  
2660 AB BERGSCHENHOEK  
THE NETHERLANDS  
TEL.: 0031 10 521 6992  
FAX: 0031 10 521 8204

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

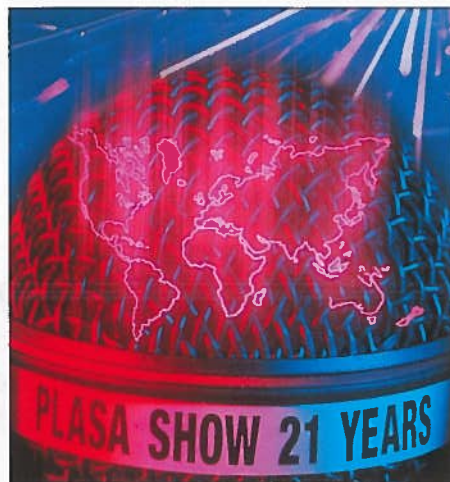
I think it's a line from Pinter's *Black Comedy* where a character constantly says to his companion as he reads the paper: "It must be right, it's down here in black and white." Well, I've recently read in the papers that we are going to have over 200 'quality' digital channels, so I suppose it must be right - it's down in black and white. The word 'quality' presumably refers to the transmission chain - cameras, VTs, transmitters etc, but not to the programme content. I thought I would never hear myself say it, but who gives a damn about engineering quality if the programme is lousy?

If I decide to purchase the requisite number of set-top black boxes to access these channels (up to four, I hear, if you want to tape and view) I shall zap hopefully, ready to be amazed at this brave new world. I say zap, because with inadequate and partisan programme guides, logical selection will be impossible. Only my best friends call me a cynic, but I reckon current evidence indicates a slight shortfall of material.

What I do in the privacy of my own home really hasn't got anything to do with you, but in the interests of good reporting here are a few things I've watched recently, which you may be sorry to have missed, and indicate what we may be in for. We can ignore the continuous news which I assume is just there to employ journalists not good enough to work on *The Guardian*. If you must watch the news, amuse yourself working out which broadcasters employ someone to light properly. Does the key change as Trevor turns to do a 'down the line'? And why is the 'in shot' monitor in wide format while we are watching in 3 x 4? Is it lit with fluorescents? Do you like the result?

Alternatively, try *The Sandbaggers* (circa 1975) - not one of YTV's best dramas, it doesn't really stand the test of time. Nor does 3,2,1 hosted by the undervalued Ted Rogers, who could have become a real star if only he had stopped being nice and learned to become a monster with a few henchmen in camel coats.

But these are all repeats, you cry, what about the new original material being produced? Well yes, there is some about, but don't imagine it's going to provide a whole new raft of employment for lighting directors. I



PLASA - Earls Court September 6-9th

watched one on learning to water ski (no, I'm not - the nearest I ever came to it was when I walked on a newly-painted studio floor) and it demonstrated the fundamental requirements for cheap fodder now masquerading as broadcasting. The idea seems to be to blur the line between home movies and normal production standards. First, do not under any circumstances use any lights or even a reflector board. These cost money and anyway silhouettes, flares and unnatural colours give the whole thing a trendy, avant garde feel. Rembrandt missed a few tricks didn't he? Only use one camera and try not to do any cut-aways or wide shots.

On the skiing programme we saw, a lot of the pretty lady learner being towed along in a head-to-toe shot, with the rope strangely going out of the top of the frame. Was she being towed by a plane? I couldn't wait. We also had several mid' shots of the hunky instructor. It's difficult to get back far enough in a small boat so sometimes our lady was in very big foreground too, which made her face look like she was about to do a bank job with a stocking pulled over it. Never once did we see a long shot of the boat and the skier from the shore, or another boat, which seems a bit fundamental to old-fashioned me. Maybe the wobblycam operator had left his 'legs' in his four-wheel drive.

Does Watty ever do any lighting or does he just moan about other people's? Well, occasionally I do, employed by enlightened producers who think the pan is mightier than the word, so I've been plying my trade and on balance have reminded myself what fun it can be. The best moment of the week came on a game show (not *Mastermind*), when the contestant was asked the question 'which one of the Marx Brothers played the harp?' Answer - "Karl". How I wish I had thought of that. This job posed another lighting problem which stumped me, but maybe I'm getting set in my ways. What would you have done? The 'star' suffers from the heat and has it in his head that all those lights (there are a lot) are rigged by public enemy number one,

namely me, to make his life unbearable. Now the floor manager, a diplomat if ever I saw one, thinks the best plan is to leave the lights off most of the time as the flack he gets from the star is much worse than from me (freelance LDs are ten-a-penny).

For my part, I'm not good enough to rig a couple of hundred lights blind and get them all in the right place and all at the right level (if I could do that I would be a DOP), so there's a problem that can only result in tears before bedtime. It appears that any suggestion that the lights, and for that matter, cameras, scenery, sound, etc, are all there to make this gent' look good and able to afford his next Jag, is not part of the equation. So, during lulls, the floor manager walks the course and we get a balance of sorts. Unfortunately, it's one of life's truisms that stand-ins are always much better looking on camera than the real people, so one is lulled into a false sense of security. With a bit of surreptitious tweaking as we go along, we make the pictures OK, and have only to concern ourselves with our man's white shirt, which shoves his face a couple of notches down the grey scale, but at least provides a slightly surreal soft lift under his ample chin, the like of which hasn't been seen since Robert Nesbitt gave up the 'floats' at the London Palladium! Lighting isn't just lighting - do they tell you that at Ravensbourne?

By the time this hits the streets, I shall be on my way to Earls Court, together with all the other unemployed lighting designers glad to be out of the chill wind that blows round the Warwick Road entrance and the TV production companies with equal force. It's the place to be seen in September, so don't miss the opportunity to sample all that's new and innovative on offer at the various stands. I've said it before, but Teatro's cheese is a must whilst Glantre have access to nautical suppliers and their Chateau de la Bilge is a unique experience. It's rumoured that Avolites will have a virtual reality set-up that makes you think you saw some food on their stand, but it's actually just some clever computer graphics. Meanwhile, Doughty have arranged their annual bash for the one night I can't be there - no coincidence.

Rather to my surprise, I had a fax from Denis Irving (Entertech Australia). It's great to find that someone actually reads this stuff, let alone in Australia, and it's good for the ego when they agree with some point or other. Denis is one of those unique lighting men who make you glad to be part of the 'brotherhood' - a droll wit thinly disguising a great depth of knowledge.

Last but not least, and speaking of the great characters in our business, I've heard rather belatedly that Michael Samuelson is recovering well from a serious health scare. I know that for once I speak for the whole industry in wishing him well.

## LIGHT OPERA

HAVE MOVED TO BIGGER PREMISES

- SALES AND SERVICE •
- DESIGN AND INSTALLATION •
- TECHNICIANS •
- LANTERN REFURBISHING •

01827 69382

0973 221312

# Source Four Zoom



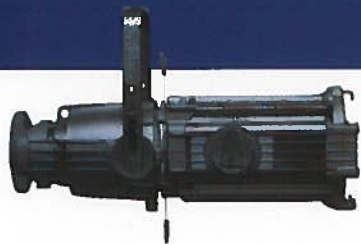
INNOVATION

ELEGANCE

RELIABILITY

DEDICATION

15° – 30° Source Four Zoom



## 25° – 50° Source Four Zoom

ETC's unique zoom focus mechanism provides precise single handed adjustment of field angle and hard/soft focus. Graduated scale markings make pre-focusing and rep work easy and quick.

## ETC's 1200 watt zoom profile uses a 575 watt lamp.

You're a Source Four user. You've learned to expect the world's best light output, field quality and energy efficiency. Now, ETC Source Four Zoom gives you more — a zoom profile dedicated to the world's most demanding lighting professionals.

Brighter than most of the top name 1200W zoom profiles\*, and with superb imaging and beam quality, Source Four Zoom is available in two versions, at 25°–50° and 15°–30°.

Source Four Zoom features a revolutionary focusing mechanism that lets you adjust field angle and focus simultaneously — with only one hand. Faster, more accurate focusing, no more balancing acts on ladders.

And that 575 watt HPL lamp means over 50% less energy, 50% less heat.

ETC is dedicated to your lighting — don't consider any other zoom profile until you've seen Source Four Zoom.

\*For comparative photometric test data, see our website at [www.etcconnect.com](http://www.etcconnect.com), or call ETC.



Visit our website at [www.etcconnect.com](http://www.etcconnect.com)

NORTH AMERICA TEL: (+1) 608 831 4116 FAX: (+1) 608 836 1736 EUROPE TEL: (+44) 181 896 1000 FAX: (+44) 181 896 2000 ASIA TEL: (+852) 2799 1220 FAX: (+852) 2799 9325

US Patent #5,268,613, 5,345,371, 5,446,637, 5,268,613, 5,544,029, Japanese #2,501,722. US and International patents pending.

# The only thing that can improve the sound reproduction of the new IEM S5000



A word in your shell like. The new IEM S5000 combines the latest UHF frequency synthesis techniques with razor-sharp sound quality and breathtaking styling. It is also the most competitively priced IEM system currently available. We wouldn't want to be accused of waxing lyrical, so we thought we'd just state the obvious.



THE NEW IN-EAR MONITOR SYSTEM

## TRANTEC SYSTEMS

BBM ELECTRONICS GROUP LIMITED  
KESTREL HOUSE, GARTH ROAD, MORDEN,  
SURREY SM4 4LP ENGLAND  
TEL: 44 (0) 181-330 3111 FAX: 44 (0) 181-330 3222  
E-MAIL: [enquiries@trantec.co.uk](mailto:enquiries@trantec.co.uk) WEB SITE: [www.trantec.co.uk](http://www.trantec.co.uk)

# A FESTIVE SEASON?

*The early cancellation of Phoenix sent a slight shiver through the live music biz - Steve Moles questions whether there is a superabundance of events*

There has been enough written about the burgeoning festival market this year - who's doing what, where and when. There were so many festivals this summer that if they were harmful to health, Summer '98 would be designated a plague by the World Health Organisation. But the ready crop of outdoor shows in the UK alone, has presented its own special problems, not least of which is saturation. And that's not a reference to the mud-bath that was Glastonbury this year, though with a maritime climate like our own one has to question the wisdom of placing any faith whatsoever in the UK weather. Just as Sod's Law states 'If something can go wrong, it will go wrong', so too the roadie's maxim, 'if it's an outdoor show, then you can be damn sure it will rain'. But a deluge of a different nature is what pertains, the previously mentioned super abundance of 'EVENTS'. And if those I talk with are representative, it concerns many others within the live show industry.

To start at the beginning, the cancellation of Phoenix caused a few nervous tics across the industry. Will other events of the summer hold up? Are ticket sales soft across the whole market? At the time I started writing this, things didn't look too bad: the outdoor shows of June all did well. Even if Madstock and the Fleadh weren't as big as they might have been, they still sold enough to look successful (whether they made anyone any money is another matter). And July saw a couple of whoppers pulled off successfully in spite of the continued bad weather. The truth about the Phoenix cancellation was this - it's a nice pastoral location with God-awful access. Consumer choice rules these days - it's the message that retailers, car makers et al have been ramming down our throats for years now. You only have to acknowledge the humungous amounts of cash Ford are lavishing upon their European dealer network this summer, merely to pass on



**Paul Weller at Victoria Park: the production was fined for exceeding sound limits.**

a simple message. Would you believe Edwin Shirley Trucking dispatched 70 truck-loads of high-tech presentation to Berlin for Ford dealers to be re-oriented? In a nutshell, Ford is no longer to be viewed as a mass-market manufacturer, not the average family saloon for the average family, but a maker of niche market vehicles - ones that can fulfil the dreams and aspirations of the late 20th Century car buyer.

For the festival-goer, however, this message has not been fully transmitted. We're still camped at the era of shelves stacked high. There's a huge range of venues to choose from across the summer for sure - yet they are all offering pretty much the same bill - so the question is 'why spend five hours in a traffic jam getting to Stratford-upon-Avon?'

The key there is line-up. If festival promoters

are going to want some security in the future, then they have to find ways of differentiating themselves from the competition, just as Ford are keen to do. Niche marketing looks to be the key. More equitable festivals like Cambridge Folk, or even the Jazz Fest' at the Festival Hall set a model: still multiple acts and stages, but thoughtful choice of artist, not just a bit of everything.

There is more to the history of this situation, however: this summer's festival season has been preceded by a real paucity of acts on the road. January through June was especially bad, although last autumn wasn't that great either. Anecdotal evidence suggests that having made easy money last summer, band managers, record companies and promoters alike posed themselves the rhetorical question: 'Why



**One big one, one small one: two events of summer 98, Glastonbury (left) and Ozzfest at Milton Keynes Bowl (right).**

See us  
at PLASA  
Stand G44

# W

**W E M B L E Y  
L O U D S P E A K E R**

**Manufacturers of the  
P.T.P. Series:-  
Professional Range  
of Chassis  
Loudspeakers,  
Tweeters and Horns**



## deuce

**Spyder Mini/Maxi Cube  
2820 Sub Bass Bin  
2824 Mid-Top Pack**

**Professional  
Loudspeaker Repair  
Specialists for  
all Makes  
of Power Units**

**Unit A4, Askew Crescent Workshops  
Askew Crescent, London W12 9DP**

**Tel: 0181-743 4567**

**Fax: 0181-749 7957**

should we pay the huge production and logistical costs of doing a full tour when we can bung the back-line in a three-ton truck, trawl the festivals of Europe and make a fortune?' The financial logic is undeniable, until, that is, a rollercoaster summer season like this happens. Well tough, everyone will get over it one way or another, even though right now August and September are looking pretty scary with three planned big tours postponed until the spring already.

*"The rationale is this. Festivals are hard on the gear and there's a very high turnover in a very short period of time. The trouble is, we get asked to provide festival systems for the same kind of rates as we would for tours."*

*Mike Lowe, Britannia Row*

Meanwhile, the multiplicity of festivals prefaced by the empty touring season has caused a bunfight for contracts amongst the service industry. It's a fight that's resulted in several companies experiencing real difficulties. Thus we're left with a sorry prospect. Barely more than a year before the Millennium, a weakened industry feasting frenzy begins. This is a time when they all should be filling their cash coffers and readying themselves for larger capital expenditure than usual (manufacturers take note). A busy, packed nine months on the touring circuit, at all levels from sub-1,000 seaters through to arenas, will do much to repair the damage. Otherwise we can expect cowboys in huge poses and a lot of production headaches when you try to stage an event 18 months hence.

The rough ride of the summer has prompted some interesting tactics amongst the main PA and lighting companies. This is no better exhibited by two of the bigger companies, LSD and Britannia Row, both of whom have a particular muscular presence in the concert market. Despite an increasing fashion for diversifying into other markets it would be fair to say these two more than most typify the high profile international touring service company. Mike Lowe described Brit Row's strategy very simply back in early May: "We made a conscious decision to avoid doing festivals this year," and does that mean you've had a better past 12 months and can afford to close the doors and beetle off to a little Gite in Gascony for the summer? "No, far from it. The rationale is this. Festivals are hard on the gear and there's a very high turnover in a very short period of time. The trouble is, we get asked to provide festival systems for the same kind of rates as we would for tours.

"Touring work is priced at low margins based upon length of time. The benefit is that once out the door, admin' and maintenance costs are fairly low relative to the tour, and over a long period we make a profit. The critical factor is preparation costs - putting big systems together takes time, manpower and money. It's a cost you can defray over a three-month tour, but try factoring that in to a three- or four-day festival hire. So we decided to avoid the issue. You only end up alienating your regular customers - the production managers who know and use us regularly."

LSD take a similar view: "We avoid them, apart from the big one-off events for our regular customers, like Bon Jovi in Austria this summer, or Jarre in Paris," said LSD's Kevin Forbes. "The relationship we have with these customers is that they know the going rate for the quality of our work and pay accordingly."

Another issue reared its ugly head at a one-day show I attended in London for a Paul Weller concert (See On Tour, page 135). Victoria Park lays at the heart of the residential East End - a situation not unfamiliar elsewhere (the previously mentioned Cambridge Folk fest' for example, could hardly be more semi-detached suburban). As such, environmental noise considerations for a rock show at Victoria Park are paramount. However: "They've actually set a limit of 67dB over by those flats to stage left," said Wigwam's Steve Levitt (that's Leq over 15 minutes) who'd been brought in by Harvey Goldsmith Entertainments, along with Travers Morgan, to oversee sound level monitoring. "Surely," I ventured to Levitt, "that's unbelievable in the centre of a major city?"

"Well, that's the limit that's been set, that's what we have to deal with. And it's a constant. They're not interested in music measured against ambient sound levels."

Hence, for this show there was nothing in the way of delays, and that's despite a good 220-240 metres to the rear of the concert arena. So it was that a popular and well-sold event saw the majority of the audience packed into the front third of the available space. Which raises a point beyond sound, but attributable to it: if noise limits are going to be so stringent in a downtown area, then maybe such concerts should be banned. Why? Because these days punters are accustomed to high quality sound for their dollar, wherever they choose to sit. Plus there's also the safety consideration - if they're all going to cram to the front to be able to hear good exciting rock, then the inherent dangers of a crush arise.

On the other hand we could take the enlightened view that I encountered out at the Bastille Day Concert in Paris last month. Willie Williams of Audio Rent CBA explains the underlying ethos: "The Paris City authorities take the view that they draw a line in the sand sound-wise, but expect you to break it, knowing full well that this kind of thing will only happen once or twice a year and they have thick enough skins to weather the complaints from residents."

Sounds pretty grown up, doesn't it? Besides, there are bigger social considerations in satisfying the populace than buckling to the wishes of a small group of residents. I'm not advocating wholesale abandonment of propriety here, just a little give and take. For example, I live in a small community of some 4,000 residents in the heart of East Yorkshire. As an established market town since 1150, we have a traditional harvest show each summer's end. You know the type of thing, the usual mix of Thellwell wannabes, naff sixth division entertainment and Best Parsnip of the crop. On the Saturday night a huge marquee in the park heaves with approximately 2000 beered-up young farmers, local wenches and other interlopers. The show band is loud: I've recorded 95dBA from my bedroom window with transients well over 100, and they play until midnight. Do I complain? No, of course I bloody don't, it's one night a year for Christ's sake!

*"If I'm not mistaken, the local authority were able to set the noise pollution level, monitor it, decide it had been broken, impose the fine, and put the collected fine into the Authority's coffers."*

*Yan Stile, Canegreen*

So lighten up London, it's not like the residents of Mile End are being asked to consider a waste disposal incinerator on their doorstep. Besides, this show was a typical example of careful planning by the PA contractor, in this instance Canegreen, but not dissimilar from the consideration given by any of the top-end audio rental companies. They chose to use a high Q system - a box like the MSL4 is very directional and controlled. What would it have been like with a more open system? As it turned out, and in spite of the best efforts of all concerned - Steve Levitt, Canegreen, etc, the show still had a £20,000 fine imposed upon it. "If I'm not mistaken," observed Yan Stile of Canegreen, "the Local Authority were able to set the noise pollution level, monitor it, decide it had been broken, impose the fine, and put the collected fine into the Authority's coffers."

Surely a conflict of interest there somewhere. But to me, the essential issue is this. You either want the business or you don't - quite obviously they didn't want it. With a noise restriction set as unachievably low as this, Harvey Goldsmith should have taken his business elsewhere.

No doubt there will be much post-summer analysis by all concerned parties. Is it worth the shilling? Well that depends on at least three factors. 1) Access: Is the site nice and is it easy to get to? 2) Noise: Will you be able to provide unrestricted, high-quality sound for your event? 3) Variety: Can you afford more careful audience targeting, even if that means smaller crowds?

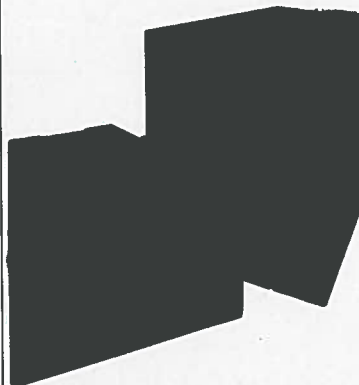
I'm off to Sainsburys to look for clues.

# αe

## The Alpha E Series -

Designed to be heard . . .

- An addition to the acclaimed Alpha family, Alpha E incorporates the technology of the Alpha System in a compact, lightweight format that may be stacked or flown.
- Wider horizontal dispersion characteristics make Alpha E ideally suited to smaller system applications across both the touring and installation markets.
- Simple plug and play active 2-way format via Nexo's proprietary TD Controller ensures great results and minimal amplifier outlay.
- Available in either a one or two box package to ensure maximum flexibility.



. . . It's time to listen

SEE US AT PLASA  
STAND F32

UK Distribution :

**Fuzion plc**

9 Lyon Road, Walton On Thames

Surrey KT12 3PU

Tel : 01932 88 22 22, Fax : 01932 88 22 44

Email : mail@fuzion.co.uk

**NEXO**



**litestructures**  
ALUMINIUM STRUCTURAL SYSTEMS

# the complete service

the design and installation of aluminium structural systems



**UNIT 55, LIDGATE CRESCENT, LANGTHWAITE GRANGE INDUSTRIAL ESTATE, SOUTH KIRKBY,  
WAKEFIELD WF9 3NR, WEST YORKSHIRE, ENGLAND.**

TELEPHONE INT: 44 (0)1927 45000 FAX INT: 44 (0)1927 45001



# FOUNTAIN OF WEALTH

*Oracle Laser Production have produced a stunning multimedia display at Singapore's symbolically-constructed Suntec City. L+SI takes a look . . .*



Australian company Oracle Laser Production were responsible for the installation of an impressive multimedia show at one of Singapore's newest and most elaborate commercial enterprises - Suntec City. The entire complex comprises the Singapore International Exhibition and Conference Centre, the Suntec City Tower and four office blocks, with an enormous ringed fountain serving as the centrepiece. In a wonderful fusion of ancient and modern, the architects and designers have drawn on the ancient Chinese art of feng shui to create the layout of the complex: the Exhibition Centre, tower, office blocks and fountain represent the respective wrist, thumb, fingers and palm of a hand designed, in the very best commercial fashion, to retain wealth - hence the symbolically inward-squirting water in the fountain.

The Fountain of Wealth, as it is expectantly tagged, provides not only the symbolic core of this complex, but also the high-tech main attraction, including as it does an elaborate



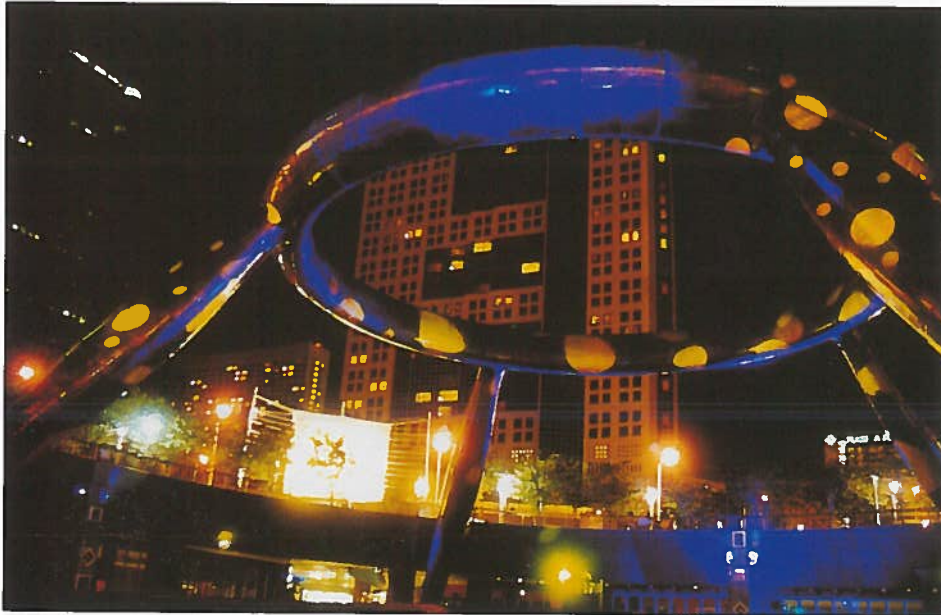
multimedia installation. The fountain consists of a ring, 21m in diameter, with 75 cascading water jets pointing downward and inward, and a high-powered central jet capable of shooting a 30m jet of water into the air. Oracle also specially designed a water screen system, which would create a 30m wide, 360° projection screen for the light and laser elements to play on. The idea was to create the world's first computer-controlled, 360° rotating water screen system. The result is stunning, as projected images from light fixtures and laser elements can be positioned to appear, move and rotate anywhere within the volumetric space of the fountain.

Included within the structure of the fountain

are 144 lights representing the stars making up the Zodiac constellations in the night sky. To provide both the colour-changing washes on the water and the solid projection effects, Oracle turned to Martin Professional for their MAC 600 575W 360° moving yoke washlight fixture, and PAL 1200 moving mirror fixtures for projection, chosen for its ability to accept 13 moving image gobos which are used to create special image effects and messages around the fountain.

Four AF1000 Dataflash strobes from High End Systems reinforce the high impact effects such as lightning and explosions, as well as creating unique 'static' effects across the cascading water, while four of Martin's 2000W Magnum Pro smoke machines add more substance to the effects.

When it came to the sound, the intention of creating a 360° experience remained the prime objective. To this end, a sound system comprising 12 narrow dispersion loudspeakers was installed within the fountain. The sound is projected through the water features, and out



**Above and previous page: some of the stunning effects achieved by the blend of water, lasers, lights and atmospheric effects installed in Suntec City's Fountain of Wealth. Below: the scale of the fountain, sitting in a major roundabout, can be clearly seen in daylight.**

to the surrounding audience, providing even coverage as well as a perceived sound image relative to the visual images being projected onto the water screen. Processing is carried out via a DSP computer linked to the main sound processor, which controls independent EQ and drive stage for each speaker.

The laser display element of the show is an integral part of the system, as it provides the images necessary to create the story, which is then complemented by the other media involved. The laser system used was an Oracle Septor 10000 system, which comprises a 10W Coherent Saber laser split into two beams. The installation of lasers with the water screen illustrated another unique first: positioning the laser systems opposite to each other with the water screen in the middle allows images to be viewed from both sides of the water screen. Presently the laser systems cover 270° of the rotating water screen, but the addition of two further systems in the near future will complete the 360° viewing experience.

The control and management of the various lights, laser, sound, strobe and smoke effects



were not the only concerns: the integration and control of the devices controlling the fountain itself also required customised integration and control. The system which Oracle developed for this application utilised a variety of command protocols to achieve integration, including MIDI, SMPTE, DMX512, RS422, RS232 and LAN, including over 100 lines which need to be read, verified and switched on or off.

The fruit of the labours of the Oracle engineering team is that the Suntec City show runs operator-free each night, playing a variety of shows. The advantages of a single control

system commanding such a huge array of devices is most evident when reprogramming is required. As the entire system runs shows based on pre-programmed computer information, changes to a show can of course be carried out simply by inserting a new disk into the system. The pre-programmable nature of the system has meant that show reprogramming times have been cut by 25%, resulting in substantial cost savings to the client for future customised show creation.

As is usually the case with such matters, the time slot available for installation was rather slim. In this case, the client required the system to be operational for December 10th last year in time for the Christmas season. That left just five weeks for final design, equipment construction, installation and commissioning: again, as tends to be the case with such matters, this was met in good time with a combination of planning, expertise and round-the-clock slog. Working day and night, the two Oracle teams from Singapore and Australia, consisting of up to 40 people at any one time, managed to open the first show without a hitch at the specified deadline, in the presence of the assembled officials and members of the public.

Suntec City is a crisp aluminium and stainless steel playground, with everywhere extreme angles and clean, perfect construction. The understanding of shape versus position derived from the study of feng shui has, they believe, helped Oracle designers Chris Sifton (production designer) and Mark Buczinski (architect and show producer) to produce this award-winning design and installation system.

In order to better service the region, Oracle has set-up Asia's first overseas laser company. Oracle Laser Production (Singapore) Pte Ltd was incorporated in 1998, headed by Sifton, with the addition of two regional development managers, two show designers and service personnel. The newly-established Oracle Singapore office is strategically located at Suntec City, in an office facility complete with a fully-featured multimedia studio and production department, including various laser, light, sound, water and special effects systems.

The Fountain of Wealth installation has been a rewarding accomplishment for both Suntec and Oracle, and now with Oracle on the doorstep, the future is sure to bring further enhancements and new attractions to the palm of Suntec City's hand.



## *The premier Windows based rental management software package*



Syon Lodge, Busch Corner,  
London Road, Middlesex  
TW7 5BH

07000 NAVSYS (628797) 07000 NAVFAX (628329) email: [lsi@navigator.co.uk](mailto:lsi@navigator.co.uk) URL: <http://www.navigator.co.uk>

- Straight forward user interface, mimicking most paperwork systems.
- Support for crew & trucking requests and schedules.
- Flexible - add items to a rental after shipping, part ship, extend rentals, early returns.
- Support for sub-hires, which can be allocated to stock or specific jobs.
- Works with or without barcoded items, or a combination of both.
- In built wordprocessor, with wizard to help create quotes and powerful spell checker.
- Stock control provides vital management information on usage and sub-hires.
- Easy printing of all paperwork, which may be customised as required.

# ECHELON



## Wholehog II® Operating System™

Echelon - the second generation Jands console for conventional and moving lights has come of age. It features 1000 channels of the potent Wholehog II® Effects Engine™ software for around half the price of a Wholehog II®.

- Wholehog II® Operating System™ with Effects Engine™
- Large central LCD provides continuous feedback on programming and playback status
- Four user configurable banks of palette buttons with integrated LCD display to indicate contents
- High performance RISC CPU
- Mouse/trackball input
- Optional SMPTE port (back panel)
- External VGA monitor output with mouse interaction
- 16 playbacks with atps faders
- Unlimited split fade, delay, wait times and crossfade profiles
- 1000 control channels
- Cue list, cue contents, programmer, patch and stage output available at VGA output
- Multiple fixture types simultaneously supported
- User definable system default settings

**JANDS**

Global Distribution:  
A.C. Lighting Ltd.  
Tel: +44 (0)1494 446000  
Fax: +44 (0)1494 461024  
E-mail: [sales@aclighting.co.uk](mailto:sales@aclighting.co.uk)

US Distribution:  
A.C. Lighting Inc.  
Tel: +1 818-707-0884  
Fax: +1 818-707-0512  
E-mail: [sales@aclighting.com](mailto:sales@aclighting.com)

Internet: [www.aclighting.co.uk](http://www.aclighting.co.uk)



The DENON DN-A850  
Zone Mixing Amplifier



# Access all Areas



**Zone 1 - Reception**  
Music or muzak. It's your choice.



**Zone 3 - Restaurant**  
Trendy Trattoria or Fine English, lively or subdued music can be organised quickly and efficiently from a nearby control.



**Zone 2 - Bar**  
Volume control here is essential, especially if you need to coincide sound with any promotional events. It's all within reach.



**Zone 4 - General Areas**  
Set the precedent. Whatever your venue you can create the right mood as the night moves on.

DENON's New Multi-Zone Mixing Amplifier offers you optimum control over your music environment whether it's a pub, club, restaurant, leisure centre, hotel, department store, shopping centre or bar. From a single source you can now manage venue music specifically to individual areas. One single amplifier allows you to select from 4 separate music input sources and direct them to 4 'Zones' of your choice, with respective volume, bass and treble controls. There are also 2 microphone sources, again with complete individual control to either page individually or broadcast to all zones. Now a range of optional remote volume panels are also available, in a variety of colours, which can give you complete 'In-Zone' control. Built to give the quality of sound for which DENON have become renowned, solid and reliable, the DN-A850 is a truly versatile product giving you the flexibility of four amplifiers in one!



**DENON**  
Professional Audio Brand

Hayden Laboratories Ltd., Chiltern Hill, Chalfont St Peter, Bucks. SL9 9UG  
Tel: 01753 888447 Fax: 01753 880109 Brochure Line: 01234 741200

<http://www.denon.com>

# ECLIPSE AT THE GLOBE

*Steve Moles looks at the stage show that has successfully brought a little bit of sophistication to Blackpool's Pleasure Beach complex*

Sir Ralph Richardson once said 'The art of acting consists of keeping people from coughing'. While Eclipse at the Globe isn't quite in the Richardson league, it does grip the audience by the throat. On this occasion, just the eighteenth day of its scheduled four-month run, I was sat next to Adrian Fisher, arguably the world's foremost maze designer, who was in town for the opening of his latest venture. "Astonishing," he said, "look how everyone on stage seems to be enjoying themselves. I've never seen anything like it." And this from a man who thinks nothing of simultaneously opening a dozen giant cornfield mazes across the USA.

Now when we think of Blackpool, memory instantly conjures blustery days on the prom, candy floss and ice cream, and Chubby Brown's profanities at the end of the Pier. Well, they're all still there, but there's Eclipse as well, and truth be known it's a surprise find in Blackpool, for this is a show that wouldn't shame the capital of kitsch, Las Vegas. That's not to say it's tacky, far from it: this is an ensemble performance by a powerful collection of talent. Amanda Thompson, third generation of the Thompson dynasty that has presided over Blackpool's Pleasure Beach, has, in her role as both director and producer, put together something unique: "The hardest part was getting them to do what we wanted," she said with a determined glint in her eye. "First we taught them to dance, then we let them do their own thing."

Now teaching a bunch of acrobats, contortionists, and various other assorted exponents of what can best be termed 'modern circus' might seem straightforward enough. After all, these people are gymnasts - surely understanding timing, grace and movement is inherent to their trade? Well perhaps: "But no-one's ever asked them to do it before," she said. "As such they were unsure of what it was we were trying to do."

Thompson's idea of marrying dance to circus is key to the success of Eclipse. Her appearance in BBC1's fly-on-the-wall documentary 'Pleasure Beach', and more recently in the pages of the Daily Mail, have given ample exposure to her desire to move the Pleasure Beach up-market: "Disneyland Paris and the rest have made amusement parks more acceptable and middle class. Blackpool is one big amusement park. What we're doing is making it more sophisticated." And to do so she has built a sophisticated organisation: Stageworks Worldwide Productions (SWP).

## PRODUCTION & SET

The rationale behind the existence of SWP is neatly explained by Vin Holme, production manager for Eclipse, and a pivotal member of SWP: "Basically, it comes from a need to keep the queues for the rides down. Plus, we are



**Above: assembled dancers and acrobats from Eclipse. Below: Vlad in full pose.**



seriously interested in the development of light entertainment."

The first reason sounds perfunctory; what else are people going to do between bouts of hair-raising thrill-seeking on rides like the Big One? Why, catch a show of course, and give their hearts time to recover; but serious development of light entertainment? "The Thompsons have identified it as an area to invest in. The Park [Pleasure Beach] is just 42 acres and there's only so many things you can cram into it. Because we already have a developed expertise in light entertainment on site, then that's something we can, and do, take elsewhere. For example, we've exported shows to Bangkok, Germany and Holland in the past year. It started with the family joining the International Association of Amusement

Attractions. Amanda brought guests over from the IAAA's meeting in America, took them on the rides and to see some of our shows, and they wanted to take them back."

And if further proof were needed, there's always the Pleasure Beach's renowned Hot Ice Show, most recently seen relieving the tedium of the over-blown Ice Warriors show on Independent TV.

But despite the commercial imperatives of running a family business, both Holme and his close ally, LD Paul Lee, protest that it's not just for the money: "Amanda has vision. She needs to do it for herself, that's what drives it along." Witness the 11 shows currently running and you begin to understand how profound that need is. "SWP has been in existence just under 10 years," said Holme, who's been there since the beginning, "and the productions are just getting bigger and better. This one came about because what used to be the Superdome was due for refurbishment." And the Thompsons didn't mess about: a cool £1m was spent on equipment and rebuild, including a completely new foyer. For those unfamiliar with the Pleasure Beach, the Superdome is an old Orbit structure used for many years as a circus arena.

"She had met Vlad in Las Vegas last November," explained Holme, describing how Vladimir Kekhaial, the star of Eclipse, had provided the required artistic stimulus to commence refurbishment. "She came back to us with an idea. We had a couple of exploratory meetings about what she wanted to do - nothing too detailed, open to change - but basically built around the elements of aerial ballet, drawing on the elements of earth, wind, fire and water. Out of that came the four seasons."

When you see the show, the seasonal motif



is not immediately apparent: what does show through is where the ideas grew from: "We started with the set," explained Lee. "Steve Hellim, one of our in-house artists, produced the original drawings, a circular stone effect platform, ringed by water and fire, with a rocky structure enclosing it behind and to the sides." In essence, that's what they still have, with one subtle but in some ways major change. "We wanted it to have steps and a proscenium entrance upstage centre, but the steps had to go. That was probably Vlad's biggest contribution to the production, telling us from the beginning that the steps won't work." The reason was simple enough, certain performers needed to roll, leap or run onto stage, "so stairs were out of the question, it was ramps or nothing."

Oldham-based Eric Crowther built the stage set, something normally done in-house, but this was too big and, more importantly, lead time was short. Not that they couldn't have done it, with so many productions running at any one time the Pleasure Beach has resources in depth, with wardrobe, set building, lighting and sound all well staffed with talented people. Having been given the opportunity to view the quality of their work on other productions around the Park, I think there might be many production houses throughout the UK grateful for the fact that SWP keep these resources so busy. Costume design especially is just fantastic.

The upstage centre grand entrance is still there, another ramp in fact, that opens to reveal a large centrepiece device through which a laser is fired. The floor of the main stage is, for me, the show's best scenic feature. One of Holme's ideas, the stage deck is all opaque polycarbonate in two layers. An 8mm substrata with heavy artwork through which light is shone, and a 6mm top layer, "so we can replace it as it wears without having to re-do the artwork every time," explained Holme, a critical consideration on his part as we'll see.

Effectively an in-the-round show, (280° at least) the stage is ringed at ground level by a gas-jet wall of fire, above by a water curtain, and in the midst of it all are Vlad's own special flying device and a Foy flying track. What can I tell you about the fire-wall? Built in the US by DKD Design, as well as the mandatory CO detector and flame fail devices, it has several interlocked ignition systems that anyone with a CORGI qualification would be thrilled to see. Throwing up a wall of fire almost two metres high, the short blasts that punctuate the show just twice produce a pretty intense heat that scorches the polycarbonate. To complete the plumber's dream, the water curtain (Aquatique Effects International) drains to a trough surrounding the gas equipment, both systems then running below stage in a mass of pipes and valves.

## SOUND

From a technological perspective it's the restrained use of state-of-the-art equipment that enhances what is already a pretty magical performance. Vin Holme first approached the Music Company for a system back in November. "Back then he wanted to purchase a system, but what he wanted in terms of sound reproduction exceeded his budget. We were able to offer him a lease hire deal instead, which gave him the system he wanted within his spending plans," said Martin Tarpay of MC. "What Vinnie wanted was a full house system with surround sound effects capability. He'd seen the Outboard Electronics TiMax system and wanted to use that."

TiMax's PC-based software allowed Holme the movement of sound image, in real time. "He was looking to move special effects sounds around the auditorium," continued Tarpay. "The TiMax computer presents you with a blank canvas, on which you can set the speaker positions relative to one another in terms of distance and position. You can then use the software to move the image around."

Holme's desire for such a system was driven by two things: Thompson's wish for sound effects to surround the audience, emerging from different spatial zones, and the problems posed by all that aerialist flying tackle above the stage. "Quite simply, we had nowhere to hang the speakers," he said, "not conventionally,

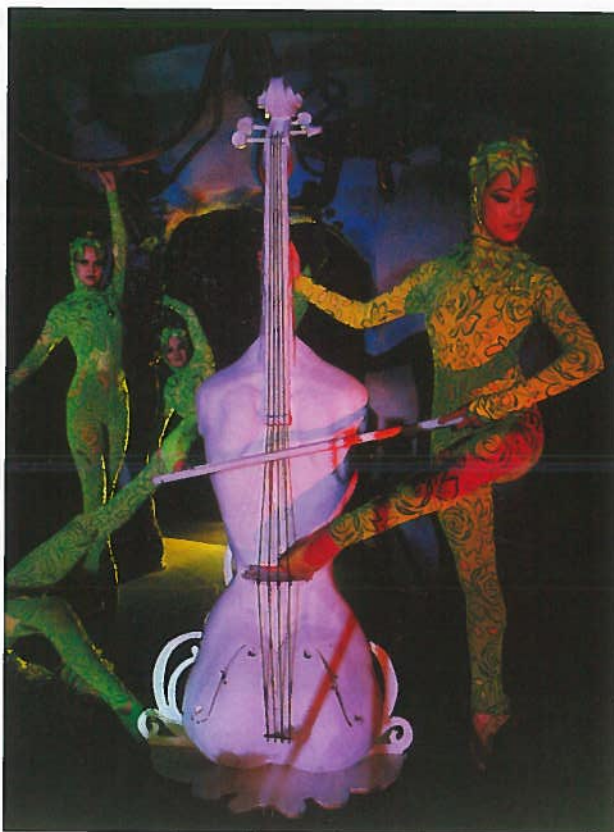
anyway." Despite which, the Music Company have managed to squeeze in 45 cabinets, a mix of Turbosound and Bose (including the Bose 151 waterproofs around the stage). "I needed something that would push the sound out the 16-18m to the far corners," Holme commented.

Signal comes mainly from a pair of mini-disc players, with a Fostex D15 with SMPTE output being used for the small amount of time coding needed to trigger the TiMax, the lasers, the Wholehog lighting desk, scenery projector, and the gas manifold. The only other input signal is from one of the performers, Ian Meeson, whose singing is relayed by a Trantec S5000 radio system using a Sennheiser Red Dot.

Neil Winterbottom operates the show through a DDA Interface console and he also programmed the effects configuration on the TiMax system. "We use a combination of level and time delay across 12 different speaker positions to move the sound effects around, plus I have programmed in image shifts, relative to Ian (Meeson's) position on stage. I've tried to paint the set with sound," which is a fair description of what he's achieved.

A variety of source material is used, the music all extant rather than commissioned for the show, with just Meeson's lyrics written specifically.

The sound effects, such as they are, tend to the subtle rather than in-your-face, reflecting the up-market targeting of the show. SPLs, for example, never exceed 100dBA, something that from a personal perspective I felt was a little too light a touch. As for the rendering of them: "What we didn't want to do was make the sound system pull people's eyes away from the stage," said Holme. Thus you might argue that using TiMax is a cleft stick - why shift image position when you don't want to cause distraction? But the truth is, the artists' performances are easily strong enough to keep attention firmly focused on them; thus, when a thunder clap does roll ominously around the room there's no inclination to follow it with your eyes.



#### LIGHTING

Paul Lee's lighting design is driven by the two main visual elements of the show, the set and the performers, with quite different approaches to each. The set is covered by conventional lighting - there are 60 Par 64s beneath the polycarbonate deck, with another 100+ Pars above and around the room. The rock surface is also dotted with MR16 Birdies, and there's a touch of fibre optic (also MR16 fed) scattered about the trees that decorate the far reaches and frame the performance area. The one significant piece of technology he employs to dress the stage is an ETC PIGI projector, positioned at the very back of the auditorium, that dapples the scenery in shadowy images, helping to enhance the mystical, fairy-tale aspects of this presentation.

For the performers he's brought in a fair amount of high-tech lighting to enhance the spectacle but, as with sound, Lee has to contend with being unable to put any equipment in the field of the flying gear, and

he also has to consider the implications of dazzling them. Thus, there are small quantities of all sorts tucked in all over the place.

Beneath stage is a 10W Chroma whitelight laser supplied by Laser Innovations, "which has a very new kind of colour changer," said Nigel Pearson of LI, who operates both it and the lighting system. "We use a crystal to change the colour instead of a dichroic system. It employs RF to control the crystal and is very efficient, something like 82% light transmission as opposed to 60% loss that you get with dichroics. I can get seven good colours out of it, including a strong red and green."

The laser runs into a six-fibre optic head which then distributes to the previously mentioned Centrepiece effect beneath the ramp, a couple of modified Moonflower heads placed on the set, several scanners dotted about, and a pair of NatScan 360° projection heads. "I've brought in a laser for a couple of reasons," said Lee. "One, specifically for strong effects, but also because I can move those effects around. It's important that there's not a bad seat in the house. With the fibre optics I can put effects out to the sides of stage where people are sat looking cross stage."

There are UV canons and Diversitronic strobes - as you might expect, the UV to enhance the costume, the strobes to support the sound effects. But Lee's main lighting tool for the performers are Starlite Mk 5s supplied by Lane Lighting, though here again they're used thoughtfully rather than forcefully. The most flattering thing you can say about the Starlites is that you don't really notice there are powerful 1200W HMI moving yoke lamps in the rig. But when you count just nine of them up there you realise what a lot of hard work they're doing.

Pearson uses LI's own Voyager controller for the laser, though he runs the NatScan heads off the Wholehog 2, "because it gives me smoother movement at slow speeds. A certain amount of the show cues are time-coded - about 100 or so. That's 10% of the show, but the rest I do manually. I'd do it all manually if I could - with this type of performers there's a lot



Sound engineer Neil Winterbottom at his post.



Nigel Pearson, in control of lights and lasers at the Globe.



of potential for speed variations, but frankly I'd run out of hands." All told, Lee's design paints a compelling picture, switching delicately from special effect, to the ethereal, without jarring. Transitions are his forte: although this show is really a series of episodic performances, it appears a coherent whole.

#### CONCLUSION

In performance the mix between ballet and circus sits comfortably: truth be known, it was

not until the second half of this 120-minute presentation that I realised the dancers and acrobats were one and the same. The trick is in selection - Thompson has picked professional dancers and top-class circus acts (though perhaps 'circus' is no-longer an appropriate moniker). The real dancers take the lead in dance, with the acrobats making a very polished job of being the troupe.

The scripted thematic nature of the whole is lightly applied, enough to give continuity and

hold attention, but not so heavy as to be over-stylised. The star, Vladimir - well, his intense feline stroll I found a bit over the top (too long in Las Vegas probably, Americans do like their posing laid on with a trowel), but his aerial artistry is superb, he makes it look very easy, which it quite obviously isn't. If I was the Harvey Goldsmith type I'd be inclined to drag this show round Europe for the winter, it's certainly worth a punt.

Should you venture to Blackpool, there is something you might bear in mind when you apply your cynical eye to this show. As Chubby Brown and many before him can tell you, Blackpool audiences are among the hardest to please anywhere.

If they don't feel they are given value for money then they're not shy in letting you know about it. This lot sat through the entire two hours without a murmur. Upon leaving, only the excited chatter of children could be heard - mums, dads, and grandparents, even an old man in a flat cap - were all curiously silent. You could discern a certain contemplation on their faces.

Place speech bubble overhead, adopt strong Lancashire accent, and insert words, 'Buddy 'ell, what were that?' However this wasn't all clogs and cloth caps, Thompson's desire to attract a more sophisto' punter to Blackpool Pleasure Beach appears to be happening. The fact that this should be so successful is largely down to quality of content, and something quite special. As Mr Holme put it, "We're attempting to put back in the wild factor."

See you on the Prom, chuck.

OUR LASER CONTROL SYSTEMS WILL ACHIEVE SPECTACULAR DISPLAYS FOR FILM, THEATRE, PRODUCT LAUNCHES, NIGHT CLUBS, THEME PARKS, CONCERTS AND SHOPPING CENTRES.

**Li**

LASER INNOVATIONS LTD  
 UNIT 16 SPRINGRISE IND EST, FALCONER ROAD, HAVERHILL,  
 SUFFOLK, CB9 7XU, ENGLAND  
 TEL: +44 (0)1440 712007 FAX: +44 (0)1440 712707  
 EMAIL: Dave@Laserinn.Demon.Co.UK WEB: http://www.laserinn.demon.co.uk

HOWARD EATON LIGHTING LIMITED

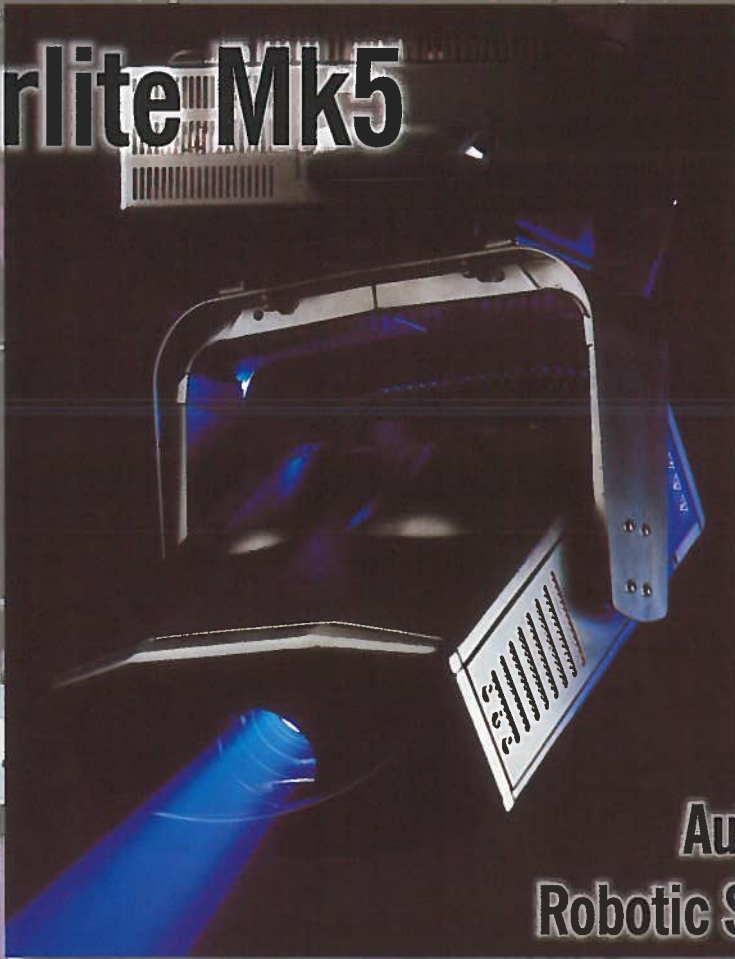
For all this and more...

Fibre Optics  
 DMX DATA DISTRIBUTION  
 SM desks  
 Motorised Iris  
 Dry Ice Machines  
 RADIO CONTROL Projects  
 SoftCUE  
 Electro-Luminescence  
 LIGHTST/CK  
 Ripple Effects  
 Fluorescent Battens

Come and see us on Stand D8 at PLASA



# Starlite Mk5



**Automated  
Robotic Spotlight**

## Superior Quality

The Starlite Mk5 is all about quality. Build quality and optical quality and the belief that there is a market for a moving light as a long term capital or rental investment rather than just to satisfy a short term fad.

The Mk5 is built to last, right from the initial concept it has been designed as a modular fixture allowing future features to be added with minimal inconvenience and considerable timesaving for routine maintenance.

## Superior Optics and Brightness

- 1200W HMI gives 6000 lux @ 5m
- 2 x 5 position rotating and indexing gobos
- CMY colour mixing
- 5 position custom colour wheel
- Rotating prism
- Separate dimmer and strobe shutter mechanism



- Remote focus
- Variable frost to full wash
- Iris 2-20° variable beam
- USITT DMX 512
- 16bit 270 x 360 pan and tilt
- High definition triplet lens system

Lane Lighting Limited  
Unit 3, Spearmast Industrial Park, Lane End Road,  
Sands, High Wycombe, Bucks HP12 4JG. England.  
Tel: +44 (0)1494 446000 Fax: +44 (0)1494 461024  
<http://www.starlite.co.uk>



**Versatility Without Compromise**

# THE FUTURE...

**BCS India '98**



**SEE IT**

**CommsIndia '98**



**HEAR IT**

## BE PART OF IT.

The who's who of the broadcast, cable and satellite industry, and the movers and shakers of the communications sector helped make BCS India '97 and CommsIndia '97 the biggest event of its kind in India. The '98 exhibition and conference promises to be even bigger.

**The future is coming. Don't let it pass you by.**

### EXHIBITION & CONFERENCE

**9 - 11 DECEMBER 1998**

**PRAGATI MAIDAN, NEW DELHI**

#### Special Features :

##### **BCS India '98**

- Satellite India
- TV India
- Pro-Lighting India

##### **CommsIndia '98**

- Internet & Networking Pavilion
- Wireless Pavilion
- Paging Showcase

Certified by :



**United States Department of Commerce**

**Organiser**



**Exhibitions India Pvt. Ltd.**

C-390 Defence Colony, New Delhi 110 024 India

Tel : + 91-11-463 8680 / 81 / 82 / 83 / 84

Fax : + 91-11-462 3320, 463 3506, 464 8692

E-mail : exhibind@nda.vsnl.net.in

Web Site : <http://www.exhibitionsindia.com>

**Co-organiser - CommsIndia '98**



**Telecom Equipment Manufacturers Association of India**

PHD House, 4th Floor, Opp. Asian Games Village

New Delhi 10 0016, India

Tel : + 91-11-651 7526, 685 9621

Fax : + 91-11-685 9620

E-mail : [tema@del2.vsnl.net.in](mailto:tema@del2.vsnl.net.in)

# TIME FOR CHANGE?

*Are the days of the megaclub numbered? With a high-profile launch going sour and stories of others in trouble, Ross Brown asks whether it's time to think differently*

I wonder if you'd allow me a small indulgence - relevant to the story, admittedly - but an indulgence nonetheless. We writers are a strange bunch; some of us write for money, some of us write to unleash a creative urge and some of us write because we can't get a proper job. Me, well I write for a mixture of all three and also - no sniggering at the back please - I write in the hope that one day 'The Collected Works of Ross Brown' will find its rightful place on the A Level English Literature reading list. Hey, you never know, stranger things have happened. They must have. Mustn't they?

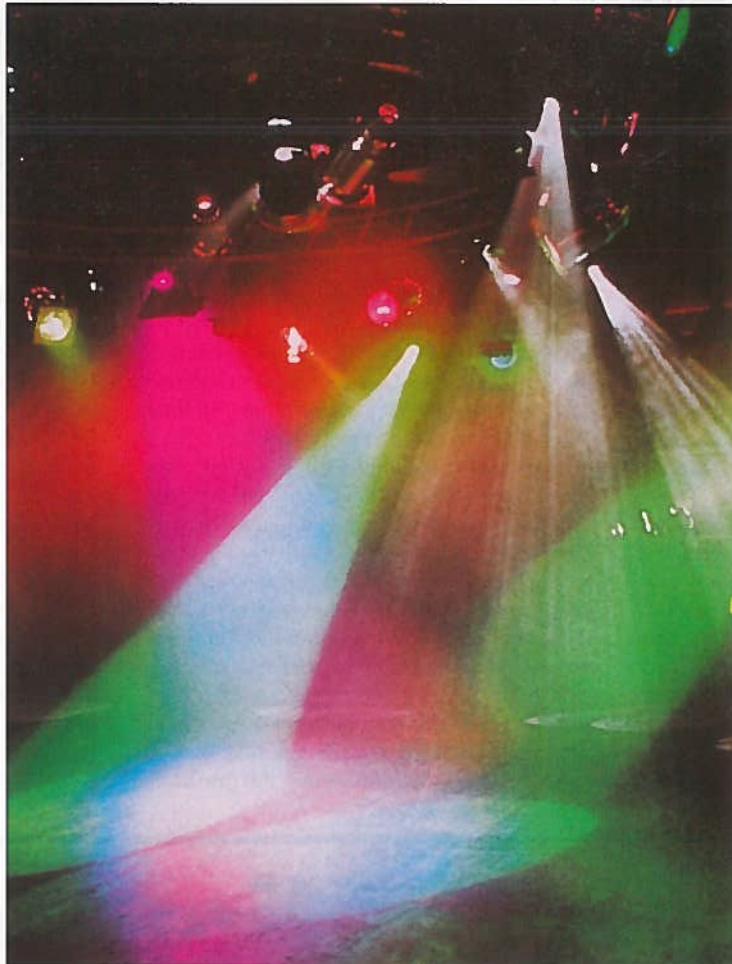
But that great and fateful day has yet to arrive so, for now, I'm going to have to settle for having myself quoted in this august publication - and to perform the thankless task myself. Oh well, que sera sera.

Last month I wrote a piece on the Spectrum Arena for L+SI sister publication S+CSI, which ended with the following paragraph: "And, as I drove away from the Spectrum Arena, just two thoughts passed through my mind: a great venue will only get better when the (inevitable) first night bumps are ironed out and, bugger, I went before the Nun's came on. Honest."

I won't bother explaining the Nuns bit (a long and sordid story), the important thing is that I predicted that a promising venue would, in time, gain some degree of popularity. Indeed the Spectrum Arena showed every indication of being a fantastic multi-purpose venue, drawing crowds from across the North-West. And so it might have been . . . had it not shut down two weeks after opening.

I'll write that again shall I? It shut down two weeks after opening. Surprising, to say the least. After spending three years getting a place off the ground, you would have thought that the management would have pushed for that 'make or break' third week wouldn't you? Obviously not.

The 'official' reason given for the swift change of fortunes was that the venue was initially awarded a four-week temporary licence, which would likely be renewed after this period. However, after a fortnight, the management was informed that the licence would not be renewed after all. The obvious solution? Appeal. Well, obvious to me anyway. But to the management of the Spectrum Arena, the solution was an immediate cessation of activities and voluntary liquidation. As I said,



that's the 'official' reason, because a variety of the contractors I spoke to have their own theories. But, to ensure that lawsuits do not rain down onto the Editor's desk (she'd never forgive me), we'll leave it at that.

The fall-out from this has seen one company suffering losses in the tens of thousands (though they are confident they will stay afloat) and one individual (no names, no pack drill) whose house has been repossessed as he personally financed his part of the project, confident that remuneration would soon be his.

But it gets worse - possibly. Rumours also abound of another über club where, after less than six months, the words 'bowling alley' are gaining volume in certain circles. It seems that the plans for club domination of a certain city in Yorkshire have yet to come to fruition: the punters are staying away in droves. Why not name the venue? You try getting this kind of thing confirmed to the level necessary before printing it in a magazine. The point is that these are but two venues and, according to many in the industry, they are not isolated incidents. What is going on?

Well seemingly two things and they're both inter-connected. Firstly, there's the question of megaclubs: do punters want them? Do they want to spend £10 for 15 square inches of

dancefloor and the pleasure of attempting to enjoy themselves with 1,500 close friends? Or do they want smaller, more intimate venues where they hear the music they want, get a drink easily and find their friends when they want them? And if so, why bother with a nightclub anyway? With 24 hour licences just around the corner and a sizeable proportion of city centre bars providing music on a weekend anyway, what's to stop punters simply ending their night in the place they started it?

We have, my friends, a revolution on our hands.

"Right now we're in one great transitional change with no real focus," says Haydn Gregson of Phase 5. "There's a need to change, you can't play seventies and rave in the same club." Which is what a massive club has to do to grab enough punters off the streets - appeal to as wide an audience as possible. Of course, the industry has a vested interest in keeping as many venues open as possible, so not everyone agrees that things are changing - too radically.

"There's still a demand for the big clubs from our corporate

clients, but it tends to be for complexes rather than single venues," says one insider who asked not to be named. (Why do these people always say that after they've spoken to me?) "Personally, I don't think that the 24-hour licences will change anything, there will always be a need for nightclubs."

A need, maybe - but will it come from the punters or the industry and will it be enough to justify the current number of larger clubs?

"The problem with big clubs is that unless they're packed they look terrible," says Chris Aberdeen of Smithfield Electronics. The insinuation being that there are too many at the moment looking terrible. But what of the impending 24-hour licences? "They will change the whole picture, and a lot of people believe it will help the smaller clubs."

David Graham of Sounddivision agrees: "The way things are going people will be able to drink until whatever the hour. Why bother paying £7 to get past a doorman and pay extortionate prices for drink when you can stay where you are?"

However, Graham does believe that there will always be a hardcore that want the larger specialist dance venues, but the majority, he argues, will want "themed restaurants and clubs where you can eat, drink and dance



Is the Spectrum Arena in Warrington a sign of things to come? Two weeks after launch, it was placed in the hands of liquidators.

without moving." The complete experience, if you will.

And, at the moment at least, it is bars that are filling this void - not clubs. Starstruck's Hardy Mattu puts the dilemma facing nightclubs into harsh reality: "Clubs need a three-hour differential to survive." And if they ain't getting it, they'll swiftly go out of business.

Over at The Music Company, Miles Marsden is honest and optimistic at the same time. He says: "The bars now have DJs - but very few have a dancefloor of any substance. There's a very clear difference between drinking and dancing venues. Although I've obviously got a vested interest in the future of nightclubs, that doesn't mean that I'm going to stick my head, ostrich-like, into the sand and ignore everything. My view is that there is still a

definite place for the big discotheque - but as an all-round entertainment."

What Marsden is talking about is a return to the 'nightclub experience', where music and cabaret merge to provide a unique entertainment: one part music hall to two parts discotheque. Remember the early eighties, when nightclubs were like that, before rave, acid and ecstasy transported the definition of clubs away from the days of late evening/early morning entertainment and into the realms of sweat and 120bpm madness? Maybe it's time for a revival to a time even before the early eighties, to the joints of the thirties and forties where people sat at tables, maybe had something to eat, watched a performance on stage and danced to the sounds of the moment? Just that this time, the music is

provided by a set of Technics decks and not a big band. It might sound like fantasy - but why not? Today's punters have a lot more choices of how and where to spend their leisure pound. To compete and succeed, nightclubs have got to come up with a new unique selling point - provide something that the bars and pubs can't or won't. Okay, so the nightclub's got a bigger dancefloor, but is that still enough?

Things are looking grim for the large corporations. If they stick with their current expansion plans - building bigger and bigger clubs - they may find themselves stuck with an awful lot of white elephants. And, by the time they decide that small, themed bars/clubs providing a complete experience are what's required, they may find they are too late to catch up with the man who got there first.

# Audio Induction Loops

The leading **CONSTANT – CURRENT** systems that set the industry standards

Comprehensive range of Loop Drivers, covering the range from service counters to Cathedrals, plus a range of installation accessories.

Specialists in low-spill, multi-loop and large area systems, with a full advisory, consultancy and design service.

Ampetronic always work in close relationship with installers and specifiers. *(We do not install systems)*

*The Complete System Capability*

## AMPETRONIC



see us at  
PLASA  
on stand  
S26

**PLASA**  
PROFESSIONAL LIGHTING  
AND SOUND ASSOCIATION

Ampetronic Ltd  
Whitehouse Wharf, Millgate,  
Newark, Nottinghamshire  
NG24 4TY United Kingdom  
Tel: 01636 610062  
Fax: 01636 610063



**PROLYTE PRODUCTS**  
ALUMINIUM TRUSS CONSTRUCTIONS

the truss company

Prolyte Products manufactures and markets a wide range of products - from decorative, multi-purpose, and heavy-duty trusses to roof structures, towers and specials. So, whatever your construction needs are, we'll cross that bridge. Anywhere in the world. Visit our website: [www.prolyte.nl](http://www.prolyte.nl)

*Headquarters*  
**PROLYTE PRODUCTS BV**  
Leek, The Netherlands  
Tel. +31(0)594 51 36 13  
Fax +31(0)594 51 69 86

**PROLYTE GERMANY**  
Swisttal, Germany  
Tel. +49(0)22 55 9505 95  
Fax +49(0)22 55 9505 05

**PROLYTE UK LIMITED**  
Dunstable, England  
Tel. +44(0)1582 670160  
Fax +44(0)1582 670260

**PROLYTE INCORPORATED**  
Savannah, Georgia, U.S.A.  
Tel. +1(912)964 5845  
Fax +1(912)965 1687

**SYNCROLITE** PRESENTS YOUR TOOLS  
FOR **THE MILLENNIUM.** WITH  
THE WORLD'S LARGEST INVENTORY OF  
**LARGE FORMAT AUTOMATED  
LIGHTING EQUIPMENT,** EXTENSIVE  
POWER AND SIGNAL DISTRIBUTION SYSTEMS  
AND VETERAN CREWS, WE OFFER EQUIPMENT  
AND EXPERTISE FOR THE WORLD'S MAJOR  
EVENTS. IT IS NOW POSSIBLE TO THEATRICALY  
LIGHT **LARGE SCALE VENUES** FROM  
OLYMPIC-SIZED STAGES TO ENTIRE DOWNTOWN  
SKYLINES AND **RETAIN FULL DMX  
CONTROL** OF ALL UNITS WHILE HAVING  
FEATURES SUCH AS AUTOMATED PAN AND TILT,  
COLOR CHANGER, AUTO FOCUS/BEAM SIZE  
AND DOUSER/STROBE WITH A **FULLY  
WEATHERPROOF PACKAGE**  
FIELD-TESTED THROUGH YEARS OF NIGHTLY  
OPERATION AT **THE WORLD'S  
PREMIER THEME PARKS AND  
MAJOR EVENTS.**



SX3K

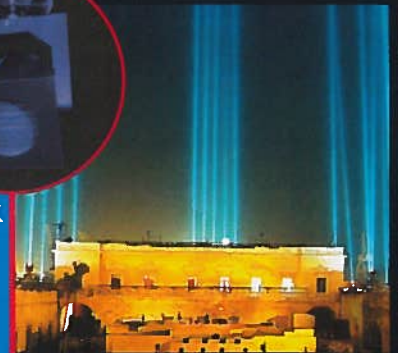


**Lenox Square Spectacular**

This SYNCROLITE-produced SMPTE show controlled spectacular enhanced this center's visibility.



SX7K



**Andrea Bocelli Concert**

A monumental performance brought to light by SYNCROLITE-created custom staging, sound, lighting and skylighting effects.



ST7K



**The Power of Houston Celebration**

The massive 70 unit SYNCROLITE Xenon skylight system helped make this historic celebration the largest, most spectacular light, sound, laser and pyro display ever.



SS7K



**SYNCROLITE™**  
ENTERTAINMENT TECHNOLOGY

TELEPHONE 1.214.350.7696

WWW.SYNCROLITE.COM

# ON TOUR

by STEVE MOLES  
AND PRODUCTION NEWS

## Paul Weller

Victoria Park

LD: Alf Zammit

SD: Ange Jones

There's something warm and reassuring about a Paul Weller gig. It's not the retro lighting system, or the pleasantly uncluttered sound mix, welcome though both these things are, it's the easy dispensation of talent. Here's a man without pretension, yet if we listen to the accolades he receives from his peers, then he's a musician from whom others derive inspiration. "He also likes to bring on new and younger acts," said his long-time LD Alf Zammit, which goes some way to explaining his musicianly popularity. This occasion proved no exception.

After one of his semi-regular three-week jaunts around the City Halls of the UK - Weller never likes to trawl the highways for months on end, but will spend a year touring, three weeks on, two or three off - he topped off this latest outing with a big outdoor special in London's Victoria Park. On the bill were Carleen Anderson, an under-rated vocalist who has been generously indulged by Weller with slots on previous outings and Top Loader - "A bit like a nineties Deep Purple," said Zammit, though I have to disagree with you there old son - more a Yardbirds or Humble Pie, but without the virtuosity to complete the image - rock and roll, not heavy rock. Finlay Quaye hardly needs Weller's support, but his purist roots reggae output was the perfect crowd pleaser as the sun went down on a long, hot day. As for Ian Drury and the Blockheads - here was a piece of history that arguably deserved the £26 ticket on its own. A spine-tingling experience to see the 'Old Raspberry' as Vari-Lite's Steve Connolly affectionately called him.

And finally, just to complete the image of 'really nice bloke', there was a cameo slot for Noel Gallagher who is no doubt looking for tips on how to mellow into musical maturity.

## SETTING

So, not your regular On Tour kind of show, but as you'll see from the production standards applied, the show's inclusion here is easily acceptable. It would not be stretching the truth to say that the sound and lighting system would not look out of place in an arena venue.

Star Hire provided the roof - a 20m square box (approx) with 20m wing each side - not massive, but perfectly adequate for this presentation. After Flatley two weeks earlier, this stage looked small, but it's as well to recall that stages of this dimension were all that was required for most of



the major stadium acts of the eighties, back in those glory days when Wembley hosted more than a dozen shows each summer. What was accommodated here (and not so comfortably back then), was the outdoor video screens. A pair of Screenco's Jumbotrons flanked the stage, 19m<sup>2</sup>, where just 10 years ago we'd have seen a pair of 40ft sea containers housing screens with an area barely half that size, and with a commensurate lack of definition. Because of sound issues here (see below) the stage was positioned so that the afternoon sun shone straight onto artists and screens alike. In spite of which, the JTS17 modules (very high resolution, but not the brightest variant from Sony) provided a clearly visible picture in the strongest sunlight - a feat I didn't realise they were capable of. So, maybe retro at first glance, but altogether an easier, faster, higher quality application of presentation technology. More specific to the video, Weller eschews followspots, which meant that the Creative Technology camera team has less extreme variance in light levels to deal with, even if they did lose some depth of field during the darker numbers.

Backstage, power distribution was handled by Innovation, who not only hooked the big Power Rent generators into sound and lighting, but also laced up the backstage facilities around dressing room and catering Portacabins, something else that was the exception rather than the norm a decade ago. One other aspect of this particular show worth a mention was the mix tower. The lack of house followspots meant that both sound and lighting control appeared to be stationed in a slightly upscale version of one of those poncey 'fabric gazebos' you see advertised in the Sunday broadsheets. But from the punter's point of view, it's a boon, and having seen the benefits of

something similar at Flatley (though for different reasons), surely there is an argument for promoters, managers and service companies to get together and agree to ban the FOH condominium that blights so many outdoor shows?

## SOUND

Canegreen have supplied Weller's tours for years, most recently delivering a system based around the self-powered MSL4. It was nice to hear it perform so well outdoors. In full, the tour rig comprises 16 MSL4s and eight self-powered subs; for the Park this was increased to 17 MSL4s, four DS2s and 10 subs per side. Now Canegreen do many outdoor shows with this system - at least a dozen picnic-style Classical events this summer alone - but it's not a system that readily springs to mind if you think of multi-act rock shows staged outdoors. A couple of observations here: within the 50m arc of the front of stage, the system was mighty, the percussive power and musical fidelity of both Quaye and Drury's bands were conveyed in all their finery - if you moved a little further away, things began to drop off. But then you take a close look - apart from a small stack of MSL4s on the back of the mix position - there is not a delay tower in sight. "It's a bit of a problem being forced to have just one UPA per side," said Canegreen's Yan Stile wryly. And there's the nub of the problem. With tall residential tower blocks barely a kilometre away to stage left, the local council have insisted on what seems an extraordinary low limit on noise pollution - hence no delay system. (See Festival Round-up (starting on page 117 this issue) for further comment on this subject).

So, Ange Jones on front-of-house is up against it

and quite frankly there's not a lot he can do. But he does have a big hi-fi stage system and if you can work your way into the right part of the arena then fine and dandy, although this did mean a fair crush down the front. "The nice thing is," Jones said, "there's no room acoustic to deal with - it's almost a studio environment. Which is handy when you have no opportunity to sound check. As such I have to add my own 'room reverb' (courtesy of a TC Electronics M5000) to give it a bit of life. But for the mix you do have to find it as you go." Of course he's being slightly disingenuous here, having mixed the band for years. Finding the balance for Jones is as instinctive as reaching for your bedside alarm clock on a dark winter morning - it just falls to your fingers.

As stated in the intro, Jones' mix is unfussy but it's not without effect; there are bits of panning and added reverb, on the drums most consistently, giving a nice solid feel to the rhythm section. There is also the little matter of Brendan Lynch (check recent Weller album credits) who is on stage adding, for example, those curious whistling effects to some of Weller's more psychedelic interpretations of classics like *Walk on Guilted Splinters* by Dr John. The underlying character to the mix is old-fashioned effects applied with modern, squeak-free tools. A look to the monitor system confirms that the Luddite ethos meets 1998, a row of those old, angle-fronted boxes stretches across the front of stage cutting off every band member below the knees, yet over to the side of stage we find Seamus Fenton seated behind a Midas XL3, rather than an ageing Mavis.

Whatever the limitations applied to sound levels, there's no compromise on sound quality and content, the older songs sounding especially rich.

#### LIGHTING

The lights had a similar 'golden era' feel to them, not least on the control side. "The best lighting



The Bandit Lites crew.

desk ever made," said Zammit pointing to his Avolites QM500. "Made obsolete before its time in my opinion."

And these are not just idle words for he supports his assertion. "I use it to trigger an MA Scan Commander which runs my Color Faders and the Optikinetics Solar System, and a Lightwave eight-lamp Cyberlight controller. The Cyber' controller has some great simple features, like the sound-to-light colour change, that somehow got lost on the Status Cue."

And to emphasise his reasoning, he adds: "I don't see why I should change my main console just to accommodate one new type of lamp." And

in case you were wondering, the image is completed by old analogue-controlled dimmer racks: a virtually DMX-free zone.

Bandit Lites are the main lighting contractor for the tour. Zammit's design is a very traditional front and back truss (pre-rig, half-loaded), with a cyc behind upon which he sprays Cyberlight gobos and a great deal of animated effect from three Optikinetics K4 projectors. "A much better packaged lamp than the old 575," he said. "I've had these out since *Heavy Soul* (Weller's latest album, perhaps a year old) and they're really reliable. I designed all the Solar effects myself with help from Poggel (Arc Light Illumination) who transposed all my artwork into

reality." His ideas translate into a series of op-art designs, swirling moiré, interference patterns and other sixties-style mandala-like images.

What has most impact from this system is the Pars. For this Park show he's added an extra 100 foot of pre-rig truss in an 'H' configuration, inserted centre stage, and fully loaded with Par 64s. It's not a 'Metal' show, there aren't that many lamps, but it does look early eighties, although the colour choices are decidedly of the moment. What technology he has is used unsparsingly, but it is restricted to just a few functions. The K4s are, of course, limited to their target area anyway, but the Cyberlights - and don't forget this is a show without spots - are also largely confined to working the rear cyc target area - there's no high beam pick-ups of rock stars here. "When I got the job some 10 years ago," (Zammit originally lit Weller back in the heyday of the Jam), "Weller said to me, 'I know lights have changed, but I don't want it to look like a disco,'" and true to instruction Zammit hasn't.

The rig also features top and bottom 4-cell cyc lights, 30 Color Faders, a couple of DF50 smoke machines (foot-switch operated, naturally) and a smattering of Optikinetics strobes, also on their own proprietary controller, to complete the picture. Thus, looking at the system as a whole, Zammit's assertion about not being forced to change his main console is vindicated, if only because of the type of show he's elected to produce. That it works is interesting, and the fact it loses nothing by being 'old-fashioned' might give pause for thought amongst other LDs searching for a new look.

This was a very pleasant show, executed perfectly on a perfect day. Nothing like a hot sunny day after what seems a month of grey skies, to make the world seem right. The only irritant was the challenges of the sound environment control, something over which the production team had no real influence. There's Harvey Goldsmith on one side asking for it to be turned up: "There's no vibe in the crowd," and on the other Steve Levitt and the guys from Travers Morgan who've been empowered with keeping the sound environment controlled saying, "Eh, we've got a bit of a problem here."

Despite which it was a great day out and also a splendid day to celebrate one of the concert world's most enduring LDs' fiftieth birthday. Happy Birthday to Phil Freeman and a hearty toast from myself, Zammit, Tony Panico and all at Bandit, and the staff at L+SI.

If you're thinking wireless . . .

We're the  
obvious  
solution.



hand held audio

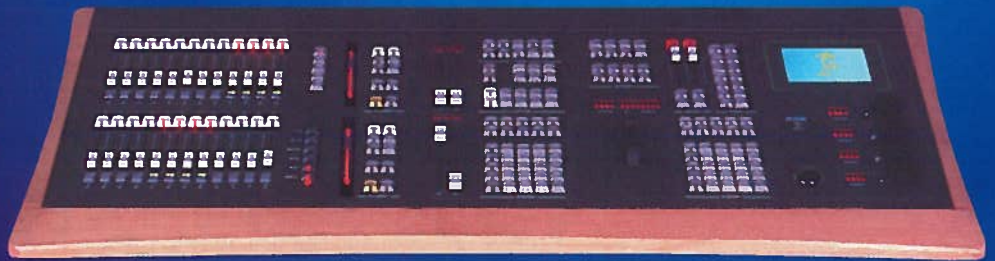
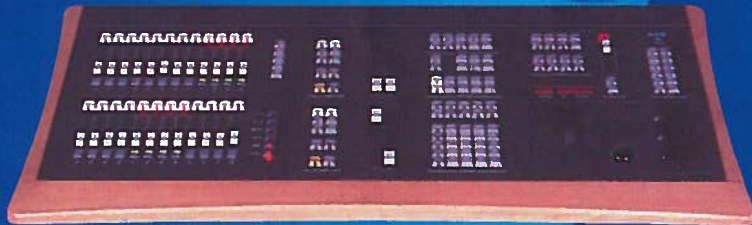
Unit 2, 12-48 Northumberland Park, London N17 0TX

Tel: 0181-880 3243 Fax: 0181-365 1131





# Phoenix



## 3 Control Platforms with *ISIS*® Software

360 - 2048 channels

48 Submasters

Integrated Motion Control

Multi-tasking Capability

Up to 4 monitors

Your Partner for Light

Belgium N.V. ADB S.A.  
Deutschland ADB GmbH  
France ADB S.A.  
Great Britain LSI

Tel : 32 / 2 / 722.17.11  
Tel : 06108 / 91 250  
Tel : 01 / 41.17.48.50  
Tel : 01483 / 76.46.46

ISO 9001 certified

Fax : 32 / 2 / 722.17.64  
Fax : 06108 / 91 25 25  
Fax : 01 / 42.53.54.76  
Fax : 01483 / 76.99.55

# ADB

A Siemens Company

# Awake in the Street . . .

Ian Herbert

Summertime is here, in spite of the weather. Time to get out a bit, get some exercise, put a stop to all that snoring in stuffy theatres. Let's see some stand-up - not comedians, but shows where the audience doesn't get a seat.

Just in case (after all, it was July), my first such outing was actually an indoor one, at Three Mills Island in the East End of London, where the Catalan wizards Fura dels Baus were up to no good in one of the big studios. The evening started bizarrely enough, with the extras from another studio parading past our queue: scores of orientals in Victorian dress for what looked like the Japanese remake of *Vanity Fair*, but turned out to be a Mike Leigh film about Gilbert and Sullivan. Why? Don't ask me why.

Don't ask why is the motto of Fura dels Baus, too, a company whose name translates variously as 'Vermin from the Sewers' or 'The Ferret from the Small Stream in the Village of Moia'. I prefer the second, cuddly version, which they probably used when they were staging the opening to the Barcelona Olympics with a cast of thousands. But tonight it's definitely vermin night. In the dark, sweaty warehouse-cum-studio, a full house is made to share in their meaningless but terrifying rituals. Wild figures dressed (when they are dressed at all) in the manner of a Mad Max movie herd us to and fro, while chickens are disembowelled, dragged from an apparently pregnant woman and obscenely barbecued - different chickens, at different points in the show, if that helps. The whole evening has the undertone of a set of catholic rituals gone rancid: baptisms in mud, communion with chickens, extreme unction with the Pope knows what.

What has all this filth to do with us clean-living technical folk, I hear you ask? Well, Fura are an interesting example, indeed probably the begetters, of the many groups now springing up who do crowd-manipulating theatre, elemental stuff with lots of fire and fluids, working on our most primitive emotions. And one of the keys to their work is the cunning mix of ancient and modern in their theatre technology. Fire, yes, but fire that will satisfy a safety officer when it passes within inches of audience members. Water that won't short-circuit the masses of electrical and electronic equipment knocking about. And that equipment usually includes huge speaker clusters, pumping out the primitive rhythms that keep my kids (and many of you, no doubt) up dancing all night, chewing strange little pills in the clubs.

One of the Fura's techniques of crowd management involved the use of big banks of battery-driven floods on



Te Pooka set the Old Quad in Edinburgh alight.

trolleys, pushed by the actors - impossible to have cabled supply with the public milling all around. They could both disperse the audience and define acting areas as they went, giving a new slant to the term 'moving lights'. The rest of the lighting, apart from the flames, was largely big follows from the roof. They had some pretty complex props, too, for an apparently homespun group. Bundles of rags, left on the ground under the feet of the crowd, began to wail like babies. A huge stock of planking was built into a three-level scaffold right across the area, which became the focus for the amateur obstetrics and home cooking that formed the latter part of the show.

Simple yet complex, elemental effects from highly mobile kit - it's all the rage. In August I was in Pula, on the Istrian peninsula in Croatia (no, not a holiday - I was pontificating to a bunch of young theatre critics, since you doubt me) watching an ambitious piece of street theatre, no less than an attempt tell the story of *The Odyssey* with a cast largely composed of local youth. It came in two separate chunks. The easy one was Odysseus's wife, son and dog (excellent dog - a real one) scouring the local shopping centre for the wandering hero - all they had to do was accost innocent bystanders and ask them whether they'd seen him. The other section was the lad himself, touring with a large troupe of sirens, giants, witches and the like in search of a place to act out scenes from Homer.

Their back-up was a large truck, disguised as an all-purpose monster, and carrying a flood or two and the sound kit. Odysseus had a remote mic tucked under his shield, which could also serve any of his adversaries who got close enough to him to share it. Otherwise, it was natural acoustics or bust. The merry crowd of extras usually bust, except when they could get into football-style ensemble chanting, but they all did a nice line in sidling up to passers-by to explain their particular character. The problem here was that the director had chosen a very verbal approach (in rehearsal I saw some excellent dances from the youngsters, but I missed them on the street). Big swirling set-pieces are one thing, but lots of exposition in

Croat doesn't go a long way with a multi-national audience of holidaymakers. After a while, Odysseus and his back-up on the truck took to playing half in Croatia, half in Italian. No doubt a lesson will have been learned.

Last scene, the Old Quad in Edinburgh, setting for some great outdoor theatre over the years - Ninagawa's fork-lift *Medea*, Biuro Podrozy's stiltwalkers in *Carmen Funebre*. The occupants for this year's Fringe were an Edinburgh group, Te Pooka, who brought echoes in their *Autocrat* of both Fura and the chanting Croats. They call

themselves 'a collaboration of performers, pyromaniacs, artists, costume makers, designers, technicians, construction builders, puppeteers, composers and musicians', which covers the ground pretty well.

What they had to offer was some very elemental stuff: after a fire-twirling start, a Lord and Lady process the 100 yards of the quad on platforms placed before them by sinister face-painted acolytes. They observe and are drawn into a black fairy tale of a sacrifice-demanding dragon. Their minister supervises the stripping and unpleasantly real whipping of two victims. In the gathering gloom of the Quad, it's all very menacing, and the dragon, a built-over truck, is finally slain in a cascade of pyrotechnics that leaves it burning brightly. The show didn't please all the critics, some of whom had to judge it in rainy conditions which must have reduced the impact of the flame and fireworks. I suspect that some of them would have been much more impressed if the name of the company had been Polish or Catalan rather than Gaelic. It worked for me, however, on the unthinking, visceral level that Fura dels Baus and others are seeking to tap.

What makes it work, once again, is its understated, but essential, technical back-up. Neil McArthur's sound-scape, terrific for the first half hour, but rather short of creative steam in the second, reverberates to splendid effect. Mini-strobes at one end of the Quad announce the arrival of the dragon. And once again many of the close scenes are illuminated by battery-driven banks of lights (in this case pinspots), dragged around by the performers as both crowd control and area illumination. They carry hand-held floods at other times as well, powered by body-pack batteries, when they're not hurling balls of flame about. There's very little formal, board-driven lighting, and what there is is credited to one Bear. Not so long ago I was warning you about the employment consequences of setless shows. Here's another futurist nightmare for you - shows lit by the performers, designed by animals.

# L+SI RECRUITMENT

## VDC

PURE CABLE TECHNOLOGY

### Wiremen Required

VDC is a leading specialist in the supply and custom-manufacture of premium quality cabling systems and components to the recording, broadcast and presentation industries worldwide.

We are currently looking for bench wiremen at all levels from trainee to supervisor.

If you enjoy working in a demanding result-driven environment as part of a growing team please call

**Pat Jamieson on  
0171-700 2777**

### RG Jones Sound Engineering

require

#### Installation and Service Engineers

A well established leading sound installation company requires experienced audio engineers to assist with the preparation, installation and front-line maintenance of all types of permanent public address and sound reinforcement systems.

Applicants must be self motivated, technically competent and have several years experience with pro-audio installation and maintenance work.

A full, clean driving licence is essential, plus a good knowledge of the London area. Some travel may be involved.

Salary negotiable according to experience and qualifications

RG Jones is an equal opportunities employer

For an application form call Viv on

**0181 971 3106**

# RGJONES

ARRI Lighting Rental, one of the UK's largest and most successful film and television lighting hire companies, is looking for outstanding candidates for the following vacancies.

## ARRI

ARRI LIGHTING RENTAL

ARRI LIGHTING

Unit 20A Airlinks

Spitfire Way

Heston

Middlesex, TW5 9NR

**STORES MANAGER** - The ideal candidate will preferably have experience of running a busy stores and distribution operation in the entertainment or media industries. However, high calibre candidates from unrelated industries will be considered. Excellent man-management skills are required as duties will include deployment of labour within a two shift pattern of 12 storemen/drivers. This will include minimising overtime. You will also be required to oversee delivery and collections between four nationwide branches plus innumerable UK locations. The successful applicant should be computer literate, and will be responsible for overseeing the introduction of computerised systems including bar-coding, pick-lists and inventory tracking. An ability to analyse existing administrative systems with a view to updating and problem solving is also required. You should have an eye for detail, as the accent is on accuracy and speed in processing incoming and outgoing checks. You will also be able to minimise sub-hire, by getting maximum utility from your existing inventory.

Reporting directly to the Managing Director, salary will be commensurate with qualifications and experience.

Reply in writing to Tim Ross

**STORES PERSON** - Required for the careful preparation of lighting equipment prior to use on film and television productions. Reporting directly to the warehouse manager, some driving may be required, therefore a clean driving license is essential and a knowledge of driving in London is preferable. The normal week is 40 hours, however, you will be required to work overtime, often at short notice, when necessary. The right candidate may also be in a unique position to progress within the film industry after completing a qualifying period.

Reply to Jason Hunt

**ELECTRICAL/MECHANICAL MAINTENANCE TECHNICIAN** - To carry out repairs to our extensive hire stock of lighting equipment and when necessary manufacture new stocks of cables or small items of equipment. Normal working hours will be 08.30 - 17.30 Monday-Friday, however, the nature of our industry means that unsociable hours may have to be worked. Overtime (including weekends) at very short notice is often required. The successful candidate will have a good basic electrical knowledge and, as a large amount of the work involves non-electrical repairs, the candidate will need to be practically minded. The ability to use welding equipment (Mig/Arc/Gas) would be useful. The right candidate will be able to work under pressure and unsupervised.

Reply to Mike Ohara

# DIRECTORY

Lighting + Sound  
Equipment Sale/Hire  
Installation and Design



Designer and manufacturer of  
protective cases and bags

CP London, Tel: 0181-568-1881  
CP Manchester, Tel: 0161-873-8181

Automated SEARCHLIGHTS - we design & build to sell or hire  
(single or multi-beam)

**Skylites International**

TEL: 01376 584799 FAX: 01376 585899  
Mobile: 0378 709989

Also for Hire:  
12 WWII Anti-  
aircraft  
SEARCHLIGHTS



**LIGHTING  
HIRE  
SALES  
SPECIAL F/X**

**STAGE CONTROL LTD.**

STATION PARADE,  
WHITCHURCH LANE,  
EDGWARE, MIDDX. HA8 6RW

TEL: 0181-952 8982  
FAX: 0181-951 4178

**Step on it.** FREEFONE  
0800  
28 99 32  
for FREE  
datasheets  
and samples.

**HARLEQUIN  
STAGE & STUDIO  
FLOORS**

British Harlequin, Bankside House, Vale Road, Tonbridge, Kent TN9 1SJ  
Telephone 01732 367866 Fax: 01732 367755

**Entertainment  
Hire Software  
& P.A.T.  
Testing Systems**



Syon Lodge, Bush Corner  
London Rd., London. TW7 5BB

Tel: (07000) NAVSYS  
(6 2 8 7 9 7)  
Fax: (07000) NAVFAX  
(6 2 8 3 2 9)

email: lsi@navigator.co.uk  
URL: http://www.navigator.co.uk

LIGHTING HIRE & SALES

Philip L. Edwards  
(Theatre Lighting)

5 Highwood Close, Glossop,  
Derbyshire SK13 6PH.  
Tel/Fax: 01457 862811.

**FREE** 76 page Wenger  
catalogue



Exclusively available from  
An indispensable treasure  
house of hard-to-find,  
everyday, and totally  
unique music equipment.

**Black  
Cat  
MUSIC**

To receive  
your free copy  
just call

**01732 367123**

Black Cat Music • Bankside House • Vale Road • Tonbridge • Kent TN9 1SJ  
Fax: 01732 367755

**P.A. music**  
Lighting, Sound & FX Video

Whatever you are doing!  
We have the Lighting,  
Sound & FX Technology  
to make it a Success!

**Hire & Sale**  
Repair, Mail Order & Export  
172 High Rd, London N2 9AS  
+44(0)181-8834350

**Francis**  
SEARCHLIGHTS

Manufacturers of  
rugged, automated  
Xenon searchlights  
for permanent -  
outdoor installation

Tel. 01204 527196  
Fax. 01204 361567

The  
**Fibre Optic  
Lighting People**

Par Opti Projects Ltd  
67 Stirling Road, London W3 8DJ  
Tel: 0181-896 2588  
Fax: 0181-896 2599

**Dial** SOUND & LIGHTING  
Stereo Sound & Effects  
Lighting Specialists

CLAY PAKY zero 88 POSCO Panasonic PULSAR  
FEAVEY ABSTRACT CX-CLOUD POWER DRIVE MODE ELECTRONICS SHURE  
BOSE OPTIKINETICS TECHNICS CITRONIC FORMULA-SOUND LeMaitre JEM  
Ey JBL RCF DENON

Unit 4G Wharfedale Road, Euroway Ind. Estate, Bradford BD4 6SG.  
Tel: (01274) 651600 Fax: (01274) 651190

**S.W.L.**  
SAFE WORKING  
LTD.

Training courses for  
the entertainment  
industry

**RIGGING  
ROPEWORK  
SAFETY**

Call  
Mark Armstrong  
Tel: 0181 674 5645  
Fax: 0181 671 8150  
Mobile: 0802 800963

To advertise in this  
directory section  
please call Jane  
or Barry  
00 +44 (0) 1323 642639  
00 +44 (0) 1323 646905



**VARIA TEXTILES LTD**

STAGE PRODUCTS:

- Scenic Gauze
- Cyclorama Cloth
- Opaque Satinette
- Back Projection Screen
- Dance Floor
- Velvet
- Stage Cloth
- Making up service

Tel: 0181-5498590 Fax: 0181-5498290



## SENNHEISER

### TOUR GUIDE SYSTEMS

6 frequencies

### RADIO MICROPHONES

multi-channel systems

### INFRA RED SYSTEMS

quality 2-channel operation

### CONDENSER & DYNAMIC MICS

MKH 40/50/60, K6 + ME60, MD421

### WHEN QUALITY MATTERS

UNITS C6 & C9 HASTINGWOOD TRAD. EST.  
HARBET RD. LONDON N18 3HR

Phone: 0181-803 7400 Fax: 0181-803 5060



## WHITE LIGHT

### Lighting Hire and Sales

London  
Tel: 0171 731 3291  
Fax: 0171 371 0806

North  
Tel: 01422 839 651  
Fax: 01422 839 773

[www.whitelight.ltd.uk](http://www.whitelight.ltd.uk)



## THE OTHER SIDE OF MIDNIGHT

SALES • DESIGN • INSTALLATION  
SERVICE OF PROFESSIONAL LIGHTING  
AND EFFECTS EQUIPMENT

TEL: 0181-871 4077

FAX: 0181-877 0161

INTERNET: <http://www.midnight-sales.ltd.uk>

100 GARRATT LANE • LONDON SW18 4DJ



- ◆ The complete gobo service
- ◆ Projection slides - all formats
- ◆ Animation effects
- ◆ Fibre optic equipment
- ◆ Digital Light Curtains

• 284-302 Waterloo Road • London • SE1 8RQ • UK •  
Tel. +44 (0)171 771 2900 • Fax. +44 (0)171 771 2901

#### ACCESS ALL AREAS

Lisbon, Portugal  
tel 351 1478 3826  
fax 351 1478 1939  
Contact: José Manuel Henriques

#### ARENA LIGHTING

Dublin, Ireland  
tel 353 (0)1 855 4490  
fax 353 (0)1 855 4868  
Contact: Mick Deggan

#### AUDIOMIC PRODUCCIONES S.L.

Sondika Vizcaya, Spain  
tel 34 94 471 1579  
fax 34 94 471 0551  
Contact: Carlos Garcia

#### BACK STAGE LTD

Birmingham, England  
tel 44 (0)121 327 3919  
fax 44 (0)121 327 5774  
Contact: Mike Hannon

#### BLACK LIGHT LTD

Edinburgh, Scotland  
tel 44 (0)131 551 2337  
fax 44 (0)131 552 0370  
Contact: John Barker

#### DELUX THEATRE LIGHTING

Zurich, Switzerland  
tel 41 1 272 7989  
fax 41 1 272 7991  
Contacts: Urs Kisler/Andreas Fischer

## VARI\*LITE®

The Automated Lighting Company

### Authorised Series 300™ European Dealer Network

Vari-Lite's Series 300 system sets new standards for compact, configurable automated stage lighting controlled by the mini-Artisan®2 console or the DMX console of your choice.

The Series 300 Dealer Network now makes the mini-Artisan2 console, VL5™ luminaire, VL5Arc™ luminaire, and the VL6™ luminaire more accessible throughout Europe.

Contact the dealer nearest you to find out just how close you are to VARI\*LITE® Series 300 Equipment.



[www.vari-lite.com](http://www.vari-lite.com) email: [info@vleh.com](mailto:info@vleh.com)

Vari-Lite Production Services Europe tel +44 (0) 181 575 6666 fax +44 (0) 181 575 0424 Contact: Jim Douglas

©Copyright 1998, Vari-Lite, Inc. All rights reserved. VARI\*LITE® and mini-Artisan®2 are registered trademarks of Vari-Lite, Inc. Series 300™, VL5™, VL6™ and VL5Arc™ are trademarks of Vari-Lite, Inc.

#### LIMELITE SRL

Roma, Italy  
tel 39 6 5060063  
fax 39 6 5060400

Contact: Giancarlo Campora

#### LITE ALTERNATIVE LTD

Manchester, England  
tel 44 (0)1706 627066  
fax 44 (0)1706 627068

Contact: Paul Normandale/Jon Greaves

#### PAN & TILT A/S

Copenhagen, Denmark  
tel 45 32 958511  
fax 45 32 958311

Contact: Lars Nissen

#### PRIMETEC AB

Gotenburg, Sweden  
tel 46 31 70 72 400  
fax 46 31 21 35 60

Contact: Ulf Irestad

#### RMC SHOW SERVICE

Helsinki, Finland  
tel 358 9 506 3010  
fax 358 9 551 220

Contact: Mikael Carlsson

#### SCENETEC & CO.

Vevey-Montreux, Switzerland  
tel 41 21 925 37 77  
fax 41 21 925 37 78

Contact: Laurent Zumofen

The  
**Fibre Optic**  
Lighting People



Par Opti Projects Ltd  
67 Stirling Road, London W3 8DJ  
Tel: 0181-896 2588  
Fax: 0181-896 2599

**10 TEN**  
OUT OF  
**10 TEN**

TEN OUT OF TEN PRODUCTIONS LTD  
LIGHTING & SOUND HIRE & SALES  
Authorised Dealers for:

AUDIO ADB AKG QSC  
METRO AUDIO Jeyerdynamic  
BOSE JBL SHURE  
RAT TRANTEC

Special Offers for  
Theatre Class Lamps

Mail Order Hotline:  
**0181-291 6885**  
Fax: 0181-699 8968  
<http://www.tenoutoften.com>  
MasterCard • Visa • Switch

**W**

WEMBLEY  
LOUDSPEAKER

Professional Loudspeaker Repair  
Specialists for all Makes  
of Power Units

Manufacturers of the  
P.T.P. Series:-  
Professional Range of  
Chassis Loudspeakers,  
Tweeters and Hornes.

**deuce**

Spyder Mini/Maxi Cube  
2820 Sub Bass Bin  
2824 Mid-Top Pack

Unit A4, Askew Crescent Workshops  
Askew Crescent, London W12 9DP  
Tel: 0181-743 4567  
Fax: 0181-749 7957

**L** Lancelyn THEATRE SUPPLIES

Lighting Hire & Sales

Equipment from all  
major manufacturers

Hire of Outdoor Equipment  
including Staging and Seating

Special Effects, including  
smoke machines, snow machines,  
projection, pyrotechnics, etc.

HIRE: Oxford (01865) 722522  
SALES: Oxford (01865) 722468  
Hire and Sales Northwest:  
0151-334 8991

**mico**  
LIGHTING

The specialists for  
LAMPS used in the  
THEATRE and  
ENTERTAINMENT  
industries.

Excellent Trade terms  
available.

Mico Lighting Ltd.  
Troydale Lane, Pudsey,  
Leeds, West Yorkshire.  
Telephone: (0113) 2567113  
Fax: (0113) 2572358

**LIGHT ENGINEERING**


**BUBBLE TUBES**

This unusual and  
attractive effect has  
many applications.  
Two sizes available or  
specials made to order.

1.2 metre high x  
75mm diameter with  
manually changeable  
colour filter. Choose  
from Red, Yellow  
or Green.

2 metre high x 110mm  
diameter with 4 colour  
automatic colour change,  
Red, Blue, Green and Yellow.  
Comprehensive catalogue  
available on request!

Tel: 0181-520 2336  
Fax: 0181-509 1332  
64 Eden Road, London E17 9JY



**GDA** G. DASHPER  
ASSOCIATES

Specialists in the design, manufacture  
& installation of staging equipment for  
the theatre and television industries.

Call us today for more information, advice  
and access to over 40 years of experience.

Tel: 01953 688150 Fax: 01953 688245

**THE GRADAV EMPORIUM**

TUBE CLAMPS IN STOCK  
CUSTOM GOBO SPECIALISTS  
DOUGHTY IRONMONGERY  
LE MAITRE PYROTECHNICS  
SCENERY PAINT BY ROSCO  
MINI DISCS BY TDK  
AMPEX 456 TAPE IN 1/4" & 1/2" WIDTHS  
SMOKE PRODUCTS BY LE MAITRE  
FILTER, GAFFER AND SUNDRIES

PLEASE CONTACT US FOR YOUR FREE CATALOGUE

Nice people to talk to

613-615 GREEN LANES, PALMERS GREEN  
LONDON N13 4EP  
Phone: 0181-886 1300 Fax: 0181-882 6517

**eskimo noise**

FOR HIRE:

NEXO ALPHA SYSTEMS  
NEXO PS-10 & PS-15  
ELECTRO-VOICE SX200  
ELECTRO-VOICE DELTAMAX 1152AS(70)  
CROWN MA5000VZ, MA3600, MA2400, MA1200

OFFICIAL DEALERS FOR:

CROWN EV ElectroVoice HILTI  
ARX SABINE NEXO White

EX-INSTALLATION HIRE EQUIPMENT ALWAYS AVAILABLE  
EV DELTAMAX 1152AS FROM £750  
CROWN MA1200 FROM £500  
EV S/SX200 FROM £200

SALES • HIRE • SOUND PRODUCTION  
TEL: 0171 277 1313 • FAX: 0171 703 6485

**IBEX**

Tel: 0181 405 1233  
Fax: 0181 688 3495

**Motion Control Systems**

From single motor control to fully automated  
multi axis computer positioning systems

Design & manufacture to individual specifications

...Winch Control...Hydraulics Control...Chain Hoist Controllers...  
.....Revolve Control...Guided Vehicles...Robotics Control.....

## WELD-FAB STAGE ENGINEERING LTD.

DESIGN & MANUFACTURE OF TRUCKING SCENERY, REVOLVES, LIFTS, ROSTRA FLOORING & TIMBER FINISHING FOR TELEVISION, THEATRE & EXHIBITION SERVICES VARIOUS EQUIPMENT AVAILABLE FOR SALE OR HIRE.

**PLEASE CONTACT BRIAN SKIPP FOR DETAILS**

HARBOUR LANE WORKS, GARBOLDISHAM  
DISS, NORFOLK IP22 2ST.

Telephone: 01953 688133 Fax: 01953 688144



**We can supply all your rigging and motion control requirements.... call us on:**

**Tel: 01279 600390 • Fax: 01279 600032**

## STAGE-TRACK LIMITED

ALL STAGE EQUIPMENT DESIGNED AND INSTALLED. SPECIALISTS IN CURTAIN TRACKS, PILE WINDING WINCHES, SUSPENSION PULLEYS, SCREEN FRAMES ETC.

**PHONE NOW FOR BROCHURE!!**



HARBOUR LANE WORKS,  
GARBOLDISHAM, DISS,  
NORFOLK IP22 2ST.  
Tel: 01953 688188  
Fax: 01953 688144

## SOUND CHECK 2

The World's Best Selling Test & Demo CD  
Mastered at Abbey Road Studios

- 58 Tracks of test tones including sub bass, active speaker set-up & frequency response check
- Dry Vocal tracks including un-compressed solo by Pavarotti
- Dry Instrument tracks including Steinway Concert Grand Piano & complete drum kit solo
- High dynamics music tracks from Cathedral Organ to Luv 4 - the ultimate bass test
- Sound Effects tracks including the famous Chieftan Tank recording
- Also available with built in analyser meter for instant frequency reponse analysis

In all - 99 tracks of essential listening

Special Readers Price: £25 inc VAT & post

With Analyser: £59 inc VAT & post

Phone or Fax SCA with your credit card details for same day despatch

**Tel: 01271 858580 Fax: 01271 858587**

*All major credit cards accepted*

Harkness Hall Limited  
**THE BIGGEST NAME**  
*in stage and screen*

- SUSPENSION EQUIPMENT
- PC CONTROL SETS
- COUNTERWEIGHT SETS
- SAFETY CURTAINS
- SERVICE, INSTALLATION & CERTIFICATION
- CURTAINS & TRACKS
- RIGGING GEAR
- SCENERY FITTINGS, PULLEYS...and much more!

**TEL: 0181 953 3611**  
**FAX: 0181 207 3657**  
E-mail: sales@harknesshall.com

## HirePoint98

Rental Software

### ON SALE NOW!

32 bit Windows95/NT software for AV, Lighting & Audio Equipment rental/production/staging.

### HOT NEW FEATURES

- ☐ Internet email hook - Load email rental enquiries, put your catalog on the web, setup web ordering & enquiries.
- ☐ Use with a Digital camera to take pictures of your pickup customers. Competitive crossgrade offer.

Download a demo [www.HireP.com](http://www.HireP.com)  
U.K Phone - Rick - Mob 0468 316612  
U.S Tel 1 888 591 1962 fax 1 888 591 1964  
Australia (+61 2) 9824 1105 fax 9824 0554  
**HirePoint Software**

## The Fibre Optic Lighting People

Par Opti Projects Ltd  
67 Stirling Road, London W3 8DJ  
Tel: 0181-896 2588  
Fax: 0181-896 2599

## DONMAR DRAMA DEPT.

Light & Sound Solutions for the Performing Arts

Sales Counter  
2 Tudor Estate Abbey Road  
Park Royal London NW10 7UY

Sales & Service

Lamps & Lanterns

Colour Filter & Gobos

Scenic Materials & Paint

Staging & Curtains

**Tel: 0181 453 6004**  
**Fax: 0181 453 6005**

## POWERRENT

"SILENT MOBILE GENERATORS

5Kva - 1500 Kva 50/60 Hz

CABLES TRANSFORMERS ETC."

Complete Distribution Systems

Specialist Location Engineers

Depots throughout UK & USA

24 Hour Service Worldwide

**Tel: - 01304 - 620062**

**Fax:- 01304 - 620072**

**Mobile: 0836 373849**



*the original*  
**RAT**  
music stand

R.A.T. (Music Stands) Limited  
16 Melville Road, London, SW13 9RJ  
Tel: 0181 741 4804 Fax: 0181 741 8949

# Specialist Technical Equipment and Services for the Entertainment and Allied Industries

## PORTABLE STAGING SYSTEMS

Maltbury Ltd rent, sell and install modular staging systems for the music, film, TV and theatre industries.

*Steeclack 7.5*, our upgraded design of the popular system, now supports 7.5k/m<sup>2</sup> even on a 4-leg 8'x4' unit.

METRODECK is our mid-weight system. It is designed for maximum ease of handling and minimum storage space.

We work throughout the UK and in Europe and would be happy to discuss your requirements in detail.



**0171 252 3700**  
**07000 MALTBUURY**

*Glantre Engineering offers a worldwide service in design, supply and installation of systems for the performing arts and entertainment.*

*Glantre's capabilities extend from lighting, sound and rigging for theatres, film and TV studios, through conference and AV to packages for cruise ships, theme parks and leisure attractions.*

Contact Carolyn Cerrino at 20 Richfield Avenue, Reading, Berkshire, RG1 8EQ  
Tel: +44 118 964 0000  
Fax: +44 118 964 0064  
Email: info@glantre.com

GLANTRE ENGINEERING LTD

### GLANTRE



Leaders in entertainment technology on land and sea.

## TRANSFORMERS

- ★ LAMINATED TRANSFORMERS
- ★ LOW PROFILE ENCAPSULATED
- ★ TOROIDAL TRANSFORMERS
- ★ From 2VA to 1500VA
- ★ 100V LINE TRANSFORMERS
- ★ CUSTOM ENCLOSURES
- ★ Design, Development, Production
- ★ Large & Small production runs, at very competitive prices
- ★ Short delivery
- ★ BAPT LISTED
- ★ ISO 9002 APPROVED

### DAREN ELECTRONICS LTD

23-29 OWEN ROAD, DISS  
NORFOLK IP22 3YU  
TEL 01379 641774  
FAX 01379 650118



## MOTOROLA CERAMIC SPEAKERS

PULSAR DEVELOPMENTS LTD  
MARLOW, ENGLAND  
TEL: (01628) 473555  
FAX: (01628) 474325

## The UK Source for Large-Format Projection Equipment

Largest Pan rental inventory in Europe

Rentals

Sales

Applications Assistance

Media Production



### PRODUCTIONarts

3 Greenock Road  
London, W3 8DU  
Tel: (0181) 896-1777  
Fax: (0181) 896-1888

## FABRONIC LIGHTING

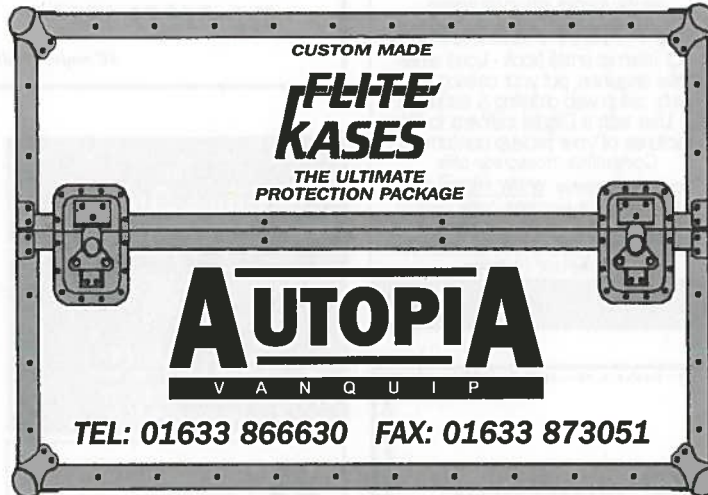
Manufacturers of a complete range of quality effects lighting for the leisure industry

PROFESSIONAL LIGHTING FOR  
PROFESSIONAL PEOPLE

For a full brochure and price list call the  
Sales Hotline

**01604 790765**

Kings Park Road, Moulton Park,  
Northampton. NN3 6LL  
Fax: 01604 492856



## THEATRE \*\*\* CRAFT

### DRAMA EQUIPMENT

*Eltec Lighting Controls*

Internally Wired Bars  
Rostra & Scenery Kits  
Braces, Weights etc

TRADE ENQUIRIES

TEL: 0151-334 0831 • FAX: 0151-334 4047

The  
**Fibre Optic**  
Lighting People

Par Opti Projects Ltd  
67 Stirling Road, London W3 8DJ  
Tel: 0181-896 2588  
Fax: 0181-896 2599

## RENTAL BULLETIN BOARD

Now Available

GLADIATOR FOLLOWSPOTS 3KW

MEGALITES (9x2Kw)

ETC SOURCE FOURS

WYBRON AUTOPILOT

4KW DMX SKY-ART SEARCHLIGHTS

WHOLEHOG II CONTROL DESKS

JEM ROADIE SMOKE MACHINES

IRIDEON AR 500 LUMINAIRES

CADENZA DMX P.A.L.S.

THOMAS SUPER RIG TRUSS

RCD MAINS DISTRO SYSTEMS

AVOLITES DIAMOND II DESKS

SCANCOMMANDER CONTROL DESKS

ALTMAN ZIP STRIPS

THEATRE  
PROJECTS

Lighting The Way Ahead

+44 (0)181-575-5555

# LHS

Leslie Hire & Sale

For  
Stage and TV Lighting  
and Stage Equipment,  
phone

0181 871 5132

L.H.S. Limited, The Business Village, Broomhill Road,  
Wandsworth, London SW18 4JQ.  
Telex: 917003 LPC G

# Almag

<http://www.almag.co.uk>

for

dimmer chokes  
emc chokes  
pfc chokes

e-mail  
enquiry@almage.co.uk

Almag Ltd

17 Broomhills, Rayne Rd  
Braintree, CM7 7RG, UK  
Tel +44(0)1376-345200  
Fax +44 (0)1376-551917



# INTERNATIONAL DIRECTORY

World-wide contact information for import/export, concert touring, exhibitions, etc.

## AUSTRALIA



**L.S.C.  
ELECTRONICS P/L**

7 University Place, Clayton,  
Victoria 3168, AUSTRALIA  
Tel: (61) 3 9561 5255  
Fax: (61) 3 9561 5277

## AUSTRIA

**VARI\*LITE®  
VARI-LITE AUSTRIA**  
Tel: (43) 1 609 02 Fax: (43) 1 609 0220

**Controlite**  
PML & WashLight

LDDE Vertriebs GmbH  
Tel: +43 1 748 18 11 Fax: +43 1 769 17 61

## BELGIUM

**VARI\*LITE®  
VLPS BRUSSELS/EML**  
Tel: (32) 16 60 76 48 Fax: (32) 16 60 83 61

**OPTIKINETICS**  
EFFECTS LIGHTING EQUIPMENT AND STRUCTURAL SYSTEMS™  
**K2 EFFECTS PROJECTOR Trilite™**  
Tel: (03) 4919170 Fax: (03) 4890562

**Flashlight**  
RENTAL

## BELGIUM

Centrum Zuid 1054  
B-3530 Houthalen  
Tel: (32) - 11525530  
Fax: (32) - 11525534

## CANADA

**OPTIKINETICS**  
EFFECTS LIGHTING EQUIPMENT AND STRUCTURAL SYSTEMS™  
**K2 EFFECTS PROJECTOR Trilite™**  
Free Tel: 800-575-6784 Free Fax: 800-678-4575

## FRANCE

**VARI\*LITE®  
VARI-LITE FRANCE**  
Tel: (33) 1 41 14 01 00 Fax: (33) 1 45 07 96 79

**OPTIKINETICS**  
EFFECTS LIGHTING EQUIPMENT AND STRUCTURAL SYSTEMS™  
**K2 EFFECTS PROJECTOR Trilite™**  
Tel: 01 437 60030 Fax: 01 489 38183

**Controlite**  
PML & WashLight

SONOSS - 59160 Lomme  
Tel: +33 3 20009210 Fax: +33 3 20009211

## GERMANY

**AMPTOWN LICHTTECHNIK GmbH**  
Wandsbeker Str. 26, 22179 Hamburg  
Tel: (49) 40-64600440  
Fax: (49) 40-64600445

**VARI\*LITE®  
VARI-LITE GERMANY**  
Tel: 49 221 595 3080 Fax: 49 221 595 4335

**FLASH ART**

- ▶ STAGE PYROTECHNICS
- ▶ OUTDOOR FIREWORKS
- ▶ SPECIAL EFFECTS
- ▶ TOUR SERVICE
- ▶ TRADE
- ▶ ENGINEERING

**FLASH ART® GMBH**  
TEL: +49(0) 521-92611-0  
FAX: +49(0) 521-92611-21  
Internet: <http://www.flashart.com>

**LMP** GILDESTASSE 55  
LICHTTECHNIK 49477 IBBENBUREN  
TEL: (49)5451-59 00 20  
FAX.: (49)5451-59 00 59

**TOUR SERVICE LICHTDESIGN**  
Hanse Str. 9,  
33689 Bielefeld  
Tel: 0 5205 22 800  
Fax: 0 5205 22 889

Concert, stage, TV and industrial lighting  
Design and Production Services  
Representative of PanCommand systems

**OPTIKINETICS**  
EFFECTS LIGHTING EQUIPMENT AND STRUCTURAL SYSTEMS™  
**K2 EFFECTS PROJECTOR Trilite™**  
Tel: (0221) 9532340 Fax: (0221) 95323519

**Controlite**  
PML & WashLight

Amptown Lichttechnik GmbH - Hamburg  
Tel: 40-64600440 Fax: 40-64600445

## HONG KONG

**Controlite**  
PML & WashLight

The Creator Ltd - Hong Kong  
Tel: 852-26936238 Fax: 852-26064189

## ITALY

**OPTIKINETICS**  
EFFECTS LIGHTING EQUIPMENT AND STRUCTURAL SYSTEMS™  
**K2 EFFECTS PROJECTOR Trilite™**  
Tel: (031) 773539 Fax: (031) 773798

## JAPAN

**Controlite**  
PML & WashLight

Technical Supply Japan Ltd.  
Tel: 03-37917501 Fax: 03-37917656

## KOREA

**Controlite**  
PML & WashLight

Digitronics Inc - Seoul  
Tel: 02-3141-4576 Fax: 02-3141-5377

## NETHERLANDS

**OPTIKINETICS**  
EFFECTS LIGHTING EQUIPMENT AND STRUCTURAL SYSTEMS™  
**K2 EFFECTS PROJECTOR Trilite™**  
Tel: (020) 6332307 Fax: (020) 6332044

**Flashlight**  
RENTAL

**SALES**

Flashlight Sales by

Postbus 9280  
3506 GG Utrecht  
Tel 030 - 2444842  
Fax 030 - 2447606

Flashlight Rental by

Postbus 9280  
3506 GG Utrecht Holland  
Tel 030 - 2447227  
Fax 030 - 2447680

## JANSEN & JANSEN



- lighting
- sound
- rigging

Isolatorweg 36, 1014 AS  
Amsterdam-Holland  
Tel: (31) 20 6 878 600  
Fax: (31) 20 6 828 326

## SPAIN

**Controlite**  
PML & WashLight

Illuminaciones Triac S.L. Madrid 28032  
Tel: 1-7763785 Fax: 1-8704027

## VARI\*LITE®

**VLPS MADRID**

Tel: (34) 91 616 6422 Fax: (34) 91 616 6425

## SWEDEN

**prisma**  
LIGHT RENTAL

Subrental all over Europe  
Tel +46-40-23 64 00 Fax +46-40-23 64 30  
[www.prisma-ljus.se](http://www.prisma-ljus.se) [prisma@prisma-ljus.se](mailto:prisma@prisma-ljus.se)

**spectra**  
LIGHT RENTAL

Tel +46-8-669 20 20 Fax +46-8-669 30 60  
[www.spectra-ljus.se](http://www.spectra-ljus.se) [spectra@spectra-ljus.se](mailto:spectra@spectra-ljus.se)

**chroma**  
LIGHT RENTAL

Tel +46-31-700 12 50 Fax +46-31-700 12 60  
[www.chroma-ljus.se](http://www.chroma-ljus.se) [chroma@chroma-ljus.se](mailto:chroma@chroma-ljus.se)

## VARI\*LITE®

**VLPS STOCKHOLM**

Tel: 00 46 8 726 8540  
Fax: 00 46 8 726 1885

## SWITZERLAND

**POWER LIGHT BAG**

Fabrikmattenweg 8, CH-4144  
Arlesheim/Basel

Tel: +41 (0) 61 706 94 49 Fax: +41 (0) 61 706 94 40

Equipment rental and services. State-of-the-art  
lighting equipment for TV, stage and concert  
productions, exhibitions and product launches  
throughout Europe: Xenon Troupers, Panis, Avo,  
Celco, Thomas, Verlinde, Strand, CCT,  
Sky Trackers and searchlights  
At the heart of Europe!

## USA

**TMB ASSOCIATES**

PRODUCTION SUPPLIES & SERVICES

2102 W. Kenmere Ave.  
Burbank, California 91504  
Tel: (818) 842-9652  
Fax: (818) 842-1064  
E-mail: [tmb-info@tmb.com](mailto:tmb-info@tmb.com)

**TOMCAT**

Staging, Lighting and Support Systems  
Serving your tour and fabrication  
needs in the USA

Tel: (915) 694 7070  
Fax: (915) 689 3805

**BML Stage Lighting Co., Inc.**

Trussing • Ground Support • Rigging  
Intelligent Lighting • Sales • Rentals • Service  
Special FIX • Transformers • Touring Systems

10 Johnson Dr. Raritan, NJ08869  
Ph (908) 253-0888  
Fax: (908) 253-9530  
[www.bmlinc.com](http://www.bmlinc.com)

**OPTIKINETICS**

EFFECTS LIGHTING EQUIPMENT AND STRUCTURAL SYSTEMS™

**K2 EFFECTS PROJECTOR Trilite™**

Free Tel: 800-575-6784 Free Fax: 800-678-4575

**BML Productions Inc.**

Staging • Rolling Risers • Soft Goods & Tabs  
Barricade • Bicycle Barrier • Metal Detectors

10 Johnson Dr. Raritan, NJ08869  
Ph (908) 253-0888  
Fax: (908) 253-9530  
[www.bmlinc.com](http://www.bmlinc.com)



**STRONG INTERNATIONAL, INC.**

FOR THE WORLD'S BEST FOLLOWSPOTS

4050 McKinley Street, Omaha, Nebraska 68112  
Tel: 402-453 4444 Fax: 402-453 7238

**THE COLORAM**

**Wybron Inc**

The ones the pros use.

And use. And use.

TEL: 719-548 9774

FAX: 719-548 0432

**MDI**

Motion Development  
Industries

Tel: 707 462 5031 Fax: 707 462 5006

## UNITED KINGDOM

**OPTIKINETICS**

EFFECTS LIGHTING EQUIPMENT AND STRUCTURAL SYSTEMS™

**K2 EFFECTS PROJECTOR Trilite™**

Tel: (01582) 411413 Fax: (01582) 400613

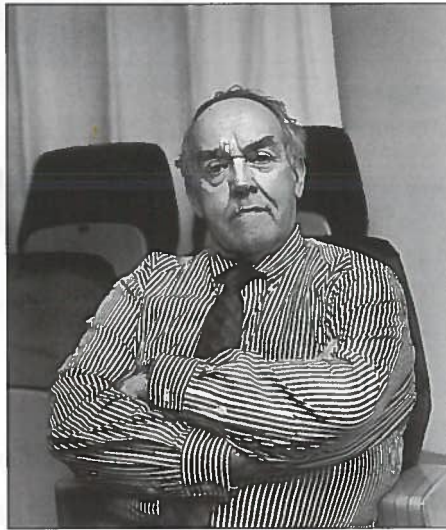
### Steve Moles talks to the founder of Artec Consultants, Russell Johnson

Russell Johnson, founder of New York-based Artec Consultants, is considered to be something of a messiah by many musicians. The man whose successes include venues such as the Eugene McDermott Concert Hall in Dallas and the Birmingham Symphony Hall in the UK has achieved an enormous respect.

As a young man, he worked in amateur theatre, designing and building scenery. "By the time I left school," he says, "I'd fallen in love with theatre, building, opera, and music." Johnson's illustrious career has continued to embrace all these 'loves': not only is he a renowned acoustician, he is equally celebrated in the world of theatre design.

During the war he served as a radio operator in the Philippines. When the war ended, while still in the Philippines, Johnson remembers a concentration camp survivor who put together an orchestra. "They were right by the tent where I was billeted. That was my first full symphony." There's no doubting the poignancy of these recollections. The long pause at the end conveyed mixed feelings - both acute melancholy at the depravity of mankind, and great joy at his ability to rise out of something so awful and produce one of the most universally understood expressions of life - music. I've spoken with many of the great and good over my lifetime - politicians, captains of industry, more rock stars than you could shake a stick at - yet Mr Johnson had the hairs on the back of my neck standing to attention.

After the war he began researching the history of opera and concert halls, but it was to be several years before he began to fully engage in the process of acoustics: "I really got started in '54, when I became a full-time theatre planning consultant." These days Johnson avails himself of all the technology you'd expect: "We use maths, and software," he said, but in a refreshingly Luddite admission pointed to what we all secretly know in our hearts, "but they're just checking tools. The important decisions are based on experience."



And he's been building that experience since he began. However, his acoustic expertise received a revelatory acceleration barely two years into his new métier. "By about 57/58, after I'd worked with many different conductors and musicians, I realised they (the conductors and orchestras) preferred a tremendous amount of reverb for some compositions, for others only a modest amount, or none at all. 'They're not looking for one room,' I said to myself, they're looking for two completely different rooms, one big and open and reverberant like a Cathedral, the other enclosed with a low ceiling and plenty of sound absorbent material." And in that slow, deliberate way of his, he drew himself to the logical question: how could it be done in one venue?

His first attempts involved double layers of heavy velour curtains brought out on motorised tracks. "A typical hall might have a delay around 2.1 to 2.3 seconds especially around the mid frequencies. This was unacceptable for more contemporary works, so we'd push the button and out they'd come. What we quickly

discovered is that you've got to have 75-85% of the walls covered to make it work."

Fortunately for Johnson, and indeed for musicians and concert-goers everywhere, his was a restless heart, always looking for newer and better ways. He then started to experiment with stage shape and configuration: "We put some sound-reflecting towers on castors out by the proscenium, and took all the soft things out of the stage house. We found that conductors and musicians quickly discovered how to make adjustments by moving the towers around." A feature that at the time made halls in Regina, Colorado Springs, and particularly the Krouse Hinds concert theatre in Syracuse, renowned for their acoustics.

But whereas theatrical stages such as those mentioned above, have that 'stage house' space, concert halls do not. The logical progression was to find a way to create that space. "The first one to really work well was the Meyerson Concert Hall," the world-famous EM Pei designed home of the Dallas Symphony. "There we've placed a reverb chamber up in the ceiling. It was incorporated into the hall in '81 or '82, although we didn't get to find out how it worked until the hall opened in 1989."

Like that other great American scientist and communicator Richard Feynman, Johnson is always able to simplify his working rationale so that even the most unknowledgeable can fully engage with what it is he's trying to do. "In effect what you're doing is building two halls in one. When all of the panels to the chamber are shut you have an inner, primary hall. When you open them it instantly becomes an open, wider room." See? Simple.

Since opening the Meyerson, Johnson has repeated the 'two halls' effect to great success - UK readers can judge for themselves by a visit to the relatively new Birmingham Symphony - but he's still of a mind to experiment, and for a gentleman of shall we say, mature years, he remains frighteningly experimental.

#### ADVERTISERS' INDEX

AC Lighting	5/27/52/70	Cirro-Lite	46	JEM	68	Pani	40	Spider	62
Adastra	85	CITC	71	Lane Lighting	129	Par Opti	44	Star Hire	69
ADB	137	City Theatrical	50	Laser Innovations	128	PCM	73	Star Rats	71
AJS	38	Clay Paky	51/90/91	LDI98	98	Peavey	61	Starlite Systems	28
AKG	20	Cloud	12	Le Maitre	IBC	Philips Lighting	41	Strand Lighting	24-29
Aliscaff	11/65	Columbus McKinnon	108	Lee Filters	6	PLASA Show	10	Strong/Xenotech	63
Altman	86	Compulite	22/72	Leisuretec	88	Principal	73	Syncrolite	134
Ampetronic	132	Denon	124	Le Mark	82	Procon	OBC	Tannoy	84
Arbiter Group	13	DHA Lighting	75	LGH Rigging Services	26	Production Arts	97	Technotronics	16/74
Artistic Licence	8	EAW	57	Light Opera	114	Prolyte	133	TMB	60
Audio-Technica	42	Electrosonic	103	LightProcessor	64	Pulsar	83	Tomcat	55
Autograph	49	ETC	19	Lighting Technology	11/105	PW Enterprises	73	Total Fabrications	65/81
Avolites	58/59	ETC UK	9/53/77/115	Link	67	RB Lighting	76	Tranlec	116
Bandit Lites	43	ERA	21	Litestructures	120	RCF	IFC	Triflite	76
Batmink	4	FAL	80	MA Lighting	32	Recruitment	139	Triple E	14
BCS India	130	Flying Pig Systems	76	Maris	35	Robert Juliat	30/56	Universal FO	81
Beyerdynamic	18	Forte	82	Martin Audio	66	Selecon	38	Vari-Lite	7
Cadstock	69	Hardware	136	Martin Professional	3	Sennheiser	39	White Light	109
CCT Lighting	36	Harkness	87	MTFX	65	SGM	48	Wembley	118
Celco	33/101	High End Systems	15/17	Multilite	78	Slick Systems	45/87	Wilkes	55
Chainmaster	92	Howard Eaton	128	Music Co	89	Sony UK	23	Wybron	47
CIE Audio	37	Jands	123	Navigator	122	Soundcraft	34	WYSIWYG	107
				Nexo	119	Sound Dept	31	Zero 88	62/96
				Northern Light	44	Sound Partner	113		

# 100% pure haze and no messing!



The Neutron Star Hazer from Le Maitre produces 100% haze with no waste and without the messy oil residue associated with cracked oil hazers. Yet thanks to its world patent pending technology, it's just a quarter of the price. And it is an impressive 95% more efficient than its water based competition. What's more, with 100 hours' operation from just 2.5 litres of fuel, it's more economical to run.

The Neutron Star Hazer from Le Maitre. Designed purely and simply to produce haze. And nothing else.

**SEE US AT PLASA  
STAND F18**

Great Britain: 6 Forval Close, Wandle Way, Mitcham, Surrey CR4 4NE

Tel: +44 (0)181 646 2222 Fax: +44 (0) 181 646 1955

E-mail: ricklemaitre@compuserve.com

Canada: 546 Sovereign Road, London On. N5V 4K5

Tel: 001 519 659 7972 Fax: 001 519 659 7713

USA: 2528 Beach Road, Port Huron, Michigan 48060

http://ourworld.compuserve.com www.lemaitrefx.com



## Neutron \*S\*T\*A\*R\* Hazer

PURELY AND SIMPLY THE BEST

# Equipment in our Hire Stock

- Fresnels**
- 500W, Art1 300 Plus
  - 500W, Desist Matis
  - 500W, Strand Mizer
  - 500W, Strand Minim F
  - 650W, Strand Quartet F
  - 650W, Strand Quartet F
  - 1KW, Desist Leonardo PO.
  - 1KW, Art1 Stradio 1000
  - 1KW, Strand Polaris 260
  - 1KW, Strand Polaris 660
  - 1KW, Strand Polaris Mk1
  - 1KW, Art1 SH-105 PO.
  - 1.2 kW, Strand Cantata F
  - 2kW, Desist Leonor PO.
  - 2kW, Art1 Stradio 2000
  - 2kW, Strand Cadenza F
  - 2kW, Strand Castor
  - 2kW, ADB
  - 2kW, Strand Alto F
  - 5kW, Desist Leo Spot
  - 5kW, Strand Pro
  - 10kW, Desist Leonardo PO.
- PC's**
- 650W, Strand Quartet PC
  - 1 kW, Strand Cantata PC
  - 2 kW, Strand Cadenza PC
  - 2 kW, ADB C-2035
  - 2 kW, Strand Alto PC
- Profiles**
- ETC SourceIV, 9, 575W
  - ETC SourceIV, 10, 575W
  - ETC SourceIV, 19, 575W
  - ETC SourceIV, 26, 575W
  - ETC SourceIV, 36, 575W
  - ETC SourceIV, 50, 575W
  - Prelude 16-30, 650W
  - Prelude 28-40, 650W
  - Cantata 11-26, 1.2kW
  - Cantata 13-32, 1.2kW
  - Cantata 16-44, 1.2kW
  - HPZ-112 12-28, 1.2kW
  - HPZ-115 15-38, 1.2kW
  - ADB DMT05, 9-20, 1.2kW
  - ADB DS105 15-31, 1.2kW
  - ADB DW105 15-38, 1.2kW
  - Cadanza 12-22, 2kW
  - Cadanza 19-32, 2kW
  - Alto 8-16, 2kW
  - Alto 14-32, 2kW
  - Alto 20-38, 2kW
  - HPs-212 12, 2kW
  - HPZ-215 15-40, 2kW
  - ADB DMZ04, 10-20, 2kW
  - ADB DMZ05, 10-22, 2kW
  - B DSZ05, 13-36, 2kW
  - ADB DWZ05, 30-64, 2kW
  - Gobo-Effect-Rotators
- Floodlights**
- 500W asym, Strand Coda
  - 3x500W asym, Strand Coda
  - 1KW sym, Strand Nocturne
  - 1KW asym, Desist Duccio
  - 1KW asym, Strand Coda
  - 1KW sym, Strand Nocturne
  - 1KW asym, Strand Iris 1
  - 1KW sym, Kobold FL 1000
  - 1KW asym, Strand Iadi
  - 4x1KW asym, Strand Iris 4
  - 5kW sym, Reich + Vogel
  - 2x1 25kW Softlight, Desist
  - 2x1 25kW Softlight, Strand
  - 4x1 25kW Softlight, Strand
- PAR lanterns**
- PAR-ETC Source 4, 575W
  - PAR-16 Solo-5 Spot
  - PAR-36 Solo-Spot, ACL
  - PAR-36 4-Lamp-Bar, ACL
  - PAR-56 Solo-5 Spot
  - PAR-56 SN-Solo
  - PAR-56 4-Lamp-Bar
  - PAR-64 Floor-Spot, CP601611621R/V
  - PAR-64 Solo-Spot, CP601611621R/V
  - PAR-64 4-Lamp-Bar, CP601611621R/V
  - PAR-64 4-Lamp-Bar, CP601611621R/V
- Artisan 2, 200W Art1**
- Artisan 5, 575W Art1
  - Artisan 12, 1200W Art1
  - Artisan 20, 2000W Art1
  - Artisan 25, 2500W Art1
  - Artisan 30, 3000W Art1
  - Artisan 40, 4000W Art1
  - Artisan 50, 5000W Art1
  - Artisan 60, 6000W Art1
  - Artisan 70, 7000W Art1
  - Artisan 80, 8000W Art1
  - Artisan 90, 9000W Art1
  - Artisan 100, 10000W Art1
  - Artisan 120, 12000W Art1
  - Artisan 150, 15000W Art1
  - Artisan 200, 20000W Art1
  - Artisan 250, 25000W Art1
  - Artisan 300, 30000W Art1
  - Artisan 400, 40000W Art1
  - Artisan 500, 50000W Art1
  - Artisan 600, 60000W Art1
  - Artisan 700, 70000W Art1
  - Artisan 800, 80000W Art1
  - Artisan 900, 90000W Art1
  - Artisan 1000, 100000W Art1
- Superscan 1200**
- Artisan 2, 200W Art1
  - Artisan 5, 575W Art1
  - Artisan 12, 1200W Art1
  - Artisan 20, 2000W Art1
  - Artisan 25, 2500W Art1
  - Artisan 30, 3000W Art1
  - Artisan 40, 4000W Art1
  - Artisan 50, 5000W Art1
  - Artisan 60, 6000W Art1
  - Artisan 70, 7000W Art1
  - Artisan 80, 8000W Art1
  - Artisan 90, 9000W Art1
  - Artisan 100, 10000W Art1
  - Artisan 120, 12000W Art1
  - Artisan 150, 15000W Art1
  - Artisan 200, 20000W Art1
  - Artisan 250, 25000W Art1
  - Artisan 300, 30000W Art1
  - Artisan 400, 40000W Art1
  - Artisan 500, 50000W Art1
  - Artisan 600, 60000W Art1
  - Artisan 700, 70000W Art1
  - Artisan 800, 80000W Art1
  - Artisan 900, 90000W Art1
  - Artisan 1000, 100000W Art1
- Colour Changer**
- 4-Waytron
  - 6-75 Chroma-Q
  - 8-Rainbow
  - 15-Rainbow
  - 8-Lite, Rainbow
  - Colour Changer to 9 Lite-Certain
  - RobotColor Pro 400, Martin
- Smoke machines**
- Safe SFC-10
  - Smoke Factory Enterprise TC2
  - Lightwave F100, DMX
  - Smoke Factory Fan Fogger 3kW
  - Smoke Factory Fan Fogger 9kW
  - Smoke Factory Water-Cracker
  - JEM Hydrosonic 2000
  - DE50 Craak-Oil
  - Atmosphere CO2
  - Dry-Ice, Londoner
  - Dry-Ice, Satek
- Lighting Systems**
- Lighting System 1, 24V
  - Lighting System 2, 24V
  - Lighting System 3, 24V
  - Lighting System 4, 24V
  - Lighting System 5, 24V
  - Lighting System 6, 24V
  - Lighting System 7, 24V
  - Lighting System 8, 24V
  - Lighting System 9, 24V
  - Lighting System 10, 24V
  - Lighting System 11, 24V
  - Lighting System 12, 24V
  - Lighting System 13, 24V
  - Lighting System 14, 24V
  - Lighting System 15, 24V
  - Lighting System 16, 24V
  - Lighting System 17, 24V
  - Lighting System 18, 24V
  - Lighting System 19, 24V
  - Lighting System 20, 24V
  - Lighting System 21, 24V
  - Lighting System 22, 24V
  - Lighting System 23, 24V
  - Lighting System 24, 24V
  - Lighting System 25, 24V
  - Lighting System 26, 24V
  - Lighting System 27, 24V
  - Lighting System 28, 24V
  - Lighting System 29, 24V
  - Lighting System 30, 24V
  - Lighting System 31, 24V
  - Lighting System 32, 24V
  - Lighting System 33, 24V
  - Lighting System 34, 24V
  - Lighting System 35, 24V
  - Lighting System 36, 24V
  - Lighting System 37, 24V
  - Lighting System 38, 24V
  - Lighting System 39, 24V
  - Lighting System 40, 24V
  - Lighting System 41, 24V
  - Lighting System 42, 24V
  - Lighting System 43, 24V
  - Lighting System 44, 24V
  - Lighting System 45, 24V
  - Lighting System 46, 24V
  - Lighting System 47, 24V
  - Lighting System 48, 24V
  - Lighting System 49, 24V
  - Lighting System 50, 24V
  - Lighting System 51, 24V
  - Lighting System 52, 24V
  - Lighting System 53, 24V
  - Lighting System 54, 24V
  - Lighting System 55, 24V
  - Lighting System 56, 24V
  - Lighting System 57, 24V
  - Lighting System 58, 24V
  - Lighting System 59, 24V
  - Lighting System 60, 24V
  - Lighting System 61, 24V
  - Lighting System 62, 24V
  - Lighting System 63, 24V
  - Lighting System 64, 24V
  - Lighting System 65, 24V
  - Lighting System 66, 24V
  - Lighting System 67, 24V
  - Lighting System 68, 24V
  - Lighting System 69, 24V
  - Lighting System 70, 24V
  - Lighting System 71, 24V
  - Lighting System 72, 24V
  - Lighting System 73, 24V
  - Lighting System 74, 24V
  - Lighting System 75, 24V
  - Lighting System 76, 24V
  - Lighting System 77, 24V
  - Lighting System 78, 24V
  - Lighting System 79, 24V
  - Lighting System 80, 24V
  - Lighting System 81, 24V
  - Lighting System 82, 24V
  - Lighting System 83, 24V
  - Lighting System 84, 24V
  - Lighting System 85, 24V
  - Lighting System 86, 24V
  - Lighting System 87, 24V
  - Lighting System 88, 24V
  - Lighting System 89, 24V
  - Lighting System 90, 24V
  - Lighting System 91, 24V
  - Lighting System 92, 24V
  - Lighting System 93, 24V
  - Lighting System 94, 24V
  - Lighting System 95, 24V
  - Lighting System 96, 24V
  - Lighting System 97, 24V
  - Lighting System 98, 24V
  - Lighting System 99, 24V
  - Lighting System 100, 24V

# Call us for a quote

Full range of lanterns, control, distribution and rigging. Large stock of automated equipment. Dry hires or complete systems. Serving all the industries needs in Europe and beyond.  
 Procon, Germany. Ask for our free Catalogue. Fon ++49/40/6 70 88 60. Fax ++49/40/6 70 61 59. http://www.procon-online.de

