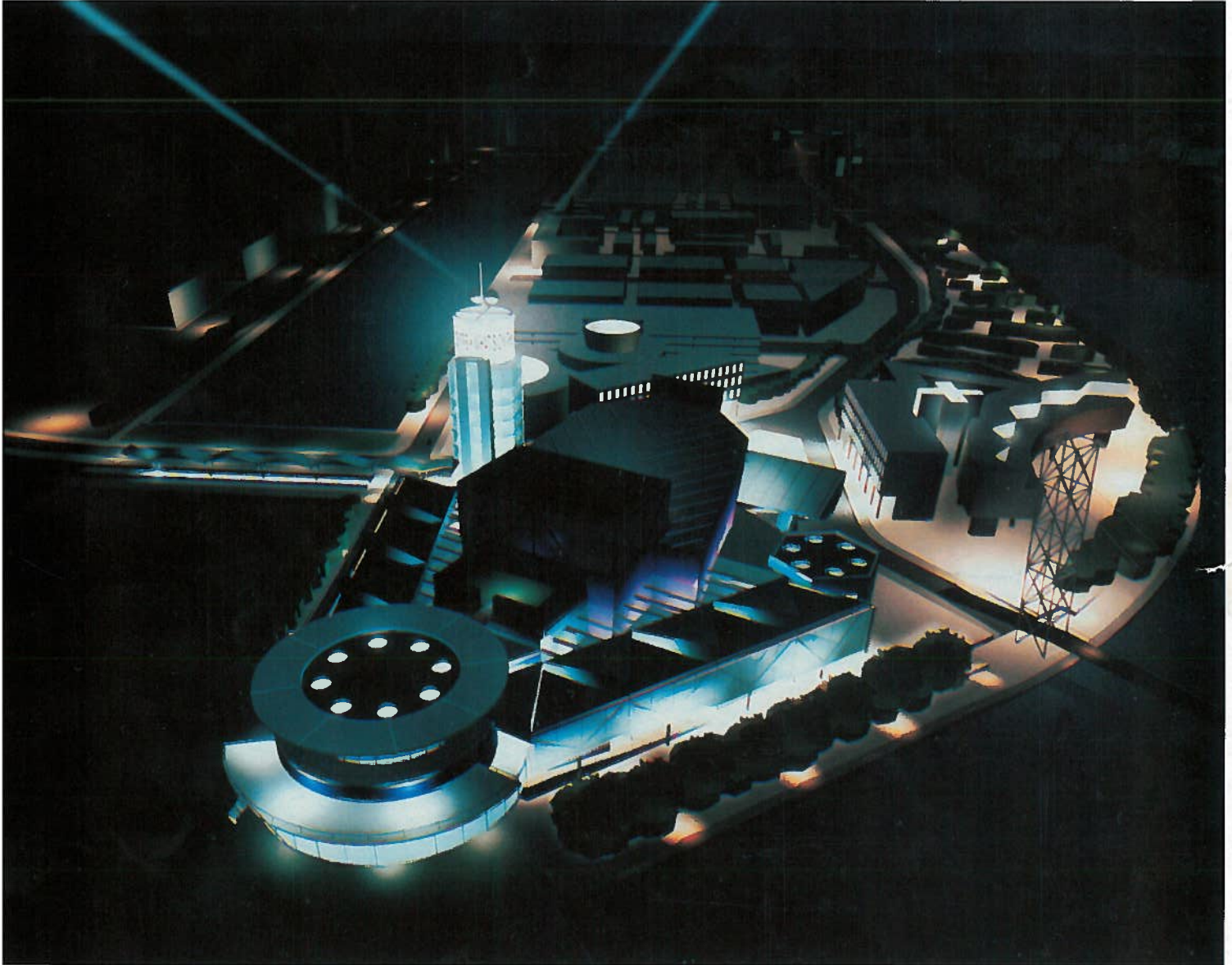


LIGHTING+SOUND

International



T FOR LAUNCH - The Lowry Centre in Salford is a major project which it is hoped will be part-funded by the Millennium Commission. The project has been in the planning for over three years and will cost an estimated £75million. Architects for the site are Michael Wilford and Partners with Theatre Projects Consultants taking on the role of theatre consultants. This is the first arts centre to fully integrate the visual and performing arts with new emerging technologies. Salford owns the largest collection of paintings by L. S. Lowry - over 340, and the centre will provide gallery spaces to showcase over two thirds of these. The centre will also include two performance spaces, a 1650 seat lyric theatre a 400 seat flexible space, and will also provide a new home for Britain's National Virtual Reality Centre. *More details to follow next month.*

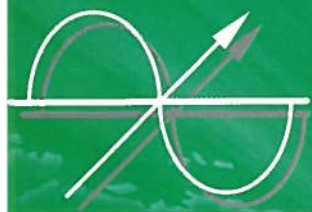
- Cerebrum Lighting: L+SI Special Anniversary Feature
- Themed Entertainment at Porto Europa, Japan
- Trade Show Reviews: Frankfurt Music Fair and SIB Rimini
- Robert Halliday sees the Broadway-bound Hamlet from the Almeida Theatre
- Wired for sound: Queensryche in performance
- New solutions for Industry Training

PLASA

APRIL 1995

EURODIM 2

The Ultimate in Digital Dimmer Technology



Congratulations and Thanks to :

-  BBC London, Studios TC6 & TC8
-  RTE TV, Dublin
-  VTM, VTS, RTL-TVI, RTBF Belgian TV
-  ERTU National TV, Cairo
-  Finnish Broadcasting Co.
-  TF1, France 2
-  Saarländischer Rundfunk, WDR-Köln
-  RAI, Italian TV
-  RTM TV, Kuala Lumpur
-  NRK, Norwegian TV
-  Seoul Arts Center
-  La Maestranza & Teatro Central, Sevilla
-  ARTI TV & M.B.I. TV, Istanbul
- ... and many more

The ADB "Diagnostic" system provides, via a PC at the lighting control position, a complete overview of all dimmer parameters. Thus allowing the user to take accurate corrective action as required.

Double control electronics provide instant back-up via a simple switch at the lighting control position.

180 or 225 kW cabinets
2.5 kW, 5 kW and 10 kW plug-in modules
TV standard filtering (TDF - BBC)

EURODIM 2 meets all current international safety standards.

ADB - Your Partner for Light

Belgium	Tel : 32 - 2 - 722.17.11	Fax : 32 - 2 - 722.17.64
France	Tel : 1 - 41.17.48.50	Fax : 1 - 42.53.54.76
Germany	Tel : 06108 - 66204	Fax : 06108 - 66205
Great Britain	Tel : 0932 - 75.28.85	Fax : 0932 - 75.28.83

ADB
A Siemens Company

WITH 48 NOISE GATES, 48 COMPRESSORS, 48 MODULATORS, 48 AUTOPANNERS, AND FDB™ EQUALISATION, SEQUEL II IS...

THE LIVE ONE



Acclaimed Fdb™ Equaliser

As if having superb equalisation, comprehensive mute grouping and outstanding audio isn't enough, the Soundtracs Sequel II live sound console gives you that little bit extra.

If you can really call a fully programmable, on-board dynamics processor a 'little bit'.

After all, what other console can offer a package that includes gating, expansion, compression, limiting, modulation & triggered effects, - fully assignable and recallable on every channel.



VCA mute grouping

All of the highest quality.

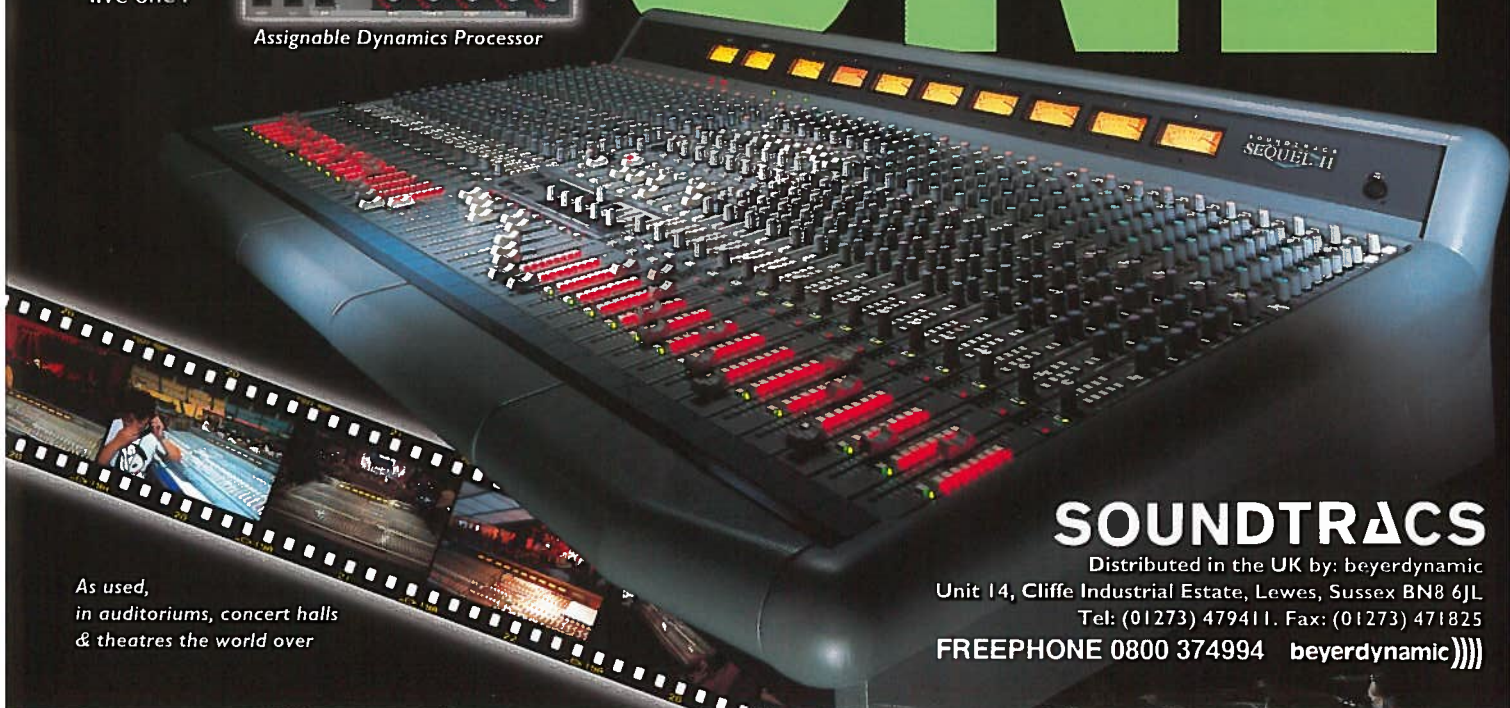
Gates with an attack time of just 5 microseconds. Compressors with variable control over threshold, attack, release, ratio, knee and stereo linking. Modulation that includes level, pan and channel triggering.

It's just another example of Soundtracs' continued strive toward giving live sound engineers the tools they need to complete their job.

Little wonder they call Soundtracs' Sequel II, 'the live one'.



Assignable Dynamics Processor



As used,
in auditoriums, concert halls
& theatres the world over

SOUNDTRACS

Distributed in the UK by: beyerdynamic
Unit 14, Cliffe Industrial Estate, Lewes, Sussex BN8 6JL
Tel: (01273) 479411. Fax: (01273) 471825
FREEPHONE 0800 374994 beyerdynamic))))



High Performance



Build Quality



Easy Maintenance



User Friendly



Pretty Pink Writing



SX Appeal

SX Pack

Robert Juliat SX profiles 1000w/1200w - 2000w tungsten and 1200w - 2500w HMI/MSR

Robert Juliat Tel: (33) 1 42 43 35 35 Fax: (33) 1 42 43 08 05 Decoupe Ltd Tel: (44) 181 505 8522 Fax: (44) 181 504 4755

LIGHTING+ SOUND *International*

APRIL 1995

VOLUME 10, ISSUE 4

6 News In L+SI

22 On Tour



Steve Moles catches up with The Doobie Brothers, Foreigner and Cyndi Lauper

24 The Cerebrum Collection

An L+SI Special Feature on Cerebrum Lighting's 25th Anniversary

40 Catalogue Collection

44 Changing Face of Training

Graham Walne outlines the high-tech solution for a high tech industry

47 Messe Mit Pro
Light & Sound

John Offord reports from the new-style Frankfurt Music Fair

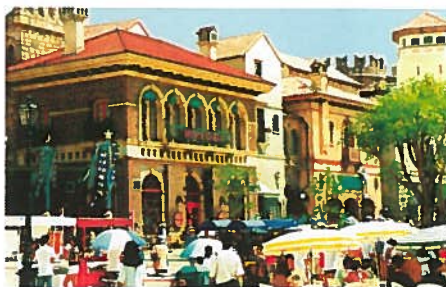
59 Almeida Hamlet

Robert Halliday looks at the Almeida's Hamlet, showing at the Hackney Empire

63 On the Air Tonight

Mark Cunningham scrutinises a wireless and wedge-free stage for Queensryche

67 Themed Entertainment



Charlie Kirby talks to the technical team behind Japan's Porto Europa

70 SIB and the Taj Mahal

Tony Gottelier and Lee Baldock go sightseeing in Italy and report on what's new from Rimini

77 Points of Law

80 Second Take

TV lighting director John Watt offers his view from beside the camera

81 Equipment News

82 Asleep in the Stalls

83 Directory of Suppliers
and Services

88 International Directory

90 Viewpoint

James Iyengar believes it's 'Time for the Industry to Act on Safety'

A full list of PLASA Members appears in the January, March, May, July, September and November issues of *Lighting+Sound International*

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

LIGHTING+ SOUND *International*

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

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

Published from the PLASA Office: 7 Highlight House, St Leonards Road, Eastbourne, East Sussex BN21 3UH England
Telephone: (01323) 642639 Fax: (01323) 646905

No part of this magazine may be reproduced without the permission of the Editor

The magazine is available on annual subscription

UK £45.00 Europe and rest of world £60.00 Airmail £85.00. Single copy price £3.50 plus postage

Editorial Advisors: Peter Brooks, Wyatt Enever, Mike Gerrish, Derek Gilbert, David Hopkins, Matthew Griffiths, John Lethbridge, Ian de la Vingne, Iain Price-Smith, Neil Rice, Jackie Staines, Mike Wood.

Lighting + Sound International is published monthly for \$90.00 per year by The Professional Lighting and Sound Association, 7 Highlight House, St Leonards Road, Eastbourne, East Sussex BN21 3UH. Second class postage paid at Rahway, N.J. Postmaster: Send USA address corrections to Lighting & Sound International, c/o Mercury Airfreight International Inc, 2323 Randolph



VARI-LITE[®] automated lighting equipment is made in the USA.
Protected by U.S. Pat. Nos. 4,095,199; 4,392,187; 4,602,321; 4,688,161; 4,701,833; 4,709,311; 4,779,176; 4,800,474; 4,972,306; 4,980,806; 5,010,459; 5,031,078; 5,073,847; 5,186,536; 5,209,560; 5,278,742; 5,282,121; 5,307,295; 5,329,431. U.S. Design Patent No. D347,133; United Kingdom Design Reg. No. 2029499; 2033108.
German Utility Model Reg. No. G9312884/3 and G9314158/5.
All other worldwide patents granted or pending.

EUROPE'S LEADING LIGHTS

The Vari-Lite European Network supplies the world's most advanced systems for this continent's greatest performances.

To find out more about Vari-Lite[®] automated lighting products, contact your nearest office.

UK
Tel: 44-181-575 6666

FRANCE
Tel: 33-1-41 14 01 00

SPAIN
Tel: 34-1-464 1092

GERMANY
Tel: 49-221-58 20 88

SCANDINAVIA
Tel: 46-8-654 18 55

BENELUX
Tel: 32-16-60 7648

AUSTRIA
Tel: 43-1-60902

Arri/ETC Changes Preserve Continuity

In a joint announcement from Electronic Theatre Controls, Inc and Arri (GB) Ltd, sweeping changes in the international distribution of the two companies' lighting control and dimming products were made public for the first time.

ETC, based in Madison, Wisconsin, is now the largest manufacturer of entertainment lighting equipment in the United States, and has enjoyed a long-standing distribution agreement for Europe and most of Asia with Arri (GB) Ltd. Arri (GB) has successfully marketed ETC lighting consoles in these territories, under its own Arri Imagine, Finesse, Focus and Mirage brand names. This arrangement will be replaced by mutual agreement as of 1st July with a new international distribution structure.

Opening its doors for business on July 3rd, London-based Electronic Theatre Controls Ltd will be a European distribution and service centre for all ETC and Arri (GB) lighting control products. From these the full line of ETC products will be available throughout Europe. ETC will continue to offer the Arri-designed SmartRack and SmartPack dimmers, with new product launches planned for the second half of the year.

ETC's London operation will be headed by current Arri Lighting Control product manager Adam Bennette. Asian operations in Hong Kong are in the experienced hands of Jimmy Cheung, who joins ETC Asia Ltd as sales director, after many years of successfully selling lighting packages to the Asian TV and theatre markets.

Commenting on ETC's relationship with Arri, Fred Foster, president of Electronic Theatre Controls Inc told L+S: "In 1986 when we started working together, ETC and Arri made a perfect fit, and the deal worked well for both parties. It was the co-operation between the two companies that led to the unique success of the Expression/Imagine console products world wide, and we want to assure all Arri's customers that we shall



The official announcement is made during the ABTT Trade Show in London. From left to right are Adrian Hicks and Michael Goldberg of M&M, Bob Vanden Burgh and Dick Titus of ETC and Adam Bennette of Arri GB.

continue to support every lighting control and dimming system sold by Arri since 1986, whether of Arri or ETC origin."

Like ETC, Arri has always aimed for high levels of customer and technical service, and has taken care to ensure that existing customers will be well looked after under the new arrangements.

Both ETC and Arri are stressing that there will be continuity of service and customer support. Aside from ETC's guarantee of ongoing service support, both companies are encouraging customers to continue to place orders with Arri (GB) Ltd or distributors right up to the end of June. These orders will be delivered by Arri up to June 30th, and by ETC thereafter.

The M&M Group will be the exclusive distributor of ETC products for the UK and Eire. A new company within the group, M&M Light Solutions, has been set up, and will be headed by Adrian Hicks. The company will provide full sales and technical back-up services to customers, with 24 hour mobile contact for operational and technical assistance.

Rosco/ET Merger



Stan Miller of Rosco (left) with Gordon Pearlman of Entertainment Technology at USITT.

Entertainment Technology, designers and manufacturers of the 'Intelligent Power System' and a range of lighting control products, have merged with Rosco Laboratories, the world's largest manufacturer of expendable products for theatre, film, television and live entertainment. The new company will market products under the name Rosco/Entertainment Technology.

ET was founded in 1983 by Gordon Pearlman and Steve Carlson. Their credits include the design of the first computerised lighting control system on Broadway, first used in 'A Chorus Line'. The company is best known for the IPS, a dimming system for light control in entertainment.

Rosco manufactures and markets a wide range of products, including Roscolux and Cinegel colour filters, three lines of scenic paint and six different fog machines. The company's product range also includes patterns, connectors and scenic materials. They have been in the entertainment business since 1910, and have offices in New York, Hollywood, Toronto, London, Madrid, Lisbon, Sao Paolo and Sydney.

In announcing the merger Gordon Pearlman told L+S: "This joining of forces allows us to market our systems through Rosco's worldwide network of dealers and agents. The product lines are totally compatible and clients will welcome the greater stability and flexibility this merger offers. It will make the introduction of new lighting control boards and other products much more efficient and cost-effective."

Stan Miller, president of Rosco added: "We have long sought a technologically advanced design and manufacturing base for our business. Entertainment Technology brings Rosco some of the best products for our industry. We expect to launch some breathtaking developments in the months and years to come."

High End Unleash Technicolor

Texas-based High End Systems used the Frankfurt Music Fair in early March to unveil their newest product, the Technicolor automated full colour mixing wash luminaire. Technicolor provides variable intensity, colour, positioning and beam angles in a single compact fixture. By the close of March, the luminaire was on show again at the Italian SIB Magis show. A full appraisal of its features is offered in our review of Rimini, beginning on page 70.



ColorExpress™
GELSTRINGS from WYBRON

Acton Business Centre, UNIT G04, School Road, Park Royal, London NW10 6TD
TEL 081-838-2254 • FAX 081-838-2253

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 through the entertainment and leisure industry.

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

WE'RE RIGHT BEHIND YOU!

LWT - MICHAEL HURLE SERVICES - CARLTON TV - TRADESHOWS - CLUBS/MARQUEES

BLOW your mind, not your budget!

CYBERLIGHT® CX

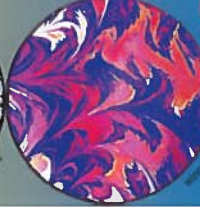


The Cyberlight® CX automated luminaire offers the most powerful features of the award-winning Cyberlight®, but in a value-priced package. Features like LithoPatterns™ high resolution glass gobos—intricately designed patterns available for use only with Cyberlight CX and Cyberlight. The only limit is your imagination—Unleash the power of your mind.



LCD LIGHTING CONTROLLER

Unleash the true power of your Cyberlight system! The LCD Lighting Controller for Cyberlight delivers cost-effective, dedicated control of up to eight Cyberlight CX or Cyberlight luminaires. These fixtures may also be controlled via many other lighting consoles, including all USITT DMX-512 compatible controllers.



Look for Cyberlight luminaires on tour with the Grateful Dead, Prince, Van Halen, Bob Dylan, Queensryche, Megadeth, Brooks & Dunn, The Eagles, Alan Jackson, Little Texas.

Sawyer Brown, Phil Collins, Indigo Girls, Travis Tritt, White Zombie, Kenny Loggins, Lee Greenwood, Jesus Christ Superstar, Reba McEntire, George Strait, and Yumi Matsutoya.

GOBO MANIA

High End



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



Harman Acquisitions Continue Apace

Harman International have recently acquired control of two German companies.

The company has signed an agreement to acquire Becker GmbH of Karisbad, Germany for 400,000 shares of Harman common stock plus cash and debt assumption of approximately \$60 million. Becker's annual sales are approximately \$200 million. The agreement is subject to certain conditions including approval by the Board of Directors of Harman International.

In addition, Harman have agreed terms under which they acquire the remaining 60% stake in D.A.V.I.D. GmbH. The German company will remain an independent operation within the Harman Pro Group and will secure and strengthen the company's skills in computer and audio, and video technology. D.A.V.I.D. expertise will be a great asset in the fast developing digital video market and multimedia projects.

Starlite Microsoft

Lighting equipment and software specialist Starlite Systems Technology Ltd has been given the title of 'Microsoft Solution Provider' by software giants Microsoft.

Awarded the certificate in November last year, Starlite Systems has now received official endorsement for their role in providing customers with expert advice on a wide range of software. Being a Microsoft Solution Provider will give Starlite access to the marketing and technical support available from Microsoft and will allow the company to keep abreast of new developments.

McKenzie Match

McKenzie Acoustics has introduced a new full-colour brochure, which includes the company's range of Studio Professional loudspeaker chassis, tweeters, horns, drivers and adaptors. It also features an optimum enclosure planner to assist matching the size of driver and enclosure.



Finding a New Way

David Rose and Richard Cresswell, both formerly of Midnight Design Ltd and authors of the Catalyst portable appliance testing software, have established a new independent venture to be called Navigator Systems Ltd.

Initially the company will be launching a new style portable appliance testing software package, which will integrate into other forthcoming packages. Navigator Systems will also have the facilities to generate custom-written computer software and networking facilities, and will assist its clients to join the internet by publishing World Wide Web pages.

The company can be reached in London on 0171-700 5000.

Talking Pyro

Le Maitre has announced the dates for a series of one and two day seminars on the safe use of pyrotechnics.

The seminars are designed to promote good practice within the entertainment industry. The first seminars will deal with the identification of devices, recommended safe working distances and safe firing procedure. The programme will also cover legislation, transport, storage and use and procedure.

Other areas featured will include Health and Safety Executive competent authority documentation, packaging, identification of hazard classifications and other codes, disposal of devices, code of practice and import/export licensing. The live demonstrations will be followed by question and answer sessions.

The seminars will be held on May 8th, June 5th, 6th, 12, 13th, 14th, 15th, 26th and 27th at The Seacombe Theatre, Cheam Road, Sutton, Surrey SM1 2ST. For details contact Le Maitre in Mitcham, telephone 0181-646 2222.

Footprints in the Ice

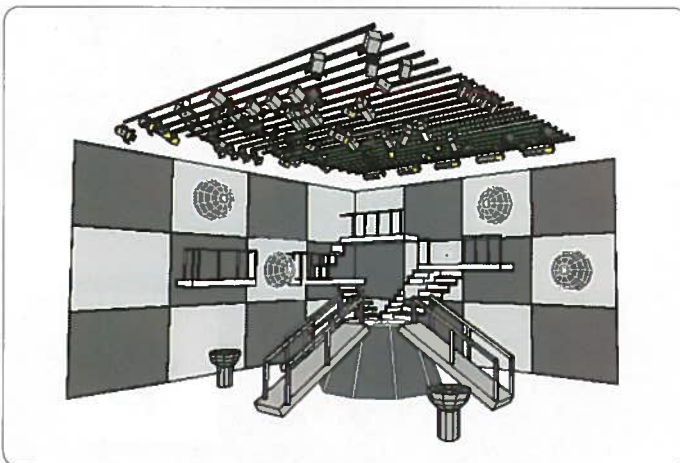
Millbank provided the amplification for the NEC's sound system during the world ice skating championships, last month.

A sound footprinting exercise during the setting up of the main and practice rinks in Birmingham revealed an acoustic cold spot above the centre of the ice.

An American manufacturer, Sonic Systems, provided sphere speakers to place in a cluster format above the two rinks and Millbank supplied the amplifiers.

© STARDRAW 3D

At last, an affordable, fast, user friendly 3D CAD package designed specifically for lighting designers



Stardraw 3D is a powerful, standalone true 3D Computer Aided Design package which runs under Windows 3.1. You can set the camera position and its focal point anywhere in 3D space allowing you to walk onto the stage and look up at your rig. It allows designers to create, visualise and present stage sets and lighting designs. Included is a large library of lighting equipment and trusses, so you can quickly produce highly detailed plots. You can also use the built-in editor to create your own libraries.

30 DAY FREE TRIAL

We will send you a complete copy of Stardraw 3D absolutely free (excluding delivery). If you like it, keep it. Only after 30 days have elapsed will we deduct your credit card. If you are not completely satisfied, send the package back to us within 30 days and you will only be charged for the original shipping cost.

Starlite Systems Technology Ltd

Design, Manufacture and Hire of Automated Lighting Systems.
Calena House, Caxton Street North, London E16 1JL
Tel: (44) 171 511 4400 Fax (44) 171 476 2922

©1994 Starlite Systems Technology Ltd. All rights reserved
©Microsoft Windows is a registered trademark of Microsoft Corporation

Microsoft
SOLUTION PROVIDER

Authorised by Microsoft

£595

excl. VAT



Taking the Lid off the CAN

In the entertainment technology business an increasingly large variety of equipment needs remote control, remote monitoring and/or to communicate with other manufacturer's products. This is relatively easy to achieve for individual manufacturers who can design their own communication systems and thus ignore the need to 'talk' to 'foreign' equipment. There are already, for example, three different lighting manufacturers who use the computer standard 'Ethernet' communication system. Unfortunately, each manufacturer has their own version of this, so cannot talk to any other.



Chairman Allen Mornington-West of Quad (centre), with speakers Philip Nye of DHA (left) and Richard MacLaughlan of the University of Warwick.

The Hammersmith symposium was organised by DHA Lighting and Quad Electroacoustics, in conjunction with PLASA, to establish whether there was any common ground across the various sectors of the entertainment technology business to progress common communications standards.

Richard MacLaughlan of the University of Warwick made a detailed presentation on the automotive industry originated CAN (Controller Area Network) communications system, and Dr Philip Nye of DHA Lighting presented a discussion paper which looked at the common application requirements of our industry.

There then followed an extended discussion of what was really required to address the perceived problems. It was considered that there was probably a need for two types of physical communications networks - high capacity, low speed (e.g. Ethernet) and low capacity, high speed (e.g. the CAN system). If possible, both networks should talk the same high level language.

It was agreed that the current requirement was for several small groups representing the various product sectors to co-ordinate their thinking on application protocols over common networks. The groups would then come together to establish commonality.

The meeting concluded that any results should be put to a wider audience at the PLASA Light & Sound Show in September. **Peter Brooks**

Big Names Meet at the Messe



Our photograph shows amplifier legend Jim Marshall (right) and Clay Paky's Pasquale Quadri together on the Marshall stand at Frankfurt last month (see report on pages 47-56).

The lighting for the Marshall stand had six Golden Scan 3s, a Masterpiece 108, a 36 channel PortaPack and 36 Par 64s.

Strand Catalogue

The Strand Catalogue is now available in the following editions: English, American, Canadian, French, Italian, German and Russian. Details from Strand Lighting in London on 0181-560 3171.

Gradav get on the Right Track

Gradav Theatre Services held an Open Day at the end of March to mark the official opening of their new hire department in Edmonton, north London.

Companies represented included AC Lighting, M&M, ASP Frequency Management, Lighting Technology, Theatre Direct (formerly Ancient Lights), Theatre Projects Lighting, Sennheiser, White Light and Zero 88. The event provided the perfect excuse to bring out the company Scalextric racing set, and amongst the would-be Damon Hills, Paul DeVille of Lighting Technology achieved notoriety by employing some extremely dubious tactics to fend off challengers.

The new premises have provided the space to develop Gradav's hire stocks still further and include rooms for speaker tests and conferences.



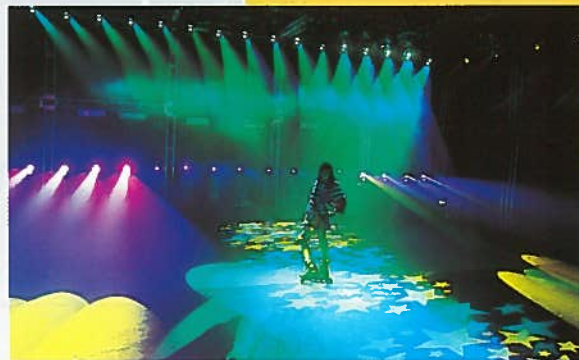
Gradav's new hire facility at Edmonton.



REGIA 256/36

REGIA

TECHNOLOGY AND RELIABILITY



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

The SGM range of lighting control consoles consist of:

- REGIA 256/36: 240 CHANNELS, 36 PRESETS, DMX 512, RS 232 and SGM 256 outputs.
- REGIA 256: 240 CHANNELS, DMX 512, RS 232 and SGM 256 outputs.
- REGIA 24: 24 CHANNELS, 24 PRESETS, DMX 512 and SGM 256 outputs.
- REGIA 12: 12 CHANNELS, 12 PRESETS, DMX 512 and SGM 256 outputs.
- REGIA 8: 8 CHANNELS, 12 PRESETS, 0/10 V and SGM 256 outputs.

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

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



P 610 / D



P 810 / D

SGM

ELECTRONIC LIGHT

• 61010 COLOMBARONE DI PESARO (PS) - ITALY - Via Romagna, 307 -
• Tel. 0721/208200 - 208254 - 208480 - 208578 Fax 0721/208231

Starry Lights

Granada Television's new series of Stars in Their Eyes, which will appear later this year, uses a total of 117 Vari*Lites.

Granada TV's lighting director Tommy Bardsley specified this impressive array for the latest series of nine shows - compered by Matthew Kelly - which were recently recorded at Granada's Manchester studios. At the helm of the dedicated Artisan console is one of the world's most respected Vari*Lite operators, Mike Owen, who spent 1994 working with Marc Brickman's award-winning lighting design for Pink Floyd's world tour (see L+SI, June 1994). Owen is controlling a rig that employs 25 VL2Cs and 12 VL4s, alongside 12 VL6 spot luminaires and 68 VL5 wash luminaires.



Canada Lights Up

Lighting specifiers from all disciplines, including architecture, interior design and consulting engineering, will view the latest in lighting products and services at the International Lighting Exposition (ILE). The show, to be held in conjunction with the Illuminating Engineering Society's (IES) Canadian Regional Conference, will take place from September 27, 28 and 29, 1995 at the Metro Toronto Convention Centre.

A wide selection of lighting companies, both large and small, will be exhibiting, and will ensure that the trade show is representative of the Canadian lighting field.

The IES Canadian Regional Conference will feature a line-up of international speakers covering the latest trends in lighting design, light source technology and energy efficient lighting. Topics to be covered at this year's conference include Computer Techniques of Modelling Lighting Design, Lighting for the Ageing Population and Non Visual Effects of Lighting.

For further details on ILE contact the organisers Kerrwil in Ontario, telephone +1 905 890 1846.

NAT Attack

When the International Snowboard Federation recently held its World Championship competition in Davos, Switzerland, it gave SpotCo the opportunity to try out Coemar NAT fixtures in extremely cold conditions. The MTV-sponsored event went ahead in temperatures of minus 14 degrees and blizzards, but the NAT 2500 fixtures utilised to light the stage and provide impact for the sponsors by scanning custom gobos around the arena, performed without a hitch.

Another advocate of the NAT is Chris Craig, lighting designer for the Orb, who currently has nine units on tour with the group. Craig has been keen to try out the lights since first seeing a prototype at PLASA 93 and this tour has given him an opportunity to fully explore the possibilities offered. He had already had a taster of the NAT's capabilities when he gave them a test drive at the 'World Dance' event at Wembley prior to Christmas.

LMC Expansion

Leading UK pro-audio supplier LMC Audio Systems Ltd have announced the acquisition of new premises in the heart of Birmingham, with showrooms, sales offices, demonstration room and warehousing. The 3,000sq.ft facility will complement the existing London operation in the supply and support of professional sound reinforcement equipment to all sectors of the market.

The Ephos Family

NEW

SDR

Powered Mixer with Digital Effects
250 + 250 Watts RMS

A New & Excitingly Different Quality Alternative

Citronic Ltd, Halifax Road, Bowerhill, Melksham, SN12 6UB, England
Tel: +44 (0)1225 705600, Fax: +44 (0)1225 709639

CITRONIC

0951 568 550 440

Brit Awards Technical Tour de Force



For the third consecutive year the Brit Awards were held in the Great Hall at London's Alexandra Palace in mid February. The event, broadcast to over nine million viewers in the UK and 53 countries worldwide, featured seven performances by top artistes with 16 awards presented overall. The ceremony is the UK's top pop awards ceremony and involves over 1,000 crew members, with a good slice of this dedicated to the lighting, sound and AV set-up.

The sound equipment for the event was supplied by Entec, the mainstay of which was a JBL Concert system configured left and right, working in tandem with Meyer UPA 1A speakers. The front-of-house mixing was provided by a partnership of two 48-channel Yamaha PM4000s and a 32-channel Soundcraft 8000. Backstage two Midas XL3s were in operation.

Paul Weber was the production manager for Entec who supplied the lighting specification. This consisted of over 100 Vari*Lites, 24 Clay Paky Golden Scans, 36 Martin Robocolors and a massed army of over 400 Parcans. Providing the control was an Avolites Diamond for the moving lights, an Artisan for the Vari*Lites and a Celco Gold for the conventional lighting.

Creative Technology (CT) and sister company, ScreenCo, made it a family affair with CT providing video projection and display, and feed for ScreenCo's Jumbotron video display. The screen, a 5x4 module system, was hung from an Edwin Shirley structure and provided a back-drop for the stage set, while two of CT's Barco 8000s projected images onto 16'x12' screens. Input for the displays was taken from an OB unit.

Brits win Trademark Cases

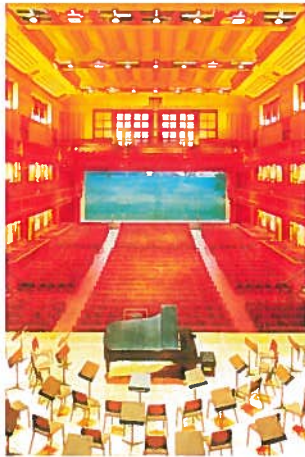
At the European court in Strasbourg on 20th February, Zero 88 Lighting Ltd won an action against Novalight SARRL to recover the registration fraudulently made in July 1992 of Zero 88's trademark. As a result, substantial damages were awarded to Zero 88. On the same day, damages amounting to 150,000FF were awarded to Jem Smoke Machine Co after Novalight filed Jem as a trademark, also in July 1992. L+SI understands that Novalight has also registered the trademarks of Abstract, High End Systems, Griven, Lampo, Studio One and Kupo. *We should point out that La Novalight SRL of Italy has no connection with Novalight SARRL.*

TPC Tanglewood

Theatre Projects Consultants were involved in the opening of the Seiji Ozawa Hall at Tanglewood in Lenox, Massachusetts.

Led by Richard Pilbrow, the company worked on the design of the new hall with architects William Rawn Associates, acoustician R Lawrence Kirkegaard and Associates and the staff of the Boston Symphony Orchestra and the Tanglewood Music Centre.

TPC's role included the programming and conceptual planning of the hall, detailed auditorium design, seating and sightlines and performance equipment. They also participated in the initial planning for the future renovation of the existing Opera Concert Theatre. The equipment installation includes the design of the performance lighting system, house and concert lighting controls, acoustical adjustment devices, stage extension platform system and the portable recital shell. The concert hall has been designed primarily for use during Tanglewood's ten week summer season, but is also intended to be used by the BSO during the spring and autumn for high quality classical recordings.



Paranco Creat 0541/201186

GALILEO

TECNOLOGY AND RELIABILITY

GALILEO II

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

- GOBOS:** • 8 gobos, of which 4 rotating and all interchangeable • 25 possible pattern combinations • Angular gobo position in relation to PAN ensures steady images during beam movement. • Gobo-change with audio sync.
- COLOURS:** • 8 colours • Bi-coloured beam
- Variable speed rainbow effect
- colour-change whit audio sync, in two-tone or single colour setting
- Colourchange with or without blackout.
- IRIS:** • Very high speed , opening/closing (100mS) extremely low noise and linear.
- SHUTTER/STROBE:** • Variable flah rate (0,5-12 flashes/sec.) • Strobe can be run in sync, with audio bands resulting in effects with really great visual impact.
- DIMMER:** • Very high speed, extremely low noise and linear for 100% - 0% dimming.



PILOT 168



• 61010 COLOMBARONE DI PESARO (PS) - ITALY - Via Romagna, 307 -
• Tel. 0721/208200 - 208254 - 208480 - 208578 Fax 0721/208231

THE SCIENCE OF LIGHTING

The HOT Issue of the 90's

JEM

1984 - JEM DEVELOPS THE FIRST HIGH POWER SMOKE MACHINE

1988 - JEM PIONEERS HEAVY FOG TECHNOLOGY

1991 - JEM INTRODUCES STAGEFX PYROTECHNICS SYSTEM

1993 - JEM INVENTS THE REVOLUTIONARY WATER CRACKER

1994 - JEM LAUNCHES



NO Heat



NO Aluminium Blocks



NO Temperature Controls



NO Jets



NO Nozzles



NO Compressed Air



NO Warm-up Time



NO Toxic Chemicals



NO Noise

SO HOW DOES IT WORK?

H.O.T technology produces tiny lens shaped bubbles within the working fluid with strong, oppositely signed, charges on either side of the cavity.

As these bubbles collapse a minute 'hot spot' is produced by adiabatic compression of the constrained gas. In fact the instantaneous temperature in these microscopic bubbles can reach that of the surface of the Sun! By accurately controlling the viscosity of the working fluid this effect can be maximised to produce large numbers of bubbles.

These miniature explosions produce shock waves which expel micron sized particles from the surface of the working fluid. These particles are filtered and refined before being blown into the air as the perfect enhancement for your lighting!

THE LIGHTING EFFECT OF THE FUTURE



A Transluscent, Optically Reflective Haze

European & Worldwide Patents & Patents Pending. All Trademarks protected

Technology

A Transluscent, Optically Reflective



JEM SMOKE MACHINE CO. LTD.
VALE ROAD INDUSTRIAL ESTATE,
BOSTON ROAD, SPILSBY,
LINCS. PE23 5HE. UK

TEL: (INT 44) - (01790) 754050
FAX: (INT 44) - (01790) 754051

USITT Goes 'Beyond the Neon'



At the opening of 35th USITT conference are USITT president Richard Durst (left), leading set designer and keynote speaker David Mitchell, and Helmut Grosser, president of OISTAT.

The United States Institute for Theatre Technology (USITT) chose Las Vegas as a base for their annual conference and trade show in mid March, under the title of 'Beyond the Neon'. As with previous shows it was a very successful event with 800 registered delegates and over 120 exhibitors. Numerous overseas delegates were welcomed to the conference, which, as usual, had an amazingly high number of meetings, seminars and workshop visits. ESTA, the Entertainment Services & Technology Association, had a strong presence, holding various meetings of its own including well-attended standards-related discussions.



ESTA's first standards officer Ralph Weber (right) with George Sabbi of Bash Theatrical, chair of ESTA's standards committee.



Norman Wright of Group One demonstrates the Celco Aviator.



Sarah Nash-Gates, former USITT president, with Jack Schmidt of Strong International.



Peter Johns and Ian Coles, part of the new management structure for Total Fabrications.



M&M's Michael Goldberg takes time out with Bryan Raven of White Light.



Mervyn Thomas of James Thomas Engineering holds a Par 30 lantern while structural engineer Alan Broadhurst looks on.



Consultant Steve Friedlander with Derek Gilbert of Glantre Engineering.



Gerard Cohen of Tracoman pictured with Steve Norman of Strand.



Ken Whitright of Wybron and David Taylor of Theatre Projects Consultants.

Sound Network

The Sound Network has recently been formed by Ralph Dunlop, formerly with Garwood Communications, Peter Wandless, ex Fairlight, and long-time Peter Gabriel associate Dave Taraskevics. The company will handle distribution for Bruel & Kjaer microphones, PMC monitor loudspeakers and ADT hand-held digital analysers. The Sound Network can be reached in London on 0181-372 3170.

PSE Liquidate

Production Services Europe (PSE) has gone into creditors voluntary liquidation following notification in early January. Former managing director Rocky Norton has purchased the assets of the old company and has formed a new company - Sermec Ltd - which was officially launched at the recent Frankfurt Music Fair. The new company will carry on where PSE left off by carrying the Laboratory Series Technology speakers.

The Compact Line



BP 2500 C - Halogen



BP 2,5 C - HMI



BP 4 C - HMI

The PANI „Compact Line“ is once again setting new standards in projection. Powerful light efficiency, combined with compact dimensions, offer greater scope for designers and operators alike. **NEW: ZOOM-OBJECTIVE 25 - 60 cm**

For information call:
Tel.: 0043 - 1 - 521 08-0
Fax: 0043 - 1 - 526 42 87



Ludwig PANI - Company for Stage Lighting and Projection
A-1070 Vienna, Kandlgasse 23

Glantre Move

Glantre Engineering has been providing a complete electrical, mechanical, design, supply and installation service for a diverse cross-section of performing arts spaces and presentation venues for almost 21 years. There have been many highlights over this period, including the Queen's Award for Export Achievement in both 1985 and 1991.

The company has been based in Reading for the last 10 years, with offices worldwide and staff numbering more than 70. Glantre grew steadily in size and turnover during its residence at Cremyll Road, but after eight years of continuous growth, needed more space. As the company wished to remain Reading-based, a move to the spacious and conveniently located Richfield Avenue site was the perfect solution.

The building has been fitted and refurbished to a high standard including the addition of a mezzanine level bringing the total area to 15,000sq.ft. The first floor, now 7,000sq.ft, is primarily devoted to project design offices and also accommodates the directors' offices. The ground floor houses the commercial offices, workshops and warehouse, as well as nearly 2,000sq.ft area for future expansion. Glantre project engineers designed and implemented the complete electrical and mechanical services, including the installation of over seven miles of cabling for data and voice communications.

The company is well known for a wide variety of prestigious international contracts which include The Capitol Theatre, Sydney, Athens



L+SI editor John Offord (left) toasts Glantre's new premises with Derek Gilbert (centre) and Francis Wells.

Concert Hall, Al-Bayan Palace, Kuwait, Edinburgh Festival Theatre, Lisbon's Coliseum, Fragrant Harbour Theme Park, Hong Kong and EuroDisneyland, Paris.

The company is one of the world leaders in the supply of cruise ship 'on-board entertainment technology' as the growing armada of top ranking cruise line clients would attest - Princess Cruises, the Cunard Line and the newly-formed Disney Cruise Lines. Most recently Glantre have provided an extensive design and implementation package for P&O's brand new cruise liner Oriana, due to be named by Her Majesty Queen Elizabeth II at Southampton on April 6th and to enter service three days later.

The building was inaugurated in late February by L+SI editor John Offord who applauded the choice of a six litre 1976 Margaux from the Glantre cellars.

Earls Court Blues



Lighting Technology Projects has completed the commissioning of a permanent lighting installation at the Warwick Road entrance of Earls Court, London's leading international exhibition and event venue.

It was during the PLASA Show last year that LTP offered to re-light the building, and the scheme was approved for permanent installation in time for the 1995 Boat Show.

The design, produced by Bruce Kirk of LTP, bathes the 1937 facade in a rich blue with the two 6 x 9 metre poster sites highlighted in cool white. The crests at the top of the central window bays are individually illuminated with small, fixed searchlights. One larger searchlight guarantees that the P&O flag on top of the building is always brightly lit. The blue effect is created with 21 Osram Powerstar HQI-TB 400W lamps in fittings supplied by Siemens and Philips. The posters are lit with James Thomas 'Outdoor' Par 64 fittings using the 400W metal halide lamp from Venture. The searchlights were specially manufactured for Lighting Technology by Francis Searchlights of Bolton and also use HQI-T light sources. 31 luminaires are used in total.

STAGETEC
SOUND & LIGHTING
PROJECTS

COMPULITE DISTRIBUTION

Telephone: 01753 567500

Facsimile: 01753 567501

TOTAL SOUND AND LIGHTING... TAKE OUR ADVICE, DON'T BOTHER TO LOOK FURTHER.



THE DIFFERENCE LIES IN A BRIGHT NEW IDEA

CHROMA

- 24 Dichroic colors CTO/CTB provided
- Inner dimmer, avoiding RF noise on the cables
- DMX512 and 0-10V interfaces provided (2CH)
- 1000W-G22 halogen model (45x22x46 cm - 12 Kg) 7000 LUX at 6m - 2m beam size
- MSR1200 discharge model (45x22x48 cm 24 Kg) 22000 LUX at 6m - 2.7m beam size
- Rainbow and strobe (1200/D) effects
- Narrow/wide fresnel or PC optics
- Silent cooling system, with thermal switch



TRICHROMA

- RGB trichromatic color fading system
- Up to 9.500.000 color tones
- Inner dimmer, avoiding RF noise on the cables
- DMX512 and 0-10V interfaces (2/4 CH)
- 1000W-G22 halogen model (45x22x46 cm 12.5 Kg) 6500 LUX at 6m-2m beam size
- Automatic color fading for architecture
- MSR1200 discharge model (45x22x48 cm 24.5 Kg) 26000 LUX @ 6m-2.7 m beam size
- Narrow/wide fresnel or PC optics
- Silent cooling system, with thermal switch

FLY

Denon Launch



Denon launched the DN 2000F MkII in grand style in March. The new and improved club twin CD player was given special treatment at Cliveden, the impressive Berkshire stately home - famous for the Astors and some indiscretions on the part of Christine Keeler and friends.

Ian 'D' Smith, formerly resident DJ of Heaven at Charing Cross, and now at the Fridge in Brixton, was on hand to give the end user's view of Denon's amendments to the already popular DN 2000F. He offered a detailed overview and covered the new features of the MkII version.

The updated DN 2000F is the result of lengthy analysis of feedback from users worldwide, and although the outward signs of the distinctive remote control panel have remained virtually unchanged, there is much within the unit that is different. There are new transports and optics, fewer moving parts and self-checking, self-calibrating lasers have been introduced to maintain intensity and avoid the need for recalibration. On the ergonomics front, Denon have added a power-button safeguard to prevent accidental switching-off, redesigned the CD

drawers making them flush to the unit to cut out the possibility of headphone leads getting caught, added a remote stand so that the unit can comfortably sit on top of the base without the need for mounting brackets, and a longer cable for positioning more than one metre away from the base unit. Other adjustments include an improved LCD display, giving a brighter read-out, as well as a wider viewing angle of 60 degrees each side of the plane.

The MkII also features a digital pitch control read-out, enabling the DJ to see an accurate read-out of the BPM as an override on the main LCD screen when the pitch control is moved. Continuous or single track mode is now indicated, and the instant start time has been improved from within three hundredths of a second to within one hundredth. A click-stop position on the zero point of the pitch control has been added, and the search facility has been made substantially faster. The range of the pitch control can now be switched between eight per cent and four per cent, and a user-selectable end of track alarm is now included.

For further details contact Denon in Chalfont St. Peter, telephone (01753) 888447.

DHA Take the Biscuit

DHA has recently been working in collaboration with a certain biscuit manufacturer on a new development which has been hitherto shrouded in mystery. After months of research, the rumours can be laid to rest and L+SI can reveal details of the new product.



Some of the most popular designs from DHA's catalogue have been reproduced using the latest technology. Christened 'cookies', the new gobos have been made to withstand very high temperatures and can be used in any 1k profile.

Holders for the gobos are in production but until available, glass gobo holders can be utilised by simply trimming down the 'cookie', a process DHA have termed 'nibbling'. The advantages are immediately apparent since efficiency of performance is matched by environmental benefit. It provides a no-waste solution since any breakages can simply be consumed.

Smoke on Virgin - The recent ECTS Computer games/simulator show at Olympia saw the Cirrus Lowsmoke system from The Effects Company in operation. The original enquiry from Tony Norton Events Management requested a 'low lying smoke effect' on the Virgin Games stand. Technical director Martin Blake told L+SI: "We custom converted the Cirrus's internal electronics so that the units could be fused with the EC400T timer controller for stand-alone operation. Two complete systems were in use, and by combining with the medium density/quick dispersing fluid, the effect far exceeded expectations, the brief being that the effect was required for the duration of the whole show without any rise in smoke levels off the floor."

STAGETEC
SOUND & LIGHTING
PROJECTS

COMPULITE DISTRIBUTION

Telephone: 01753 567500

Facsimile: 01753 567501

BECAUSE YOU'LL ONLY FIND US AGAIN!

College Workshow

Croydon College celebrated its 21st Theatre Workshow in March, with the second year theatre design students once again presenting their work to mark the halfway point of their course.

At this special annual event, students taking the three year (Sandwich) B/TEC Higher National Diploma course in Design (Theatre Studies) have the opportunity to create large scale examples of their set and costume designs, in conjunction with atmospheric lighting provided by students on the Lighting and Production course.

The main exhibits presented were the culmination of two terms' work and were centred on two productions - 'The Fantasticks', a musical by Harvey Schmidt, which was produced with the West 28th Street Theatre Company, and directed by Mark Helyar, and hypothetical designs for Benjamin Britten's operatic version of 'A Midsummer Night's Dream' (shown above).

Each of the pieces on show was complemented by a finely-detailed miniature model-box exhibit, together with drawings and plans demonstrating the various stages of the lengthy and thorough design process. The students' work is guided by Suzanne Adams, senior lecturer on the design course and Robert Muller, senior lecturer on the Lighting and Production course.

The unenviable role of production manager for the presentation was taken on by Andrew Hurst, a student on the Lighting course, who worked as a theatre electrician before catching the LD bug and enrolling at Croydon College. Andrew was given a very brief tutorial on the control of Vari*Lites by M&M's Adrian Hicks prior to the show.

The exhibition owed much to the support of a lengthening list of sponsors from the industry including Pulsar, Gradav, Rosco, Avolites, Optikinetics, LHS, M&M Camelont, The Spot Co, Theatre Projects, White Light, Cerebrum, DHA, HTS, Unusual Rigging, Vari-Lite, Lee Filters and Mushroom Lighting.



The arch framing Bottom and Titania was designed by Sian Brooks and lit by Keith Johnson.



Chris Watts of the ALD with, Adrian Hicks and Roger Hennigan of M&M, and Robert Muller, senior lighting lecturer at Croydon.

JHS Kick Off - John Hornby Skewes & Co Ltd of Leeds, have added an 8,075sq.ft extension to their warehouse. On the day of completion - and before moving in stock - employees played five-a-side football in this space - the only chance they'll ever have!

JHS now occupy 21,375sq.ft. of warehouse space and 11,125sq.ft of office space on a 3.5 acre site.

11 YEARS IN THE LIMELIGHT!

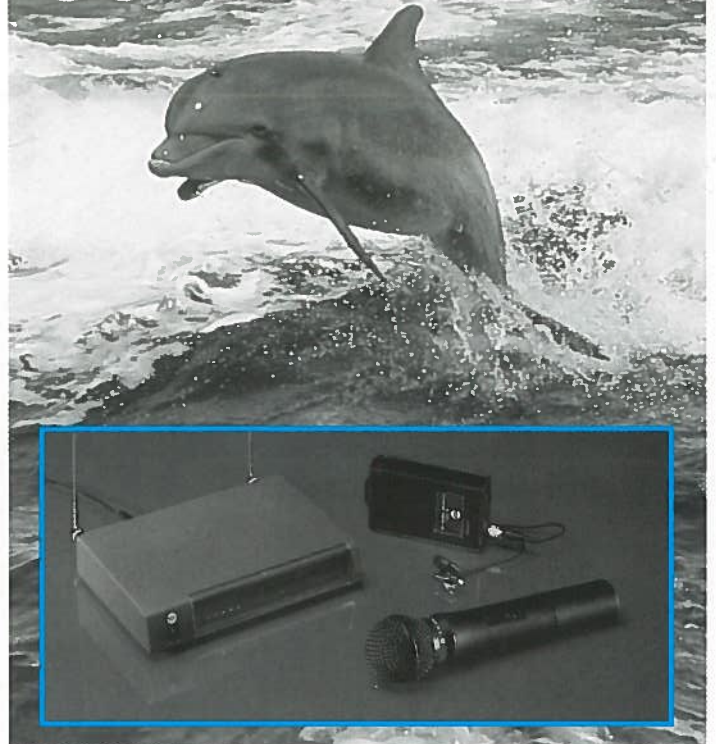
CALL US TODAY FOR OUR NEW ILLUSTRATED BROCHURE

Since 1884 we have been manufacturing and supplying Iris diaphragms. Today, with a reputation second to none, we supply many of the leading companies in the Television and Theatre industry, from our wide range suitable for all applications

Wilkes Iris Diaphragm Co Ltd

Widco Works, London Road, Bexhill-on-Sea, Sussex, England Telephone: (01424) 217630 Fax: (01424) 215406

THE FREEDOM AND QUALITY TO COMMUNICATE



The RCF DWM Series Wireless Microphone Systems



The RCF DWM Series of wireless microphones incorporates the most innovative electronic technology, providing high quality features with excellent reliability meeting all of the professional requirements for both vocal and speech applications.

- VHF HIGH-BAND WIRELESS SYSTEMS (173.8MHz - 216MHz)
- HIGH QUALITY AUDIO TECHNICA® MICROPHONE CAPSULES USED WITH BOTH HAND HELD AND BELT PACK SYSTEMS.
- 19 INCH EIA RACK MOUNT COMPATIBILITY
- TONE LOCK TECHNOLOGY TO PREVENT RF INTERFERENCE
- COMPANDER CIRCUITRY FOR EXPANDING DYNAMIC RANGE
- DOUBLE SQUELCH SYSTEM TO ELIMINATE AMBIENT RF NOISE
- TRUE DIVERSITY RECEIVER TECHNOLOGY
- FULL UK APPROVALS TO BOTH MPT1345 (DEREGULATED) AND MPT1350 HIGH POWER (REGULATED) SPECIFICATIONS



Sound Systems

RCF Electronics (UK) Ltd
2 Blenheim Court,
Hurricane Way
Wickford Business Park
Wickford, Essex, SS11 8YT
Tel: 01268 570808
Fax: 01268 570809



NAVIGATOR

NEW! Navigator V3.0

An affordable moving light console. Now, with added functionality and increased channel capacity.

- 240 Control Channels
- Up to 480 Memories
- Choice of lamp personalities
- V3.0 software and personalities available as separate upgrades to existing users



PATHFINDER

Pathfinder

Designed for the budget conscious professional user, Pathfinder combines quality and innovation for all entertainment or educational applications.

- 60 Control Channels
- Up to 480 Memories
- 512 patchable DMX channels
- Individual Submasters and Theatre Stack Playback



FUSION DIMMER

NEW! Introducing Fusion 1210

First of a range of intelligent dimmers featuring Celco's all new digital dimming engine, designed for permanent installation in any application world-wide.

- Configurable as 12 channels @ 10A, or 6 @ 16A, or any combination
- MCB protection throughout
- Control by digital, or analogue inputs
- 100% duty cycle
- Voltage stability
- User programmable features
- Various load types
- Will comply with mandatory European EMC, RFI and safety regulations



AVIATOR

NEW! Aviator V2.0

A range of advanced technology lighting control consoles for dedicated concert, theatre, television and nightclubs.

- From 180 to 720 plus Control Channels
- 1000 Memories
- Simultaneous control by Fader, or Keypad
- Individual Submasters and Theatre Rate Playback

Celco, Hawley Mill, Hawley Road, Dartford, Kent, DA2 7SY, England. Tel: +44 (0) 1322 282 218 Fax: +44 (0) 1322 282 292

Celco is a division of Electrosonic Ltd.

concert ♦ theatre ♦ television ♦ nightclubs

Aviator and Navigator consoles are subject to UK patents. Other patents pending.

Cyberlights all over USA



Lighting director Dennis Rudge and effects LD David Chance used 54 High End Systems Cyberlight luminaires for the 1995 Miss USA Pageant (shown above) at the South Padre Island Convention Center. The conventional lighting equipment came from Vanco, while the Cyberlight luminaires used at the pageant were supplied by Production Arts.

Country music star Alan Jackson is currently on tour with a variety of Lightwave Research equipment, including 20 Cyberlight automated luminaires, 17 Trackspot automated luminaires, two F-100 atmospheric fog generators, and two Coldflow LC02 exchanger modules. The lighting designer for the Country Comfort tour is Jim Bauman, and the Lightwave Research equipment is being provided by Bandit Lites of Knoxville, Tennessee.

WYSIWYG Achievement

Flying Pig Systems' WYSIWYG software was awarded the Outstanding Technical Achievement Award by the Academy of Canadian Cinema and Television at its ninth Gemini Awards.

A technical jury recommended WYSIWYG because of its ability to improve the production value of a Canadian broadcast. In nominating the product for the award the Gemini panel stated that: "With the aid of WYSIWYG, designers find that pre-programming moving lights can be done effectively in an office, freeing up valuable studio or theatre time."

Since its commercial release last year, WYSIWYG has been establishing itself in the market and has been successfully employed on such shows as the 1995 Juno Awards, the Superbowl half-time show, as well as the Gemini Awards programme itself.

Donmar's ALD Template

In the USA, the standard lighting designer template has, for many years, been the USITT template. The symbols on this generic style template can be used to represent every manufacturer's lighting instruments together with their accessories, filters and control ID.

Chris Watts of the Association of Lighting Designers has designed a UK generic template that adopts the same principles, and Donmar, with its experience in designing and supplying lighting templates, was commissioned to manufacture the new template. Its 1:25 scale has both metric and imperial rules in 1:25 and half inch scale respectively and has a scalloped edge for representing drapes. The range of instruments includes profiles, PCs, Par cans, Fresnels, floods, beamlights, FX projectors and specials. Other symbols include stands, barn doors, boom arms, scrollers, FX wheels and notation lozenges.

This new template is available from both Donmar (0171-790 1166) and the ALD (0171-482 4224) at £8.50 plus VAT.

Laser Video Defence Spectacular

Definitive Lasers Dubai supplied over 50 tonnes of equipment and 30 personnel for the opening of the International Defence Exhibition - IDEX '95 in Abu Dhabi. The ceremony featured laser graphics which flashed up messages of Welcome and images relevant to the exhibition on walls either side of the main video screens. Video images of Maqutra firing range and Port Ziad were shown on a large screen format synchronised with lasers and moving lighting. The following evening the Heritage Village at IDEX '95 was host to a major display of the region's culture. Integrated into the hour-long spectacular were dancing waters, lasers, conventional light, moving lighting, large video screens relaying live action and a 10 minute finale of fireworks.

ShowTech'95:
Leading trade fair.
Trend-setting trade fair.
Future-oriented trade fair.

SHOW
TECH

**International Trade
Fair and Congress**

Entertainment Technology,
Stage Engineering,
Equipment, Organisation

Berlin, 30 May - 1 June 1995

Contacts, markets, trends and technologies. International. At ShowTech'95. The newest developments of lighting and stage technology, innovations in sound, image and communication technology, the latest on ticket management, security technology and in-house presentations.

Returning this year: Trade fair construction and event management. magic moments for your business.

For further information, please call:

Tel.: (71) 486 19 51

Fax: (71) 487 34 80

Please send me the ShowTech magic moments magazine. German English

Company

Industry branch

Name

Address

Messe Berlin GmbH, Messedamm 22, D-14055 Berlin
Tel. 4930/30 38-20 77, Fax -20 59

Patron:



Sponsoring associations:



Patron:



Overseas Trade Show, Agencies Ltd.
11 Manchester Square
London W1M 5AB
Tel.: (71) 486 19 51 Fax: (71) 487 34 80

Messe Berlin

Theatrical Services Adviser Award



Michael Savage of Midland Theatre Services has received the prestigious British Safety Council Diploma in Safety Management at an awards ceremony in the House of Commons hosted by Neville Trotter, MP for Tynemouth.

Savage was among 42 safety professionals representing a variety of industries who were presented with diplomas in Safety Management.

Diploma delegates studied problem solving and decision making, communications, fire protection and advanced safety management, occupational health and hygiene and total loss control. The programme develops expertise in techniques used to protect people, property and material and financial resources. It leaves delegates well equipped to make vast savings for their organisations and companies - an essential benefit

Doughty Zenith

For the first time in their history, Doughty were represented by two major distributors at the Frankfurt Music Fair - Lightpower Showtechnik and Zitron Musik. They accordingly took full advantage of the situation by launching the Zenith II telescopic truss lift.

Available from mid-May, the Zenith II has many of the attributes of its earlier counterpart, as well as featuring some significant advances in design. A new cabling system has led to improvements in the lifting capability of the unit, whilst additional refinements include large 'dolly wheels' and increased adjustment for regulating the tolerances on the inner sections of the central mast.

The Zenith II got its second outing at the SIB Magis show in Rimini. Full product reports from both Frankfurt and Rimini are featured in this issue.

Sunset Automation

Stage Technologies has won a major contract to provide automation systems for the new production of *Sunset Boulevard* opening in the Rhein Main Theatre in Germany later this year.

The automation and control system company designed the system for the original show which opened in London in 1993 and will be working with the same production team at the new venue. However, although the stage set for the German production remains the same, many more automation techniques are now being incorporated.

Richard Bullimore, the production manager for both shows, told L+S-I: "We worked very closely with the Stage Technologies team to get the London set just right and, having built up that trust, were keen to work with them on the German production. Combining our experiences on the new show was an excellent opportunity to develop and simplify the controls even further."

The automation equipment, which includes 26 winches, 20 axes controls, one Acrobat control desk and a Trapeze control desk controlling an 8.5 tonne house, will undergo extensive trials in the UK before being installed in the theatre in September.

Germany's *Sunset Boulevard* is scheduled to preview in November and will also mark the first production in the new Rhein Main Theatre, a purpose-built theatre and leisure complex outside Frankfurt.

Megagig Crew Call

Hull University's annual Megagig charity performance is fast approaching. The 1994 was a great success with 26 bands, playing to crowds of 5,000 over two days. This year the technical crew are intent on improving the lighting and sound presentation, even with a reduced budget, so they have approached L+S-I for help.

If you have any equipment that you would be willing to loan to the University for the week commencing 12th June or you feel you could offer other practical help, contact Ben at the University on (01482) 466284.

Stagetec's Flying Start

Following the formation of Stagetec (UK) Ltd by Andrew Stone, the company has been appointed dealer for a number of lighting and sound equipment ranges. These will complement the Compulite range for which the company is UK distributor. A full system design, installation and maintenance service is offered.

On the audio side, products include Bell mixer/amplifiers, Denon Pro-Audio, EAW loudspeakers, Ecler amplifiers, Metro Audio intercom and Ohm loudspeakers. Lighting products (in addition to Compulite) include ADB lanterns, Fly Chroma and Trichroma, Doughty Engineering stands and staging, Light Processor dimming and control and TTL control desks. Stagetec will soon be marketing its own range of smoke machines available in both standard and turbo driven formats.

Unusual for VE Day

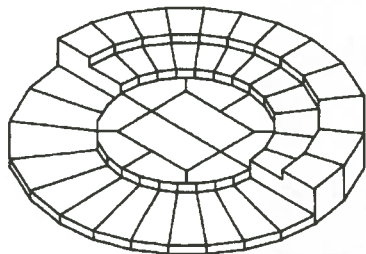
Unusual Services, a member of the Unusual Industries Group, has won the government contract to provide overall technical infrastructure and production services at Hyde Park's massive VE Day event scheduled for 6-8th May.

As main contractor, under the direction of executive producer Major Michael Parker, the company will be responsible for the provision of all elements of the event - from technical services to security. On the production side, the company is managing and co-ordinating the entertainment that takes place in seven main areas: a 160ft stage and a 75x75m arena, both fronted by two 5,000 seat tiered stands, a Youth Village, International Village, Performing Arts Pavilion, Dance Arena and Auxiliary Service Area.

The programme brings together an Opening Ceremony, the Saturday night Royal British Legion concert and Sunday's Heads of State Ceremony. On the final day there will be a spectacular fireworks display and a massed 'singalong' outside Buckingham Palace, with a VE Night celebration in Hyde Park. The contract (funded by the Department of National Heritage) has enabled the company to bring forward an expansion programme that sees its technical development and manufacturing move to larger premises near Northampton, whilst its creative and administration departments remain at Unusual's existing London premises.

There will be more detailed coverage of the VE Celebrations in the June issue of L+S-I.

ALISTAGE



All the shapes, all the sizes!
Available for both hire and sale.
Limited only by your imagination.

Various heights catered for, specials manufactured on request, units tested to 9.88 kN/M². Accessories include guardrails, straight and spiral steps, ramps and fascia.

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

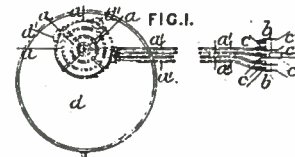
A HUNDRED YEARS AGO THIS MONTH BRITISH THEATRICAL PATENTS

Intro to Patent No: 8111, April 24th 1895
Oswald Stoll: Fountains

Whilst Oswald Stoll is today remembered as a theatre manager, proprietor, and entrepreneur, he was also fascinated by new technology. In 1895 his address was still given as the Empire Theatre, Cardiff, yet within the next few years he would build the mighty Coliseum in London, and establish one of the largest theatre circuits in the country. Indeed, he would also continue to produce patents for the theatre, notably for the triple concentric revolving stage which was installed at the Coliseum in 1904.

In 1895, his patent was associated with a water effect which also owed something to the Pepper's Ghost illusion. Spectacular theatre was at its zenith at this time, and special effects were undoubtedly a critical part of this style of theatrical presentation. Not only was Stoll a businessman, he was also an innovator and inventor!

8111. Stoll, O. April 24.



Fountains.—Relates to Pepper's ghost illusions, and consists in arranging behind the glass sheet used a water-spraying or water-projecting appliance so placed with respect to the other objects, that in the images seen the object appears to be in the water, or receiving or discharging water. The Figure shows one arrangement of water pipes &c., the main *b* having four branch pipes *a'* leading to perforated rings *a* standing in a trough *d*. The jets are adjustably controlled by cocks *c* having handles *c'*. The trough may have windows *d'* therein to illumine the fountains from below.

Out Board Award



Robin Whittaker, managing director of Out Board Electronics Ltd, recently received a Smart Award for innovation from Michael Heseltine, President of the British Board of Trade. The award takes the form of a grant from the British Government to fund research into new product development, the focus of which is a proposal submitted by the company for an automated sound control system for theatre applications.

VL in the Valleys

Michael Samuelson-Goleuadaw Cymru has been appointed as Welsh dealer for the Vari*Lite Series 300 lighting system. Jim Douglas, Vari-Lite Europe customer production manager, told L+SI that the company had been chosen for its expert local knowledge and all round professionalism. They will draw on the expert knowledge of Gareth Morgan and Pryderi Baskerville, certified Series 300 technicians.

Most of MSGC's work is in the television field with recent contracts using VL5 and VL6 luminaires including the BAFTA Cymru for BBC Wales, 'Can i Gymru' (Song for Wales) and Ffilmiau Elidir 'Steddod' (a Welsh quiz show).

John Dowzell of MSGC commented: "Since we signed the deal, our business growth has been fantastic. This is the first time a stock of Vari*Lite has been available in Wales and the demand is phenomenal, especially from TV production companies, including S4C."

JHS NAMM Award

John Hornby Skewes' SKB Pop-up Mixer Case (SKB19P12) has been awarded the title of 'Most Innovative Accessory Product of the Year' in the Ninth Annual Music and Sound Awards 1995, which took place during the recent NAMM Show in Anaheim, California.

The SKB Pop-Up Mixer Case, which stacks with all SKB Rack Cases, features an internal frame with heavy-duty slide hinges, allowing the mixing board to pop out of the case and tighten securely at any comfortable angle.

JHS have also added to their Rapco Professional Audio Interface range with Neutrik Speakon speaker cables - heavy duty, four conductor, 12 gauge rugged cables terminated with Neutrik four pin Speakon connectors, available in 8ft and 25ft, and Rapco HI-Z microphone cable - available in two models, M10 (10ft) and M25 (25ft), constructed from Sound/flex cable and fitted with a Switchcraft 1/4" mono jack.

Hersey Lecture

Lighting designer David Hersey will give the 19th annual Charles Marques Memorial Lecture at the Royal Institution, London, on 19th April. Hersey will talk about his work over the last 25 years on shows such as Evita, Cats, Les Miserables, Miss Saigon and Oliver. Admission is free, but places need to be reserved in advance. Contact the Institution of Lighting Engineers, Lennox House, 9 Lawford Road, Rugby CV21 2DZ.

Wharfedale Guide

Wharfedale head of international sales and marketing, Stan Curtis, has written a book offering advice on the choice of a home theatre system.

Called 'The Wharfedale Guide To Home Theatre' it begins with the introduction of surround sound in cinema and the use of Wharfedale's 2180 enclosures. The book continues with the advent of Dolby Stereo and George Lucas's desire to improve cinema sound with particular regard to the placement of sound effects, achieved when his company, Lucasfilm, developed the THX Sound System.

The guide explains decoding, wiring set-ups, integrating hi-fi systems with home theatre systems and speaker choice, right down to planning speaker placement in a variety of different-sized rooms, and is available through Wharfedale distributors and retailers.



MK 3

for large areas
(Radio Remote Control)



CRACKED OIL MACHINES

BY

CIRRO LITE (EUROPE) LTD

- * FINEST QUALITY MIST EFFECT
- * COSHH TESTED AND APPROVED SYSTEM
- * PHARMACEUTICAL GRADE OIL
- * USED BY PROFESSIONALS
- * BACK UP HIRE STOCK
- * BEST VALUE AVAILABLE.

Micro Mist

Portable machine



Manufactured in the U.K.

CIRRO LITE
(EUROPE) LTD

3 STAR WORKS
SALTER STREET
LONDON NW10 6UN
TELEPHONE: 081 964 1232
FACSIMILE: 081 964 3134



THEATRE DIRECT

(Formerly Ancient Lights)

Lighting • Staging Sound

Hire • Sales • Service

Corporate and Special Events

Please telephone for
a Hire or Sales Brochure

Unit 2, Kilmaine Close, Cambridge. CB4 2PH
Tel: 01223 423010 Fax: 01223 425010

ON TOUR

by STEVE MOLES
AND PRODUCTION NEWS

The Doobie Brothers

Foreigner

Sheffield Arena

LD: Steve Owens

SD: Mike Kelly/Greg Price

Sheffield Arena was rigged for half house - as it transpired, a very full half house. Not a reversed baseball cap or lumberjack shirt in sight, but a half house full of middle-aged fat people, so I felt right at home. The occasion was the double-header of the Doobie Brothers and Foreigner: when was the last time you saw either of these two billed to appear in England? This was either going to be very sad or we'd all go home and talk about the good old days over our cocoa. Growing old gracefully is all about the way you cut your cloth, and like a nice pair of Marks & Spencer corduroys, the sound and lighting production carried for the two bands was a quality fit, even if it did have to accommodate an expanded waistline.

SOUND

Soundwise, doing a double header with two groups of this stature could make for double headaches. SSE were providing the Electro-Voice PA system and two complete sets of front of house and monitor control systems. Well, that's not entirely true - for example, they provided just one rack of 16 TC 1128 digital graphics for the monitors, but then this is exactly the sort of show when such an expensive piece of kit comes into its own. The two Midas XL3 monitor boards were set either side of stage, and by simply running a cross-stage snake for the graphics control panel (TC6032) both engineers could comfortably run their on-stage sound through the same piece of hardware. No small expense though, and neither were the two Yamaha PM4000s out front and the huge array of effects that accompanied them.

Mike Kelly was knob-twiddler for the Doobies: their long time monitor man, he has only recently made the move to front of house, and no, he didn't rip everybody's head off with the vocal mix. Surprisingly, one area I did feel was over indulged was the drums. The Doobies have two drummers (why? I don't know - they're just that sort of band - two keyboards, three guitars and a bass-man), and both can play hard. There were times when the drum sound sent reverberations crashing through the room whilst the Doobies' exquisite harmonies (for that is their forte) struggled to compete. Still, it was only occasional and Mike did have plenty of other things to occupy his hands and ears.

Greg Price, mixing for Foreigner, had a smaller band, just the one vocalist, to grapple with, but in some ways a more dynamic sound environment. The power chords from Mick Jones' Les Paul underline the style of Foreigner's music, verging on the heavy with a dusting of the anthemic, and it would be all too easy to let this instrument dominate the mix. The guitar needs to sound big, strong and fat, but not at the expense of the rhythm section and Lou Gramm's vocals. This was well achieved by Greg and without recourse to sheer volume. Greg is a big fan of the Electro Voice PA, and especially the SSE version. "I first used this PA when I was mixing for Poison. I've used all sorts



A 'quality fit' double-header production for Foreigner, above, and The Doobie Brothers, below.

before, but this is different. Comparing this to the original is like night and day. I think Chris Beale is probably the most intelligent man in the sound business at the moment. The way he and the company have improved the system is fantastic." (SSE's own customised version of this PA is now available direct from EV).

LIGHTING

Lighting for both bands was designed and operated by Steve Owens. Steve has been lighting Foreigner since they started this tour just over a year ago and added the Doobies to his responsibilities shortly after they joined for the European leg. Having only done a few shows with the Doobies in the US, he spent several days pre-programming on an Icon board at LSD's California base. He arrived in the UK only to find the disk almost totally corrupted by infection from cheap games loaded into the Icon's back-up Macintosh computer. (Road crews have now been warned). He has managed to rebuild some of the show (and lost a few nights' sleep) but this was still an on-going process for the show featured here.

The LSD system comprises three trusses (204 Pars, 17 sections of pre-rig) a rear cyc lit by four MoleMags and 24 Icons (8 on the floor). The trusses were arranged asymmetrically; rear-high stage right end; mid-high stage left end and angled from upstage to down; front straight across stage but hinged 2/3's across and angled down to stage left. It all sounds a bit odd, but was in fact quite pleasing to the eye and also the configuration made both the stage seem larger and the lighting rig seem greater than the sum of its parts. There were also three LSD hexagonal pods hung from the rear and mid, and half a dozen triangular slashes of grey scrim stretched between various points on the trusses which forced the perspective and added to the illusion of size.

Despite the lack of rehearsal, Steve produced a very accomplished show for the Doobies. With a



big and busy band he used main multi-colour combinations and relied upon the four house spots to cover the vocal roles, which were swapped furiously. (It would appear all eight band members can sign, and take the lead vocals at that). He did attempt, and pull off, some quite striking Icon effects for some songs, others he has obviously yet to bring into the repertoire, unless the moves were the victim of the computer game bug!

With Foreigner, it was quite noticeable how much more time he has been working with them. He often chose single colour washes from the Par system and worked the Icons much harder to provide the visual dynamic. Pencil beams for one song (an effect he didn't use for the Doobies at all, and in truth it would probably be inappropriate for their more melodic style), and some very nice gobo effects across the back-drop for another. For one of the band's few ballads Steve managed to persuade the Icons to produce a single spot of colour (deep violet in this instance) with a rotating gobo of white spots around it, an effect I've not seen before from any automated lamp. All round, a very polished light show with some nice new touches and a few old tricks.

As I said at the beginning, it could have been a sad show, but as it transpired both bands managed to get the crowd on its feet and even yours truly tapped a toe once or twice. Visually and acoustically it was very well executed.

Cyndi Lauper

Sheffield City Hall

LD: Dave Maxwell

SD: James Geddes

A diminutive figure walks on stage. Wearing a black mini dress, knee length black stockings laced in scarlet silk ribbons, and sporting a shocking yellow mop of hair on top, this sparrow of a woman brings with her a personality the size of her home town, New York. It doesn't hit you that way immediately, she innocently says "Hewho" sounding for all the world like a female Elmer Fudd, then launches into her opening number. But slowly, insidiously, song by song, she insinuates herself into our hearts. She has the humour and garishness of Phyllis Diller, the innocence of Shirley Temple, and most importantly, she has the common touch. When halfway through her show she lets backing vocalist Catherine Russell take centre stage to sing 'Simple not Easy', and adopts the backing role herself, it seems the most natural thing in the world. The focus of attention shifts easily from star to support, no mean achievement when you consider the previously stated dimension of her personality, and a sure indication that despite the kitsch persona, the ego is well under control.

SOUND

The hardest part of front of house sound engineer James Geddes' job is managing the sheer diversity of her talents and materials. "She plays guitar, melodeon, washboard and dulcimer, plus the style changes, there's hip-hop, Appalachian folk, reggae and hard rock." Not only this but the band features keyboards, guitars, drums and drum loops, as well as a host of acoustic string instruments, mandolins, something that resembled a sitar without the drone section, and most especially violin.

Britannia Row are providing the PA for the tour (inevitably a mixture of Flash and Floodlight system), as company director Brian Grant said of James: "He has a great understanding of the dynamics of this show." This is fortunate indeed, for the stage environment is best described as 'imbalanced'. For many of the songs, but not all, he is obliged to ride the faders of his Yamaha PM4000, the difficulty being as James said "to layer it all in there." Cyndi herself uses three different microphones during the show, an SM57 (the old faithful), an 87 wireless, and just occasionally a headset boom mic, and roams the stage with each and all of them - up on the side fills for a ballad (the beautiful 'True Colours') and quite frequently right in front of the floor stacks to reach her fans in the corners of the hall. Seth Goldman, mixing monitors from a Midas XL3, is presumably also kept pretty busy by this activity, but despite the fact that Cyndi uses an in-ear monitor system she only once appeared to suffer any discomfort, and this as she admitted was due to her own screech of exclamation during a period audience banter.

Notably, James uses a DBX 120X Boom Box through an auxiliary send to selectively fatten-up the odd instrument here and there. For the most part the general sound mix from the subs is kept tight and clean. When the extra emphasis is added it's clearly discernible where it's come from, bass guitar, drums or keys, and has all the more impact for that. Despite it being a busy show, it was nice to see James take the time to say to Dave Maxwell on lights "Have a nice day" when Cyndi threw in a song he'd never heard before. Nice, because the song has a false ending and James was able to signal this to him. This obviously comfortable relationship between sound and lights is borne out



An open show, plain set and simple 'loiting' for Cyndi Lauper.

by the tale of how Dave Maxwell came to be lighting designer for this tour. A designer (who shall remain nameless) came over from the States to light the show.

LIGHTING

Despite strong hints that moving light technology was inappropriate he imposed three types of wobbly mirror on the show. (The instrument manufacturer is not important here, it is the artiste's preference that is the issue). After the first show he was told in clear language: "Oiyem noit Genesis" and sent packing back to SuperMick's yard to redesign during the following two days off. Unfortunately, the damage was already done, confidence was breached (oh! how fragile is the relationship between artiste and production), and during these two days the decision was taken to restart with a clean sheet and a new designer.

Production manager Jonathan Clearey (no slouch himself behind a lighting desk in the early seventies, when welded to the Rick Wakeman camp) was about to fly someone else in from across the pond when Hugh Richards (part of the Britannia Row team) piped up: "Why fly someone out, you've got just the man for the job right here on the lighting crew." Dave Maxwell (featured last year lighting Elvis Costello), having witnessed rehearsals and the first show, quickly resorted to a generic two truss, Pars and ellipsoidals rig, brought in five Groundrows and adopted a good old Avo QM500 out front. Unfortunately, Dave and the rest of the SuperMick crew had completed the original LD's rig rebuild just in time to rebuild once again to the new design. Loading into the Royal Albert Hall, Dave slipped and badly

sprained his ankle. I mention this as, if it hadn't been for his heavily bandaged ankle, Dave might have lost the job as well. For some reason Cyndi thought Dave's name was actually Mark, he blithely ignored her for three days thinking she was addressing someone else and it was only when she mentioned his rudeness to Jonathan Clearey and he asked "Who's Mark?" "He's the loiting goiy wid de ankle," that the day was saved.

Despite the rocky start, all is now well. The light show is, in truth, somewhat pedestrian by comparison to most shows of this era, but is none the worse for that. Cyndi doesn't like red, so the washes are all blues, greens and ambers, with a nice warm pink in the front truss ellipsoidals to warm up the band's skin tones. Much of the show is keyed in open white with perhaps 8 or 12kW of wash from the rear and a similar colour across the blue sky and fluffy cloud backdrop. Dave has a back truss spot (Lycian 400 HTI) and four further Lycians out front. The stage is open, drums on a riser stage left, keys to the right, and a low, four step set of stairs between them. The essence of the show is openness, the set is generally plain, the lights basically simple - Cyndi is busy and holds attention, so anything more would be a distraction.

Cyndi's show is vaudeville. Her tale of performing three shows in three countries the previous day: "We flew into Nice. I want you to know that's naht somebowdies liddle choild," was witty, not sympathy seeking. Her poetic and strong narrative ability in recounting tales of her Bronx childhood painted vivid pictures only matched, in my experience, by Springsteen's cosy chats. She rose to fame in this country in 1983 after the success of her album 'She's So Unusual', and 12 years later, she still is!

ASTROCLOTHS... For Effect

Starcloths

Fibre optic background effects for the stage and entertainment industry.

- Theatre ● Product launches ● Conferences ● Corporate events
- Discothèques ● Social clubs ● Film & Television ● Concerts ● Exhibitions

Peacloths also available

Manufactured at our Manchester production facility, all products are flame retardant conforming to BS 5867 Part 2

MAKE A COST EFFECTIVE DECISION -

buy direct from the manufacturer.

Astrocloths can be purchased or hired.

For advice or a quotation please contact:-

Playlight FREEPOST - MR9555

Manchester M16 8HB

Manchester: 0161-226 5858

Birmingham: 0121-328 1591

London: 0181-965 8188



CEREBRUM IN 1995

*John Offord introduces L+SI's Special 25th Anniversary Feature
with an interview with managing director John Lethbridge*

The contrast between the dreamy and intellectual surround of Cerebrum Lighting's start-up days in 1970 and the international high-tech commercial operation we see in 1995 may appear dramatic in the extreme. In addition, the thread that links one to the other is in a certain sense an antithesis of the meaning of cerebral - and that's practicability. But what's in a name? If ever a company won its way to success by providing the widest possible range of the best possible products to the broadest possible market place in the most organised and professional way, it's Cerebrum Lighting.

From the very beginning the company established an integrity, trust and standing that has placed it in the premier league of major distribution outlets worldwide across its 25 years of continuous operation.

The backdrop has changed along the way of course, and we like to think that the industry has begun to 'grow up'. Most recently, rationalisation, nudged on by the necessity of staying alive during recent recessions, has become the norm in the manufacturer/distributor relationship.

"Strand were probably the first company to begin paring down the number of dealers they were involved with and to start working almost exclusively through distributors," explained John Lethbridge. "In turn, other companies such as Pulsar adopted a similar approach and cut down to their current 16 in the UK. Optikinetics are also in the process of reviewing their set-up with a view to creating a smaller number of 'specialist centres', all of whom will have product in stock for demonstration purposes. Other manufacturers are now taking similar steps, and there's certainly a growing trend towards cutting down the number of distributors and concentrating effort onto fewer competent organisations. A definite pattern has emerged from the recent recessions. During these periods some manufacturers decided to service as many people as possible simply in order to survive. But as things picked up again and delivery times got longer they began to realise that they needed a network of good distributors."

On occasion, Cerebrum has arranged worldwide exclusive distribution on certain products. "Cerebrum has always worn two hats ever since we started in wholesale distribution, which began with Powerdrive. This was the first product we ever had worldwide exclusivity on and it was only as a result of this that we adopted a tiered pricing structure for retail, trade and exclusive distributors overseas. Business built up gradually and Powerdrive has always been a product that has sold predominantly into Europe, a factor we attribute to its weight/price ratio with freight prices making it uneconomical to airfreight beyond the Continent.

"Building on our experience, we then entered into an exclusive distribution deal with Celco which meant a very different approach to product marketing than the one we had taken with Powerdrive. With a product like Powerdrive it's relatively easy to persuade a company to take a small stock order, but when you're selling high value lighting desks people need to be very sure of the market before they



Cerebrum's premises in New Malden, Surrey.

will commit to the cost. Taking on the Celco line changed the way we exhibited at trade shows and opened our eyes to the international market - the image we presented at these exhibitions was critical. It became clear that there was a degree of conflict between the range of products we were handling, which were largely discotheque, and the Celco line, so we decided that it would serve both areas better if Celco had its own unique image within our role as worldwide distributors. As a result we always had two stands at shows, one for Celco, one for the rest of the products we handled.

"There has always been a dichotomy between the company selling a range of products around the world and representing certain British manufacturers and trying to find exclusive distributors for them. We did it on an exclusive worldwide basis for a limited period



John Lethbridge.

for three companies: Advanced Lighting Systems, Light & Sound Design and Axon Digital Design, manufacturers of ShowCAD. Each has been a learning curve in its own right, but with ALS and LSD we learnt how difficult it is to take on a worldwide exclusive role for companies who already had their own dealers set up previously. It's very difficult to get people to accept that they now have to buy through a middle man.

"ShowCAD presented the same challenge as Celco, and added to this was the fact that both the product and the company were relatively unknown at the time. ShowCAD was easier in some respects because it's software-based and therefore easier to demonstrate, whereas with Celco it was a very costly exercise exhibiting the product around the world. ShowCAD is an incredibly sophisticated product that needs two to three hours to demonstrate effectively and at trade shows you never have that luxury. You therefore have to do it on a one-to-one basis. As with Celco, ShowCAD began to take off, and because it was so successful, they understandably made the decision to share the distribution with other companies.

"With Celco we were even more so the victims of our own success! The Celco relationship was successful to such an extent that it was inevitable that they would go their own way. The last year we exclusively handled the range - 1989/1990 - we had a turnover of £1.6m on Celco alone, £750,000 of outstanding orders, and we were quoting up to nine months delivery. With Light & Sound Design, I think it's true to say we were a little over optimistic."

Alongside an identity with companies such as Celco, Cerebrum has always been seen, by most people, as a one point source of a wide range of product. At least that's what I thought - but John Lethbridge developed the point. "We are involved in so many areas that we tend to be viewed as different things by different people. Some see us as distributors of band

lighting, others think we specialise in discotheque lighting and yet others see us as stage lighting distributors. In fact, we get involved in a wide number of market areas and I think we are probably unique in that we can handle any type of sale and installation.

"This has been particularly helped over the last year by the flow of new people into the company. As a result, there is now a much greater level of academic skill to draw on and all the staff are highly trained. We are getting more involved in project management and there are more than a few interesting things on the horizon."

The background to the recent changes at Cerebrum came about as a result of a decision made in 1993 when John Lethbridge decided to take up the offer of having a company 'health check' run by The Federation of Crafts and Commerce. "Consultants came in and interviewed the key people to establish where our strengths and weaknesses lay," explained John. "The driving force behind this decision was that I felt that Cerebrum had reached a plateau in terms of turnover growth. We were advised to contact the local TEC (Training and Enterprise Council) and in doing so we discovered that they ran a Business Change Programme through which they offer grants to 10 local companies a year. The minimum requirement was that the company should employ 15 staff, which we just met, and following our application they agreed to offer us funding for the purpose, which we had to match.

"A consultant visited regularly and met with all the managers to assess where our business skills could be improved and to define where any problems lay. A combination of in-house workshops and some external training were then put into place. It's been a learning process for all of us as we all come from different backgrounds and no-one had formal training in either leadership skills and business management. One of the first suggestions of the consultant was to reorganise our sales approach. Previously we had three people deciding sales policy but we have now split the roles into two distinct areas - one being customer services, the other business development.

"One of the down sides was that during the programme we lost four members of the sales team for quite different reasons. However, they have since been replaced and we now have what I feel is a more widely-based cross-section of skills within the company.

"The first to join was David Wilkins who was previously with Strand Lighting where he had been a specialist in the educational field. His knowledge of the schools market gave us an added dimension. Shortly after we took on Paul Wordingham, a young physics graduate. We were then joined by Peter Threadgold as project manager. A former customer, Peter had worked at Eurolight before starting up on his own with The Lighting Company. We changed the job designation slightly to make the most of his management skills and he is now also responsible for quality control and the raising of standards within the company. The fourth person we took on was Pete Sherrington, also from Strand, where he was the north of England sales representative.

"Supporting the new members of the team are people such as Stuart Maseyk who has been with the company for four years and is one of our principal contacts with regular customers, and Graham Whittaker, of course, who is a co-director. One of the biggest changes has

ShowCAD

The Ultimate in Show Control...

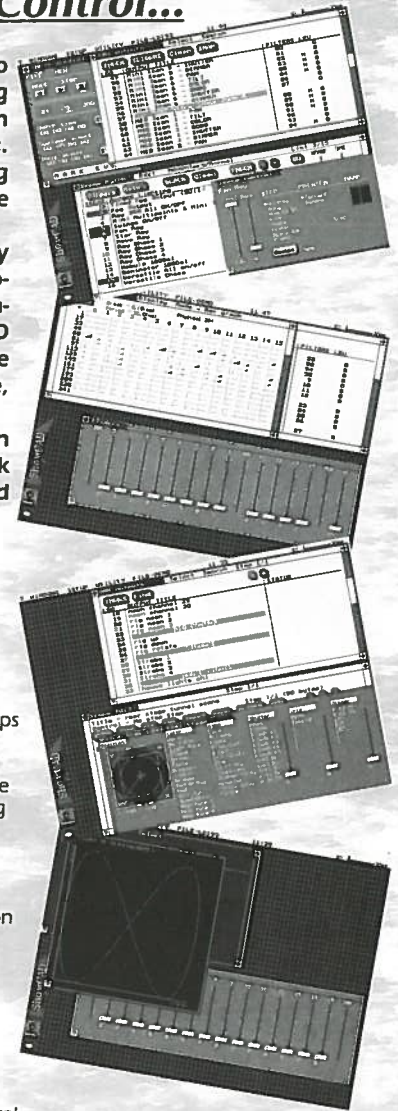
ShowCAD is a rapid and easy to understand control system, providing impressive and powerful features often found only on more expensive systems. These features are constantly expanding and improving to accommodate the demands of new technology.

Since ShowCAD's launch, many higher end control desks have been obsolete by newer models in order to accommodate the latest technology. ShowCAD however, has continued to stay up to the minute with every new software release, responding to user's and market demand.

ShowCAD is currently installed in environmental projects, theatres, rock shows, TV studios and night clubs world wide. Numerous testimonials to its versatility, reliability, cost-effectiveness and customer's satisfaction are available.

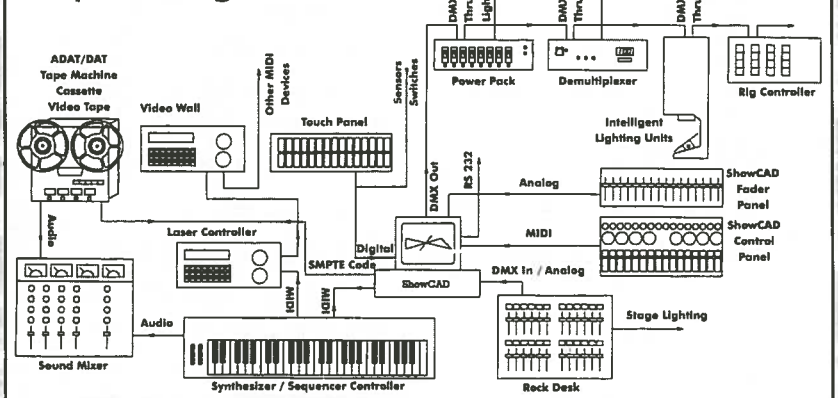
FEATURES:

- 1024 DMX Control Channels
- Templates allow rapid patching & programming
- User-definable templates for intelligent lighting
- Auto-generates scenes for intelligent lighting groups
- On screen Sliders, Joypads & Color pads
- Thousands of scenes can run concurrently
- All scene levels & features independently selectable
- Independent speed, audio, BPM, and tap stepping
- Possibility of thousands of steps per scene
- Soft patching with output levels & limits
- Inserts hundreds of channels with one command
- Snap-function for instant multiscene captures
- Modular programming for block scene construction
- Point-to-Point conventional programming
- Point & Shoot indexing for quick access
- Off-site editing using any text editor
- SMPTE Record / Playback for time code shows
- MIDI Interfacing IN / OUT
- Digital Inputs for Switch & Touch Panel access
- Analog Inputs for external fader access
- Audio input with three separate filters
- User-definable ramps for cross-fades & scene control
- Uses readily available PC hardware
- 24 Hour Modem Bulletin Board software support



Call for a Free DEMO Disk

Sample Configuration



CEREBRUM

 LIGHTING

CEREBRUM LIGHTING LTD

Units 4 and 5, Shannon Commercial Centre,
 Beverley Way, New Malden, Surrey KT3 4PT.

Tel: 0181-949 3171 Fax: 0181-949 3649

Now All You Need Is An Idea.

No matter how unfinished. No matter how ambitious. The amazingly versatile Litestructures range of products will make your concept a reality.

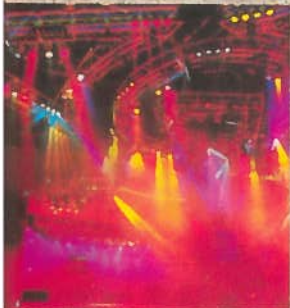
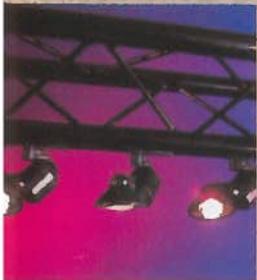
And it'll do it for a very realistic price.

The Litestructures system is the world's best-designed family of interconnecting aluminum truss components – for stage, convention center or showroom.

Every aspect of real-world usage has been considered and planned in – from fabulous strength to weight ratios, to the ability to intermix modular and custom components, to the availability of any powder-coated finish at a minimal charge (with black, white or silver at no extra charge).

Our Astralite range – based on a triangular element structure – is the de facto standard for light & sound suspension. For maximum load-bearing, there's our four-tube Boxlite or Quatralite range. For cost-conscious applications, our ladder-style Bilite range. And for the ultimate in aesthetic simplicity, our new Livelite range – essentially an Astralite system with an integral live electric track for cable-less installation of even your most power-hungry lighting.

Litestructures. Bring us your ideas. We'll bring them to life.



 **litestructures**

Durkar Low Lane, Durkar, Wakefield WF4 3BQ, West Yorkshire, England
Telephone 01924 240800 Fax 01924 254083



John Lethbridge (centre) with Keith Dale (left) and Colin Whittaker of Celco following Cerebrum's reappointment as UK distributor of the Aviator range at the 1992 PLASA Light & Sound Show.

come from the role of women in the company. Mary Barrett, who was book-keeper, has become company secretary and Tracy O'Mahony has taken on more of a management role and is in charge of personnel. She organises training and our work towards the Investors in People Award. Pauline Cann has been with us for many years as export administrator and has more recently taken on the role of customer services manager. So, effectively, we now have a far more solid management structure."

Having thought I knew pretty well what Cerebrum did, I must admit that I wasn't aware that project management was one of their specialist areas. "Before our reorganisation we had to turn projects away because we simply couldn't handle them," continued John Lethbridge. "All this has now changed, and David Wilkins' experience with project negotiation (he worked in association with us as area representative for Strand before joining Cerebrum), has been instrumental in this. As a result, by working closely with our major trade customers, we've won some interesting projects, notably a conference centre for a major high-street bank with the Saville Group, a joint project with JYG for a private residence of a member of the Saudi Royal family, and another joint project with Paul Craig Productions at the Al-Rashid shopping centre in Saudi Arabia (see last month's L+S).

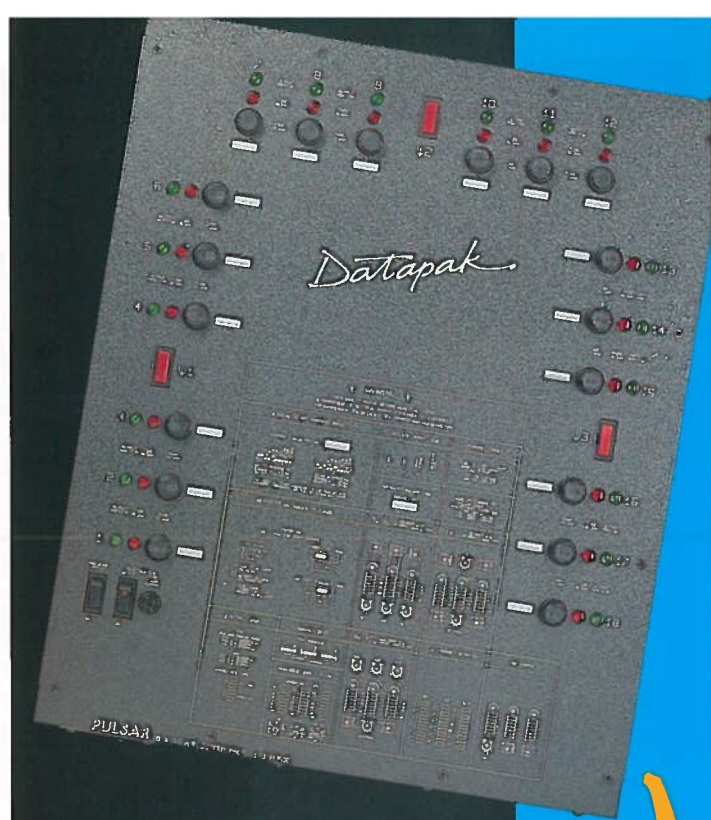
"Our new management structure has also meant that I have more freedom to get involved in these projects, whereas previously that wasn't always possible. I am concentrating on the export clients at the moment with David Wilkins responsible for the UK and certain overseas territories. We are now developing business opportunities more effectively and are taking a much more active role in assisting our customers to win major projects. We now want to develop further the major installation part of the market."

But back to the subject area that I knew I knew about, by reputation. Throughout all the recent changes at Cerebrum, the one statistic that has remained consistent over the years has been the percentage of their export sales, which year on year has regularly accounted for 60-65% of the company's total turnover. John Lethbridge confirmed that the 'boxed goods' side of the operation is still a large part of the operation.

However, he sees the future of the company in terms of major growth coming from the large-scale commission area. "Underlining this approach we've actually split the building into two so that the customer services team are in one side and the business development team are in the other - giving them the chance to concentrate on their 'own' areas. One side is dealing with the fast turnaround of proposals, the other with the fast turnaround of goods. Once a quote becomes an order it gets passed over to customer services to follow it up. It may well be that once the goods are on site it returns to the business development team who may have to go out and train on-site technical staff.

A good example of how effective this network can be was shown by a recent project Cerebrum did for Chelsea Football Club, and it's a fitting way to conclude this interview.

"The brief was to light the supporters club room, but as this was an awkward area beneath the tiered seating, the project was not as straightforward as it could be. The house lighting was installed by the main electrical contractor, N G Bailey, and Cerebrum undertook the final commissioning and programming. Under the supervision of Peter Threadgold, Cerebrum supplied a Strand LD90 dimmer rack catering for the different light sources, a system-wide control station fitted to create various themes for the house lighting, which was pre-programmed by the Cerebrum team. Additional control came from Pulsar Touch Panels for the discotheque effects, with overall control provided by a Strand LX24. For special effects there were 2 Clay Paky Piper Mini Sapphires and 2 Spazial 8s, 10 Par 56s and general Strand luminaires for cabaret effects."



- 18 or 12 Channel versions
- 5 Amp or 10 Amp per channel load capability
- Dimming or Switching versions
- Pre-heat facility on dimming versions
- All models fully Resistive and/or Inductive load compatible
- Single or three phase power input with indicators
- "Status" indicators show output and fuse blown status for each channel
- Analogue 0-10V - PMX Digital (RS 232) - DMX 512 digital inputs
- Internal channel override and digital test switches for ease of installation
- All connections accessible by removal of front cover
- High power versions feature temperature controlled fan cooling

PULSAR
LIGHTING FOR EFFECT

Pulsar Light of Cambridge Ltd
Henley Road, Cambridge CB1 3EA
Tel 44-(0)223 66798 Fax 44-(0)223 460708
United Kingdom



CEREBRUM SERVICE

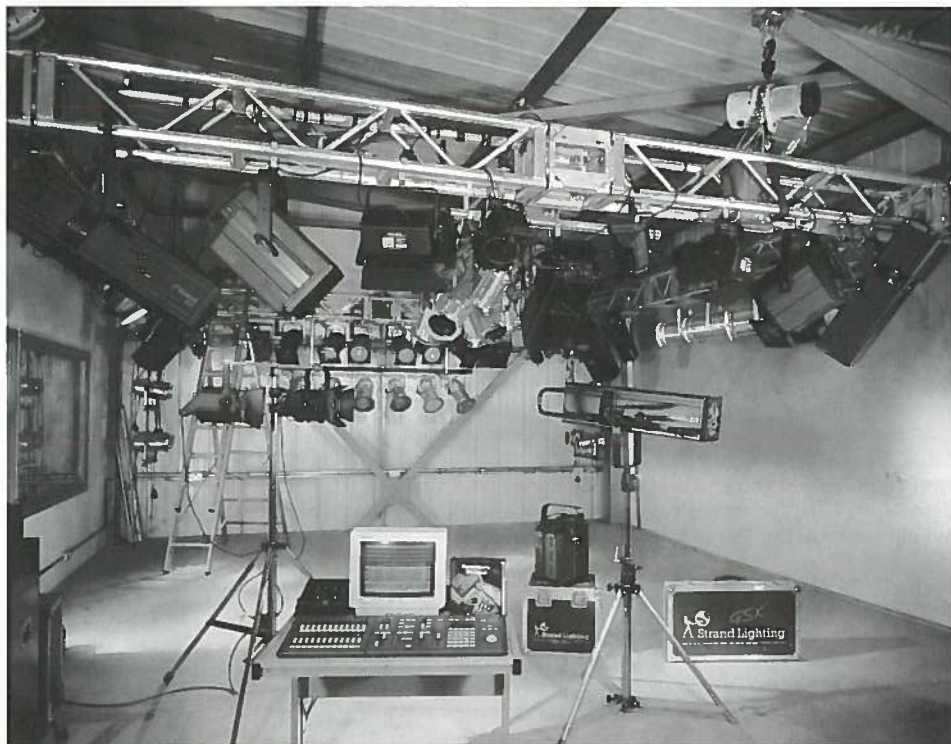
Cerebrum's 25 years in the industry have seen the company grow from a small concern to a major company with a turnover to match. The priority has always been reinvestment in the business, both to improve service to customers and to maintain excellent working conditions and resources for the company's employees.

As a result, the company purchased their modern freehold premises in 1990 and recently refurbished their showroom area to expand the range of equipment on permanent display. In tandem with this, they also developed their in-house product awareness training and seminar schemes.

The customer has always been the catalyst for change and improvement and as a result Cerebrum stocks one of the widest ranges of lighting control systems available anywhere in the UK. The company's sales counter has one aim: to turn 90% of personal callers' orders around in less than 10 minutes - an impressive target to set by anyone's standards. Not only that, the company have a stock library of over 300 product brochures at the sales counter.

Two years ago the company undertook an analysis to determine where their UK customers were located. What they discovered was that the largest base was in the local area with pockets of customers around the regular delivery routes. It became clear that free, quick delivery was a motivating factor in people putting orders their way. This proved the catalyst for the seed of an idea that had already been germinating in John Lethbridge's mind. As a result of expanding business, they decided to open a second operation in the UK, unfolded the map, and by consensus opted for the Midlands. As the company already had a strong relationship with United Kingdom Distributors (their number one Powerdrive distributor in the UK), the obvious solution was to forge a link with the company, and so Cerebrum set up a satellite operation running out of UKD's premises in Leamington Spa, with a sales office and shared warehousing, showroom, servicing and sales counter facilities.

The development has enabled the two companies, in partnership, to provide a much wider range of products and services, plus faster delivery from stock and thereby substantial



The well equipped demonstration room.

savings for clients throughout the Midlands. Future plans include more stock availability over a wider area and further discussions on joint ventures within the UK.

A further development of this philosophy came with Durango, a French company in which Cerebrum has a 25% stake. This is run by Jean Francois Cheron (formerly sales director with Fiat Lux who previously distributed for Cerebrum before Fiat Lux went into decline) and offers all the ranges from Cerebrum, but specialises in the products of Anytronics, Lite Structures, ShowCAD and Powerdrive. The company was also, from day one, the Pani distributor in France which, in turn, led to Cerebrum striking up an arrangement with Pani.

Cerebrum's operation is bigger than you might think. Over 60% of the company's sales are shipped to destinations outside the UK, and they were recognised recently as one of the top 500 exporters in the South of England.

Perhaps one of the most revealing factors on



Part of the office set-up.



Stock ready for despatch.



The final part of the process.

Le Maitre have really hit the spot with their new and good-looking G300. Electronically controlled for constant programmable output, it hazes the atmosphere with a fine suspension. Just perfect for intelligent lighting and lasers. No more clouds thank god!

Keith Hardy, Disco International

Le Maitre

Le Maitre (Sales) Ltd., 6 Forval Close, Wandle Way, Mitcham, Surrey, CR4 4NE.
Telephone: +44 (0) 181 646 2222 Facsimile: +44 (0) 181 646 1955



Cerebrum's sales counter where the customer is king.



John Lethbridge, with his PA and personnel manager Tracey O'Mahony.

Cerebrum's commitment to service comes from the company's corporate mission statement.

It pulls no punches and gets straight to the point: "Cerebrum Lighting is to be the leading industry supplier of entertainment lighting products in Europe, with an international reputation for quality and service." When you realise that this is just the first paragraph in a document spanning two pages, it gives you some idea of what further commitments follow. The main emphasis is on making quality products available and delivering a high standard of service to customers - but there are telling paragraphs too on the level of professionalism expected by suppliers. Given that this is where the chain starts, it's not a bad platform from which to launch a successful business.

CEREBRUM ARE SPECIALIST STOCKISTS AND INTERNATIONAL DISTRIBUTORS FOR

Andolite Ltd
Anytronics Ltd
Axon Digital Design Ltd
CCT Lighting Ltd
Celco
Clay Paky
DHA Lighting Ltd
GE Lamps (Thorn)
JEM Smoke Machine Co
Lee Filters Ltd

Le Maitre Ltd
Light Processor
LiteStructures Ltd
MA Lighting GmbH
Maris Ensing Ltd
Martin Professional Ltd
Mode Electronics Ltd
Multiform Lighting Ltd
Optikinetics Ltd
Osram Lamps

Ludwig Pani
Powerdrive Ltd
Pulsar Ltd
Rainbow Colour
Changers
Strand Lighting Ltd
James Thomas Ltd
Total Fabrications Ltd
Trillite
White Light Ltd

CCT LIGHTING

**With a Worldwide reputation for excellence,
quality and innovation –**

*a comprehensive range of Stage
and Theatre lighting; Control Systems;
Colour Change and Optical
effects; Stage Accessories,
Spot Bars, Rigging and
Curtains; Mobile Service
Teams and Portable
Appliance Testing.*



CCT Lighting – Sales

4 Tudor Court
Brighton Road
Sutton SM2 5AE
Surrey, U.K.
Country Code: 44
Tel: (0)81 770 3636
Fax: (0)81 643 9848

CCT Lighting – Projects

Hindle House
Traffic Street
Nottingham NG2 1NE
United Kingdom
Country Code: 44
Tel: (0)602 862722
Fax: (0)602 862546

CCT Lighting Inc.

1260 Lyell Avenue
Rochester
New York 14606
U.S.A.
Country Code: 1
Tel: 716 458 5790
Fax: 716 458 5793



PICK UP A

**12
PACK**

OR A 6 PACK TOO!

**PORTABLE, INTELLIGENT
12ch x 16A & 6ch x 25A
DIGITAL DIMMERS**

THE
ID
SERIES

Z610 88
A touch of Brilliance

Hart Road, St Albans, Herts AL1 1NA. UK.

Telephone: St. Albans +44 (0)1727 833271

Fax: +44 (0)1727 843676

CEREBRUM HISTORY

John Lethbridge's first foray into the world of entertainment lighting was with Pete Samuel, a fellow land survey draughtsman, and the pair sold their services under the name of the Mass Spectrometer Light Show. This was March 1969, and the 'show' consisted of a converted Hanimax slide projector, some bottles of ink and a very early analogue 'strobe' (a cardboard disk attached to a food mixer, held in front of a projector).

Things went well for this highly inventive venture, and John and Pete soon found themselves earning up to £6 per show as twice-weekly residents at Eel Pie Island, Twickenham. After their first year, they had already worked with Mott the Hoople, Genesis, Small Faces and Hawkwind, and were soon to add Pink Floyd and Elton John to their impressive list of clients.

In March 1970, John gave up his office job and advertised real electronic strobe lights for sale in Melody Maker magazine. The response was instantaneous; he realised that the potential to start a small retail business was very much within his grasp. Cerebrum Lights made its first public appearance as a lightshow at an open-air pop festival at Portsmouth Stadium on 4th July, 1970. Soon, the fast-selling strobes were added to by custom-built projection effects, and among Cerebrum's customers that year were Paul Woodhead (founder of ICElectrics) and Todd Wells and Dave Street (founders of Soundout Labs which later became Soundtracs plc) and L+SI's associate editor Tony Gottelier.

The meeting with Gottelier turned out to be fortuitous and provided another boost to the company, as one of Tony's colleagues had designed a sound to light unit which would be sold through Cerebrum. Meanwhile, the light show was becoming better equipped and now had several projectors, including an old Aldis 500W Tutor, some brand new Rank Tutor 2s, an overhead projector in which they projected live insects and newts as well as oils, 8mm cine, strobes, UV, a home-made flashing footlight system for on stage use and over 1,000 special slides. The main effect was still created by boiling special inks in the projector gate, but new ideas were essential, as competition was hotting up. Rival light shows were appearing in the Surrey area, among them one called the 'Infusoria Five Acre Light Show' run by Neil Rice, now of Optikinetics.

Sales enquiries were increasing constantly. Tony Gottelier and a young light artist called Phil Brunner, who was making 6" liquid wheels which he fitted to converted slide projectors, were called in to help with a complete club installation - 'Bumpers' in Piccadilly Circus. Out of this project was born Meteor Illusion, run by Gottelier and partner John Jeffcoat, who were the first company to give Cerebrum a monthly account. Phil Brunner then teamed up with Keith Canadine from Krishna Lights and Neil Rice to form Optikinetics, while Meteor opened a small shop near St. Paul's Cathedral. Here, they acquired exclusive distribution rights for a new controller - the Soundlite, invented by a couple of Cambridge graduates called Paul Mardon and Ken Sewell, whose company went under the name of Pulsar Light of Cambridge Ltd. Cerebrum started to offer the new Pulsar range, together with some projection effects from Optikinetics, including the very first set of 3" effects cassettes and a Tutor with liquid wheel.

With mobile discotheques starting to take a real interest in lighting, as well as sound equipment, all the new companies experienced rapid growth. John Lethbridge was still operating out of a garden shed in New Malden, and was attempting to branch into combined electronic music and light shows. Joining forces with Pete Aldgate, Pete Aldworth and Mike



CEREBRUM Airways chartered a 'light' aircraft to fly them and other exhibitors to the DIFA exhibition in Munster. Pictured before leaving (from left): Pulsar's Ken Sewell, Cerebrum's John Lethbridge and Colin Whittaker, Mode's Dick Steward and Optikinetics' Neil Rice.

We found this hidden away in Cerebrum's scrapbook. The details are not too clear so just in case you can't read the caption, it shows the assembled flares of Pulsar's Ken Sewell, John Lethbridge, Colin Whittaker, Mode's Dick Steward and Neil Rice of Optikinetics - sorry - but we couldn't resist it.

*Working together
since the beginning*

Test One



- Simultaneous control of 4 DMX channels
- Large LCD display, switchable to show output level or channel
- Slider control of output level
- Progressive low battery indication
- Memory of addressed channels and level even when unit is in stand-by
- Automatic shut down to extend battery life
- Quick address selection via 3 switches
- Output via female 5 pin XLR socket

Anytronics Limited

5 - 6 Hillside Industrial Estate, London Road,
Horndean, Hants. England PO8 0BL.
T 01705 599410, F 01705 598723

Cooper, the quartet spent 14 months getting together a show called 'Waves after Dusk.' All the profits of Cerebrum's sales were put into the new venture, invested in a 600W stereo PA system, tape decks, Dolby units, a 40' free-standing projection screen and several new lighting effects. It soon became obvious that the group could not raise enough money to finance the project so they approached the Arts Council for a grant - which was refused! - and the venture came swiftly to an end. Following a brief escape to America, John teamed up with Pete Aldworth and Tony Holmes, and Cerebrum became a three-way partnership. By now the garden shed was getting a little cramped and the neighbours were none too pleased with the comings and goings in the middle of the night. When a council order banned them from running a business from a residential address, they were forced to find a shop and duly moved into new premises in June 1974. The opening of the shop was heralded as 'Cerebrum Lights New Discount Disco Centre'. John generally ran the shop whilst Pete and Tony went off on tour with various bands.

Light shows were now considered dated, but commercial AV presentations were proving a lucrative new venture. However, the turnover from the first 12 months was erratic and at the end of the first year, the trio decided to split up. John elected to carry on with disco sales, while Tony took on the stage lighting hire. Cerebrum Lights now became Cerebrum Lighting (Sales) and Cerebrum Lights Equipment Hire. Tony Holmes wound up his side of the operation after only three months, but John persevered, running his side of the business single-handed.

In the summer of 1975, John was introduced to Keith Dowzell, a manufacturer of drum stands and pedals who had recently branched into making music stands. Keith's company was called Powerdrive Drum Co, and the exclusive dealership that was set up has proved to be one of the most enduring business relationships. Cerebrum were now offering trade discounts on products from Pulsar, Meteor, Optikinetics and Powerdrive, among others. Also in 1975, an old friend of John's, Steve Prince, joined Cerebrum and a new firm, called 'Gig Rigs' was started, based on a lighting rig of 24 lanterns with rigging, dimmers and cables that would fit into the back of a Ford Cortina Estate and could be assembled in an hour and a half. The company then went on to exhibit at Discotek 75, and after John attended the Frankfurt Musik Messe with Keith Dowzell, it was decided that Cerebrum should exhibit in their own right the following year. It was here that the vast potential of the export market was realised, and a string of important new contacts were made.



How times have changed: an early stock take for Cerebrum Lighting's Tony Parker, Pete Samuel, John Lethbridge and Steve Prince in 1972.

FOX Presents at

EDEN PARK HOTEL
422 UPPER ELMERS END ROAD
BECKENHAM

★ A HAPPENING EVERY THURSDAY ★

Thursday 19th February **JUICY LUCY**

.. 26th .. **QUINTESSENCE**

.. 5th March **FREE**

.. 12th .. **MIGHTY BABY**

.. 19th .. **HEAVY JELLY**
Featuring JACKIE LOMAX
and BARRY JENKINS

MASS SPECTROMETER LIGHTSHOW

LICENSED BAR MEMBERSHIP 7-45 p.m.

Buses: 194A & B **Opp Eden Park Stn**

PRINTED BY L.E.A. PRINTERS 435 NEW CROSS ROAD, LONDON. SE14.

An early outing for John Lethbridge's Mass Spectrometer Lightshow.

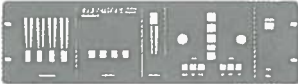
Things were now very much on the up for Cerebrum Lighting (Sales) who became Cerebrum Lighting (Sales & Hire) Ltd the following month - their turnover doubling during the year. Later that year the full time staff increased to four. By the end of 1978, the company's turnover had increased 500% in just two years.

The turning point for the company came in 1980. At the time, Cerebrum stocked over 700 items, held £150,000 worth of stock on the shelf and supplied dealers in over 35 countries, and by the end of the year the company had 10 full-time staff. It was also to be the year in which Cerebrum were approached by Celco. It was the dealership for Celco's lighting control desks which helped to change the way in which Cerebrum's identity was considered by the industry at large. No longer were they a supplier of the simpler hardware concerned with lighting systems - they were now involved, through Celco's ground-breaking Gamma desk, with hi-tech innovation of a kind that had taken the wind from the sails of the supposed 'leading' lighting control manufacturers. The Gamma was an example of what John Lethbridge calls 'talent spotting' - applied to both companies and products - which has been a strength of Cerebrum since the beginning. It also led the company towards basing itself strongly on technical and academic expertise, in keeping with the fast-moving technology in the industry.


Technical excellence
— rugged reliability from . . .

MULTIFORM LIGHTING


Discotheque




INTEGRATED CONTROLLER



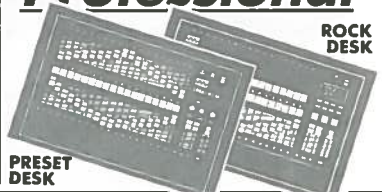
MULTIZONE CONTROLLER




CLUB CONTROLLER




TOUCH PANEL




ROCK DESK



DIMMER PACKS




SLAVE PACK



STROBE

Professional



PRESET DESK

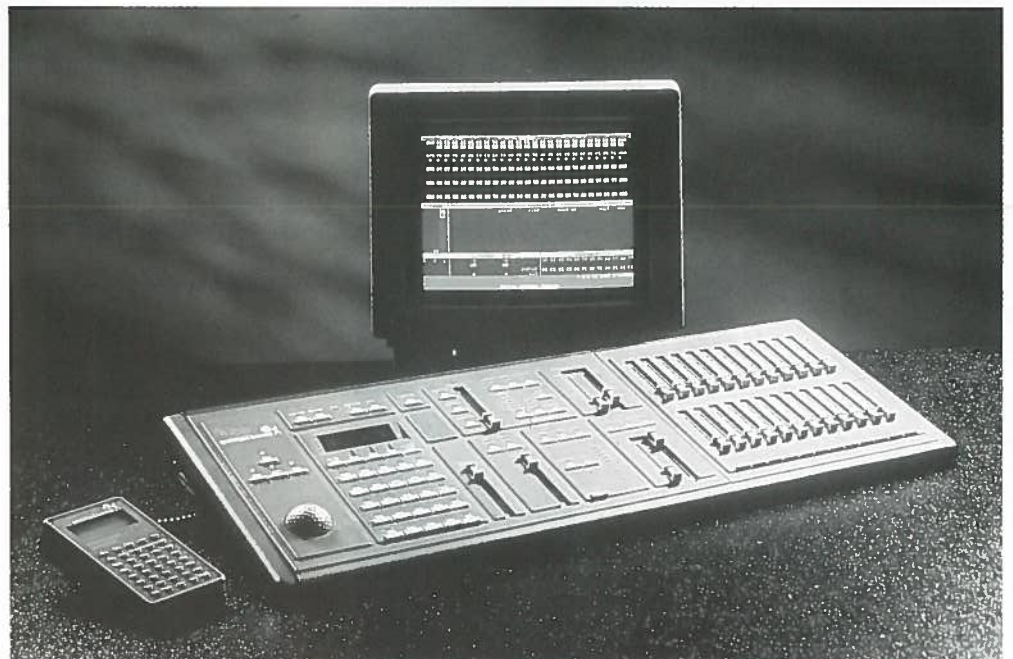
Multiform Lighting
Bell Lane, Uckfield
East Sussex TN22 1QL
Tel (0825) 763348
Fax (0825) 763310
Telex 877173

Full information on our products

Name _____ Address _____

Stage Disco
Lighting

MAX
S
G



Don't replace the desk, just upgrade the software.

Strand's GSX™ console announces a new era in lighting control, offering you the flexibility to choose and upgrade your console software via the integral 3.5" disk drive. Simply select one of the Genius™ foundation applications for 25, 50, 75, 100 or 125 channels, then add Kaleidoscope™ for advanced effects and color scroller control, and Communique™ adding MIDI, MIDI show control, DMX in, RS-232 control and more.

Call today for more information.



CEREBRUM LIGHTING LTD

Units 4 and 5, Shannon Commercial Centre,
Beverley Way, New Malden, Surrey KT3 4PT.
Tel: 0181-949 3171 Fax: 0181-949 3649



Strand Lighting



- A wide range of dimming & switching packs that span from portable Mini-Pack units to 2U, 4U and 12U standard 19" formats

- The range covers a vast 3, 4, 6, 8, 12 & 18 channel per pack capability with either 5 or 10 Amp channel load capability. All units are designed to operate on any international line voltage

STATUS PACK FEATURES

- Channel output indication
- Fuse blown indicators

Individual channel test & override facility



DIGITAL CONTROL

- The Universal Interface provides cost effective interfacing of Pulsar packs to PMX, DMX512 or MIDI digital control

PULSAR
LIGHTING FOR EFFECT

Pulsar Light of Cambridge Ltd
Henley Road, Cambridge CB1 3EA
Tel 44-(0)223 66798 Fax 44-(0)223 460708
United Kingdom

Dimmerpack

MARIS ENSING

If you have seen a very tall, lean and lanky haired individual, with a knowing twinkle in his eye, hanging around various stands at numerous trade shows recently, the chances are that the person you saw was the lofty Dutch electronics and software wizard - Maris Ensing, whose unusual range of innovative gadgets and gizmos are now available exclusively from Cerebrum Lighting.



Maris Ensing's Stinger.

After taking his degree in information technology and electronics, Maris leaned towards a career in aerospace and qualified to work on spacecraft hardware which became his speciality while at SIRA, for whom he worked on many such related projects. AV software must have seemed elementary by comparison, so when Ensing moved to Electrosonic as software development manager in 1991 he wasted no time putting his stamp on a raft of, by now, well known products. Names such as MSC and BSC, C-Through and Ancor all systematically flowed from Maris's hyperactive brain.

Now that he has established Maris Ensing Ltd at his home in Meopham a new string of products has resulted over the past couple of years, many stimulated by the rapid acceptance of DMX512 as the industry standard control protocol. Others, presumably resulting from the aerospace connection, relate to simplifying control of motion bases for flight simulators. He has recently purchased a 16-seater flight simulator, now resident in his front garden, to enable him to try out his software developments on site!

Cerebrum are handling the whole range, but have selected five which they expect to be the most popular. 'PicoDMX' is claimed to be the world's smallest DMX reader, analyser and transmitter and just the job for fault-finding and testing. 'DMX Fix' adjusts the control signal to receivers which misbehave, or do not behave at all, when they receive full-speed DMX (and there are plenty of these around), or will even smooth out that annoying, and eventually costly, jitter which can occur with some gel scrollers. 'DMX Emulator' is a DMX program store, enabling 'canned' shows to run without a desk after initial programming.

Image Stick breaks ranks with all this DMX gadgetry, being an attention-getter with a difference. It somehow fools the eye into seeing a three-dimensional image generated from a single 40cm vertical row of ultra-bright leds. Between 10 and 50 simple, graphical images may be stored in the associated electronics, and cycling from one to the other is possible. The resulting images appear to float in thin air and are not affected by the eye's registration on other objects in the foreground. And all this without the aid of any holographic medium.

The last of Cerebrum's five favourites provides the sting in the tail. As the entry level product in a small series of AV show controllers designed by Ensing, Stinger is described as a cost-effective small to medium sized, stand-alone system with eight switched outputs. Also there are add-on options for serial outputs such as MIDI or to provide control for laser disc players, as well as a 20-channel DMX module for lighting control.

Stinger can be programmed from a mouse and is considered ideal for exhibition stands, industrial presentations, visitor centres and local displays in museums, as well as other, small show control applications.

LUDWIG PANI

One of the major developments of recent months has been the appointment of Cerebrum as distributors of the Ludwig Pani range of projection equipment. As mentioned earlier, this was in part due to Cerebrum's involvement with Durango, who were the Pani distributors in France. It wasn't coincidence though that led Pani to Cerebrum. The Austrian company were very keen to broaden their presence in the UK market and felt that Cerebrum would provide a useful conduit to the growing theatre and concert markets which they were keen to exploit.

The deal, officially struck at the end of March between Herman Sorger of Pani and John Lethbridge in Vienna, will see Cerebrum handling all of Pani's projectors and followspots. They have already placed an order for demonstration units which they will be showing to customers just as soon as they get an opportunity.

The complete range of equipment stands and accessories for mobile applications and fixed installations

POWER DRIVE

TRUSS TOWER

Max. height 5.5m
Max. load 130kg

FEATURES



360kg winch twin pawls and friction-brake for maximum safety.

Truss Tower also features:



Fail-safe device – prevents fall of truss in case of cable failure.

PLUS FULL RANGE OF MOUNTING OPTIONS

POWER TOWER

Max. height 5.9m
Max. load 160kg

WINCH STANDS

All Powerdrive telescopic winch stands are self-contained, easily transported by one person and ruggedly constructed for trouble-free service.

SUPERHOIST

A self-contained three section flush base telescopic stand designed for single and multiple lighting and PA applications which can also be used in pairs to lift up to 10 metres of 12" square trussing

LIGHTHOIST

A two-section stand designed as a heavy duty wind up version of our popular Ref. 40 tripod

STANDS

MIDIHOIST

A two-section truss lifting tripod stand incorporating a twin safety screw locking system, which, with our hinged truss adaptors, allows an 8 metre span of trussing to be lifted.

TELEHOIST

A three-section tripod stand designed for single or multiple lighting and PA applications.

SCAN-STAND

A two-section stand designed for use with 'Scan' type lighting effects and large follow spots.

◀ Illustrated: Superhoist

◀ Illustrated: Power Tower

OVER 120 ITEMS IN THE RANGE

FULL RANGE OF SPARE PARTS

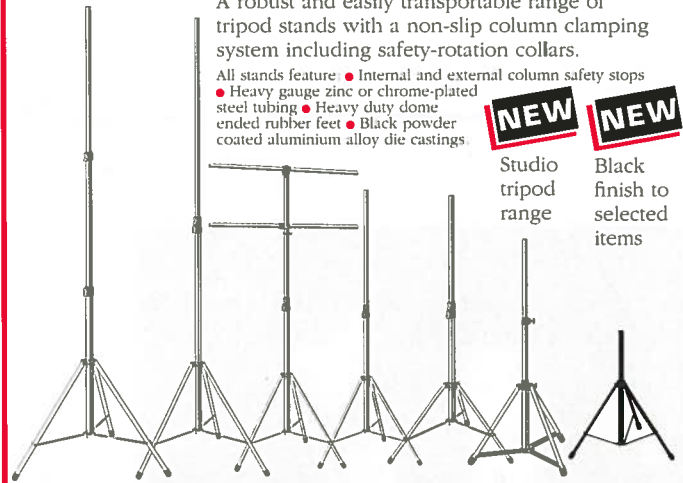
LIGHTING AND AUDIO STANDS

A robust and easily transportable range of tripod stands with a non-slip column clamping system including safety-rotation collars.

All stands feature: ● Internal and external column safety stops ● Heavy gauge zinc or chrome-plated steel tubing ● Heavy duty dome ended rubber feet ● Black powder coated aluminium alloy die castings

NEW NEW

Studio tripod range
Black finish to selected items



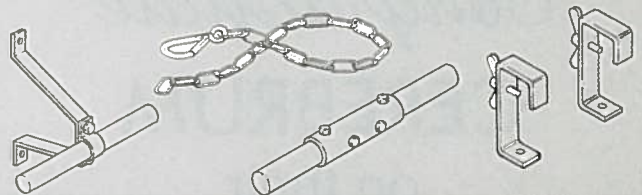
A FULL RANGE OF ACCESSORIES AND FITTINGS

- Stand Tops
- Fixing Clamps
- Horizontal Supports
- Cabinet Fittings
- Column Spigots and Sleeves
- Speaker Brackets



ANDOLITE

BRACKETS & BAR ACCESSORIES



ILLUSTRATED LEAFLET FOR BOTH RANGES AVAILABLE ON REQUEST



Worldwide Trade Distributor:
Cerebrum Lighting Ltd,
Units 4/5, Shannon Commercial Centre,
Beverley Way,
New Malden, Surrey KT3 4PT, England.
Tel: 0181-949 3171. Fax: 0181-395 6111.

NEW DEALER ENQUIRIES WELCOME

▶▶▶▶ OVER 30 DISTRIBUTORS NATIONWIDE ◀◀◀◀
CALL 0181 949 3171 FOR DETAILS OF YOUR LOCAL STOCKIST

You can depend on our support

CLAY PAKY & PULSAR

Pulsar Light of Cambridge will be celebrating their own 25th Anniversary during this year's PLASA Show, and most of that time has been spent in a close business relationship with Cerebrum. The early history is well documented in this feature, and perhaps few would have guessed that from those first faltering steps in the early seventies Cerebrum would quickly develop into one of Pulsar's major distributors - a position they've held onto ever since. Derrick Saunders, sales director of Pulsar, remembers taking Cerebrum's first order for 12 6 x10amp dimmer packs, which he recalls delivering into the hands of John Lethbridge at one of the early BADEM (the British Association of Discotheque Equipment Manufacturers, and forerunner to PLASA) meetings.

Cerebrum by this time had made a niche for

themselves by gathering together products from a number of UK suppliers to export around the world and it was only natural that they should seek to add Pulsar to their growing list. The industry was still in its infancy and Cerebrum's role was a vital one at a time when most major manufacturers hadn't yet established their own international distribution networks.

Pulsar's full range, together with that of Italian's Clay Paky, with whom Pulsar have a close working relationship, has always been handled by Cerebrum, and they are their main reseller for the London area - understandably a large slice of the UK market-share.

Ken Sewell, Pulsar's commercial director, is sure that Cerebrum's success has grown out of John Lethbridge's ability to follow market trends. "Over the years, the products have become more sophisticated. As recently as 10 years ago the technology was relatively straightforward, but now it is much more complex and the equipment needs a good level of support. Cerebrum have recognised this and have put extra effort into the 'value added' and service elements. This was a very perceptive move in light of the fact that there is less scope for export these days, now that many manufacturers have their own international distribution systems."

Both Derrick Saunders and Ken Sewell agreed that the keystone of Cerebrum's longevity has been the company's ability to embrace new technologies and to foster the growth of young people within the industry. Both hope, of course, that Pulsar and Cerebrum will work together for another 25 years!



John Lethbridge pictured with Pulsar's Derrick Saunders.

POWERDRIVE

Powerdrive's relationship with Cerebrum stretches back for some 20 years to when Cerebrum took on sole distribution of Powerdrive's products. Cerebrum at that time had a small shop from which they hired out and operated lighting systems, and this led eventually to wholesaling. Powerdrive's Keith Dowzell, a tool-maker by trade, had been manufacturing stands and pedals for drum kits (hence the name Powerdrive Drum Co), since 1965, but began to recognise the growing market for lighting stands which was developing alongside the infant discotheque scene.

It was at that time, along with other companies such as Optikinetics and Pulsar, that Powerdrive and Cerebrum became involved in the early days of BADEM. It was also through Powerdrive that Cerebrum took their first important steps into the European market.

The move into manufacturing lighting stands was eventually total, with the drum market being left behind altogether. This was partly due to the relatively lucrative disco market, but was also influenced by the appearance of major Japanese manufacturers onto the drum scene, which greatly increased the competition, as well as the tendency of the market to be fashion-led, and Powerdrive, with their sights firmly on the discotheque market, were happy to leave drums behind.

Based initially in Letchworth, Hertfordshire, the company now has 10 staff working on the design, manufacture and assembly of their range of stands under the roof of their 6,000sq.ft premises in Leighton Buzzard, and Cerebrum distribute their range of stands worldwide.



GE Lighting

Congratulate
CEREBRUM
on their
25th Anniversary
and wish them
continued success

G.E. Lighting Limited
Miles Road, Mitcham,
Surrey CR4 3YX, England
Tel: 0181 640 1221 Fax: 0181 640 9760

JEM

SMOKE MACHINES
HEAVY FOG AND
PYROTECHNICS

WOULD LIKE TO CONGRATULATE
CEREBRUM LIGHTING
ON 25 SUCCESSFUL YEARS

HERE'S TO THE NEXT

25  YEARS!

TEL: (01790) 754050 FAX: (01790) 754051

Knocking spots off the competition



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

At Lee Filters, we offer you the widest possible range of colours. And we use high technology to maintain consistency and the highest quality. Every piece of our product is checked against sophisticated spectrophotometers to ensure correctness of colour and filter performance. So what you want is what you get.

We only changed the spots on the Dalmatian. We've been knocking them off our competitors for years.



Lee Filters

pedigree shines through

Lee Filters, Central Way, Walworth Industrial Estate, Andover, Hampshire, SP10 5AN UK.

Tel : 01264 366245 Fax : 01264 355058



CONSISTENCY



CONTINUAL R&D



IN-HOUSE MANUFACTURE



TOTAL COLOUR RANGE



TOP QUALITY MATERIALS



TOP PERFORMANCE



FILM INDUSTRY



ENTERTAINMENT



THEATRE INDUSTRY



TV INDUSTRY

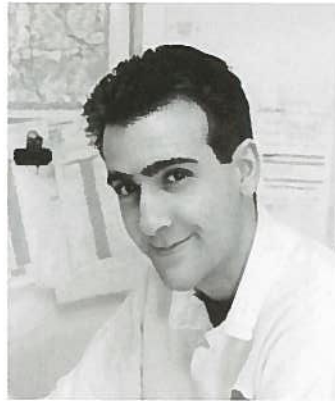
CEREBRUM PEOPLE



Director Graham Whittaker is also responsible for stock control.



Business development assistant Lorna Simmonds.



Stuart Maseyk, customer services salesman.



Graham Whittaker's assistant, Linda Haywood.



New recruit Paul Wordingham, a trainee sales technician.



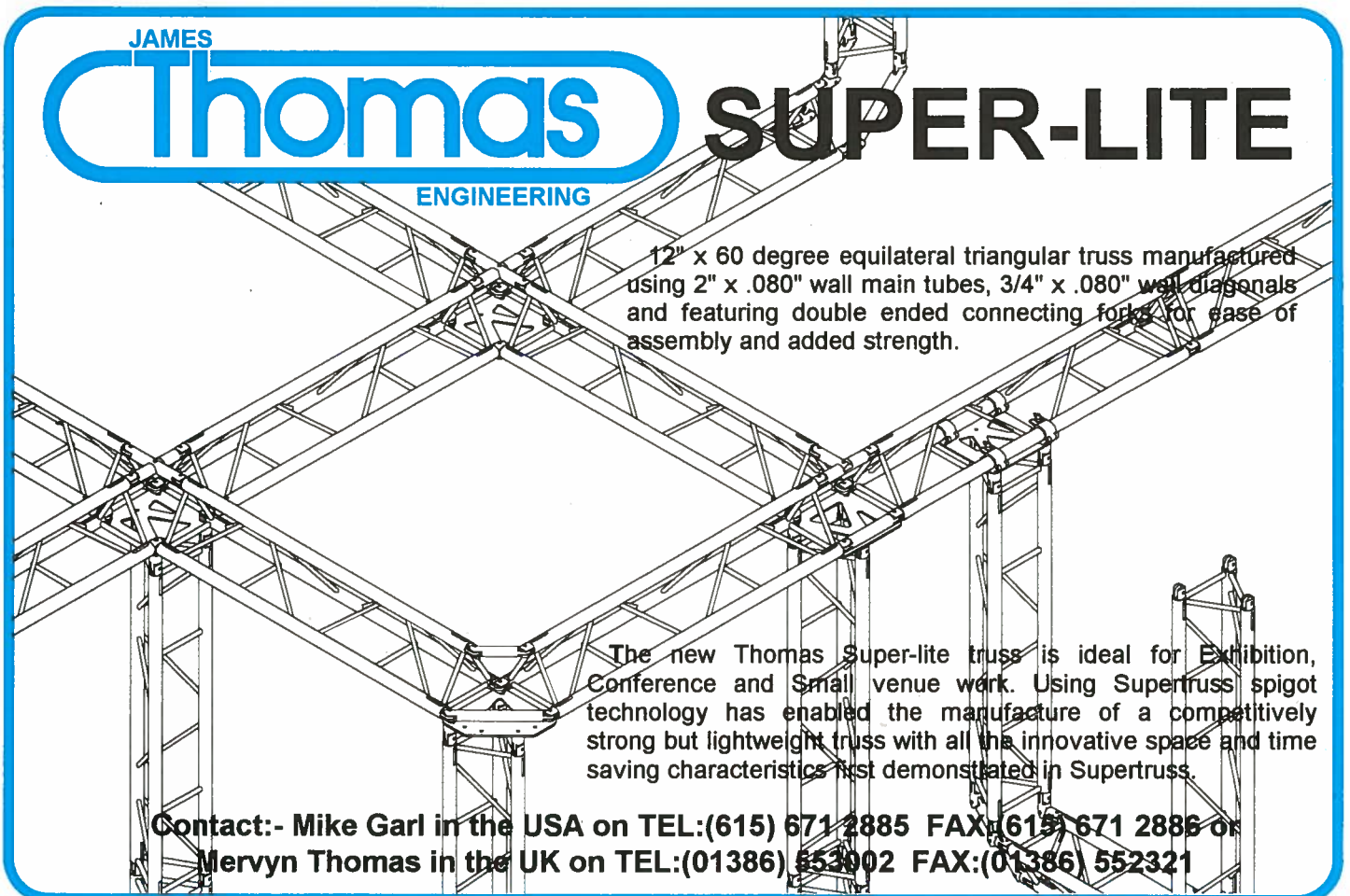
Peter Threadgold, project and quality service manager.



Pauline Cann, customer services manager.



Business development manager David Wilkins.



JAMES
Thomas
ENGINEERING

SUPER-LITE

12" x 60 degree equilateral triangular truss manufactured using 2" x .080" wall main tubes, 3/4" x .080" wall diagonals and featuring double ended connecting forks for ease of assembly and added strength.

The new Thomas Super-lite truss is ideal for Exhibition, Conference and Small venue work. Using Supertruss spigot technology has enabled the manufacture of a competitively strong but lightweight truss with all the innovative space and time saving characteristics first demonstrated in Supertruss.

Contact:- Mike Garl in the USA on TEL:(615) 671 2885 FAX:(615) 671 2886 or Mervyn Thomas in the UK on TEL:(01386) 553002 FAX:(01386) 552321

The science of effects projection . . .

In the design of Optikinetics lighting equipment, the bridge between sound and vision is strengthened by the highest quality, innovation and reliability. The **Solar 575 Effects Projector** and **Solar System** go hand in hand to produce multiple visual effects that are continually stunning audiences worldwide.

SOLAR 575 PROJECTOR

- High powered effects projection
- Computer precision optics
- Sound animation

SOLAR SYSTEM

- 16 interchangeable 2" effects giving 64 inescapable visuals
- DMX or 0-10v control
- On-board memory card allows stand alone operation

For further information please contact:

OPTIKINETICS LTD

38 Cromwell Road
Luton LU3 1DN
England
Tel: (01582) 411413
Fax: (01582) 400613

OPTIKINETICS LTD (US)

10387 Dow-Gil Road
Ashland
VA 23005-9464
USA
Tel: (804) 752 2570
Fax: (804) 752 2888

OPTIKINETICS™

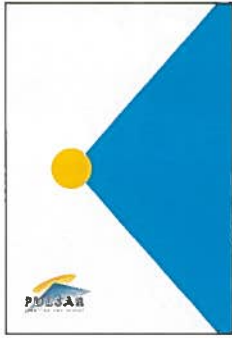
Producers of

Trilite™

CATALOGUE COLLECTION

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

1



Pulsar Light of Cambridge Ltd
 Contact: Derrick Saunders
 Tel: (01223) 66798
 Fax: (01223) 460708

2

CUSTOM HOUSE GROUP LTD

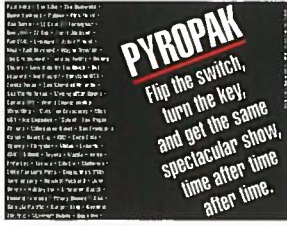
The name for innovative public address products

P.O. BOX 66 • UCKFIELD
 EAST SUSSEX • TN22 3ZR
 ENGLAND

TEL: + 44 (0) 1825 732601
 FAX: + 44 (0) 1825 732730

E.U. DISTRIBUTION
 ENQUIRIES WELCOME!

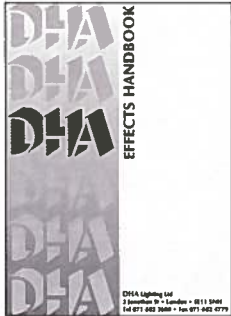
3



Pyropak Precision
 Pyrotechnic Products - the largest worldwide dealer network for sales and tour support services

LUNA TECH
 Tel: (49) 4353 643
 Fax: (49) 4353 1014

4



DHA EFFECTS HANDBOOK

DHA have increased and improved their range of moving effects to encompass a greater spectrum of luminaires

For more details:
 Tel: 0171 582 3600
 Fax: 0171 582 4779


5



SGM PROFESSIONAL LIGHTING EQUIPMENT

Strada Romagna 307
 Tel: 0721 208200
 Fax: 0721 208231

6



THE TOTAL PACKAGE

Lighting, Sound, Rigging and more...
Glantre Engineering
 Tel: (01734) 64 00 00

7



RCF's new Professional Sound System Catalogue, featuring the complete range of RCF Loudspeaker Systems, Monitor Series - Espace - Process Control & Power Amps.

RCF (UK) Ltd, 2 Blenheim Court,
 Hurricane Way, Wickford Business Park,
 Wickford, SS11 8YT.
 Tel: (01268) 570808 • Fax: (01268) 570809


8

XTBA for DMX512

XTBA supplies DMX512, encoders, decoders, soft patches, splitters, merge units, DMX testers, FX controllers, dimmers, control systems and all things DMX512.

Tel: 0171-700 0996
 Fax: 0171-609 8281

9



Lighting Technology

Studio, Theatre and Club Catalogue, lamps, lighting, special effects.

Tel: 0181-965 6800
 Fax: 0181-965 0950

10



Rainbow Colour Changers
 Rainbows Evolve.
 Other scrollers just change.
 Worldwide distribution
 M&M 0171 284 2504

11




USLIGHTS

BRINGING THE BEST OF AMERICA TO EUROPE

Tel: 0181-838-2254
 Fax: 0181-838-2253

12




DeSisti

ALL YOUR NEEDS IN TV, FILMS & VIDEO LIGHTING, SUPPLIED BY

DE SISTI LIGHTING (UK) LTD
 Tel: (01842) 752909
 Fax: (01842) 753746

13




PRODUCT GUIDE JEM

The full range of JEM Smoke Machines and Pyrotechnics including the award winning Hydrosonic machines

Tel: (01790) 754050
 Fax: (01790) 754051

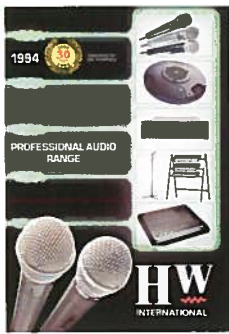
14



Rubber Box Co.

Rubber Box Co specialises in lighting distribution boxes. Made from rubber, they are double insulated and designed for outdoor usage to IP57

Tel/Fax 01282 830965



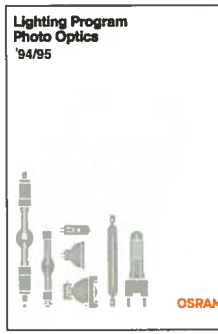
15

Covering all the existing product ranges from Shure, Pro Acoustics, 3G, Ultimate Support, QSC and HW, our latest catalogue also includes technical specifications.
Tel: 0181 808 2222
Fax: 0181-808 5599



16

LINK
All you need for audio + video professional installations.
Tel: +39 6 4072831
Fax: +39 6 4073138



17

Lighting Program Photo Optics '94/95
OSRAM'S latest Photo-Optic Catalogue includes technical information on their full range of HMI®, HTI® and HSR® lamps.
Tel: 0181-904 4321
Fax: 0181-904 1178



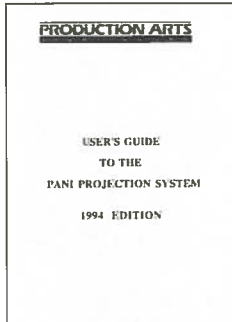
18

For more details of the Selecon Acclaim range of luminaires Contact Mark Morley
AJS Theatre Lighting and Stage Supplies Ltd
Tel: (01425) 470888
Fax: (01425) 471398



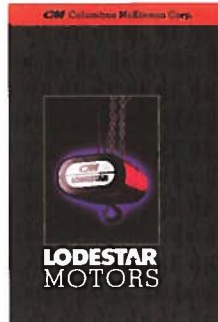
19

DIVERSITONICS, INC.
Award winning DMX strobes with HYPERFLASH™ now available from A.C. Lighting Ltd
Tel: (UK) 01494 464000
(Int.) 44 1494 446000



20

PRODUCTION ARTS
USER'S GUIDE TO THE PANI PROJECTION SYSTEM
1994 EDITION
The 1994 "User's Guide to the Pani Projection System" is a comprehensive manual of large format projection techniques and equipment
Production Arts Lighting, Inc.
Tel: (212) 489-0312
Fax: (212) 245-3723



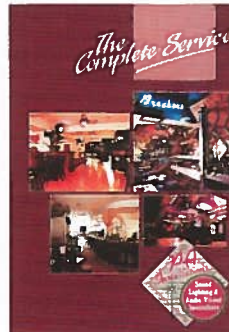
21

Lodestar Chain Motors
PCM
(A division of Pfaff Silverblue Limited)
UK agents for Columbus McKinnon USA
Tel: 0151-609 0101
Fax: 0151-609 0200



22

ENIGMA
CONTROL SYSTEMS
Latest brochure featuring the new release 9.00 graphics software
Advanced Lighting Systems
Telephone 0131 556 1771
Fax: 0131 557 1973



23

PA INSTALLATIONS
The Complete Service
Tel: 01554 752490
Fax: 01554 777848



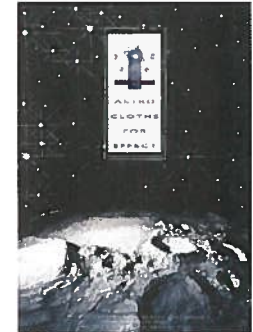
Unusual Rigging Ltd is part of the Unusual Industries group comprising
Unusual Manufacturing - Steel Fabrication
Unusual Automation - Automated Winches & Chain-hoists
Staged-Rite - Indoor & outdoor staging
Unusual Services - Production services
For more details phone
0181-206 2733

24



25

Telephone Strand
ON
0181-560 3171



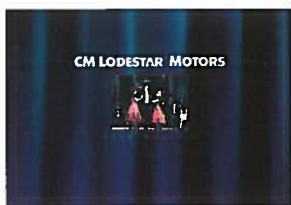
26

MAKE A COST EFFECTIVE DECISION
- buy direct from the manufacturer
PLAYLIGHT, FREEPOST MR9555,
Manchester M16 8HB
Tel: (+44) 0161-226 5858
Fax: (+44) 0161-232 9510



27

Tel: 01708 741613 Fax: 01708 741 579



28

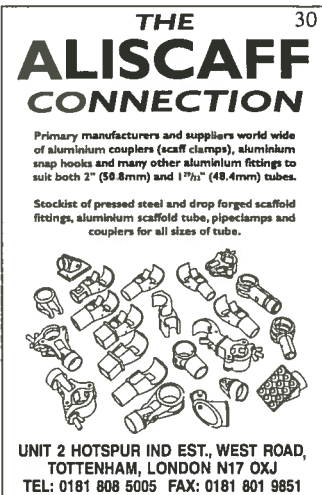
CM LODESTAR MOTORS
The Columbus McKinnon Lodestar motors brochure gives the entertainment industry a backstage look at the quality, durability and flexibility CM Lodestar chain motors offer. From lifting sets and backdrops to flying light grids and sound equipment, CM Lodestar chain motors adapt to countless staging environments.

Contact:
CM Theatrical Products Division, USA
Tel: 716 696 3212
Fax: 716 695 0122



29


LASERSCENSE SPATIAL LASER SYSTEMS
LASERS THAT CUT THROUGH THE PRICE BARRIER
Distributed exclusively by
Nu-Light Systems Ltd
Tel: 01925 243075
Fax: 01925 243077



30

THE ALISCAFF CONNECTION
Primary manufacturers and suppliers world wide of aluminum couplers (scaff clamps), aluminum snap hooks and many other aluminum fittings to suit both 2" (50.8mm) and 1 1/2" (48.4mm) tubes.
Stockist of pressed steel and drop forged scaffold fittings, aluminum scaffold tube, pipeclamps and couplers for all sizes of tube.
UNIT 2 HOTSPUR IND EST., WEST ROAD, TOTTENHAM, LONDON N17 0XJ
TEL: 0181 808 5005 FAX: 0181 801 9851


31



rosco
PRODUCTS FOR PRODUCTION
1995

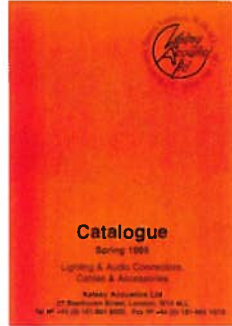
For all Rosco product catalogues and more detailed data sheets:
Tel: 0181 659 2300
Fax: 0181 659 3153

32



MA SCANCOMMANDER
The Scancommander from MA is one of a complete range of lighting control, call M&M 0171 284 2504

33



Catalogue
Spring 1995
Lighting & Audio Connections
Cables & Accessories
Nabney Associates Ltd
27 Brompton Street, London, W1A 2AL
Tel: 01-262 01 262 0100 Fax: 01-262 01 262 0100

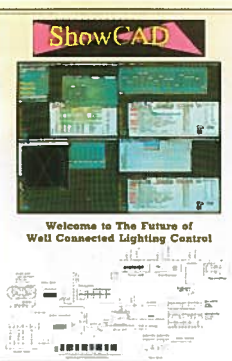
For all your audio and lighting cable, connector and custom wiring requirements contact Richard Vickers or Sean Downey
Tel: 0181-964 8000
Fax: 0181-964 1010

34



Bridon International offer the complete service from specialised training to the smallest shackie.
Tel: 01302 382239
Fax: 01302 382303

35



ShowCAD
Welcome to The Future of Well Connected Lighting Control

ShowCAD
Axon Digital Design Ltd
Tel: +44 (0) 1929 423222
Fax: +44 (0) 1929 427232

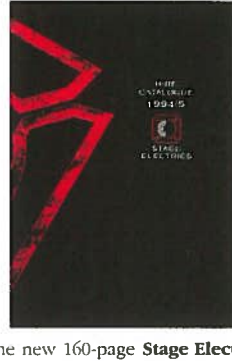
36



THE CATALOGUE 1995
ALOGUE
MIDNIGHT
1995

The new Midnight Design 150-page sales catalogue contains updated information on lighting products, special effects, and consumables.
Tel: 0171-498 7272
Fax: 0171-498 8845

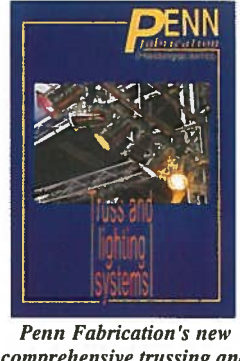
37



STAGE ELECTRICS
HIRE CATALOGUE
1994/5

The new 160-page **Stage Electrics Hire Catalogue** with detailed information on lighting, sound, A.V., rigging and mains distribution systems.
Tel: (0117) 9827282
Fax: (0117) 9822180

38



PENN Fabrication
Truss and lighting systems!

Penn Fabrication's new comprehensive trussing and lighting catalogue is now available.
Tel: +44 (0) 1424 718576
Fax: +44 (0) 1424 718572

39



PRODUCT GUIDE
Martin
...OF THE FUTURE...

Martin Professional A/S,
Nordlandsvej 114, DK-8240
Risskov, Denmark
Tel +45 86 21 44 11
Fax +45 86 21 50 01

40

TRIPLE E
TRACKS AND AUTOMATION
Our comprehensive range for both sale and hire is featured in the new **TRIPLE E** catalogue now available.



Triple E
B3 Tower Bridge
Business Complex
Clements Road
London SE16 4EF.
Tel: 0171-237 6354
Fax: 0171-237 7650

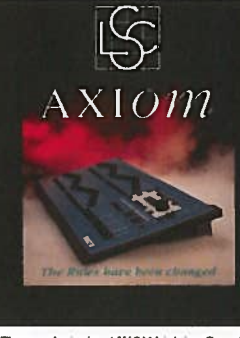
41

C.J. COLLYNS®
FRENCH DISTRIBUTION
OUR NEW
1995 CATALOGUE
IS NOW AVAILABLE

TEL: (33) 1 46 11 41 00
FAX: (33) 1 46 66 04 73

PROFESSIONAL LIGHTING & SOUND MIXERS

42



AXIOM
The Rules have been changed

The award winning **AXIOM** Lighting Consoles available in the U.K. through:
• XTBA Tel: 0171 700 0996 Fax: 0171 609 8281
• Lancelyn Tel: 01865 722 468 Fax: 01865 72 8791
Contact L.S.C. Electronics Pty Ltd for your nearest dealer.
Tel: +61 3 561 5255 Fax: +61 3 561 5277

AXIOM - Winner of
• Australian Design Award 1994
• 1994 Powerhouse Museum Selection Award

43



Thomas
PRODUCT RANGE 94/95

Tel: 01386 553002
Fax: 01386 552321

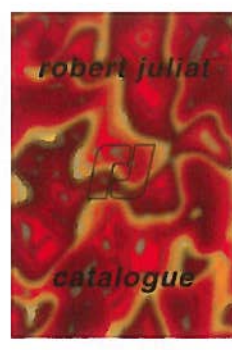
44



GARDAV
THEATRE SERVICES LTD
The people to call to
THE BIGGER BOOK
1995

HIRE and SALES
From **AKG** to **ZERO 88**
Tel: 0181-886 1300
Fax: 0181-882 2865


45



robert juliat
catalogue

Robert Juliat Catalogue 1995
Full details on the new range of HMI and tungsten profiles, HMI followspots, HMI digital dimming shutters and other theatre luminaires.
Contact: Tom Mannings of Decoupe Ltd
Tel: 0181-505 8522 Fax: 0181-504 4755

46



SMOKE FACTORY'S COMPLETE RANGE OF PROFESSIONAL FOG GENERATORS AND FLUIDS

SMOKE FACTORY
FOG GENERATORS • NEBELMASCHINEN

Vahrenwalder Str. 205 - 207
30165 Hannover/Germany
Tel.: ++49-511-37 30 - 2 88
Fax: ++49-511-37 30 - 4 23

47

Pure Brilliance

The complete product information guide featuring specifications and full colour photographs of the entire range of sound and lighting control equipment

Tel: (0115) 9394122
Fax: (0115) 9490453

48

WYBRON LTD

Technology Serving the Arts

Tel: 0181-838 2254
Fax: 0181-838 2253

49

CARTRIDGES AND MAROONS

LeMaire

For a complete set of LeMaire product leaflets covering smoke machines and pyro

6 Forval Close, Wandle Way, Mitcham CR4 4NE
Tel: 0181-646 2222
Fax: 0181-646 1955

50

CANFORD

audio

94-95

Essential for every audio professional

Tel: 0191-417 0057

51

The world's first fully integrated and affordable automated lighting system.

Varilite introduces the Series 300[®] automated lighting system.

Tel: 0181 575 6666
Fax: 0181 575 0424
or see The International Directory for our European sub distributors

52

TRANTEC SYSTEMS

Telephone: 0181-640 0822
Fax: 0181-640 4896

53

WHITE LIGHT

White Light's latest price list contains the vast range of lighting equipment currently available from both London and Halifax. It also contains projection charts, reference guides and other useful information.

54

Lighting Collection

A comprehensive range of lighting control available to suit most applications. World-wide dealer network, Showroom and Training Centre. Multi-language brochures available.

Tel: +44 (0) 1727-833271 (sales and spares)
Tel: +44 (0) 1633-868099 (service only)
Fax: +44 (0) 1727-843676

55

THE ACCENT RANGE

Low voltage lighting for professionals

Call M&M 0171 284 2504

56

Stage Lighting Systems

To receive Multiform's latest club and stage lighting catalogues call (01825) 763348 or fax (01825) 763310

57

CATALOGUE

Light Engineering have a unique range of lighting, sound & special effects products, also a vast array of component parts, lamps & accessories.

Tel: (44) 0181 520 2336
Fax: (44) 0181 509 1332

58

LEE Filters

For a free Lee Filters information package, please telephone (01264) 366245 or fax (01264) 355058

Please arrange for the following catalogues to be sent to me: (Please tick those required) April 1995

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Name _____

Company _____

Job Description/Title _____

Address _____

Telephone _____

We endeavour to forward your details to the relevant companies as soon as possible. Please bear in mind that these mailings only take place at certain intervals and forms received after May 26th will be held over until the next mailing.

TRAINING'S CHANGING FACE

Graham Walne outlines the high-tech solution for a high-tech industry

The director general of the City and Guilds Institute has highlighted the differential between the large number of trained and qualified people in Japan and Germany, and the smaller number in the UK. Not surprising you might think, except he did this when the City and Guilds was founded in the last century! More recently I wrote both in this publication and in 'The Stage' of the parlous state of technical training in the theatre. Today, the picture is rather different, mostly through direct or indirect reaction to Government policies. By the end of this century the changes now taking place could make the theatre training industry rather different to that of just a few years ago.

Until recent years the established drama schools, such as Mountview Theatre School, only offered their own diploma in stage management and this was generally acceptable to the funding authorities which provided discretionary grants. However, the percentage of these has dramatically declined, forcing the drama schools to change their qualifications and courses with the aim of attracting mandatory grants. Thus, whilst once the system was relatively uniform, today's students have a choice of diplomas, BTEC certificates, City and Guilds and degrees. Moreover, where once their choice was influenced by a school's reputation or facilities, today it is more likely to be governed by the availability of funding.

The established drama schools all quietly fear that with the decline in funding there will be one fewer of them by the turn of the century. Combined efforts to combat this, by lobbying for mandatory funding for their diplomas, have had no success with the Government. Consequently, and perhaps understandably, each school has tended to find out where their lifeboats are rather than try to save the ship.

Some schools have turned to degrees to boost their finances and it is too early to say what will happen if the majority of the established schools go this way. Certainly, some schools have successfully battled to retain a high percentage of practical work, previously the touchstone of the established drama schools. But others are finding that degree courses attract different students from those they were



Mountview Theatre School's production of Don Juan with all the lighting, set and costume design undertaken by the students.

accustomed to teaching on their old stage management diploma courses. The consequence is that different people are being turned out and many don't go into theatre at all. If this trend continues, it could leave the country devoid of good practical stage management if training cannot be provided elsewhere. Critics also warn of a drift to the USA system, which has produced an entire culture of University Theatre schools producing people who only work on the University circuit, or who have problems adjusting to the demands of professional schedules.

The UK schools have been squeezed by the Government's policy of simplifying the qualification system so that only degrees and vocational qualifications (NVQs and SVQs) will ultimately receive funding. The Government, through its accrediting agencies such as the National Council for Vocational Qualifications (NCVQ), requires bodies submitting new vocational qualifications (such as NVQs) to withdraw older qualifications (such as City and Guilds) if they overlap. Schools thinking to adjust their courses so that they can award a qualification which attracts mandatory grants frequently find that the Government's restrictions on the number of places in the further Education system means fewer students on a course. In addition, the grants are awarded on a points system and frequently schools find their total income is

lower than that through the discretionary grants they used to enjoy. More than one college has been obliged to abandon courses altogether because of the restrictions.

National Vocational Qualifications (NVQs) and their Scottish equivalents (SVQs), are becoming available through the Arts and Entertainment Technical Training Initiative (Aetti) which will announce in April, with its partner City and Guilds, the first network of theatres where the qualifications can be assessed. These will be for technical competences with stage management (from the Arts and Entertainment Training Council - AETC) following later in the year. Funding for NVQs is, according to Government, mandatory, but likely to be less than that enjoyed in the heady days of discretionary grants. Training

and Enterprise Councils (TECs - called Local Enterprise Companies - LECs in Scotland) are a source of funding for NVQs and SVQs but nationally they use only 10% of the Training Credits to which they apparently have access. Additionally, they are established to serve their own region first and this tends to hamper their response to the theatre industry which has national needs. Both the Aetti and the AETC are working on a proposal to help the TECs and LECS address this issue.

The Aetti has always stated that training will be needed to top-up the skills of those who have been assessed for their NVQ or SVQ as being 'not yet' fully competent in some aspect. Thus the Aetti argues there could be growth in short course training. However, the drama schools, which could benefit considerably from this area, are unlikely to seize the initiative since it would require a considerable adjustment to their timetables. Thus, the way is open for others such as Theatre Technical Training Services (TTTS), formed by the consortium of repertoire theatres, to enter the fray. TTTS's policy, wisely, is to serve its own members' training needs first, but the consortium has formed a link with the Association of British Theatre Technicians (ABTT) to offer its courses to ABTT members.

Outside of TTTS, those requiring training in technical skills fight for the limited number of drama school places delivering a technical



Like many colleges and schools, Mountview runs a range of professional training courses. Above left, a student works in the sound studio on the creation of an effects tape, whilst right, a student has the opportunity to oversee the editing process for a television project.

specialism. The City of Westminster College (see L+S, November 94) in London, perhaps better known in theatre training circles by its previous name 'Paddington College', continues to be a rare beacon, developing new technical courses through wide industry consultation; and here and there other colleges frequently lean towards technical skills notably through their BTEC courses. Commercial organisations or theatres offer short courses in specific skills, but these are often outside the pocket of the ordinary technician and it is a rare management that will, or can afford to, pay for staff training, whatever the Health and Safety legislation says.

There is a view that the industry is not in as bad a state as it would appear, especially given that it has survived rather a long time. However, a 1984 NOP survey found that 40% of technicians ultimately left the industry because of its inability to provide career opportunities and financial rewards which increased in line with their personal responsibilities. There is a constant need for new and trained people to replace the experienced hands until the wastage can be slowed.

NVQs and SVQs were never intended to solve all of the industry's skills and training shortcomings and they have been so long in coming that their initial impact has been dulled and their potential largely ignored. The Aetti must take some of the blame for this, but dwindling funding from the Government and no funding from the industry mitigate against lavish publicity and speedy results. Some people, such as those at TTTS, have recognised that NVQs and SVQs are a method of assessing the outcomes of a training process and can add

value to it. Some drama schools have also made this connection: Guildford School of Acting, for example, has conducted several pilots to see how NVQs could work with its stage management course. The benefit to a good course, like that at Guildford, is that the majority of the skills are already being taught and thus the addition of NVQs would mean little change to delivery, just the establishment of an assessment timetable.

Elsewhere, however, many organisations are finding the rigours of Aetti assessment criteria too strict - another reason for the delay in making the NVQs widely available. The NVQ assessment centres cannot be accredited if they lack the appropriate facilities or assessors with recent professional experience of the competence they are assessing. This mitigates both against small theatres and college staff, but it should encourage them to form links with larger professional venues and to take sabbaticals. Consequently, in time, the whole industry could be enriched by this.

The need for sabbaticals was highlighted in the first part of a research project carried out by the Aetti with three European theatres (see L+S February '95). Significantly, this found that staff development and awareness were of equal, not greater, value than formal technical training.

Exchange schemes and touring should be encouraged since they help people to experience new systems and methods, and provide examples for comparison with those in their home theatre. Sadly, Government funding for exchange schemes is scarce and since few English people can speak a second language there is a disincentive to take part which is not

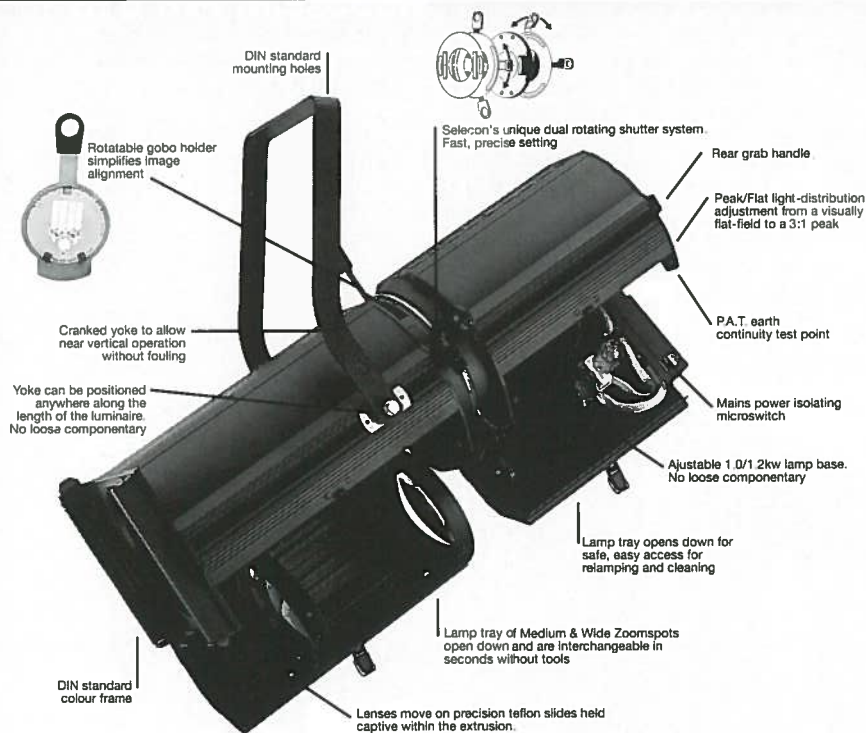
the case with our colleagues across the Channel. Vocational Qualifications come into these exchanges since they provide a methodology of assessing competence vital for safety. Some of the Aetti NVQs have been translated into other languages.

A further shortcoming of formal or informal training systems is that they rarely address the needs of freelancers or casuals. The Aetti carried out a survey of freelancers in 1992 and found that the majority of those working backstage fell into this category at some point. Not only does this group suffer from lack of protection of some components of employment legislation, but it is hard for them to afford or to timetable training, although some slight reduction on NVQ cost is available to those on Schedule 'D'. Both the Aetti and the AETC are looking at ways in which training and qualifications can be made more accessible to this vital group.

Undoubtedly, greater access would be granted through the production of 'open learning' materials, not a technique the theatre has employed in the past. In other industries the development of interactive CD in particular, has enabled 'correspondence' type courses to reach a wide market and notably those who, like most employed theatre people, would not wish to leave employment to top up their skills.

With the scarcity of funding for formal training likely to continue, other solutions must be found. A theatrical 'Open University', employing CDi and networking, would fill many gaps and complement existing provision, a high-tech solution for a high-tech industry in a high-tech age.

'Ingenious' would be putting it lightly.



How can one light have so many intelligent design innovations? Simple. At Selecon we use our heads-and that's what has everyone else scratching theirs.

SELECON ZOOMSPOT 1200 RANGE

High performance ellipsoidal 1.0/1.2 kw variable beam profiles.

"A useful unit for most purposes and good value."

ABTT - Which 1 kw Profile. Sept. '93.

Leading Performance

Narrow	8° (310,000cd) to 16° (147,000)
Medium	18° (205,000cd) to 34° (147,000)
Wide	24° (160,000cd) to 40° (95,000)

For further information and sample units to test contact your nearest distributor.



UK AJS Ph: 425-470 425, Fax: 425-471 398

DENMARK Kunelco Ph: 35-822 728, Fax: 35-824 141 NORWAY CP Norway Ph: 55-297 170, Fax: 55-296 950

SWITZERLAND Licon Ph: 61-311 3010, Fax: 61-312 5471 NETHERLANDS Aukes Ph: 20-694 4996, Fax: 20-694 6261

FINLAND Fokl Ph: 56-120 66, Fax: 56-124 41 SPAIN Stonex Ph: 1-471 5597, Fax: 1-471 9703

Selecon New Zealand Ltd, 26 Putiki Street, Grey Lynn, Auckland, Ph: 64-9-360 1718, Fax: 64-9-360 1719.

SELECON

The Roboscan family is the United Kingdom's No. 1



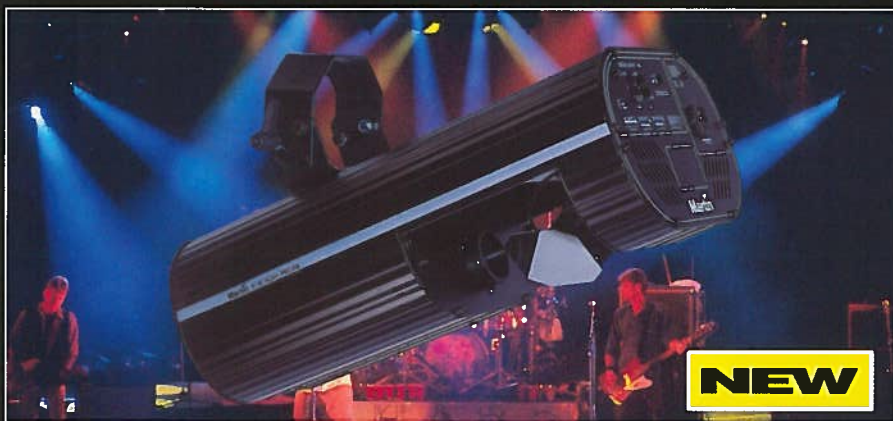
EENY **Roboscan 812**

- Lightweight, compact and portable
- 11 radiant dichroic colors
- 11 gobos
- 150W HMI lamp
- Microstepping



MEANY **Roboscan Pro 218**

- 200W MSD lamp
- 17 dichroic colors
- 18 gobos
- Fast shutter control for strobe effects
- 2000 hours lamp life



MIGHTY **Roboscan Pro 518**

- Rotating gobos
- Powerful color palette
- Prisms
- Frost filter
- 2000 hours lamp life



MO! **Roboscan Pro 1220**

- New version - Now with:
- 1200W MSR or HMI lamp
 - Rotating gobos
 - Full DMX
 - Future protected


Martin

MESSE MIT PRO LIGHT & SOUND

John Offord reports from the new-style Frankfurt Music Fair



Linton Smeeton of RCF with the new Event Series loudspeakers.

The Frankfurt Music Fair authorities successfully split their long-standing Spring event into a duo show this year, with the Pro Light and Sound segment housed in Halls 5 and 6. It worked extremely well for the pro audio sector who gained a new individual identity with a seamless join from levels 5.1 across to 6.1. And the visitor numbers were up again: 88,000 reported from 100 countries covering the combined event.

The only moans we heard, and PLASA's stand was on the main flight-path, were the problems associated with those visitors who only wanted to look at musical instruments for instance, being forcibly routed via the aisles of halls 5 and 6 rather than accessing the distant halls by using the much faster and direct moving walkway system. It was a very deliberate policy, of course. It kept the visitor count up for all aspects of the Show and at the same time every visitor was aware of the new set-up from the start.

Lighting companies had their own floor in hall 6 level 0, which had good headroom but not so good ventilation. Venturing to the depths of this hall was not, at least for this writer, a pleasant experience, particularly later in the day. Will the



In disguise, Canon's artistic talents now equal their technical know-how with the V-100.

smoke officer be an employee of the future at this type of event? Knowing the efficiency of the Messe halls' organisation they've already worked out the answers to this problem.

Florian von Hofen, chief executive of VPLT, the German association for professional lighting and sound technology that works closely with PLASA, told L+S: "The Pro Light & Sound concept appears to be right on target. The attempt to set up an independent segment within the framework of the Music Fair has been a success. The echo among both exhibitors and trade visitors was extremely positive. Our expectations have been exceeded by a wide margin."

LOUDSPEAKERS

- The show launch highlight for JBL was the EON Series - a competitively priced entry level integrated PA system designed with solo performers, public arenas and clubs in mind. The initial product line includes five attractively designed speaker cabinets and two mixers plus one complete system.



Bruno Wayte and David Gerrard of Harman Audio (UK) with the EON Series from JBL.

The EON Power range features three radically new high-performance powered loudspeaker systems that have been engineered using the latest materials and techniques developed by JBL to enable weight to be kept down and performance high. The Power10 weighs in at a little over 12kg and incorporates a JBL 10" high excursion woofer driven by an on-board 60W amplifier, plus a 1" high-frequency driver/horn combination powered by a 25W amplifier. Power15 comes in at 18kg and combines a 15" bass transducer with internal 130W amplifier and a 1.75" high frequency driver powered by a 50W amplifier module. The PowerSub sub-woofer cabinet weighs 17kg and features a 15" extended low frequency driver and a robust 250W discrete-component power amplifier. EON 10 and 15 are the unpowered versions that complete the five-strong line-up.

EON MusicMix 10 offers a total of 10 input channels with six inputs accepting either microphone inputs on XLR connectors or line-level signals on 1/4" phone jacks. Each mic input channel is equipped with input trim control, non-interactive three-band equalisation, effects send, pre-fader monitor send, pan control, signal



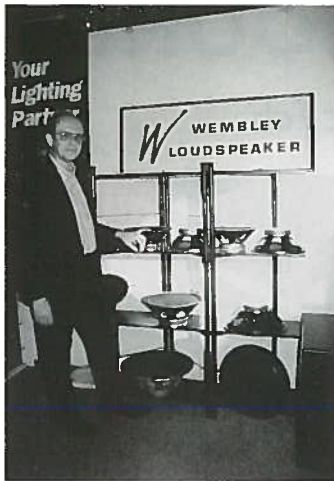
Wharfedale's Garry Orrell with further additions to the Force range.



Karl Brunvoll and Robert Lingfield fronting the Renkus-Heinz Waveguide series.



Bob Goleniowski with the new GS1 mixing desk from Allen & Heath.



Paul MacCallum of Wembley with the P.T.P. series of speaker chassis.



Jon Petts of JEM (right) firing off on pyrotechnics.



Stephen Court of Court Acoustics with Alan Parsons of Soundcheck.



Stage Accompany's 10-channel modular mixing console, the SA202.



Rick Wilson of Le Maitre and Rod Bartholomeusz of Lite Smiffs.



Sandy MacDonald of EAW with the JF560 (top) and LA215 (below).



Roy Millington of Cloud (left) showing the CX Series of mixers.



PLASA's Anna Pillow plays host to Dan Martino of Wybron.

present and peak overload LED indicators and a 60mm level fader. The two stereo line inputs are provided with both RCA phono and 1/4" unbalanced inputs, two-band equalisation, effects sends and monitor sends. Phantom powering for condenser microphones is provided on all microphone inputs. The EON SoundMix is a mono 10-channel mixer similar in most respects to MusicMix, but has been designed with schools, churches and similar usage in mind. It has auto trim on all mic inputs, two-band equalisation on all channels and non-interactive auto summing to mono on the stereo input channels (for CD and tape players).

The EON PowerSystem is claimed by JBL to be the first complete and fully integrated high-performance PA system made specifically for quality oriented but non-technical musicians. Designed as a 'balanced whole' it includes a pair of Power15 cabinets, the MusicMix 10 and two JBL E50S dynamic hand-held microphones plus complete AC line, mic and speaker cabling.

EON is available in the UK through **Harman Audio** whose Bruno Wayte told L+S: "The response at Frankfurt was overwhelming. Aimed initially at the portable musician market our dealers who visited the show have been very quick to latch on to the universal appeal of EON, and I have no doubt that in installation work, especially where performance combined with aesthetics are the main criteria, we will meet with a similar response. EON will give us the same share in the MI musician market that we now enjoy in the professional sector."

The JBL people are also jumping up and down about their new 6208 biamp reference monitor which incorporates an 8" high excursion woofer and a 1" titanium dome tweeter, with each transducer driven separately by a dedicated power amplifier module with discrete circuitry. Its

exceptionally flat response shows deviations of less than 2dB from 60Hz to 20kHz. For easy interfacing the rear panel has a switch facility for selecting either -10 or +4 input levels and it weighs a relatively light 14kg.

- Leading Italian sound company **RCF Electronics** launched their new 'Event' Series of speakers composed of two and three-way bass reflex systems which claim excellent intelligibility and distortion-free high peak power levels (6dB above the average). The range is aimed at the live concert, monitoring, cinema, theatre and discotheque markets and is intended for both temporary and permanent installations. It includes the Event 1000 and 3000 two-way systems, the 4000 three-way, the SM 3000 two-way stage monitor unit and the high output ESW 1018 subwoofer. All units have hard rubber feet to aid floor-standing or stacking. The lower part of the enclosure, protected by a rubber cover, has an insert for fitting the speakers on the SCE/1 RCF floor stand or for positioning them above the ESW subwoofer on a rod. Inserts for flying installations are also included.

- **Peavey** launched the HI-SYS XT flying version speaker enclosures, alongside the EURO-SYS range aimed at the lower-price end of the market.

- The first introduction of Danish **Mach** speakers to the world came at PLASA in 94, but Frankfurt provided the first live demonstrations of this 8-strong line. Divided into the Café, Club and Stage lines, appropriate sub-woofers support the range. A Martin Professional-owned company, under the management of Steer Geertsten, watch for new launches from Mach at this year's PLASA including active top-end speakers and sub-woofers and a 'no compromise' touring line.

- **Martin Audio** launched their ICT 300 compact stage system on the stand of Beyerdynamic. A

full-range system designed for applications where both compact size and high output are required, it is capable of producing SPLs normally associated with much larger enclosures, and it features twin 10" drivers horizontally aligned in a unique two-way configuration using patented Pro ICT (inductively coupled transducer) technology.

(The ICT principle uses the magnetic field generated by the low frequency driver's voice coil to inductively drive an aluminium high frequency diaphragm located at the centre of the unit and horn loaded by a phase plug and waveguide. Because the HF diaphragm is energised by induction, it has no voice coil, ensuring that one of the most common faults in music systems - tweeter voice coil burnout - has been eliminated. In addition, although the ICT unit is a true two-way device, there is no separate electrical crossover network, since the crossover function is inherent in the ICT principle).

The M1 system controller enables both full-range and bi-amped operation of ICT 300 systems. For applications where ultra-low frequency enhancement is required, a sub-bass system can be used in conjunction with the ICT 300 and M1. In the full-range mode the M1 unit performs equalisation functions, whilst in bi-amped mode it provides additional dedicated electronic mono subcrossover outputs for two-way active system configuration. Additional flexibility in the bi-amp mode is achieved by allowing the system to run either full-range or as a mid-high cabinet.

Martin Audio also launched the Wavefront 8 full range touring system and the Wavefront 8S hybrid sub-bass system. The Wavefront 8 is a highly efficient three-way touring sound reinforcement system which achieves full frequency performance down to 80Hz. Its 55 degree



Pulsar's Ken Sewell on CP&P/Lightpower with David Graham of Soundivision.



Clive Salmon of GE Lighting with Graham Fathers of AJS Lighting.



Lightronic Licht & Lampen's Michael Schneider (right) in demonstration mode.



Glyn O'Donoghue of AC Lighting with Nils Thorjussen of Flying Pig Systems.



Optikinetics' Neil Rice with Maciej Partyra, organiser of the Polish Intermedia show.



Ivor Green of Carlsbro (right) with Martin Clinch and Kate White of Chevin Research.

horizontal dispersion pattern and trapezoid footprint allows it to be arrayed to suit a variety of medium and large scale theatre and live applications. Each enclosure houses a vertically splayed dual 12" driver horn-loaded low-mid section, a 61/2" treated cone driver loaded by a unique toroidal phase plug horn whilst high frequencies are reproduced by a 1" exit compression driver on a constant Q HF horn with dispersion characteristics engineered to match the high-mid. Use of twin 12" drivers for the low-mid allows the unit to operate down to 80Hz, making this a very flexible system capable of full-range performance on its own. It is fitted with load certified MAN flying points which link between cabinets to provide a fast and secure means of assembling an array.

The Wavefront 8S is a trapezoid sub-bass enclosure designed for use with the 8 full-range system in situations where low frequency enhancement and extra headroom are required. Its hybrid horn/reflex combines the benefits of the fast transient bass performance of a folded horn with the extreme low-frequency extension of a reflex enclosure. The horn and reflex sections are entirely separate - the folded horn section being powered by a high efficiency 15" driver and the reflex section by a high power 18" device. This combination within a single enclosure results in a dynamic sub-bass with an efficiency of 104dB and acoustic addition of the separate sections is maintained up to 150Hz.

The first major sale of the Wavefront 8 was to Art System of Belgium, an order that included 40 full-range boxes and 40 8S hybrid sub-bass enclosures along with 24 LE400s.

• **Court Acoustics' LX** (Less eXpensive!?) Club Contract Series is a new range aimed at the club market. The LX1 two-way 8" miniature system is

based on the Court compact studio monitor for wide angle surround applications and features a long throw bass unit in a ported enclosure. The LX2 is a two-way 12" trapezoid system using a double port enclosure with a titanium driver on a 90x60 bi-radial horn, covering mid and high frequencies. LX3 is a three-way trapezoid system and the LXBass 800W bass bin is a high power bass and sub-bass system with a wide frequency range. The 18" heavy cone driver combines with the LX2 and LX3 bass units to provide high intensity bass that can be felt as well as heard. Also in the range is the CX1 electronic crossover.

• **D.A.S. Audio** of Spain have now completed their range of polypropylene speakers with three units each in their Factor (5, 8 and 12) and MI Series (8 and 12 full range systems plus Sub18 bass reflex enclosure). All drivers now incorporate neodymium technology.

• **Community** have expanded into the cinema market with the introduction of their AMCH integral array system. A surround loudspeaker manufactured for the massive AMC theatre chain, it is designed to meet the demands of digital stereo cinema surround sound applications and provides coverage for a venue's entire seating area from one location. The operational range is 40Hz-19kHz. The company have also announced the incorporation of their new VHF100 driver into all of their RS systems and the launch of the CSX-S2 11-strong loudspeaker line for musicians.

• **Wharfedale** launched its Force 3180 bass reflex enclosure (big brother to their most successful speaker ever, the 2180), which has been designed to eliminate the sound direction compromise that occurs when trying to optimise both speaker positioning and audible stereo effects. By aligning two drive unit arrays at a 90 degree angle, the

horizontal dispersion pattern is greatly extended beyond that of the normal loudspeaker, resulting in a wide listening area spread over an angle of more than 120 degrees. Also on view was the redesigned Force 105B sub-bass unit (now 4 ohm). Other developments include the fact that the Force 1 now has fixing brackets and a transformer for 100 volt line installation.

• Following on from their appearance at the Paris AES event, **Tannoy** previewed their Ovation Series. This new range comprises four dual concentric and three sub-bass loudspeakers and is intended to serve a wide range of applications in theatre, AV, concert reinforcement and other leisure applications. Dual Concentrics include the S250 compact mid/high system, the S300 featuring a 12" SuperDual, the S900 trapezoidal for wide bandwidth applications, and the M350 ultra compact stage monitor which has a conical dispersion of 90 degrees. The three new Ovation Bass systems include the B400 horn bass, the B850 3"x12" bass unit for extended natural bass response and ideal for theatres and acoustic concert reinforcement, and the B950 2" x 18" high power sub bass.

New additions to Tannoy's range of monitors included the PBM 6.5II, the PBM 8II, the PBM 6.5LM self powered unit and the AMS 10 studio unit, fresh from AES previews at both San Francisco and Paris.

• New introduction to the TCS range from **Turbosound** is the TCS-618, a low-frequency enclosure designed with theatre and corporate applications in mind. It is seen as an ideal partner for the TCS-612. It features a proprietary 18" low-frequency driver and the magnet assembly has been designed to give increased upper bass frequencies and a smooth transition to the 12" driver in the TCS-612.



Richard Wear of Celestion with Rick Wakeman and the CX Series of loudspeakers.



Steve Warren of Avolites with distributor Andreas Kurth of Camco.



Bob Schacherl and Harry von den Stemmen of High End Systems.



Ian Sharpe of Ramsa with the new WR-SX1 mixer.



Mike Parry and Tony Cockell of Formula Sound with their first custom-designed stand-by mixer, The Shadow.



Toshihide Nakama of the Vestax Corporation (right) with Rob Peck of Vestax UK and the CDX Series of CD players.



Chris Pike and Peter Child promote Millbank's MSR range of loudspeakers and the MultiMix, first seen at PLASA.



Hans Freytag of C Audio (right) with the company's distributor awards winners - Electro Systems Pte Ltd and Harman France SA.



Elaine Dinnage of Citronic with the Conquest range of power amplifiers designed in full compliance with EMC regulations.



Roger Skuse of Pic Systems with the second generation of the Vp Series of amplifiers now featuring 'Cold Cube' technology.



K R Malik of Studiomaster shows the P7.

Also new is the TSW-718 low-frequency subwoofer enclosure which has been designed for use in applications requiring accurate and powerful reproduction of bass, and particularly upper bass frequencies, at extremely high levels. Turbosound say it makes the ideal partner for the TFL-760H Floodlight mid/high enclosure in both fixed club installations and small to medium scale touring PA systems.

- New from **Celestion** on a new-style stand comes the CX Series of high performance sound reinforcement enclosures. Featuring newly designed cast-chassis drivers all with edgewound voice coils coupled with a precision 1" exit compression driver, the range is planned for introduction in early summer. It initially comprises a two-way 12", two-way 15" and a powerful dual 15" full-range system together with a dual 15" bass system. More models will follow. Other product news includes the introduction of flying models in the CR Series and a first showing of the SR3 Mk2 in the SR Series.

- **Wembley Loudspeaker** introduced the new P.T.P. series of speaker chassis, comprising 10 units beginning at the 10" 250/PG musician's speaker. The biggest of the range, the 450 LSB and 410 LSB bass units, are capable of handling 300W RMS for long periods, and have 7" vented magnet assemblies and extended pole pieces, making them suitable for bass requirements in PA, disco and sound reinforcement systems.

- **Volt** were demonstrating their PA, studio and professional' ranges of speaker chassis, with several new additions, including the PS12 pressed steel speaker chassis, which comes as a 100W lead guitar unit, or as 150W or 200W mid-bass unit. The RS823 is a 15" radial bass high power unit, with 500W RMS power handling. Also new from volt were the BM251.3 and 251.4 10" mid-bass chassis, with 50mm voice coils.

- From **Apogee** came the CSM2 studio monitor, a three-way, passive crossover design with mechanically aligned drivers, aimed at near and mid-field monitoring in critical listening environments. Also new were the AC-1 compact monitor, the AC-2 low profile speaker system and the AC-4 loudspeaker system.

- **Studiomaster** introduced the KMX Vision 12, 15 and 15 Bass heavy duty cast chassis speakers. The 12" and 15" speakers have high frequency driver protection and a cabinet power handling of 350W, and are available in 4 and 8 ohm versions. The 15" bass, also available in both 4 and 8 ohm versions, has a max SPL of 124dB at 350W, a sensitivity of 100dB at 1W/metre, and weighs in at 27kg.

- **Millbank** showed their MSR range of loudspeakers. The MSRI offers a full range, lightweight, two-way portable unit, suitable for a variety of applications either as part of a main system or as part of a secondary set-up within

church installations and conference rooms. It has a powerful 8" mid-bass driver, with a substantial magnet assembly and 2" voice coil, and the passive crossover network incorporates equalisation and all driver balancing circuitry, negating the need for a dedicated processor. The MSRII is a three-way unit and has a 10" bass driver, with 2.5" voice coil. It can operate as a stand-alone full-range unit, or be coupled with a bass enclosure to form a bi-amped system. The MSRIII has a 12" bass driver, suitable for theatre, club and leisure centre applications. The MGSI was also on show - a 50W moulded cabinet loudspeaker, featuring a 5" mid/bass driver.

- **Electro Voice** introduced the new High-Q MT Series concert speaker systems, designed for high level sound reinforcement in both touring and permanent installation applications. The MTH-4B systems are available in 40 degree x 20 degree or 60 degree x 40 degree coverage patterns. The MTH-2B comes in 90 degree x 40 degree or 60 degree x 40 degree coverage patterns, and are available in rectangular or trapezoidal cabinets. The MTL-2B low frequency system comprises two 18" woofers, each facing into a manifold chamber, and was designed to give the highest possible low-frequency output. There were further developments from Electro Voice, including the new sub-woofer for MI systems, designed to augment the low-frequency performance of EV stage systems. The T18 behaves like a horn over much of its 33-250Hz range, but avoids the time delay and weight problems usually associated with conventional designs.

Also from EV was the new FR10-2S cinema surround system. Components include a Super-Dome high-frequency driver mounted on a constant directivity director. The enclosure has a 15 degree slanted front for even coverage, and a usable frequency range of 52-18kHz.

- **Ohm** were displaying the results of their new Zero Acoustic Signature Technology, in the form of the BR10S and BR12S loudspeaker. The walls of the BR series loudspeaker cabinets have virtually zero radiated output, making this exceptionally clear and powerful. Bonding a special 'plate array skeleton' to the inside of the cabinet, gives a high degree of stiffness and raises the panel resonances above the power band, so there is no energy to set them vibrating. The BR10S has a 10" woofer, and a 1" compression driver on a constant directivity horn. Maximum SPL is



CP&P/Lightpower stand: the new Pro Light and Sound sector has bolstered the appeal of Frankfurt.

127dB. The BR12S has 3dB more maximum output than the 10, and an enhanced low-frequency bandwidth. Ohm will soon be launching a processor to further enhance the performance of the BR series loudspeakers.

- New in Europe from **Renkus-Heinz** was the CE-3T, the foundation of the TSC loudspeaker family, featuring CoEntrant Waveguide Technology which claims true point source performance, along with natural signal alignment and tightly controlled dispersion. The result is near perfect imaging at low and high SPL levels. Pre-prototyped in 1994, the CoEntrant system is now in full production. Another prototype from last year, now appearing as a full production model is the Complex Conic Series. These two-way designs have Waveguides which provide an optimum elliptical coverage pattern throughout the HF range. The lower frequency units have ultra-long throw voice coil overhangs which give true linear movement at all SPL levels.

- **Meyer Sound** featured the new HD-2 self powered high definition mid-field monitor, launched officially at the AES. With the design, Meyer is introducing a new technique for phase correction of two-way systems, involving a high frequency horn.

- **EAW's** new LA (Linear Activation) Series, previewed earlier this year, was on show again. The LA325 is purpose-designed for nearfield applications such as band PA, keyboard, drum and sidefill monitoring. The three-way design incorporates two 15" low-frequency cone drivers in vented enclosure, with dual direct-radiating 6.5" mid-range cones are separately housed in a sub-enclosure to minimise distortion. The LA215 is a two-way version, in an asymmetrical cabinet for use vertically as a main PA system, or horizontally as a floor monitor for drums, keyboards or vocals.



Nic Tolkein (right) flying the flag for AC Lighting.



Gary Pritchard of LSC with the prototype of the Axiom Atom lighting desk, available in 12/24 and 24/48 versions. Each sub masters can control pre-recorded scenes or chases, and the desk has nine pages of memory.



Uta Raabe with the new 6-channel DMX desk from the Smoke Factory.



Zero 88's David Catterall and Freddy Lloyd flank Neil Rice of Optikinetics.



Ken Sewell (Pulsar) and Pasquali Quadri (CP), with Ralph Jörg-Wezorker and Günther Olbricht (CP&P Germany).

- **Dynacord** introduced the new Corus Line speaker cabinet series, comprising five full-range systems, from 12" two-way to 15" three-way, plus three sub-woofers and three stage monitors. Also new was the Forum Line, consisting of the full-range F200, four mid-high modules from the F123 to the F400 Hi, five sub-woofers, from the F100 Lo to the F400 Lo W-Horn and two floor monitors. Dynacord also showed the Sub 600 A Active Sub-Woofer, equipped with a processor-controlled power amplifier, and an active crossover separating mid-high range.

- **Acoustech**, exhibiting on the **Eminence** stand, were showing the new Pro Series II range of glass fibre horns. Both bi-radial and constant directivity horns have been introduced with the new range, including 1" and 2" compression horns.

- From Italy, **FBT** introduced the Renegade Series integrated sound system, featuring a five channel powered mixer, the 160R, a protection system including soft-start and a proportioned limiter on the mains supply, and two double-coned 10" S80 speakers. The system is aimed at small club fixed systems, town halls, places of worship and general commercial sound installations.

AMPLIFIERS

- Two new amplifiers were introduced by **C Audio**, the RA 4001 and the XR 3801. The main features of the RA 4001 are a rugged steel chassis, compact 2U height, forced cooling and overall sonic quality enhanced by 'audiophile-grade' circuit topologies, electronically balanced inputs on both XLR and quarter-inch jacks, outputs on Neutron Speakon connectors and in-built protection against faults and misuse. It has a power rating of 1000W into 4 ohms, 680W into 8 ohms and 340W into 16 ohms with both channels driven, or 2000W into 8 ohms bridged.

The XR 3801 has a rating of 2400W into 8 ohms bridged, and has an oversized toroidal transformer and low ESR filter capacitors which handle high energy levels, even at low frequencies. Thermally controlled, two-speed twin cooling fans keep the amp running at safe temperatures, even at continuous high output.

C Audio also used the show to present their fifth annual distributor awards. Electro Systems Pte Ltd picked up the 'Most Improved Territory Award'



Intimidation now have their full European distribution network set up and signed up further agents at Frankfurt. The Don is the latest addition to their mixer range and Steven Carroll (right) was on hand to explain its radical features.



Keith Dale and Colin Whittaker of Celco show the new M9 video system.

whilst Harman France SA were recognised for their 'Outstanding Sales Achievement'.

- The power amplifier market was joined by **Electro Voice** at Frankfurt, as the loudspeaker giant presented the Precision Series amplifier to the industry. The series comprises the P3000, P2000, P1250, P1200 and P600. The larger two of the family are designed for high performance concert sound reinforcement systems, while the less powerful are aimed at smaller PA systems or lower-powered fixed installations. The Precision amps incorporate protection against overheating, overload, underload, short circuits, RF interference, inrush current and DC voltage at the input, as well as damage from back-EMF from speaker failure. The Precisions have Dual Differential Discrete Topology circuit design, which provides symmetrical circuitry for both polarities and hence equal slew performance. The P1250 model includes a built-in processor, utilising Dynamic Signal Processing which minimises transient response and phase distortion. Users can select enclosure tuning (12 or 24dB per octave). The P1250's processor also has prevention against clipping and limits peak power output. EV have been a long time in developing this series, and the process has involved a great deal of research and extensive bench testing and redesign. From first showing, it looks and sounds as if the end product is worthy of the effort.

- **Crown** introduced a posse of new amps including the Micro-Tech 2400 stereo power amplifier. All Micro-Tech amps feature three power supplies and have Crown's patented grounded bridge circuitry and ODEP (Output Device Emulation Protection) circuitry. Operable in stereo, bridge-mono and parallel-mono modes, the MT2400 is conservatively rated and in stereo mode delivers 800W per channel at 4 ohms. Alongside the 2400 was the latest recruit to the CSL Series - 1400CSL - a new amplifier aimed at the fixed installation market where front panel controls are not required. Direct coupled and grounded bridge circuitry ensure sonic integrity. For example, the unit offers an extremely high damping factor of >1000 all the way down to 10Hz for chest slamming low end. It is also operable on stereo, bridged mono and parallel mono modes and delivers 720W per channel at 4 ohms. The PowerTech 3, the latest in the PowerTech series, offers recessed level controls



Iain Price-Smith of Multiform with the Zodiac 36, a 36 channel level memory lighting desk that stores fade times as well as levels for each scene in a memory. It also has pause/override facilities, LTP operation and 0-10V/DMX/MIDI outputs.



Rolf Garnies of Amptown focusing on the Controlite PML luminaire.

and a re-settable circuit breaker power switch. In addition, signal presence and Crown's own I.O.C. distortion indicators, together with 'fault protection' circuitry, provide useful monitoring. Like its counterparts, it can be operated in three modes and in stereo delivers 760W per channel at 4 ohms.

- **PSL** were promoting their new Airflow Management System which is at the heart of every Vp Series amplifier. The fundamental part of this system is the Cold Cube. Designed in conjunction with a specialist manufacturer, it is based on the same technology used in the F-111 fighter aircraft. A combination of increased surface area and high pressure fans ensure that heat is removed before saturation becomes an issue.

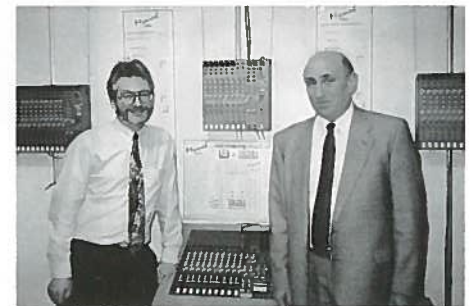
- **RCF** showed their complete range of RCF2000 series of integrated amplifiers and power amplifiers for the first time. The 2000 series was initially launched in 1994 with the introduction of the 60W and 120W models. It has now been added to with the 200W mixer amplifier - AM 2200, plus the UP 2401 - 450W power amplifier.

The 2000 series is designed for use in all types of PA applications, including announcement and/or musical programme diffusion in shopping centres and leisure facilities. All models offer five universal inputs of DIN/XLR connectors with fully programmable priority protocols. Power amp versions offer 60W, 120W, 200W and 450W models.

- **Chevin Research's** A series of amplifiers, introduced at the Paris AES show, were on display again at Frankfurt - the A3000, A6000 and Q-900 for large-scale touring, and the A700V for commercial multi-speaker applications.

- **Citronic's** Conquest range of power amplifiers, the 4.5, 9, 12 and 16, were launched, aiming at the smaller budget. Citronic have used their 'Thick Film Ceramic Hybrid' voltage amplifier, developed from the PPX, which has been undergoing trials for two years. The amps have been designed in compliance with EMC regulations. Features include an on-board input mixer that allows either stereo or mono input to both bridged and unbridged applications, and all amps in the range are adjustable to match all major international input signal level standards.

- The **Lab Gruppen** LAB 1600, debuted in Paris, was on show. The stereo power amplifier,



Ron Bailey of 3G with John Ruppin of HW International and the Mynah Plus. HW also had the 'Headset' system from Shure on stand which features the new WH-10 microphone, a T1G pocket transmitter and a receiver unit.

delivering 840W per channel into 4 ohms, is based on the LAB 1300C model, offering low weight (8kg) and small size. A new short circuit protection system, the ALS (Adaptive Limiting System) has been developed for the LAB 1600.

The MLS switch, introduced to the LAB 5000 five years ago, is now present in the LAB 1200C, which supersedes the LAB 1200. The LAB 1300C is promoted as the first professional power amplifier with EMC approval and bears the CE-label.

- **ARX** came all the way from down under to present their new Power Drive, an integrated system power stage with three channels (left, right, sub) and an integrated processor which makes the unit suitable for quick and easy installation.

- **FBT** introduced the HP series of power amps. The range comprises four models - the HP 2030 and HP 2040 with outputs of 120W and 200W respectively, the HP 2080 (400W) and the HP2100 (500W). Main features include independent channel protection, DC and SOA protection, soft start for surge reduction and LEDs showing all operating modes.

- In response to market demand for low-cost power amplifiers, **Crest Audio's** range has been augmented by the new 'V' and 'Vs' Series. The V Series amps are feature packed. The 20-segment precision meter's 'peak hold' and 'instantaneous' readings give an accurate indication of channel output. Recessed, detented channel attenuators are front panel mounted for easy level adjustment. The rear panel is also configured for simplicity of use. Differentially balanced TRS jacks and barrier strips provide flexible input connection, whilst a mode select switch permits stereo or bridged mono operation. The Vs amps are identical in performance and electronic design, but are simplified in construction and features to make them the most cost-effective in the Crest product line. Crest also extended their CA range, with the addition of CA2 and CA4.

- **Millbank** introduced a range of five new amplifiers - the AP series featuring the AP500, 1000, 1500, 2400 and 3200. The first three in the range are dual channel, high powered 2U units, whilst the larger two are 3U amps. All the amps use selected NPN power devices arranged in a symmetrical output stage of unparallelled linearity as opposed to standard 'push-pull' designs. The 500, 1000 and 1500 feature massive linear power supplies based around a toroidal transformer design, with the 2400 and 3200 having dual linear power supplies. All have been fitted with clip eliminator circuits allowing each to deliver its full undistorted power capability without allowing the signal waveform to 'square wave'.

- The new 700D and 1200D amplifiers were introduced by **Studiomaster**. Both are 2U rack-mounting, and feature AMCS (Amplifier Management Control System) circuitry, balanced XLR and quarter-inch jack inputs, Speakon outputs, switchable bridge and mono modes with status indicators and input level controls.

MICROPHONES

- A new condenser microphone was introduced by **Electro Voice**. The RE 2000 has a frequency response of 70-18,000Hz and an impedance of 150 ohms, balanced. Sensitivity at 1kHz reaches 20mV/pascal at -32.7dB. The mic contains an externally biased high-voltage transducer, and is equipped with a mid-sized diaphragm that combines a high output with a smooth transient response and a tight polar pattern. Noise is reduced by the gold-laminate diaphragm which reduces stray capacitance, and the high output of the transducer which avoids the need for an additional gain stage. The RE 2000 uses its own external computer-grade power supply for the heating element and the mic electronics. A 10dB



David Lyth of Volt Loudspeakers with the company's latest loudspeaker chassis.

pre-attenuator, activated with a switch on the back of the microphone, gives a usable input level of 148dB (138dB without attenuation).

- **Sennheiser** had the BF811 and BF812 - new microphones that have a super-cardioid pick-up pattern and a specially designed 'synthetic calibrated spring' system to suppress handling noise. Both microphones feature the same design, but the 812 has the additional facility of a noiseless on/off reed switch which can be locked 'on'.

- **AKG** launched a number of new products. The Consumer series of microphones comprises the D40S, D50S, D60S and D65S Performance Microphones, aimed primarily at the hi-fi, home recording and karaoke markets. The CK77 claims to be the smallest dual diaphragm microphone in the world. This allows the mic to maintain a frequency response of 20Hz-20kHz, despite the loss of capacitance, sensitivity and low signal/noise ratio caused by such a reduction in size. The C921 CM and the C947 CM, shown in Paris, were also on show, and are aimed at flown 'invisible' applications for sound and speech reinforcement. Two additions have been made to the WMS 900 wireless system - the PR 900 portable UHF receiver and the R 901 Standalone Mainframe, which turns the PR 900 into a stationary, standalone receiver. The 19" frame has spaces for two PR 900s, which can be combined via a stacking cable for diversity operation.

- **Audio Technica** continue to develop new product and showed a range of recently introduced microphones. The 'Midnight Blues' series of three neodymium dynamic cardioid hand-held mics designed for the MI market, but equally at home in reinforcement situations. In response to customer demand, the new AT805 is an ultra-miniature omnidirectional microphone for cosmetic use on stage. Also shown were two new headworn mics, the Dynamic Pro 8 HE and the ATM75 condenser. AT also introduced two new precision studiomikes designed specifically with professional monitoring/mixing in mind - the ATH-M40 and the ATH-D40. Finally, the AT4050 multi-pattern capacitor mic expands on the technology that established the AT4033.

- **Beyerdynamic** were showing their M series of microphones - the M01 to the M05, as well as the new studio mic, the MCE 83. This brass-housed condenser mic is aimed at instrument miking, and employs 'back electret' technology. Also new was the V200 VHF system, similar in style to the UHF U700, offering 12 wireless microphones in one TV channel. Taking 4U of rack space, the system is available with three types of transmitter - belt pack, handheld, or handheld with integrated antenna. Other additions at the show included the System 3000 systems contracting modular system and the U600 UHF system, which comes in a 1U half-rack space format.

SIGNAL PROCESSING

- **Electro Voice's** new SbX passive crossover has been designed to be used with the Sb 120 bass module, in combination with the Sx200 or Sx100 speaker system, but can also be installed in other sub-bass speaker systems with the same power handling. The SbX can be used in two modes, selectable by changing the wiring between the Sb 120 bass module and Sx speaker. Used in the crossover mode, the speaker is rolled off at below 200Hz at 6dB/octave, reducing the woofer excursion at low frequencies. Also new was the Dx34 digital sound system controller, designed to set up and optimise active, multi-way loudspeaker systems in professional and fixed installations. The controller uses 18-bit linear AD/DA hardware with Sigma converters and a 24-bit Motorola digital signal processor.

- **Eminence** had their PX crossovers on display, featuring extensive protection circuitry. Supplied complete with mounting hardware, and including parallel inputs and controls, the crossovers come in 10 different models: four PX-i filters (high-pass filters are also available without hardware for in-cabinet use), three PX-ii two-way crossovers and three PX-iii three-way crossovers. They use a proven HF protection circuit with custom-built aerospace lamps used as positive temperature coefficient series varistors. The tungsten filaments effectively track the programme material, maintaining a safe maximum current level to the HF driver without introducing any distortion.

- Two new graphic equalisers were introduced by **Millbank**. The EQ 311 offers a single channel of 31 bands of EQ, while the EQ 152 offers 2 channels of 15 bands of EQ. All frequencies meet ISO requirements. The design of the units incorporates a 30-step output gain trim and peak indicator calibration to maintain system headroom and warn against power amplifier clipping. Comprehensive operational control and front panel indication facilities are included as standard to help with fast set up.

- **SCV Electronics** had the new SCV PSL104 5-band parametric variation of the PSL52 on stand, alongside the new MX2 mic amplifier from LA Audio which has been upgraded to include filter and enhanced metering.

- **Audiomation Systems** launched the Audiomate 64, the first motor fader automation system to run on a Macintosh. Previewed as a prototype at last year's San Francisco AES, it is claimed the system costs half the price of any other comparable unit on the market.

- **Sabine** introduced the FBX Solo feedback exterminator, a miniature version of the FBX-901 designed for use on individual microphones. The Solo is available in two versions: the SL-610 for line level insert points on a mixer's inputs, and the SM-610 with mic-level input/line level output for use with mixers lacking insert points. The Real-Q Real Time Adaptive Equaliser was also introduced by Sabine. This digital signal processor constantly monitors the response of a sound system and maintains a specified equalisation curve, ignoring any signal processing that occurs before it in the signal path. The Real-Q features pink and white noise generators, a full-featured real-time analyser, 31 band digital master and adaptive EQs and inputs for up to three microphones.

MIXING DESKS

- **Millbank's** 16 channel Multimix mixer was on show, offering variable configurations of either 16:2:1, 12:4:2:1 or 16:4:2:1. The Multimix is 19" rack mounting, and other features include 12 inputs, 48V phantom powering, three band equalisation with defeat switch, two aux sends (one pre and one post fade, internally switchable),

Unique &

Indisputably coemar

new
advanced
technology

coemar nat **pro colour**:
unique because it
combines beam control
with an advanced dichroic
colour mixing system.

Priceless because it combines
fresnels, spots, profiles and
diffused beam fixtures into one
unique, extraordinary projector.
You want only the best,
you want only coemar nat
pro colour. Nothing less will do.



priceless



coemar nat

pc 1000

pc 1200 HMI

■ **coemar nat pro colour is available in two versions: halogen (nat pc 1000) and discharge lamp (nat pc 1200 HMI).**

■ **coemar nat pro colour** requires only a single power supply, a single signal cable, and a DMX 512 control desk. It requires no external dimmer, no colour changer, or other accessories.

predominant features

- motorized projector with built-in colour changer for limitless colours, iris diaphragm, dimmer, zoom objective lens, focus and frost facility
- 2 ultra high definition achromatic finished motorized zoom lenses are used for precise beam sizing from 14.7° to 26.7°
- totally smooth built-in dimmer for complete intensity control from 0 to 100%
- slick motorized iris with built-in variable speed pulse facilities
- motorized focus lens
- all functions available from standard DMX 512 control via 3 or 5 pin cannon connectors
- full cyan, magenta, yellow colour mixing
- high definition optical system formed by a parabolic lens and a quarzed plano-convex lens achromatic finished
- typical working distance: 4-18 meters (pc 1000) 4-30 meters (pc 1200 HMI)
- frost usable at all settings from sharp to totally diffused with built-in frost flash facilities
- indicator for DMX 512 signal reception
- dip-switches for projector address number
- built in self-test mode
- protection range IP 20

For more information please ask for the detailed catalogue



coemar

coemar spa via inghilterra - 46042 castelgoffredo (mn) italy
tel. (0376) 779336 ■ fax (0376) 780657



The Sennheiser stand was the platform for the launch of the BF811 and BF812 microphones.

full routing to four groups and master, peak level indication and a 100mm fader.

- New from **Citronic** at Frankfurt were two mixers, the Predator and the SM100. The Predator is aimed at the creative DJ, and supersedes the SM350 with additional developments such as a dual frequency to allow the mixing of bass and top from differing sources, a sub-fader located adjacent to the cross-fader, and cut/punch buttons on either side of the two main inputs for fast beat-mixing. The SM100 is a start-up model for DJs, and is the smallest of Citronic's Remix range of mixers.

- **Formula Sound's** back-up mixer, the Shadow, launched last year and featured in these pages at the time, has apparently been doing well with disco operators and installers. The 1U Shadow is designed to take over from the main mixer at the flick of a switch should the main mixer suddenly become inoperable having been doused with beer, or some such mishap. The Shadow can be installed as part of a new system or 'retro' fitted into an existing system, and will also operate alone in a mobile or small fixed system.

- **HW** launched the 3G Mynah PLUS range of mixers. Amongst a number of improvements, the mixers have new input circuitry and selectable gain structure, insert points throughout and multiple aux returns. The eight model range consists of various configurations from 8-2-1 through to 16-4-2-1.

- **Allen & Heath** launched their latest product in the recording market - the very compact GS1, dubbed 'The Biggest Little Mixer in the World'. The eight buss console is expandable and also comes with an optional meterbridge. With a frame measuring 500mm x 550mm, the GS1 boasts 32 inputs for mix down, five aux busses and three band EQ with mid sweep on the channel paths. The package comes with MIDI mute control as standard and includes the latest version of Allen & Heath's Function Key facility.

- New from **Soundtracs** came three mixers - the Topaz Mini, Topaz Maxi and the Topaz Macro. The Mini version is aimed at small bands and clubs, conference mixing, stereo recording and multi-track remixing. The Maxi is available in two configurations, 24:4:2 or 32:4:2. Aimed at FOH applications in larger concert halls and fixed installations in theatres, the Topaz Maxi has eight auxiliary sends - two pre fade, two pre or post fade (switchable on the master section), and two further pairs for post fade and post pan. The Macro model is aimed at gigging bands, larger fixed installations and post-production mixing.

- **Dynacord** launched the StageMate mixers - configured as 16:3 or 24:3. Both offer 4-band equalisation with two sweepable mid ranges, six aux lines and separately switchable phantom power for each mic-input. The 16:3 model offers eight mic and four stereo line inputs, while the 24:3 model has 12 mic and six stereo line inputs. They also introduced the M2 club mixer, a follow-up to the established M1, Rackmate 1400, a 19" mixer and the SmartLine range of compact effects processors.

- **Ross** introduced the RC 2842 mixing desk, taking its place at the top of the RCS range. With



Stéphane Colin of RVE (right) with Helmut Schanz of Licon GmbH.

more than 28 channels, four sub-busses, 44 inputs, eight aux sends and eight stereo returns, the desk is well-suited to live use. Other notable features include mute functions and pre-fade listen switch, clearly labelled XLR sockets and a robust case for touring use.

- From **Ecler**, came the new SAM 502 professional PA stereo mixer which has five channels with two direct inputs each, level control and pre-fader listening, master output level with two outputs (one balanced and one unbalanced) and front panel mic input in channel one. Also new is the QEM series of graphic equalisers. The QEM 10:2 takes one unit of rack space, has two channels and 10 bands-one octave equaliser. The 16:2 is a 2U model, with high resolution slide controls, electronically balanced inputs and outputs, radio frequency filter and switchable subsonic filter, while the QEM 30:1, also a 2U model, features in addition high and low cut filter controls, providing the ability to set the upper and lower cut-off frequencies of the unit from between 2.2kHz and 30kHz on the high end, and between 15Hz and 300Hz on the low.

- **Stage Accompany** were showing for the first time the SA 202 modular mixing console, especially developed for live performance in clubs and theatres. The 10 channel fully modular console offers a maximum of 10 stereo 3-input-modules. The controls are equipped with soft-touch knobs and the aluminium mixer housing gives the option of mounting the connector panel on the back or the bottom of the 19" housing. High quality VU-meters and clip level indicators offer optimum control of the sound reproduction.

- **Soundcraft** were giving further airings to the D-Mix 1000 and k1 console. On the **Spirit** front there was the new Protracker 8-channel in-line multitrack recording mixer. The compact rackmount console has a simple signal path for optimum audio quality, and features - including limiters on all inputs - that make it a suitable partner for affordable digital multitracks. Several ProTrackers can be daisy-chained to allow simultaneous recording on more than eight tracks at once, with an integrated monitor path. The desk also provides simple, but effective, live mixing facilities allowing FOH stereo mixing and simultaneous recording. Spirit's range of live sound products has also expanded to include three dynamic mics - the VM01 and VM01S vocal mics and the IM01 instrument mic.

- **Studiomaster** launched the Powerhouse Horizon powered mixing console, based on the successful vision range. The Horizon is an eight channel unit with a rackmount option, taking 1200W of power (600W per channel into four ohms), and using Studiomaster's AMCS (Amplifier Management Control System). Also new is the Powerhouse 300, available in eight and 12 channel versions, with 600W total power and two seven-band graphic equalisers. Studiomaster have also made the addition of a new full-width meter bridge to their Mixdown Classic 8 console. This allows simultaneous visual monitoring of all input channels, each on a bi-colour, 12 segment, peak-reading bargraph. A meter bridge has also now been included as standard on the P7. Three



A Martin Audio trio of Sara Kendrick, Sean Turk and Martin Kelly.

new disco mixers were also introduced by Studiomaster - the DM01, a nine-input mixer with effects unit, the DM02, a 16-input mixer with delay unit and the DM03, an 11-input mixer with digital sampler.

- **Ramsa** launched the WR-5X1, a 48-channel console, plus four stereo, the main features of which are 10 VCAs, 10 mutes and 22 auxiliary busses, complete with automation.

AND MORE

- **Vestax** launched their CDX-25 professional double CD player. The 19" rack-mountable (2.5U) unit features frame display, pitch display, instant start of one hundredth of a second, pitch-bend system, shock-absorbing suspension and stick controller for scanning and searching. For the vinyl side of the business, Vestax introduced two new turntables to their PDT series. The PDT 6000 is the top of the range, aimed not only at the professional DJ, but at broadcast and high-end audio users. A digital display indicates turntable speed, with pitch control available at a very broad +/-10%. The PDT 4000 features the same basic facilities as the PDT 5000, though simplified.

- **Siemens** presented its CARAT-ARC digital archiving system, originally developed for the automation of radio stations, but equally suitable for theatre and opera house applications. The system allows digitised audio data to be stored over long periods of time with zero quality loss. The audio material can be accessed from the control desk and the sound technician can find the items required quickly and easily from the data base.

- There is good news for live musicians with budgets of a lower order. **Garwood Communications**, recently finding tremendous success with the Radio Station in-ear monitoring system, has now launched a more affordable version of this hot-cake idea. The PRS-II is a stereo UHF unit with the same audio quality as Radio Station, and comes complete with a transmitter, receiver and earpieces. The unit is complemented by the M-Pack, a hard-wired unit that is aimed at stationary stage performers, such as drummers and keyboard players. The M-Pack incorporates a pre-set compressor/limiter, and is connected by cable to any line-level mix source. The transmitter is free-standing or rack mounting with the optional rack mount kit, which enables two systems to be housed in a 1U space. The unit offers full stereo transmission on a single transmission frequency, and is configured for up to 12 compatible operating frequencies. The PRS-II has a range of 300 feet even in adverse conditions.

L+SI IS ALSO RUNNING A MAJOR FEATURE ON SIB MAGIS IN THIS ISSUE. FOR THE LATEST PRODUCT NEWS FROM RIMINI SEE PAGES 70-76



COMPLETE SCENE... AND BE SEEN

Whatever your involvement in theatre, Theatre World '95 has something for you. From May 12th to 14th, *Wembley Exhibition and Conference Centre* will be the stage for actors, producers, arts and entertainment officers, costumiers, marketing managers, production and technical managers, retailers, students, teachers, box office and venue managers and many, many more to gather together.

In fact, virtually the entire theatre community will be making sure they've got the ticket to 3 days of information, opportunity, business, entertainment and activity. So if theatre is your business, as a performer or in production, Theatre World '95 is just the ticket for the complete scene. Make sure your face is in the crowd. Clip the coupon below *Today*.

Supported by **THE STAGE**

THE EXHIBITION - Information, advice, products and services on every aspect of theatre from accountants and agents, through costumes and casting, set design and special effects to venues and schools.

THE WORKSHOPS - Thousands of workshop places run by leading UK teachers & organisations provide an invaluable opportunity to experience a wide range of teaching methods under one roof.

THE CENTRE STAGE - Programme of the widest variety of performance styles running continuously. Some of the finest, most innovative performers and companies present a snapshot of current work.



**THEATRE
WORLD • 95**

May 12 - 14, 1995
Wembley Exhibition &
Conference Centre, London

professional event - not open to the public

LECTURES AND SEMINARS - A focus on professional issues, each day examining a different theme: technology marketing, management and training.

THE PLAYHOUSE - A quieter area for visiting casting executives to evaluate hundreds of performances, and providing performers with a valuable showcase platform.

THE PAVILION - An intimate cafe where jugglers, comedians, magicians and speciality acts can create a lighthearted environment to entertain Theatre World visitors.

THE ENTIRE WORLD OF THEATRE TOGETHER ON ONE STAGE

Please send me details about visiting Theatre World '95 Please send me information about how I can exhibit

TITLE (MR/MRS/MS) _____ NAME _____

POSITION _____

COMPANY/ORGANISATION _____

ADDRESS _____

POSTCODE _____

TEL _____

Please complete and send this coupon to: Performing World Events Ltd., Hadley House, 17 Park Road, High Barnet, Herts EN5 5RY, UK, or you can fax to us on 0181-364 8063

more...



~POWERFUL~ACCURATE~COMPACT~ARRAYABLE~

A no compromise touring, flying or installation system with more ...
hear it, we deliver all we promise.



A HARD ACT TO FOLLOW.

Martin Audio Ltd, 19 Lincoln Road, Cressex Industrial Estate, High Wycombe, Buckinghamshire HP12 3RD, England.
Tel: 0494 535312 (International: +44 494 535312) Fax: 0494 438669 (International: +44 494 438669)
TGI/Tannoy North America Inc. 300 Gage Avenue, Kitchener, Ontario, N2M 2CB, Canada
Tel: (519) 7451158 Fax: (519) 745 2364

TGI

A member of TGI plc Group of Companies

THE ALMEIDA HAMLET

Robert Halliday looks at the Almeida Theatre's production of Hamlet, now showing at the Hackney Empire before heading off to Broadway . . .



Architect Frank Matcham's spectacular auditorium at the Hackney Empire.

If there was a list of theatrical wonders of the world, high on it would surely be the Almeida Theatre in Islington, north London. Not because it is any kind of temple to the god of high-tech stage technology, or because it is the finest example of modern theatre architecture, or because it spends millions of pounds in producing huge blockbuster shows.

No, the Almeida is something completely different. The theatre itself is the first give away: from the outside it resembles some kind of church hall. In fact, it began life as the Islington Literary and Scientific Institute, and was the scene of the 'unrolling' of one of the first Egyptian Mummies to be brought to the UK. The building then went through various incarnations as a music hall, a Salvation Army citadel and a factory for Beck's Carnival Novelties before being discovered and claimed as a theatre by Pierre Audi, Will Bowen and Chris Naylor. They installed a lighting grid and seating on two levels, looking into an open acting area that extends to the rear of the building. They also left many features intact, including the striking curved brick wall at the back of the stage that is something of a temptation to any designer working in the building, and has featured in many of the theatre's productions.

Audi ran the theatre through the eighties, playing host to theatre companies from around the world. But the next stage of the building's history began in 1990 when the actors Jonathan Kent and Ian McDiarmid took over the artistic direction at the venue and turned the Almeida

into a full-time producing house.

It is their record in the years since that makes the theatre a candidate for any theatrical wonder list. They have produced both premieres of new plays and revivals of long-neglected classics, often in new translations which cut the lengthy pieces down to a more reasonable size without seeming to omit anything. They have persuaded many theatrical 'names' to appear in those shows, always for very little money - people like Janet Suzman, Nicola Pagett, Anna Massey, Ian Holm and Penelope Wilton, as well as Kent and McDiarmid themselves. Their work has spread out of the Almeida itself, many of their shows being taken up by commercial managements for UK tours or West End runs. *Medea*, starring Diana Rigg, played to great acclaim around the UK before sweeping onto Broadway and claiming the Best Actress Tony award for its leading lady.

As well as highly regarded actors and directors, the Almeida attracts the top names amongst designers and lighting designers and benefits from the experience of sound designer John Leonard. Billed as the Almeida's sound consultant, Leonard also designs many of the shows and picked up the New York Critics' Drama Desk Best Original Sound Design award for his work on *Medea*. Backing up this strong artistic work is a technical team, led by production manager Simon Harper, who seem to have no conception of the limits that should be imposed by their building. The Almeida's crew is small and by no means highly paid, but

they are completely committed to the theatre and to finding solutions to the problems they are presented with. Previous triumphs include the stunning collapsing wall in *Medea*, a whole host of complex, moving sets which somehow end up on stage despite having to pass through a standard double door to gain access (the building is listed and so little can be done to improve this), and a rain system praised by Ian Herbert last year and now permanently installed in the roof of the building by popular demand from directors and designers!

The company's reputation thus belies its size, and not just in this country. Through the work of members of the board of directors the Almeida also has a strong American following, with donations from the States being received from a separate American Friends of the Almeida organisation. It is money raised from these people, the British supporters, and the many industrial sponsors led by AT&T, that allows the company to exist, since it receives just 30% of its income from public funding, and with only 300 seats could never survive from box-office takings alone.

But it is also the American connection that has led to the Almeida's latest project. Dodger Productions are an American company whose work includes shows such as *Tommy* on Broadway. They made a decision to bring some 'art' to the home of musicals, and, based on the reputation earned with *Medea*, approached the Almeida to produce that art. AT&T, the Almeida's principal sponsor, stepped in to help. So, the new project was born - a large scale

production of *Hamlet*, directed by Jonathan Kent and starring Ralph Fiennes, the British actor who shot to fame with his Oscar nomination for Steven Spielberg's production of *Schindler's List*.

Given that the play would end up in a large Broadway theatre, and that it was also intended to visit large theatres across Europe in a tour that, sadly, was later cancelled, a larger venue than the Almeida was called for. The company didn't want to move into a West End theatre with the high costs and complex contracts that would have been involved. Instead, they approached the Hackney Empire.

Designed by the renowned theatre architect Frank Matcham, the Hackney Empire was built in 1901 as a music and variety hall, a role it filled successfully up until the 1950s, when ATV turned it into London's first independent television studio. It then spent a long spell as a bingo hall before being rescued and returned to entertainment use in 1986. Since then it has returned to its 'variety' roots, hosting music events, comedy nights and the occasional theatre piece.

Although slightly run-down, Matcham's spectacular auditorium has survived remarkably well over the years. The seating is spread over the stalls and three circles, but the circles are set further back, and are more strongly curved, than in many of Matcham's other theatres. From the stalls the effect is therefore not dominated by an overhanging circle and the audience have a strong connection to the stage which seems close, yet also epic, because of the space around and above it. Viewers in the circles are further from the stage, yet as they lean and turn to see the stage, the effect is of an audience cascading over the circles, like theatrical paintings of old. The decoration includes two domes flanking the proscenium arch - unusual, yet fascinating to look at.

The first problem facing production manager Simon Harper, though, was that in its years as a bingo hall, the theatre had missed the movement away from light painted scenery to heavy realistic scenery through the sixties and seventies. Although the flying grid was in remarkably good condition, it was still based around hemp flying. "We also found that whoever installed the iron had just hacked through the grid to make space for it - the front of the grid wasn't really attached to the back of the proscenium wall," Harper explains.

This would be a problem with *Hamlet*. Designed by Peter J Davison, the show is in many ways a 'sequel' to his work on *Saint Joan*, covered in L+S last year. Much of the action takes place within one room, defined by two walls set on a diagonal across a raked stage; not an ancient castle, but suggestive of a more modern palace. However, the design also called for the angled back wall to fly out to reveal an open vista behind, for an extra 'box' of scenery (containing a series of doors and giving the impression of a long corridor when viewed through the door in the back wall, to drop in and out behind the wall), for a heavy 'front wall' to drop in down-stage of this room and, behind all of these, for a large gauze-and-perspex wall which can split open - in addition to a section of floor capable of lifting *Hamlet* into the air.

Harper also had to work against a very tight schedule, which gave him less than a month between the arrival of the final set design and the start of the fit-up. His 'equation' also had to include the practicalities of getting the show out to Europe and across to America, and the American producer's demands that the show



Ralph Fiennes as Hamlet in The Almeida Theatre Company production. photo Ivan Kyncl

run with as small a crew as possible on Broadway. All of this led him to automate much of the flying, using hydraulic jiggers supplied by Delstar. These are linear hydraulic rams mounted within vertical frames which are bolted to the fly floor and then attached to the steel wires from a flying bar, in much the same way that the wires would be attached to a counterweight frame in a conventional counterweight flying system. Hydraulic pressure is supplied by a pump in the theatre's basement and taken up some large-gauge hydraulic hoses to the rams on the fly floor. Control is through a switch box with 'in dead' and 'out dead' buttons for each ram.

The system is not just a simple 'go/stop' one, though - each piece has a slow start speed, then a faster running speed, then a slow stop speed, so that flying pieces take off and land gently while appearing and disappearing quickly. The drawbacks are that each piece can only have one overall flying time, and speed changes require a visit from Delstar. The advantages are the low noise of the system and the fact that the show can be run by just one flyman.

Delstar also strengthened the grid to ensure that the hydraulics would lift the scenery rather than pull down the roof, since the rams can lift up to half a tonne and some of the scenery, built by Terry Murphy Scenery and painted by Chris Clark, uses much of that capacity. In the end, though, the strength of the grid almost became one of the least of Harper's worries, since "it wouldn't have mattered if we couldn't get the scenery in - and just before the fit-up we discovered that the council would be digging up the access road at the side of the theatre. The set is five 40-footers' worth, and it took some careful negotiation with the road workers to get them all in!" Harper and his assistant, James Crout, also had to deal with an extended fit-up period which worked around other shows booked into the Empire, as well as with the on-going shows at the Almeida itself. "We have taken on extra staff to cover this show, but we went from a fit-up at the Almeida straight into this. Once this is running we do another get-out and fit-up at the Almeida, then we come back and get this out - by the end we'll have been in production for almost three months!"

To light the action through all of this scenery, the Almeida called upon Mark Henderson, who successfully tackled a similar challenge on *Saint Joan* and also has many Almeida shows under his belt. Henderson also had to work to

a tight schedule, designing his rig before seeing a run of the show so that pre-rigging work could get underway at the Empire. Though the theatre does have a small stock of equipment and a few front-of-house lighting positions, Henderson, production electrician Simon Needle and Almeida electrician Chris Clay decided to bring in everything that they needed from White Light, and to install extra front-of-house rigging positions to meet the demands of the show. Three of White Light's 48-way Arri touring racks and 15 5k dimmers thus found their way to the basement, connected to a power supply updated especially for the show. DMX control arrived from an Arri Imagine desk installed in a lighting and sound booth constructed at the back of the stalls, with power then fed out to the rig through a large number of Lectriflex multicores.

Unlike *Saint Joan*, which featured a specially constructed truss to follow the shape of the set, *Hamlet* was rigged on standard hemp bars angled to match the line of the set. The flown rig features a huge assortment of gear: Patt 743 and 243 Fresnels, various 5k Fresnels, Par 56 battens, an assortment of Par cans, and some R&V beamlights. The wings are also full of lighting equipment, including ADB Svoboda light curtains, to enable Henderson to get light through the wide assortment of windows and doors that Davison has built into the set. The FOH rig comprises Sil 30s spread across two pro boom positions, Sil 15s high in the upper circle slips and, most interestingly, five Sil 30s on each side of the lower circle.

In the show, these Sils provide a low front-fill into the action. It's an angle which doesn't feature strongly in the lighting textbooks, yet it is extremely powerful, rendering the actor's eyes clearly visible. "I started experimenting with angles at the Almeida," Henderson explains, "because people in the circle tend to have to look down the beams of light, which isn't very flattering. The Almeida has some good low lighting positions which I started using, and since then I've used that angle in projects elsewhere."

Henderson's colour palette has also changed with time and experimentation. Lee 200, supposedly 'double 201', features strongly in the show in lamps that the lighting designer might previously have coloured 201. "Having used 200, though, I now find that 201 looks very pale and green, much like the old 17 steel used to look," he comments. The 200 is supported by a range of tints either side of open white.

One further surprise lurks in the rig - three 1200W Clay Paky Golden Scans which get used for the ghost sequences. "You never see them move," Henderson explains. "We're using them for the quality of their light." They do reposition, though, to allow intense highlights to appear in several positions. The Scans are also run on the DMX line from the Imagine. The rest of the rig is very light on 'toys', not even featuring the now near-ubiquitous scroller.

But with the equipment to hand, Henderson has, as he did on *Saint Joan*, created high quality lighting of considerable beauty. Elements of the style are distinctive - the use of soft-edged lights as 'loose' specials (he admits to preferring PCs for this work, but here uses Fresnels and beamlights to considerable effect), the low front lighting to pull actors out of the background, and the incredible use of tints of colour, giving so many varieties that it does seem as if scrollers have been used. Despite the amount of scenery in the show, much of the action takes place within the main 'angled room with door and window' setting, and it is the lighting which

provides practically all of the information about location, time and mood.

There are moments of individual beauty: the first appearance of Ralph Fiennes' Hamlet, caught in a tight beamlight backlight through the huge window, or the entrance of Ophelia into a low side-light created by a Svoboda light curtain through another window. But more impressive is the way Henderson binds the whole show together. Even when the lighting is highly atmospheric, faces are clearly visible and stylised sections like the player's scene, with the court lit in a cool blue toplight to contrast strongly with the warmth of the players are very effective.

They work so well that they even draw compliments from other members of the creative team. Sound designer John Leonard, for example, watching a Hamlet soliloquy in the low crosslight was impressed with Henderson's clever approach. Henderson is equally complimentary of Leonard (Simon Harper claims that he's been working to turn the two of them into the "hard men of theatre", but fortunately he doesn't seem to have succeeded so far!), especially the way that Leonard's control system triggers the Imagine on the ghost cues, ensuring a precise synchronisation between lighting and sound.

Leonard wasn't given quite as free a hand with regard to equipment, and is using the Empire's own Hackney Cab FOH loudspeaker rig, supplemented by extra Hackney Cabs supplied by Hardware House, who have a long-standing relationship with the Empire. But he did bring in a 28-channel Soundcraft Venue mixer, an Akai S1100 sampler for replaying spot effects, a Revox CD player for music cues, and an Amiga computer running version 2.62 of Richmond Sound Design's Stage Manager MIDI control programme. This triggers the S1100 directly, and the CD player through an MM Productions MIDI relay switch box. The system was installed by sound engineer Simon Baker, and is being operated by the Almeida's Rachel Chapman.

Leonard's sound design is a mixture of musical, naturalistic, heightened-atmospheric and non-naturalistic elements. The naturalistic elements are often used to establish a time and mood alongside Henderson's lighting - the tolling church bells as Ophelia is buried, for

example. The heightened atmospheric elements are the sometimes larger-than-life wind, sea and thunder effects. The non-naturalistic elements include the 'sting' which accompanies each appearance of the ghost. This is a great sound effect short, incredibly sharp and precisely matching the lighting from the Golden Scans, which can appear and disappear without the usual tungsten filament lag.

The music, composed by Jonathan Dove, also plays an important part in establishing atmosphere. It features an assortment of brass instruments, and Leonard's early argument that if they were going to do the show, they might as well do it properly, led to the music being recorded on a 48-track digital Neve Capricorn system at the BBC's Television Studio music centre by their chief engineer, Tony Philpot, and some of the country's top session musicians

"Leonard's sound design is a mixture of musical, naturalistic, atmospheric and non-naturalistic elements. The naturalistic elements are often used to establish a time and mood alongside Henderson's lighting."

organised by Colin Sheen and made possible through a deal organised by Ken Cordingly of the Musician's Union.

As well as replaying recordings of that quality, Leonard's design also had to act as "the most expensive bar-bell system in history". As he explains: "the Empire has no bar-bells, so we put one on the sampler and used the new timed cue option in Stage Manager to start the pre-set sound cue at 7 o'clock, then run a sequence of bar-bells 25 minutes later. Once they are finished, the bar-bell cue list closes itself down until the interval." Leonard is delighted with many of the new features worked into this latest version of Stage Manager, but upset that the uncertainty surrounding the future of the Amiga computer has forced Charlie Richmond to temporarily suspend development work on the system. Richmond is currently investigating other platforms, but is having problems finding any that match the power of the Amiga. In the meantime it seems that Leonard is buying up

the remaining stocks of the computer in this country!

This *Hamlet*, then, is a triumph. Not just the technical elements (with a team this strong behind them, that's what would have been expected) but as a whole. It is a starry cast - undoubtedly much of the explanation for a Shakespeare production in a large, unlikely venue in the East End being sold out lies in that cast list - but once the show gets underway they don't appear as 'stars'. The show rattles along thanks to intelligent pruning of the script and the driving central performance of Ralph Fiennes. Many actors consider Hamlet to be the greatest challenge for a young actor, and many consequently show that challenge on stage. Fiennes' triumph is that he doesn't show that - his Hamlet appears to be a young prince struggling with the problems he faces, rather than a young actor showing how hard he's working playing that prince. Fiennes also receives strong support from the rest of the cast.

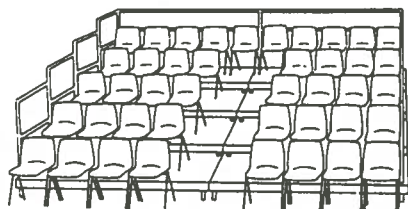
At the preview I saw, some tightening up remained to be done (the sight of director Jonathan Kent curling up on the floor at the back of the stalls clearly indicated moments that were less-than-perfect to his eye). But the audience, an incredible mixture of ages and backgrounds, sat with their eyes riveted on the stage, completely engrossed by the story unfolding before them.

Making 'epic' plays accessible in this way is what the Almeida is good at, and they have succeeded again. It's a shame that the show won't be seen around the rest of Britain, but it was fascinating to watch the Almeida team let loose in a larger theatre. Co-artistic director Ian McDiarmid seems to speak for the whole team when he says "this is a great theatre, and we would really like to return here in the future." Sadly, the company are only funded to run the Almeida, and not very well funded at that, though the co-operation they have already established with the Borough of Hackney (the borough were due to announce their new council tax rate on the show's first night; fearing that the inevitable protests would disrupt the evening, the theatre persuaded the council to postpone the announcement) does bode well for the future. The Americans are in for a treat.

Dodger Productions wanted art, and they've got it. Everyone involved has done the Almeida proud.

ALISTAGE

PORTABLE MODULAR
STAGE SYSTEM



MODULAR TIERED SEATING MODE

Available for hire, sale or lease. Can be supplied minus seating so that client may use own seats. Each tier has 200mm rise for perfect audience viewing. Guardrails at 500mm and 1000mm height. Modular construction ensures that the unit can be customised to client's requirements. Seat unit cost is considerably less than most other systems.

Canopies available for outside events.

ALISTAGE

Unit 2 Hotspur Ind Estate
West Road, Tottenham
London N17 0RJ.

Tel: 0181-808 5005 Fax: 0181-801 9851

The Fibre Optic Lighting People

We manufacture and distribute all fibre optic lighting materials, Parglas harnesses and conduits, Parflex polymers, light sources, theatre curtain washers, spot ball and bullet lenses, side emitting fractured fibres, ceiling fittings and large bore fibre optics.

Examples of our fibre optics may be viewed at our London showroom, from subtle backgrounds to fibre optic fireworks. Leaflets available.



Trade & Export call Paul Raymond
Par Opti Projects Ltd
67 Stirling Road
London W3 8DJ.

Tel: 0181-896 2588 Fax: 0181-896 2599

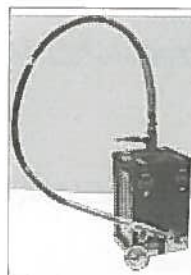
HIGH PERFORMANCE

AT A LOW COST

THE MINI DRY ICE BOX

PORTABLE DRY ICE MAKER

PRODUCES DRY ICE IN LESS THAN A
MINUTE!



• RSC - BARBICAN &
STRATFORD

• LOUGHBOROUGH
TOWN HALL XMAS
PANTO

• ON TOUR WITH ME
& MY GIRL

(PRODUCT OF THE YEAR ABTT 1989)

NO MAINS OR BATTERIES REQUIRED
COMPACT AND LIGHTWEIGHT
SAFE AND CONVENIENT
SALE OR HIRE • AVAILABLE FROM

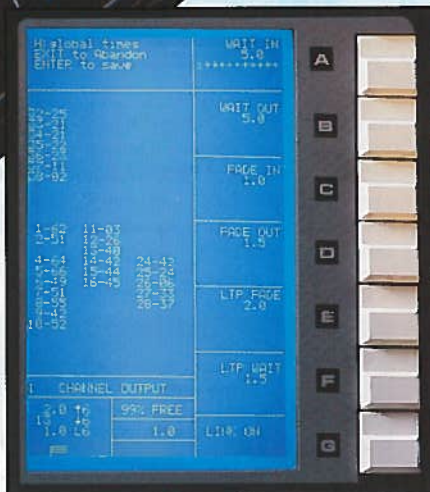


4 NORWICH ROAD, WHEATLEY PARK,
DONCASTER DN2 4QD TEL: (0302) 364908

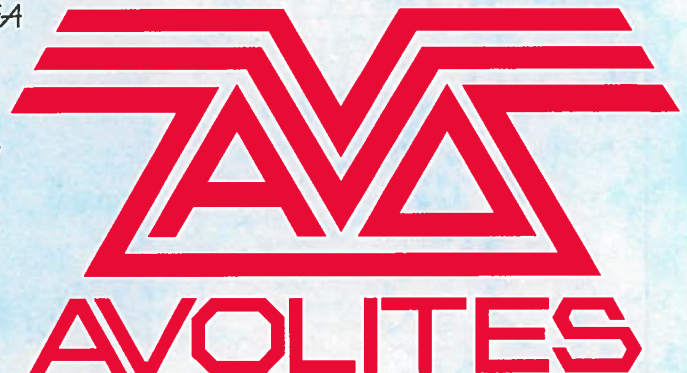
THE PEARL PURE POWER



- *SIMULTANEOUS CONTROL OF 30 INTELLIGENT INSTRUMENTS (SUPER SCANS, INTELLABEAMS, VARI*LITE 5's & 6's ETC.), 60 COLOUR CHANGERS AND FULLY LOADED DIMMER RACKS*
- *THREE DIMENSIONAL INTELLIGENT TRACKING SYSTEM FOR CONTROL OF MOVING LIGHTS*
- *15 SUB-MASTERS FOR CONTROLLING MEMORIES OR CHASES*
- *450 MEMORIES (OR CHASES)*
- *DEDICATED FOCUS (PALETTE) BUTTONS FOR POSITION, COLOUR, GOBO ETC.*
- *ANY CHANNEL MAY BE OUTPUT AS 16 BIT HIGH RESOLUTION DMX*
- *EASY PROGRAMMING, LABELLING AND ORDERING OF CUES*



- *SEPARATE ADD AND SWOP BUTTONS FOR MASTERS AND CHANNELS*
- *BUILT IN GRAPHIC SCREEN AND OPTIONAL COLOUR VGA OUTPUT*
- *STORE OR EDIT A MEMORY WITH TWO KEY PRESSES*
- *THREE CHANNEL SOUND TO LIGHT INPUT*
- *TWIN DMX OUTPUTS, DMX INPUT, MIDI PORTS, 3.5 INCH PC COMPATIBLE DISK SYSTEM*



1995 LIVE! AWARD WINNER FOR NEW LIGHTING CONSOLE

ON THE AIR TONIGHT

Mark Cunningham scrutinises Queensryche's wireless and wedge-free stage at the Royal Albert Hall

Technically, Queensryche's current 'Promised Land' tour is about as far removed from the clichéd rock 'n' roll stage production as one could get. This is *not* Spinal Tap. For Chris de Garmo and Michael Wilton, guitarists with the American hard rock giants, there are no right-foot-on-the-monitor poses, owing to a complete absence of wedges.

Instead, the five-piece band have joined the ranks of U2, Take That, Phil Collins, Status Quo and many other users of the increasingly popular Radio Station wireless in-ear monitoring system from Garwood. But that's not all. To ensure a completely cable-free stage, Queensryche also chose to use a range of radio microphones and guitar transmitters; proof that rock 'n' roll has been well and truly dragged screaming into the nineties!

As Take That would insist, this is not a new phenomenon. But in the macho rock world where guitarists are prone to arguing over who has the loudest amp and largest jack plug, Queensryche are heralding a revolution in live sound. A major incentive behind the move to an all-wireless approach has to be the visual element. After completing their previous tour with a regular monitoring rig, the band decided on a new streamlined stage set that would require at least an 'apparent' absence of monitor wedges and backline amplification, leaving just the drum kit in front of video projection screens.

The Radio Station provided the answer. Not only do its wireless qualities allow musicians to wander the stage and experience a consistent, high quality monitor mix regardless of the environment, it also eliminates the risks involved with excessive on-stage volume levels and the inevitable feedback. With a mix fed directly to an ear piece set via a UHF radio link, musicians can both focus complete concentration on their performance and, with a volume control- equipped belt pack, determine their own comfortable listening level.

For monitor engineer, Tom Abraham, this new approach provides huge time and labour-saving benefits: "I like it because you don't have to set up loads of equipment. I set up my normal console and outboard effects, along with a small transmitter rack and antennae, refresh the batteries in the receiver packs and I'm then ready for the gig. I don't have to put out 40 wedges, fly six side fills, put up a drum fill or set up seven amp racks. That's all gone now. It saves truck space and a hell of a lot of labour too. In most venues, because the amount of equipment I use is drastically reduced, I can be packed and ready for load-out within 45 minutes."

A band that has worked with a regular monitoring system for their entire career would very likely find the change-over to the in-ear system a daunting prospect. But for



Queensryche offer the 'Promised Land' at the Royal Albert Hall.

photo: Pete Cronin/Idols

Queensryche it was a comfortable transition, as Tom explains: "Once they got used to it, it was fine. The system sounds very controlled - once you compare it to wedges, you never want to go back. Unlike ear defenders, the ear pieces themselves don't block out the outside world, so you can still hear and feel the sound of the venue you're playing in, particularly the low mids and the low end which become part of the mix. The house is like your low end and the ear pieces provide the top and mid range. We have to put up a pair of front-of-stage ambience mics so the guys can hear audience feedback, otherwise they might not sense that the crowd are enjoying the music!"

Despite the high-tech approach to the on-stage sound, Scott Rockenfield's powerful drumming still proved a significant obstacle. "We found that his drum kit was leaking over the vocal mics, sometimes louder than the vocals themselves," adds Tom. "So we had to

shield him off with a Plexiglas cage which provides at least 10dB reduction, as well as being a source of visual interest!"

From stage left, Tom operates a Midas XL3 mainframe console with a Midas 24-channel expander which includes eight stereo modules: "A pretty slick rig!" comments the engineer. Although the front-men of Queensryche have wireless in-ear monitors, drummer Scott Rockenfield wears a Garwood hard-wired receiver pack which takes a line straight from Tom's console.

To help place each instrument where it belongs in the in-ear mix, Tom uses compression at levels way above normal. "I employ Behringer and Drawmer compressors to smooth out the drums, bass and vocals, and compress quite hard because it sounds better in the ear pieces, although the band don't really hear it as heavy compression. Across each mix there is a BSS 402 compressor which goes into a BSS 31-band stereo graphic equaliser to shape up the tone of the ear pieces. There isn't that much EQ applied; I just take out some of the sibilant frequencies that bother the ears. I give a curve boost to the high-mids because it helps to keep the receiver pack volume lower, while still providing a defined, cutting sound.

"The clarity of sound that's inherent with the in-ear system certainly makes the wearer more critical about what he's hearing. One thing we notice is the occasional hum or buzz from the guitar rigs. Of course, it was always there but until now we never picked up on it. I guess the pressure is now on the guitar amp manufacturers to clean up their side of the act."

Queensryche's backline amplification is concealed behind the stage. The two guitarists each use an advanced stereo rig featuring Bradshaw switching systems, pre-amps and power amps, along with a multitude of effects programmes. Both have a single 12" speaker in a cabinet, housed in a flight case which has two integral Audio Technica 4050 microphones.



Monitor engineer Tom Abraham with the Midas XL3 mainframe console and 24-channel expander.

photo: Simon Camper

There is a jack socket on the outside of each flight case to enable the sound crew to simply plug in and send a signal straight to the consoles. We adopt the same method for the bass, only we use a single 15" speaker with a Sennheiser 421 microphone. The acoustic guitars and keyboards go straight into DI boxes, so there are no mics on the stage except for vocal mics and drum mics. Eddie Jackson (bassist) and Chris de Garmo use Countryman Isomax wireless headset microphones, as does Geoff Tate (lead vocalist) for five songs. Then he switches to an Audix OM5 on a stand. They're all on Samson transmitters because the whole point is to be super slick with no-one restricted by clumsy cables."

With so many signals floating around the ether, one might imagine there would be a mammoth risk of RF interference. But nothing to cause Tom Abraham sleepless nights: "It's been very consistent, but it all depends on where you are in the world. The frequency set that we have from Garwood hasn't given us any problems because it operates in a range well away from even our own Samson wireless gear for the microphones and guitars - over 300 megacycles away, in fact. We have the Channel 77 Samson units which give us tons of frequencies to choose from. You don't have too many back-up channels but it hasn't really caused any nightmares. I've had a few RF problems in port cities where there's an abundance of shipping, but only minimal. Because we're using these systems in such close proximity to the antennae, within 200 feet maximum, we'll only experience an occasional small glitch in the sound. It's more of an annoyance than a problem."

Take a cross section of engineers currently working with the in-ear system and you'll find they each have their own method of listening in on the monitor mixes. Some, like Take That monitor man Ian Newton, will choose to alternate between headphones and a cue wedge. But Tom Abraham prefers to listen to the sound the band hears - through his own set of ear moulds. "Tonally, the ear pieces sound nothing like a speaker, so there's no possible way I could set up and maintain a mix without them. On the front of the Garwood units there's a 1/8" jack output so I can monitor exactly what's coming out of the transmitter. I don't monitor from the console, I take my signal from the last link before it goes to the band. Each one of the band's mixes are radically different to each other and I have a six-way switch box that switches between each unit so I can listen to whichever mix I want."

Legalities surrounding the use of radio equipment have been a source of frustration for acts requiring very large multi-channel systems. In the United States, where the operating band



Abraham with Garwood's Radio Station wireless in-ear monitoring system.

is considerably wider than in the UK (10 frequencies in the USA, six in the UK), frequency usage is not subject to heavy restrictions.

Garwood's Martin Noar explained how the restrictions are dealt with: "We have not come across any real dilemmas because most artistes require only four, five or six in-ear systems operating simultaneously. Those who need to go beyond that in the UK and Europe can be accommodated with careful pre-planning. In Europe, if we want to add to the SK frequencies that we already have available, we have to note which countries a tour will be visiting, because each country still has its own separate rules and regulations concerning frequency band usage. Based on that knowledge, we can add to that group making sure that the frequencies that we choose for them are going to be legal."

"Should that route involve complications, the system is designed to allow the swapping of modules in the transmitter and receiver, so that people visiting the whole of Europe can carry spare frequency kits with them. If necessary, they can take the lid off, unplug one module and replace it with another, which takes about five minutes to do."

In charge of the PA and front of house mix is engineer Brad Madix, who operates a Gamble BX56 console brought over by the band from California. He drives the Electrotec PA with the newly-launched BSS Omnidrive and Varicurve loudspeaker management systems to align and EQ the speakers. The Omnidrive's four-way

crossover system has 60 user memories in which to store the integral limiter, delay and parametric EQ settings.

Designed to allow maximum audience vision, the Electrotec PA system configuration includes a low-end courtesy of a single 18" speaker, with the mids and highs provided by two JBL (2445 and 2450) 12" speakers, a custom Electrotec horn and two bullets mounted below the horn and passively crossed over. For the subs, two cabinets at both sides of the stage fit together to form large 4x18" floor-mounted cabinets with centred speakers and side flares, which can be run either four-way or from an auxiliary. The PA also has underhung cabinets consisting of columns which alternate between two 12" and horn cabinets.

For a band of such hard rockin' proportions, the Royal Albert Hall (or Chez Eric, as it has become known in contemporary circles) would seem out of character as a choice of venue for Queensryche. Tom agrees: "It's a difficult place to work in from a sound point of view. We've had to install a giant central cluster which we wouldn't normally do."

"Everything at the Albert Hall is on a grid so you don't have much choice on where to put the rig. The building isn't that big, it's just very tall, so you don't want to put the PA up too high and risk sending the sound directly into the huge bowl in the roof. That would cause a lot of problems. So the PA is brought down to near audience level."

In common with Simple Minds' LD, Steve Pollard, Howard Ungerleider operates an Avolites Diamond II console. The lighting rig is supplied by Neg Earth and is based around three trusses - an upstage, middle and downstage truss - loaded with Par 64s and 40 Colorfaders. In addition, there are 10 of High End's Cyberlights spread between each truss and the floor, four Super Troupers out front and two short throw Panis on the back truss.

Video plays a major role in the current Queensryche show where two 20' x 15' screens are suspended from the rear lighting truss to serve a front truss-mounted Barco 8000 projector. Julian Hogg, of video equipment supplier, PSL, told me: "Until this tour, the band used only film projections which included footage shot during the filming of conceptual promos. We had this film stock transferred to Betacam, and then on to laser discs which helps us achieve greater frame accuracy on playback. These images are interspersed with live pictures of the actual concert. We have a Sony camera fixed to the front lighting truss, a manned Panasonic camera in the pit and three remote Sony minicams on the stage, focused mainly on the keyboard, guitar and drums for action-type shots."

RB lighting Ltd

NEW SALES COUNTER NOW OPEN!

Main Supplier of **CCT**

CCT Lanterns and Spares available from stock.
0181-977 9665
 RB Lighting Ltd, Unit 10, Teddington Business Park,
 Station Road, Teddington, Middlesex TW11 9BQ.
 Fax: 0181-977 5687

SET LIGHTING & SOUND

THEATRE & NIGHT CLUB LIGHTING & SOUND SPECIALISTS

UNIT 8, MILL HALL BUSINESS ESTATE
 AYLESFORD, KENT ME20 7JZ

Q. ARE YOU LOOKING TO EITHER UP DATING OR HAVING A NEW LIGHTING OR SOUND SYSTEM?

A. WELL IF YOU ARE, LOOK NO FURTHER BECAUSE WE CAN PROVIDE ALL OF THIS FOR YOU, AND AT A PRICE TO SUIT ALL BUDGETS.

SO CONTACT US NOW
 TEL: 01622 717787 FAX: 01622 717797 MOBILE: 0850 091509

The Premier Inverted Hoist/Motor
NOW STOCKED IN THE UK



- ◆ Black powder coat finish ◆
- ◆ Up to 40 metres lift - high duty factors ◆
 - ◆ Protector ® overload protection ◆
 - ◆ 110 volt controls ◆
- ◆ Upper/lower adjustable limit switches ◆
- ◆ Motor suitable for use in UK, Europe or USA ◆
 - ◆ Capacities ½ to 3 tonnes ◆
 - ◆ Fast speed units available ◆
 - ◆ Single phase versions available ◆
 - ◆ For Inverted Use ◆

Contact for motors/spare parts/service:-
PCM,

A Division of Pfaff Silverblue Mechanical Handling Ltd,
 Prenton Way, North Cheshire Trading Estate,
 Prenton, Wirral L43 3DU
 Tel: 0151-609 0101 Fax: 0151-609 0200

37/19 PIN CONNECTORS

KUPO®



SOCAPEX COMPATIBLE CONNECTORS
STRICT STANDARDS QUALITY

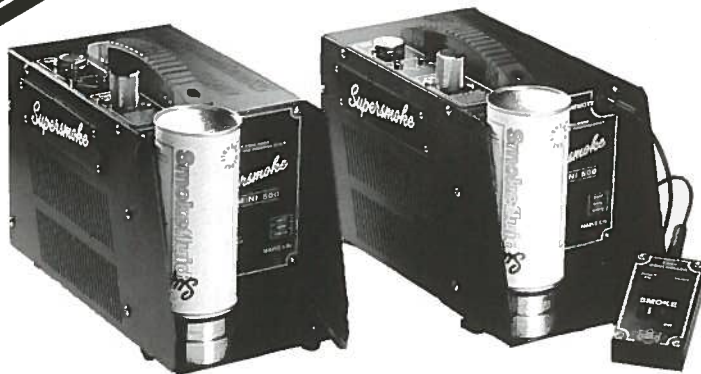
KUPO CO., LTD.

P.O. BOX 28-265 TAIPEI, TAIWAN
 FAX: 886-2-999-1955 TEL: 886-2-999-1906
Socapex is registered trademarks of its owner

**EXPORT/
 DISTRIBUTOR
 ENQUIRIES WELCOME**

MINI 500

MINI SIZE - MAXIMUM PERFORMANCE



With the MINI 500, you get the usual quality that the Supersmoke range of smoke machines is known for. With electronic control and thermal fuse (no more molten blocks!), 0-10V compatible remote and manual control for 'off mains' operation, the MINI 500 brings aerosol powered smoke machines into the 1990s.

Just look at these features:

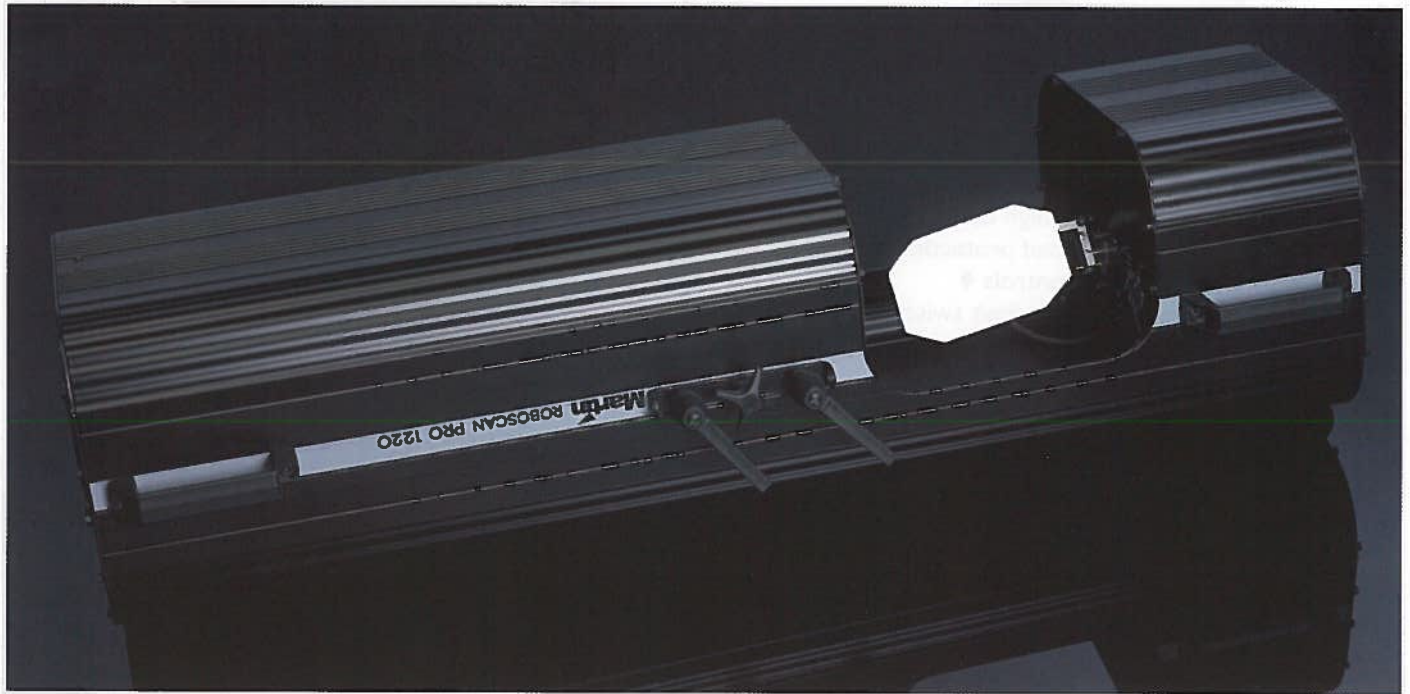
- Ultra-reliable electronic thermistor control.
- Independent thermal fuse - 100% effective.
- 0-10V remote (no more mains voltage remote!).
- Generous heat insulation - up to 30 mins. 'off mains'.
- Manual or manual/remote versions available.
- Timer controller operation possible.
- Ease of serviceability.
- Small and compact.
- Very powerful output.



STOP PRESS
 Effects Company Aerosols are
 100% compatible with:
 ● Le Maitre Mini Mist range
 ● Yes Y1
 ● Le Maitre Microfog
NOW YOU HAVE A CHOICE!

Unit 43, Barns Court, Turners Hill Road, Crawley Down, West Sussex RH10 4HQ. Tel: +44 (0) 1342 718399. Fax: +44 (0) 1342 717525.

Positively, the best scanner on the planet



That's the new Martin Roboscan Pro 1220 CMYR

CMY is the extraordinary full color mixing system which has been added to all the other attributes which were previously synonymous with the quality and performance of the original Pro 1220. The R is for rotating gobos, of which there are no less than four on-board every model in the new series, plus 9 motorised gobos, which can be standard or custom designs, or even etched dichroic self-colored gobos.

In addition, the new, quieter Roboscan Pro 1220 series offers you the choice of HMI, or MSR 1200W lamp, full DMX 512 implementation, including a high resolution option on pan and tilt, and microstepping on every dynamic feature.

And, all of these new facilities have been achieved without compromising the Roboscan Pro 1220's famous modular principle.

Martin Professional - the choice of professionals

Martin

Martin Professional UK Ltd

Martin House · Boxmend ind. Est. · Bircholt Road · Parkwood · Maidstone · Kent · Tel: 01622 755442 · Fax 01622 755447

Martin Professional A/S

Nordlandsvej 114 · 8240 Risskov · Denmark · Tel: +45 86 21 44 11 · Fax: +45 86 21 50 01

THEMED ENTERTAINMENT

Charlie Kirby talks to the technical team behind Japan's newest theme park - Porto Europa

It's a situation that would make a light board operator want to cry. Six bays, holding 100 hard-wired dimmers each, running a 30 minute show with over 1,000 light cues, and a lighting plot so complex that only a computer can run the cues with any degree of accuracy. Welcome to the real world. Welcome to the Viking Adventure at Porto Europa, Japan's newest theme park.

The park stands on a small island on the outskirts of Wakayama, Japan. An hour from Osaka and, more importantly, half an hour from the new Kansai airport, this is possibly the perfect setting for a venture such as this.

Matsushita Investment & Development (MID), the company behind the theme park, realised early on they would need to look outside Japan for help. The reason was one of temperament: the Japanese have a very analytical approach to life, and this extends into their play. To physically build a theme park is tough, but the creation and design process is even more difficult. It requires a run-away imagination, a quixotic fantasy and a downright silliness that can then be taken, put down on paper and made into concrete-and-steel reality.

MID needed to bring in experts - professionals who knew how to entertain people and could be entrusted with the task. As MCA/Universal Studios just happens to be a sister company, the search was incredibly short. MID approached MCA in the spring of 1991 with the project that would bring a number of firsts for the corporation: an overseas theme park that would be designed, and its construction overseen, by MCA and that would, upon completion, be turned over and operated by MID.

The 4.5 acre park is divided into three areas with an overall Mediterranean theme. The Spanish Castle contains the Viking Adventure Stunt Show and the High Dive flume ride. The French area features a cinema, a laser tag game and Seafari, a motion-based ride, whilst the Italian sector is distinguished by the Blue Tone jazz club and Club Coyote, a discotheque. Each area has its own distinct identity, but the overall effect is remarkably unified.

Porto Europa was an opportunity for MCA to show the world what it could do, and it was only natural that they turned to the top people



The Viking Adventure Stunt Show set - an amazing collaboration between design and technology.

in their fields for the development and construction of the technical systems for the park. Vancouver-based Richmond Sound Design were called in to provide the park-wide control system for both sound and lighting, which provides all elements of control for the effects lighting, background music, sound effects and paging systems. At its heart is the Command/Cue control software, which is run through an Amiga 4000 computer and which works in tandem with an interface, custom-designed by MCA and Signal Perfection Ltd (SPL). Any combination of inputs can be routed to any zone of the park. The cues are pre-programmed but can be immediately cut across in an emergency. The lighting control handles 630 circuits throughout the park, the monitoring of which is made easier by a graphic mimic panel which uses LEDs to indicate the location and status of the lights. This panel was designed by SPL and installed alongside the Richmond system.

The audio section of the system can be

expanded to handle 36 inputs for 24 different zones, but currently controls the 24 outputs in 16 different parts of the park. This allows technicians to control the music for any zone, as well as permitting them to operate a paging, announcement and special effects system from a centralised location. An internal MTS (MIDI to Serial) 232 interface allows the computer to talk to 16 compact disc players.

The system also has an internal 'clock'. It knows, for instance, of planned events at the park and on these occasions, specially prepared lighting and sound sequences overlay the pre-existing cues. Despite being practically on the other side of the world, Richmond have continual access to the computer system at Porto Europa through an on-line system and from the company base in Vancouver can call up the screens from the computer at Wakayama and change the programming as needed.

At no time is a visitor to the park without ambient sound. At the California Cafe, there's bubble gum and Beach Boys. The French



Behind these carefully crafted Mediterranean facades lies some very sophisticated technology for VR (Virtual Reality), left, and Seafari, right.

Quarter has Dixieland jazz, the Viking Castle appropriate sea-faring orchestrations. Audio is a vital part of establishing the character of the different areas of the park and that audio is watched over by seven Alcorn-McBride Digital Binloops. They have computer hard drives that allow up to 40 minutes of audio storage on one card. Disney has employed Binloops in its parks for years, but only Porto Europa's units have this greatly expanded storage capacity. It can be used as one long sound, such as ambient sound for different areas or as a multitude of shorter sound cues.

Audio is the speciality of Michael Rives, director of technical services. Rives' experience in theatre started back at the University of Nevada in Reno, and his last job was at Universal Studios Park in Florida, where he worked on the 'Lagoon Stunt Show'. None of this really prepared him for his first overseas venture in Japan. He was brought into the project early and through prior trips was able to see Porto Europa, appropriately and literally, spring up from the ocean floor.

"The language was challenging. All the designs were handled in America, by Americans, using English," Rives said, over a plate of soft tacos in probably the only Mexican restaurant in the small fishing/industrial town. This was a problem because MID is in charge of the daily operation of Porto Europa and its employees speak Japanese.

Rives went on to point out that priority was always given to Japanese equipment that met the specifications over an overseas version, but inevitably, that wasn't always possible. As with his fellow co-workers, Rives credits his current position to his theatrical experience and his willingness to work. It's a job that entails not only staying up all night to fix a major problem, but can also mean coming in early to make sure the park music starts on time: "It takes imagination - lots of it - to make it in this field. We have something like 25 actors working on the site, as opposed to more than 1,000 technicians. There are tremendous opportunities for anyone who wants to make it work," Rives added.

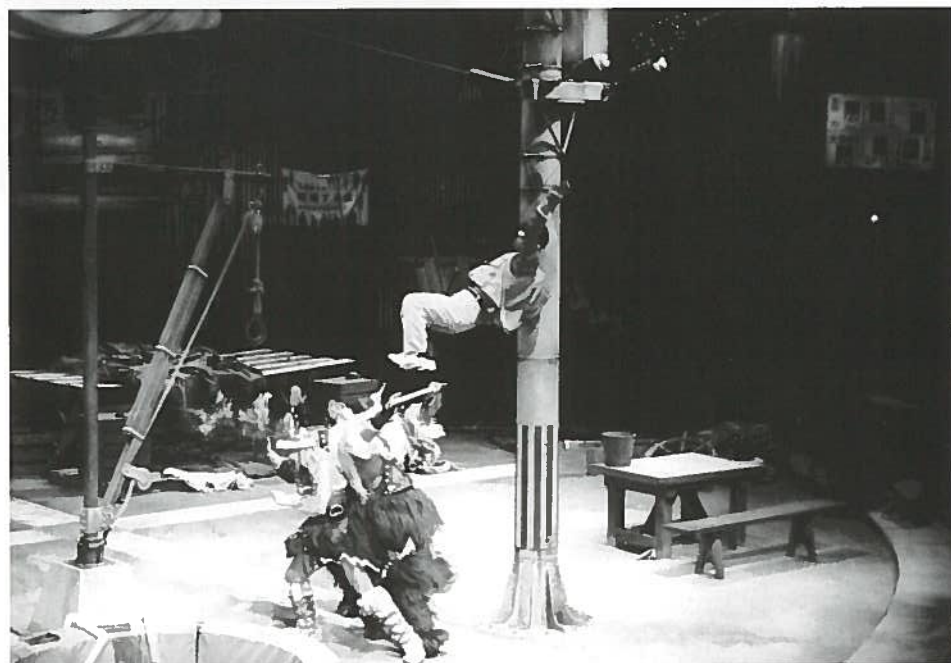
Kristin Appleton was technical co-ordinator, as well as Rives' assistant, at Porto Europa and her involvement with the park began over three years ago. She oversaw the lighting design from the art direction and specification phase to on-site installation - no mean feat considering that there are over 2,500 exterior lighting fixtures. She also oversaw the installation of Viking Adventure, VR (Virtual Reality) and Seafari. This was Appleton's first theme park project and she had to first acknowledge that the Japanese have a different way of thinking about business, and then figure out how to work with it: "It's a very challenging job to create something that hasn't existed before. It's different from theatre, but there's so much of it that can be applied."

Tom Ruzika and The Ruzika Company designed both the theatrical and architectural lighting at Porto Europa. Most of the lighting fixtures and dimmers in use on the site were manufactured by National, a subsidiary of Matsushita Electric Works. Control for these is provided by Electronics Diversified Inc of Oregon. Additional lighting fixtures, many of them used in the Blue Tone and Club Coyote, include effects lighting from High End Systems, Colortran ellipsoidals and Wildfire ultra-violet effects. Ruzika worked closely with Appleton and Rives to co-ordinate all the lighting in the park.

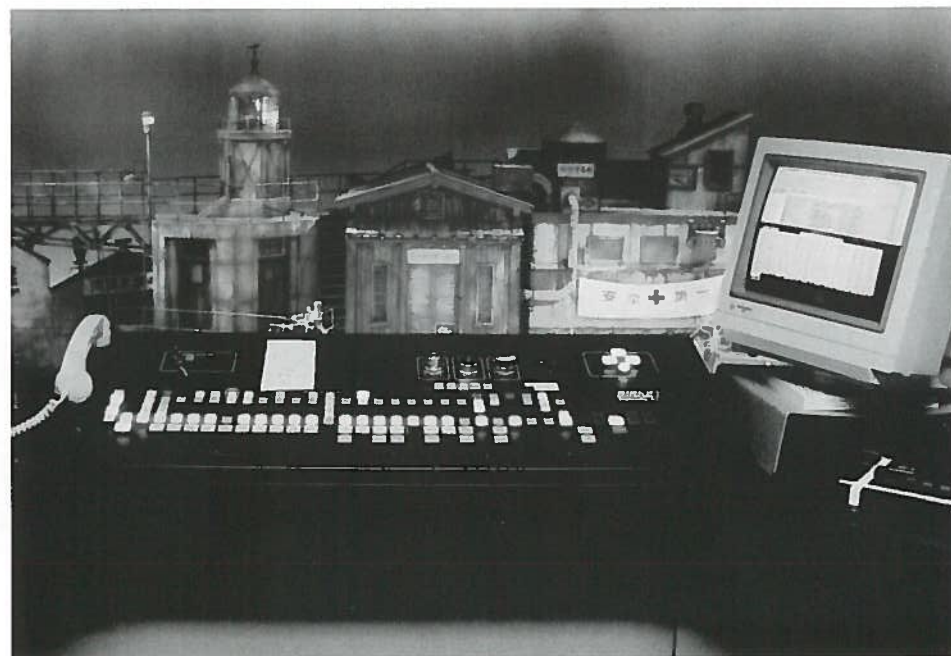
SPL had the task of building all the audio



Over 2,500 exterior lighting fixtures are needed to illuminate the 4.5 acre site.



Viking warriors and Japanese fishermen feature in the all-action stunt show (above). Richmond's Command/Cue is linked to Allen-Bradley programmable logic controllers provided by Birket (below).



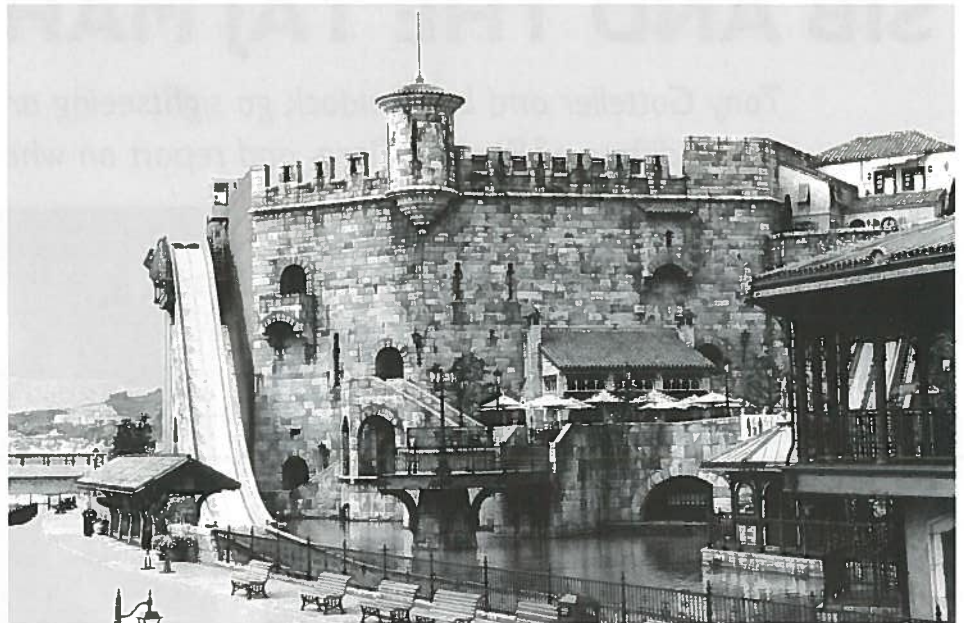
systems. They pre-built the audio racks and undertook some of the preliminary audio CAD editing at their Columbia base before moving on-site. Once at Wakayama, the racks were then completed ready for the installation of the Japanese-manufactured amplifiers from Panasonic. The majority of speakers on site naturally enough are Ramsa and were supplied by Panasonic, but there are a few exceptions, primarily the EAW speaker system used in the Viking Adventure stunt show, and small outposts of Apogee, JBL and SAS speakers at other sites throughout the park.

One of the most interesting aspects of Porto Europa from a technical point of view is the stunt show at the Viking Adventure. This is a live action show along the lines of those at Disneyworld and Universal Studios in Florida. Behind the scenes are eight fully-loaded National racks with 72 dimmers per rack, 2kW 100V dual modules, for a total of 576 dimmers or 1,152kW capacity. The racks accept DMX512 via a National translator. The console is a MIDI-implemented Electronics Diversified EnAct 1000. This controls the dimmers and a number of High End Systems Dataflash strobes. Although the system is technically a dimmer-per-circuit installation which is soft-patched through the console, there is also a hard-wired patch bay to ease installation and show changes. The EnAct receives MIDI control commands directly from the Richmond Command/Cue system, so technically there is no lighting board operator. Ruzika's rig is heavily stocked with National fixtures, mainly ellipsoidals and Pars.

The sound effects are sourced from Alcorn-McBride's digital Binloops. This is an interesting application for the units which are linked to MIDI Show Control, and has allowed the Richmond Command/Cue to communicate with the Binloops in its native language. The use of MIDI permits the operator to control anything from the 16 compact disc players to the pyrotechnic effects in the stunt show.

Another feature of Porto Europa is the High Dive, a flume attraction which incorporates a dark ride show. It sits on the northwest corner of the Viking Castle and raises its passengers two storeys high. At the apex of the ride, it enters the castle through a heavy wooden door, breaks through a wall of fog, passes through a swamp-like environment and then, the inevitable - a terrifying 65' drop to a deep lagoon. The control for this ride is provided by Birket Engineering, Spectra FX and Arrow. Wildfire black lights were used to light the set pieces with gelled ellipsoidals on the fog to create a ghostly feel. Spectra F/X provided the show elements, including the high-pressure water fog system, fibre optics, water projection systems and the spiralling fog tunnel which uses a Pani projector as a source for the vortex of light.

John Erickson, the technical co-ordinator for the High Dive flume show, studied theatre in college and eventually settled into a job in



The High Dive, a flume attraction which incorporates a dark ride show.

which he was responsible for the audio of speciality shows. It was a profession that was to lead him into sound engineering for such demanding events as the Academy Awards and the Emmys, and eventually to the small town of Wakayama on the coast of Japan - and Porto Europa: "It's very intense work," Erickson told me, from a table in his makeshift off-site office. "It was 12 to 18 hour days, seven days a week for the three or four months prior to opening."

Porto Europa was not his first working experience in Japan. He had previously worked on Harmonyland, outside of Beppu, which is near Oita. It was a job that prepared him for the demands that Porto Europa would make on both his time and talents. One of the aspects that was difficult to work with was the audio track. Like much of the park, it is designed for the Japanese, so Erickson had to rely upon translators while making the tape.

David Mispagel, ride installation manager, began his career as a general contractor, which eventually led him to a small special effects company. It went out of business, but it gave him a new direction to follow. It was a path that would lead first to the animation department of Universal and then to working on 'Backdraft' for Universal Studios Park in Hollywood.

As with theatre, the safety of the performer, and in the case of a theme park, the park-goer, is paramount. Mispagel took High Dive from conception to installation, and safety was foremost in his mind. The biggest area of concern was the interface with the door that opens to allow the riders into the castle. The door was designed, redesigned, and redesigned again until it met with Mispagel's specifications. Now, if the door does not open quickly enough, the ride stops, thereby avoiding potential collisions.

Larry Paul is responsible for the on-site

networking computer, but his college experience includes a grounding in theatre lighting and sound - two very important aspects to a theme park. Paul also maintains that, as with theatre, the theme park is a collaborative business. "It can't be one person. It never is. You have to be flexible and learn to think on your feet. The biggest challenge is communication," he added. One of the accomplishments that Paul is most proud of is a general index document that he put together for Porto Europa. It was something that became an operational bible for many of the technicians who worked on the project.

Zenon Kobiela, one of the technical managers, is a veteran of numerous stage performances, and this has helped him adapt to the different situations demanded by both Porto Europa and Puroland, his previous Japanese theme park experience. This doesn't mean that he didn't come up against customs that tried his patience: he cites the story of the Japanese foreman who insisted that all MCA personnel wear special slippers when walking across a plain concrete floor. Many, like Kobiela, ended up carrying several different types of slippers in their pockets just to get around the site.

There is a permanency to theme parks that modern day theatre lacks. While a show may run several performances, and if enormously successful, it may go on the road, a theme park will run for years. Whether it's hearing the screams of delight from a ride, or the laughter from a successfully-delivered piece of low comedy, or even something as insignificant as a light coming on as dusk approaches, the dreamers and designers of Porto Europa can look back upon what they created in the years to come and see that they have made a bit of history.

That's not a bad curtain call . . .



The way ahead.

UNIT 4G, EUROWAY TRADING ESTATE, BRADFORD BD4 6SG
Tel: 01274 651600 Fax: 01274 651190

SIB AND THE TAJ MAHAL EFFECT

Tony Gottelier and Lee Baldock go sightseeing amongst the towering edifices of Rimini's Fiera, and report on what's new at SIB



Part of Paul Dodd's lightshow on the FAL stand.



The Shuttle centrepiece takes centre stage on the Griven stand.

I travelled out to Rimini this year with Chris Cronin of Total Fabrications and JYC's Garry Clark, Lee Baldock having gone ahead with the advance party from PLASA. And mighty grateful I was too for their company, since it turned out that there was to be no courtesy-bus to meet our plane, which arrived at 11 o'clock at night with at least 30 participants on board. For those of you who haven't been to this Show, the nearest airport at this time of year is Bologna, an hour and a quarter from Rimini with a following wind, or a taxi ride which would cost at least £100, or the trains which are scarce at this time of night and precarious if you lack the language.

So, I was glad of the lift in Garry's hire car and for Chris's high-speed driving skills. In turn (and the Editor certainly won't believe this), they were pleased that I could contribute some directional knowledge, since neither had a clue where to go, nor was a map provided by Avis, but I vaguely remembered that Ancona was the general direction in which to head. On a more serious note, I really cannot understand how the organisers can expect to sustain SIB as an international Show, especially with renewed competition from Frankfurt, if they do not make more effort on behalf of foreign visitors to get them to the Fiera when circumstances are so difficult.

Of course, it doesn't end there, for there was the usual spate of missing baggage, this year's best known case being Craig Schertz of Wybron who was left with no clothes and no current software for the AutoPilot for the first day of the Show. I am sure he never felt less like an Emperor! Nor did his employers realise that they were about to have their own clothes stolen at the Show, but that's another story for later. Then, no room at the inn for Chris and I trying to check into our hotel at, by this time 02.00 (the hour has moved forward since

midnight, and we lost an hour en route). Stoically, we trudged to another hotel which, unfortunately, was even nearer the Rose and Crown! However, another Rimini lesson learned - don't take your bags out of the car until you know your room is secure.

Of course, it was interesting travelling with two such currently newsworthy characters as Cronin and Clark. Chris, who with partner and ex-LSD person Peter Johns, has recently acquired Total Fabrications from Salvesens, and full of renewed energy for the future, was positively bubbling with enthusiasm. In fact, what we didn't relate in our news piece about this coup last month was, that in acquiring Total Fabrications, Cronin and Johns had also bought LSD's total means of production, Icon and all and will, thus, continue to be their major supplier but as an independent subcontractor. This, of course, is a complete reversal from the proudly proclaimed policy under the previous parent, who were convinced of the need to give LSD the ability to make absolutely everything themselves. So now we wait with baited breath for news of the management buy-out of LSD by Nick Jackson, Terry Lee et al, and everything will, presumably, return to normal with LSD sticking to what they have always excelled at, and that is a touring production company, not a manufacturer.

Typically also, in view of the Italian connection, Garry Clark told me on the plane that his company had just been appointed UK distributors for SGM of Colombarone, whose moving beam projectors go under the appropriate brand name of Galileo. These products have probably been underrated in the UK market up until now in view of the vast number of different scanners emanating from Italy these days, and I can tell you that this year's Show only made the matter worse. As a result we are all

suffering from multiple-scan-fatigue syndrome. However, as an ex-disc jockey of some repute, Garry must have an eye for a product likely to succeed in his own 'all singing-all dancing' universe and Galileo may well be the discovery (no pun intended, Ryger) that they are waiting for.

If Rusty Brutsché of Vari-Lite is losing any sleep over the possible revitalisation of LSD, he is almost certainly seeing red (and cyan and magenta and yellow) over the potential of High End Systems' Technicolor colour-mixing wash light, first announced at Frankfurt and performing for the first time in Rimini. This is the first really professional looking, moving-yoke luminaire to come from the mirrors-for-sale brigade, as opposed to the yokes-for-rent party in the opposite corner. The fact that it comes from the very firm who were the first of the genre to make a major incursion into touring, through independent renters, must send shivers down collective spines. And I am led to believe that Technicolor won't be astronomically expensive to buy.

Nor can the competition rest their hopes on a stalling court case with the film-stock company of the same name, High End's in-house counsel, JR Bell, has this covered and the name has apparently been trade marked to the company. Furthermore, the temporary data sheet is peppered with asterisks pointing to 'patents applied for': the colour mixing system (three cyan, magenta and yellow colour wheels with Gaussian distribution in combination with a 'seamless' five-colour wheel); the remote, variable beam angle facility, from 12 to 45 degrees (via a 'variable power, rotating internal lens'); the switching power supply (which automatically keeps the lamp at a constant 100v AC irrespective of input voltage between 100 and 240 volts); and the optional, you can dim on the supply also, mechanical dimmer ('a micro stepping, graduated



The new Golden Scan HPE from Clay Paky.



FLY's Trichroma colour changing luminaire.



Dancers on the stand of Martin Professional, under the gaze of the Roboscan Pro 1220s.

optical disc'); are all claimed to be unique which, presumably, puts HES in good stead in the litigious American market.

Housed in a smart, finned and convection-cooled, black, diecast, aluminium casing, the three Technicolor units on the front of High End's typically attractive stand, where Cyberlights smooched away in perfect harmony with other Lightwave innovations, moved in perfect unison all week. So, I think we can say that that yoke is moving fine, especially in the 16-bit DMX mode which is provided, though the idea of combining the power and data input on a single Neutrik will no doubt give the DMX gurus something to criticise.

At the beginning, the light output seemed a bit disappointing, but by day two High End had apparently sussed a power problem and things were looking decidedly brighter. The 750W halogen source, with a 10 x 10mm compact filament, delivers a colour temperature of 3,200 degrees K and is combined with a range of Fresnel lenses for Par lamp range beamalikes. Unusually for such a fitting, the Technicolor utilises stepper motors throughout, and not servos, which will be something for the drive specialists to ruminate over when lying by their pools this summer.

The other headliner from the Show was undoubtedly **Clay Paky's** Golden Scan HPE (for High Performance), which we previewed extensively last month, under the development code-name of Golden Scan 4. By the time we arrived at the Show, the baby had not only been re-named but was already out of its cot and earning a living with various people (who shall remain nameless, but they know who they are and you can probably guess), loudly proclaiming that they had placed substantial orders. In my view, two great advances are made with this unit over previous models. The first is that all 12 attributes are individually addressable on separate channels of control, and this is now also retrofittable to the GS3 and the Super Scan Zoom. The second is the wider angle standard lens of 23 degrees which proves that the company have recognised that their product has made the transition into serious lighting. Mind you, cleverly, they have hedged their bets with a built-in, remotely selectable 15 degrees option, and the complete alternative of 12.5 and 8.5 degrees lenses. Remote focus is another major feature.

The unit has four static and four rotating gobos, two of which can be dichroic glass gobos, and the two wheels can be superimposed; four rotating and one fixed prism, also with superimposition - the mixture of all these creates some very curious and unusual effects. As many as 113 different colours are claimed from the combined colour wheels and warm (3200K) and cold (7000K) colour correction filters when added to the Osram 1200W HMI lamp (now 6000K). There are also bi and quad colour splits and concentric colours, as well as a Woods glass filter and frost available. Add to this all the standard facilities of variable iris, dimmer/strobe, and smooth-walking pan and tilt with excellent optics and you have a scan for all reasons.

CP also launched a new compact colour-changing projector, the Combicolor 300 based on the Osram HTI 300 lamp and Astroraggi Power, an MSR 400 version of their famous porcupine disco effect.

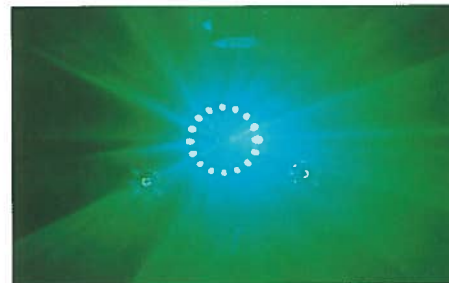
Martin Professional, the other major name in scanners determined to make a big impression on the Italian market, pulled off a considerable coup by taking a space across two aisles in a cul-de-sac in Hall B. This enabled them to create an exciting village atmosphere with a whole series of Martin-related, or just image-building activities, on all sides. And you were immersed in it almost without realising it. This enabled the Danish



Taking the limelight from Wybron? The Follow-Me is demonstrated on the stand of Greek company SLS, who run the system through their own scanner.



Adrian Offord (left) and Daryl Vaughan (right) from Wybron with Martin Professional's Mark Ravenhill.



A Divine centrepiece, wall-mounted, in action on the La Novalight stand.



L+S's Tony Gottelier talks to Ian Brown of Coemar.



Tyrone LeMercier with Ryger's Discovery.



Flower effects produced by SLS's PanScan.



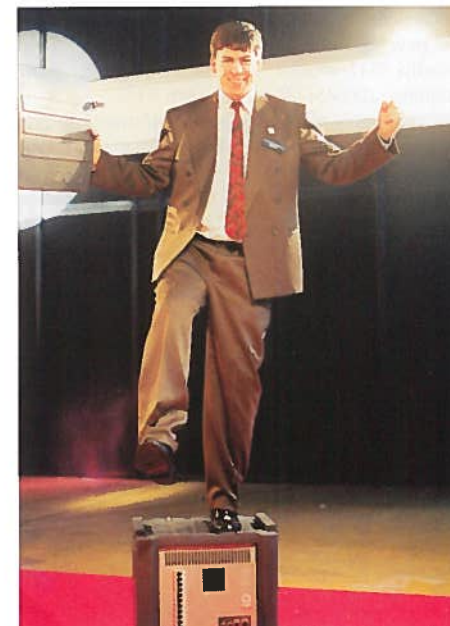
Daniel Canuti of FLY in conversation with Tony Gottelier.



L-R: Marcello Bertini, Gareth Balderstone and Maurizio Marchiorri of La Novalight with the Divine centrepiece.



A New Deal: JYG's Garry Clarke with Dr. Franco Zaghini of SGM.



Zero 88's David Catterall shows that the ID dimmer packs stand up to the challenge.



Cerebrum's John Lethbridge and JEM's Nigel Morris have a tête-à-tête on the PLASA stand.

invaders to claim a massive 1275sq.m for their entire complex, and this so spooked their competitors that, what the PLASA Show's James Brooks-Ward refers to as 'the Taj Mahal syndrome' set in. This is exhibition organisers' jargon for 'my stand's bigger than your stand' and, perhaps surprisingly, is not something encouraged by switched-on exhibition companies such as P&O Events. However, it's something deep in the psyche of the Italians whose merchants have been doing it since the middle ages, as witness St. Gimignano, a city of towers in Tuscany whose every building was built taller than the last - long before the developers of Manhattan got the same bug. Both Clay Paky and Coemar seemed to have reacted to the perceived threat with much bigger stands than previously.

Though I am here to declare the Treaty of Orlando well and truly dead, with only High End keeping to the bargain, I am still at a loss to find any economic model which justifies such extraordinary expenditure, especially when multiplied across the 10 or so major Shows which the companies attend each year.

That aside, back to Martin Professional's village, whose main features were a regular fashion show featuring some of those long-legged beauties for which the Rimini Show is justifiably famous, and Roboscan Pro 1220s driven by Wybron's AutoPilot, their regular in-your-face light show, a hands-on product display, a colour changing Lamborghini, a Harley, and side shows provided by Videasel, Ecler, Mach and famous Italian nightclub Sesto Senso who provided the beverage and catering facilities, to say nothing of the performers on the catwalk.

Martin were, of course, proudly proclaiming their top-of-the-range colour mixing scanner, the Roboscan Pro 1220 CMYR which is the 'exotic' version of the 'plain vanilla' model now suffixed XR though both have rotating gobos. Though seen at earlier shows this year and at LDI, they may still be new to some as will be the 'virtually silent' Studio (ST) model, and the compact, gobo-rotating, 200MSD Roboscan Pro 518.

Completely new, amidst unconfirmed rumours of a major incursion into the medium, was a laser system based on a 4W mixed gas tube from Cambridge Lasers and a scanning system developed in the USA. MP will also be offering a 4W Argon model. I think it's safe to say, like everything Captain Peter Johansen touches these days, that we have not heard the last from Martin



Graham Norman on the Light Processor stand with Q-Packs.



Pulsar's new Replay Unit in demonstration, flanked by Ken Sewell and Derrick Saunders.

on the subject of little green laser beams.

Meantime, both **Martin Professional** and **Clay Paky** are vying with each other to become the new Benetton, both producing catalogues of branded clothing and accessories for our delectation. While 'Martin Wear' includes among other items T-shirts, sweatshirts, track-suits, denims and even a leather jacket, they also offer a useful business organiser, whereas Clay Paky's all black 'Backstage Club' strip also adds Bermuda shorts, a polo shirt, a cagoule and a so-called, 'Rock Sack' all emblazoned with the familiar yellow and white company logo. What sort of person buys these things, let alone wears them, is beyond me, but apparently they were selling like hot cakes, so maybe I should keep my thoughts on the subject strictly to myself.

While we are on the subject of clothes, what about those apparently stolen from **Wybron**? You would think, wouldn't you, that something which proved as complicated to crack as the AutoPilot might be given a few months to run before competition appeared on the scene? Well you'd be wrong, for an almost entirely unknown Greek company (yes, I did say *Greek*), have cracked the formula and are offering a four-transponder-into-16 moving lights system called 'Follow-Me'. By dint of demonstration to myself and others, **SLS (Hellas)** were able to show that their system works well, at least in a relatively small but open space - we await feedback on wider, and indeed considerably smaller applications, for it could well be that the smallest spaces are the hardest in which to make such a system work. SLS is another case of a distributor turned manufacturer, having been teed off, for one reason or another, by previous associations. Now suddenly they have appeared in the market place with an entire range of scanners from a compact, based on the long life MSD 200 lamp, through two mid-range models using the HMI 575 or 1200W lamps, and offering 16 colours plus splits and 16 gobos, to the top model which, using the more powerful of these same lamps, offers indexable rotating gobos (5), indexable rotating prisms (4), 10-colour overlapping colour wheels (2), remote focus, remote iris, and linear mechanical dimmer, and blackout shutter with strobe effect.

I suppose it was inevitable, in view of national mythology and Pan being the short form of the first name of the company's MD, that the series goes under the name of Panscan. Nevertheless, I cannot



Steve Warren of Avolites with PLASA's Nicola Evenden.



Jane Dorling from Pulsar joins Con Bivioni (left), John Saunders and Glen Bancroft (right) on the Abstract stand.

help a sneaking feeling of admiration for what SLS have managed to achieve in a very short space of time. I just hope that they can find enough customers to make the development effort worthwhile.

Another big scanner has been developed by FAL under the aegis of British lighting designer Paul Dodd (no, its not called the Doddlescan). The ProScan 2 HMI 1200 claims the greatest amount of features of any scanner in its price range - nine dichroic filters with high chromatic yield, two colour temperature correction filters, UV filter for backlight simulation, four-colour filter, rainbow effect, five interchangeable gobos with variable speed continuous bi-directional rotation, seven fixed gobos (four interchangeable) and five rotating prisms. Also new, and next in line to the Proscan is the Proscan 1 HMI 1200, which has five interchangeable gobos and two prisms. The Roulette, another, smaller scanning addition from FAL, features an HTI 300 lamp, seven dichroic filters, seven rotating and seven fixed gobos and strobe effect, like the Proscans, available at one to seven flashes per second. These new scanners join the existing SuperCleverScan, ItalScan and PrimoScan in the FAL range. Moving on from the world of the scanner, two new centre-piece lighting effects - the Andromeda and the Cross-Ray, were also introduced by FAL. The Andromeda has two sound-activated alternating groups of four crossing beams that create dynamic spirals of coloured light. The Cross-Ray has four dichroic filters around a 400W lamp which projects onto mirrors and moonflower discs. The Gyro light has now been complemented by the SuperGyro, which offers rotating gobos and prisms, colour changers and strobe effect. FAL's other new additions at Rimini were the DMX Colour Changer and the Comet 4000 and Meteorite 4000 space trackers.

Meanwhile, in the other mega booth at the Show, **Coemar** introduced a new style of presentation, for them at least, with something for all sectors of the market built into the show. In view of our vested interest, I was particularly pleased to see the NAT being used to subtle effect to demonstrate its versatility for stage use, where it could prove a useful alternative to Telescan. A lower cost 1200W cut-down version has recently been introduced in a move to broaden its appeal. Meanwhile, the ProColour PC1000/1220 HMI full-colour mixing luminaire was also adding its own flavour to the palette of this new light show



In control: Axon Digital Design's ShowCAD at work on the Sagitter stand.



Tony Shembish demonstrates a Graphics Tablet on the Avolites stand.

which was put together by a fresh team of light artists, in the absence of Carl Dodds and John Lindsell for the first time in several years.

While on colour change, several manufacturers seem to have suddenly realised the designer's need for such instruments, and not a moment too soon if you ask me. One of these is FLY who have finally come down to earth with a compact and budget priced dichroic colour-changing series of Fresnels with the current option of either 1k Halogen lamp or 1.2k MSR. In fact, the lamp of choice may well be the third option not yet available, the new 700MSD which sits midway between the two in lumens output, has the same high colour temperature as the MSR, but more than doubles the rated life of the lamp at 2000 hours. Two basic models are available, the Chroma offers 24 colours, the Trichroma CMY colour mixing and colour fades. There is a selection of front lenses available from narrow Fresnel (18 degrees), through to wide (33 degrees). In addition there is a PC lens offered (22 degrees) and flood (45 degrees).

One of the very appealing features of these instruments is that they include an on-board dimmer, thus saving external dimming channels, and enabling DMX control of colour and brightness without elaborate patching. Successfully marketed, these products could pose a real threat to the dominance of the Parcan/gel-scroller combination. So it was pleasing to hear during the Show that FLY have accepted that their skills are better applied to the design and manufacture of their products and that, having come to that realisation they have formed a deal with Arri Italia, who will supply their products to the TV and theatre market.

Going back to lasers, both Tarm and Lobo impressed as usual, though there was some concern that Space Cannon, who certainly make super searchlights, have entered that market with two pulsed lasers, a 10W and a 3W, both of which were sitting open on their stand on tables about 90cm from the floor, with the 3W spraying beams left, right and centre. Enquiries on the stand indicated that they thought this entirely safe, but by whose standards? And if anyone had asked for a demo of the 10W, would they have fired that up also? I suspect that the answer is probably yes.



Penn Fabrications were exhibiting on the stand of Italian distributor Valentini.

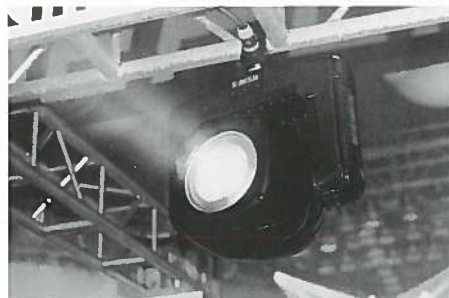


Neil Rice of Optikinetics with Roberto Santini from EtaBeta Electronics, their Italian distributors.

ACR Lasertechnik were presenting a striking new laser and 3D video display, the Real 3D System. Combining the DP 100 professional laser display system with the SpaceVision 3D Video system, which works with special polarisation spectacles, the display gives an exceptional 3D effect. The DP 100 system is designed especially for publicity and advertising purposes, and is controlled by a digital laser show player (the DAG 2). The entire programming for a laser show can be stored on tape and replayed at the touch of a button, lessening the need for skilled technicians, whilst the use of sealed-mirror technology cuts down on the need for maintenance. The PanScan Effects Head, which produces the animated laser images, moves along X/Y axes plot for greater positioning accuracy, and is DMX or analogue controllable.

Since laser beams are virtually invisible without some atmosphere, this is probably a good point to catch up with progress on JEM's so-called H.O.T. Technology ultrasonic powered smoke machine which, I was reliably informed, is now a matter of weeks away from first deliveries. The other bit of good news from the Smokies, is that they intend to make their profit in future from the hardware and end the practice of exploiting the made-up fluid, selling the necessary Glycol in sachets unmixed with instructions as to the amount of water to add. Sound thinking I would say, as a fair proportion of the current cost must be in transportation of the water which forms the bulk, and the formula hasn't exactly been a mystery for years.

Also attracting attention on the JEM stand was the new Hydrosonic 24G smoke machine, which, incidentally, debuted at the extremely impressive Clay Paky Gala Dinner at a nearby hotel and was giving the all-important haze to the lights around the wonderful Amii Stewart, who performed live at the event.



The new Technicolor: High End Systems' colour changing moving yoke luminaire.



'In Yer Face': Lite Structures' truss-furniture.

Studio Due, from Viterbo near Rome, were demonstrating (with the help of some thumping Pink Floyd), their extensive range of lighting effects. New this year is the Stratos Hi-Res 700W, an upgraded version of the Stratos 575 HMI. Improvements include a pan/tilt speed increase of 30%, rotating gobos with position memory and 256 steps for dimmer, focus and iris functions. The Ray Ball is a lighting effect that gives 32 rotating and crossing rays from two 400W halogen lamps. Available with white or coloured rays, the unit is sound activated and a switch allows the speed of rotation and the length of the pause between each movement to be adjusted. Studio Due's lighting effects, including their very own scanner, the Top Scan (if you haven't got a scanner, you're not coming in . . .) are accompanied by their own dedicated control unit.

New from Sagitter was the Gipsy centrepiece light. The Gipsy produces six concentrated beams of light from one HMI 575W lamp, via six scanning mirrors with 175 degrees of pan movement and 110 degrees of tilt movement. Two stepper motors on each mirror with high resolution microstepping give a uniform effect. Sagitter were also exhibiting for the first time their Color-Dream colour changer, based on the same optical system as the Sagitter Prince scanner, and capable of producing 144 colours through two 12-position colour wheels. The Infinity Scan Light 1200, Sagitter's new scanner, was also launched, claiming a particularly powerful and uniform light beam due to its high-performance optical system, which includes double-coated lenses.

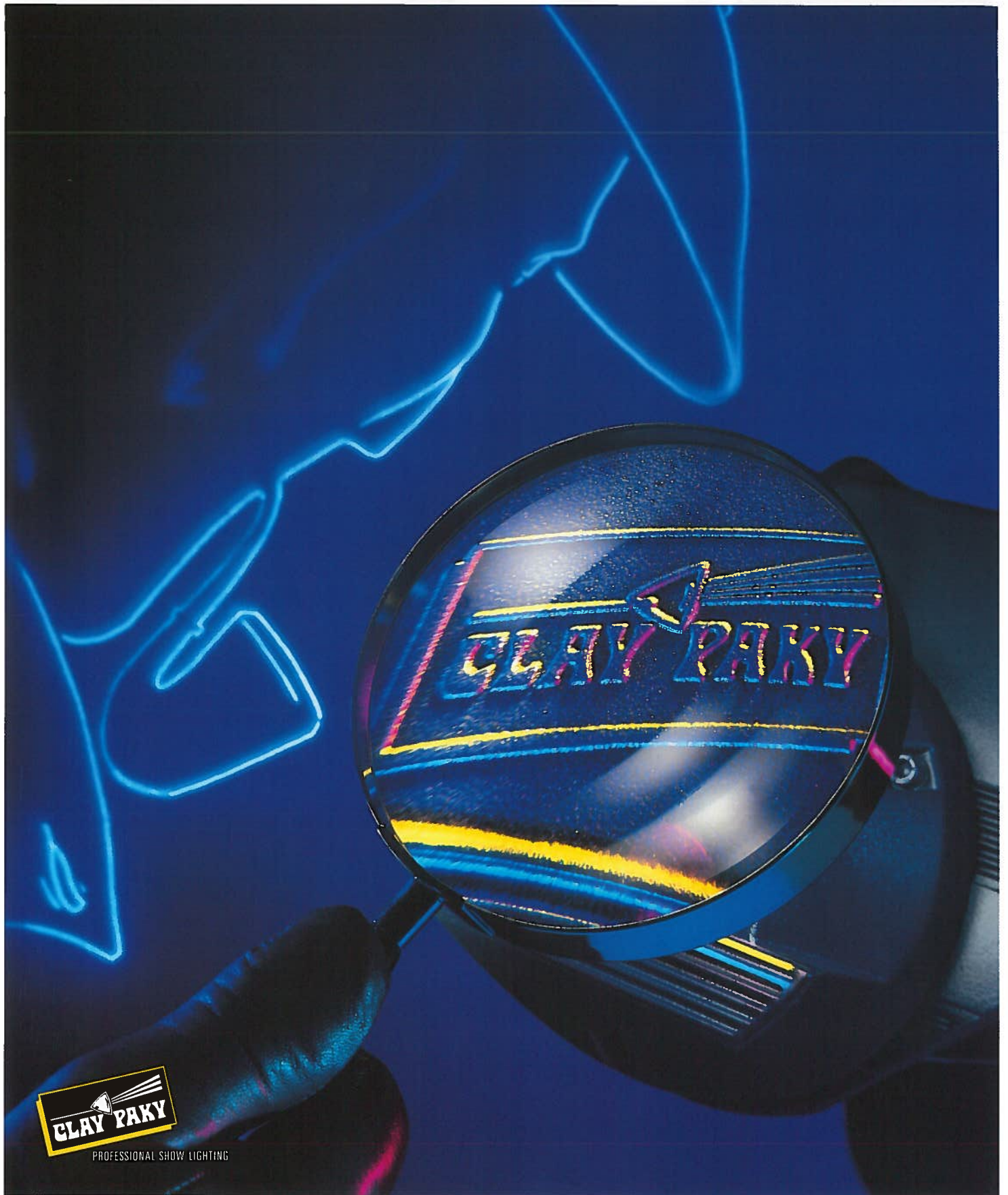
Lite Beam were exhibiting their Swing 1200 scanner, with its 11 dichroic filters, plus white and rainbow effect, 11 standard interchangeable gobos and a strobe effect of up to nine flashes per second. The mirror offers 140 degrees pan and 110 degrees tilt. The Chandra lighting effect has 360 degrees of movement with seven dichroic filters and seven standard gobos, all interchangeable. As with the Swing, control is via DMX 512 or current loop. New from Lite Beam comes the Color-Change series of colour changers, taking from two to 20 colour filters and controlled via DMX 512.

Italian lighting effects manufacturer Programmi & Sistemi Luce introduced several new products



The Lighting Technology crew get a quiet moment to themselves (almost). L-R: Philip Norfolk, Garry Nelsson and Richard Maunder.

It's elementary my friend:
it has to be CLAY PAKY.



PROFESSIONAL SHOW LIGHTING



Clay Paky's new Astroraggi Power in action during a demonstration.



Mike Lowe stands amid the gently lit stage setting of the Teatro stand.



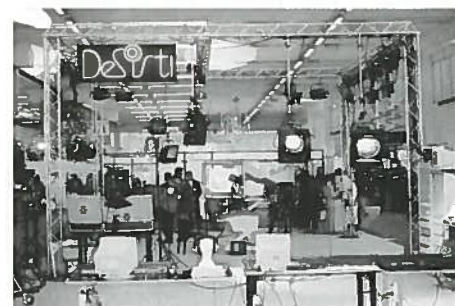
A view of the inside workings of FAL's new ProScan 2 HMI 1200.



The Strand Lighting stand.



Discussions on the stand of Arri Italia.



The DeSisti stand in the Magis hall.

to the karaoke and mobile disco markets. The Talisman uses a 1000W bulb and dichroic mirrors to give a colourful dual light-tunnel effect. The Random Scan is a small unit comprising four Par 36 30W lamps with corresponding moving mirrors. The unit can be sound activated or use preset programmes, and control is 0-10V analogue. The Light Bar is a similar effect, but with four moving lamps, and like the Random Scan, allows up to three slave units to run in sync with the master unit. Also new is the small but powerful Lone Star, with external colour wheel and 150W halogen lamp giving a moonflower effect.

As usual in recent years at Rimini, new and bigger and more glamorous dancefloor centrepieces were making considerable running with some exciting looking combinations from **Griven**, **Lampo** and **La Novalight**, as well as those from FAL and Sagitter already mentioned, all of which defy adequate description. One of the most attractive of these was the Divine centrepiece from **La Novalight**, on stand with their UK distributors **Nu-Light**. From one HMI 1200W lamp, the Divine produces 16 surprisingly powerful beams, reflected from an array of 16 movable mirrors, while light is also reflected from mirrors in the centre of the unit, creating a wide variety of effects. Each of the reflectors on the outer edge of the unit has its own blackout shutter and four-colour changing system, and up to eight Divine units can be synchronised together. Installed either horizontally or vertically, the Divine light packs a good deal more punch than many of its competitors. Also new from La Novalight for 1995 are the Single and Mono. The Single is a small and powerful outdoor projector with a fixed opening angle of 20 degrees, visible at distances of up to 4km. The latter is a sound activated flower effect, coloured by a single external gel.

Griven's enormous centrepiece, the Shuttle, now carries the DMX suffix and can be DMX controlled. Entirely new, and offering 10 gobos and six colours is the Cruiser effects projector, operated as a stand-alone unit, through a dedicated controller or DMX controller. Also new is the Concord Centrepiece, with seven available sequences (eight via 0-10V analogue control), and the Rotobox, a rotating unit which can rotate attached lighting effects. Other new additions to the Griven range include the Venice, which produces a pulsating light effect and can, lo and behold, be turned into a scanner

with a special attachment, and two new theatre profilespots.

Rounding up the Italian manufacturers, **LED** were unveiling more than the average amount of new additions. The EuroScanner, has eight gobos with optional blackout changing, eight colours on a high speed colour changer and a two-tone beam. The EuroScanner 2 has eight gobos (four rotating, giving 25 possible variations), and like the EuroScanner, is available with 575W or 1200W lamps. A smaller scanner, the MSR400 offers eight colours and eight gobos. The Stargate and the UFO 2000 were two new centrepiece lighting effects on show, the latter being a smaller model of the UFO 2001, and giving a spray of dichroic colours reflected from eight mirrored arms.

The AR500 colour-changing architectural luminaire from **Irideon Inc** was on display on the stand of Italian lighting manufacturer, **Teclumen**. Andy Pivec of Vari-Lite Austria was on hand to demonstrate the light, which offers smooth, computer controlled dichroic colour changing across the spectrum, a wide range of beam spreads from 9 degrees to 68 degrees, via optional lenses, dousing giving full-field dimming of beam intensity and diffusion providing precise and dynamic control of beam distribution.

French company **Ariane** were displaying their range of fibre optic lighting sources alongside their Arabesque, California, Diabolo and Techno lighting effects. Available in various lengths of 1mm fibres, the optical fibres use the PFO 100 or PFO 100S light sources. The PFO 100 includes a stand-alone colour changer with six colours plus white, and on/off colour changing remote operation, while the PFO 100S offers variable colour changing speed control, and either six colours plus white, or five colours plus white and blackout.

This intelligent lighting source is controllable by DMX 512 or 0-10V analogue. Both source units include powerful fan cooling, thermal protection and optical condenser. Also from Ariane, the Tubelight is a 10mm diameter plastic tube, available in seven different colours containing a string of long-life microlamps. The strips of Tubelight can be fitted into a specially made aluminium strips which can then be fitted on to stairways and walkways for safety or decorative purposes.

Amongst the Brits morale was high - especially for **Zero 88**, several thousand pounds the richer from having won judgement in a passing-off

action in France, or they will be if they are able to collect. Zero were showing their portable dimmers and mains termination units, all snugly racked up in double skinned, vacuum formed, polysomething jackets which will not only withstand the accidental drop from the back of a tour truck, but also look the business at the same time. These rugged units (suitably demonstrated by David Catterall), feature individual channel circuit breakers and a user-selectable multi-lingual (English, French and German) back-lit LCD.

Other features include 32A CEE17 output connectors on the rear panel, 16A auxiliary output socket, selectable start address, preheat, emergency programmable back-up memory, topset, selectable dimmer laws, full test diagnostics, softpatch and channel grouping. We all know that their dimmers are up to snuff, but we cannot say the same about Freddy Lloyd's line in Chinese silk ties!

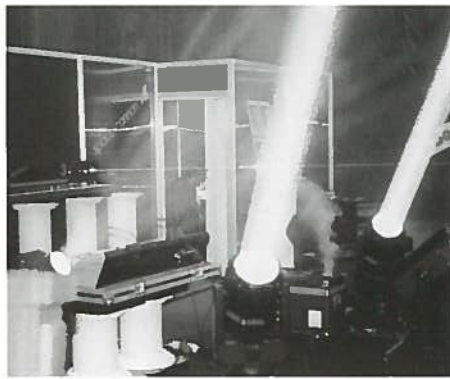
Lighting Technology were maintaining their humorous approach to lighting through the Caterpillar, this time with the addition of glowing feet doing the can-can and hairy hands doing the hand jive, off the front of their stand. Apparently, the previous setting amongst the cabbages had convinced some naive potential customers that it was a garden fixture! Also popular on the stand were LT's own flicker-effect candles. The rumour mill was hard at work with the story of Andrew Stone's departure to set up his own company called Stagetec. But, as with all such unexpected disappointments, it's made the Techs all the more resolute to keep their other deals well lubricated and they are going great guns with EAW.

New from **Pulsar** was the Masterpiece Replay Unit, which is designed for applications where simultaneous control over a large variety of equipment - lighting, sound, visuals - is required. The Replay Unit is programmed via a Masterpiece 48 or 108 console, with the completed programme being transferred to the Replay Unit using a memory card. Using all 108 dimmable control channels, it can command up to 216 scenes with individual fade in and out times. It also features 54 scene chasers with individual speeds, slopes, directions and fade in/out times. All of the scenes, chases and channels can be combined into any of 48 environments. Remote control of the unit is via MIDI, contact closure and six-bit 0-10V analogue, and programmes can be played back in real-time or clock-time.

Pulsar are also backing an established CAD



The assembled Batmink contingent of David Churches, Declan Reynolds (from Reynolds of Raphoe), Grant Thomas and an affectionate Shaun Robertshaw.



The Space Cannon stand: questions about lasers.



Standing with Irideon's AR500 exterior luminaire are, left to right: Edoardo Henle (Scenitek), Antonio Morbini (Teclumen), Andreas Pivec and Manfred Hamberger (Vari-Lite Austria).



Cloud Electronics' Roy Millington on the PLASA stand.



Tony Gottelier talks to Ken Sewell and Derrick Saunders on the huge Clay Paky stand.



Carl Mills (left) and Graham Thomas on the Lite Structures exhibit.

package in which the Clay Paky & Pulsar AutoCAD symbol library can be included, for less than the cost of the existing system. The support of Drafix Professional Windows CAD Version 3 will allow easier access to the design of CP&P equipped systems. The company were also exhibiting a new intelligent colour wheel system in prototype form, expected to cost a quarter of the price of a scroller.

The wheels have five easily changeable colour gels, and can be rotated at almost any speed. Colours can be selected either complete or split, and the system operates from either DMX, PMX or 0-10V analogue. Other new developments include the 12-way Mains Voltage Switch Unit, now redesigned in a slimmer 2U format, and a 12-way Low Voltage Switch Pack, a 1U unit for simple control of switch packs without the need for a touch panel. Features include a master blackout switch with LED and 12 channel switches with monitor LEDs.

Ryger Electronics were exhibiting their complete Discovery lighting range. The Discovery HTI 400W scanner was complemented for the first time by the DC1000 programmable controller, which features preview and editing facilities, 16 channels of control, individual manual override, 20 scene stores and 20 pattern stores, XLR output connections and internal sound trigger. The DC1000 takes 4U of rackspace and includes battery power backup. Also new from Ryger was the Discovery Scene Setter projection system. This 400W colour changing and gobo system gives sharp images and is also controlled through the DC1000.

A new innovation from trussing specialists **Lite Structures** was their range of 'In Yer Face' furniture - styled from wood and trussing. These extremely sturdy pieces range from the 'Wave' bench to the 'Dakota' chair, and include hatstands, display cases and tables. Anyone wanting to furnish a house with this range may be advised to win the national lottery beforehand, but at least they will be safe in the knowledge that these pieces are built to last. Lite Structures were also featuring their ranges of AstraLite, BiLite, QuatraLite and MiniLite trussing systems.

Light Processor were exhibiting the Q-Pack, a range of commercial dimmer packs suitable for applications requiring lengthy use and reliable results. The Q-Pack dimmers feature front panel

lamps indicating when each phase is connected and switched on. Each channel input has an individual preheat setting and test switch set below the front panel for tamper-proof operation. The latest enhancements to the Q-Range, first seen at PLASA 94, are now in full production. The Q-12 and Q-24 have been slightly remodelled externally, while their interior workings remain the same. Finally, the Q-Store desk, intended to operate as a back-up unit or alone as a playback unit, can store up to 64 presets of up to 512 channels.

Of course, **Strand** were there promoting all their latest wares through their local operation, as well as Pani projectors, while **AVAB** and **ADB** were represented and, of course, **Arri Italia**, **De Sisti** and **Rosco Italia** were there in their own right, as were **Teatro**. As the result of a little gentle persuasion from within, the ever astute Mike Lowe was persuaded to show the world what his Teatro products can do in reality, rather than just showing rows of black metal boxes with glass fronts and red stripes. The result was a delightfully lit, gently changing stage setting.

Optikinetics were on the stand of their Italian distributor, **EtaBeta Electronics**, with their range of lighting effects and the TriLite trussing system. Distributors **Batmink**, from Glastonbury in Somerset, were promoting their dealerships and excellent back-up service, and were joined on stand by Declan Reynolds from **Reynolds of Raphoe**, Ireland. **Northern Lights** from Lancaster were showing products from **Cloud Electronics** and **Multiform Lighting**, among others.

Penn Fabrication were represented on the stand of their Italian distributor **Valentini**, and have introduced an extensive range of products, both at Frankfurt and Rimini, including the MSB modular stage box system, 19" lockable rack drawers (2U, 3U and 4U), 19" security panels (1U and 2U), 19" perforated vent panels (1 - 4U) and custom speaker grilles. Another British exhibitor was **Doughty Engineering**, manufacturer of a broad range of stands, staging, clamps and fixtures, including Zenith and Nebula winch stands, Easydeck modular staging and Club, Studio and Shadow lighting stands. New from Doughty in Rimini was the telescopic truss lift, the Zenith II, which can claim greater lifting capacity than its predecessor. The overall appearance of the unit is also enhanced, as the winch cables are now located

within the central tube of the lift.

Complite were there in force in support of their Italian dealer **Spotlight** in the MAGIS hall - I know this because they were having extreme difficulty persuading the less than bi-lingual night-desk clerk at the Hotel Nacional to give them their rooms, since all had been booked in the name of their travel agent, which obviously did not tie up with the passports. Spotlight, incidentally, have also recently prised away the High End distribution from Sagitter, and these two product lines should make a formidable combination in the Italian market.

On the final night we sat down to dinner with PLASA's Anna Pillow and Nicola Evenden and, among others, the guys from three companies which could be described as the rest of the UK lighting console makers 'not already mentioned'. All have gone through, or are going through, the agonies of extended software developments. Colin Whittaker of **Celco**, who assures us that Aviator has finally taken off, ending his agony and whose latest video-related product looks very interesting indeed, Nils Thorjussen of **Flying Pig Systems**, who promises Wholehog II by the summer "at the very latest" (he'd better be right coz Spot Co's Pete Miles told me that he has booked one out on tour about then), and **Avolites'** Steve Warren whose Pearls have also, apparently, been a while coming from the depths of Park Royal. (Notice we resisted all references to pearls and swine, and to twin-sets for that matter). As you can imagine, there was a great orgy of mutual sympathy and no detectable acrimony whatsoever.

We engaged in a lively conversation with Steve's splendid Italian distributor, who I had first come across when reviewing the technology on the Eros Ramazotti tour last year. Here is a guy who is deeply passionate about what he does, and therefore a man after our own hearts, so it was deeply disturbing to hear from him that the Italian market is in a state of crisis of similar proportions to its current political impotence.

If that is true, and it probably is, the Italians are very good at papering over the cracks. If you'd walked around the Show that week in March you would have had no inkling whatsoever of such desperate straits behind the scenes. But is the whole edifice crumbling like the real Taj Mahal? We will just have to wait until next year to see the results of any fall-out.

POINTS OF LAW: TRADE MARKS

The second in a series of articles in which Alex Carter-Silk explains the basic law surrounding Trade Marks and their use

When Trade Marks legislation was first enacted, it left in place the common law of passing-off. This was no accident: the common law supplements its statutory cousin and provides protection in some areas not specifically covered by the codified law. This article does, however, lead into an explanation of the changes effected by the 1994 Trade Marks Act and the wider opportunities now available under that statute.

Neither the common law nor statute will permit one person to obtain an unfair advantage by misrepresenting either himself or his products as being those of, or associated with, another business. An individual or organisation may establish a look 'get-up' or label for its product and, in time, the market may identify the product with the company. In due course, the label or style under which it is sold will become associated with the company which has produced the goods.

It is said that the company using the Mark, label or 'get-up' has created 'goodwill' in it. This 'goodwill' cannot be objectively valued but is nonetheless of value to the owner and hence to the would-be copyist or counterfeiter.

The final output of any manufacturing process will usually attract protection from a number of sources. The design layout and the drawings may be protected by copyright. The three dimensional shape of the product may attract unregistered design right protection and the overall presentation of the product may be sufficiently distinctive to be identified with a particular source. Copyright requires no registration and neither does design right protection. Similarly, the law of passing-off requires no registration - it is entirely a creature of case law or 'precedent'.

A great many well-known cases have been fought on the basis of the law of passing-off. In 1990 (Reckitt & Coleman v Borden) Reckitt and Coleman sought (successfully) to prevent imitation of the well known 'Jif Lemon'. They argued that its shape and 'get-up' was associated in the public mind with a quality of product produced by their company and that no-one else should be entitled to benefit from the years of work that went into establishing the mark.

In Warnink Erven BV v Townsend J 1979, Warnink sought to prevent a third party from using the name 'advocaat' which they said they had established as associated specifically with their product. They were successful.

The plaintiff must show that he has established goodwill in the name or 'get-up' and demonstrate that there is some form of misrepresentation being perpetrated by the defendants. The goodwill must not only attach to the plaintiff, it must be goodwill generated within the jurisdiction of the court.

In the case of Anheuser Busch v Budvar, 1984, the manufacturers of the American 'Budweiser' beer sought to prevent the manufacturers of the Czech 'Budweiser' beer from being sold in the UK. They argued with some force that their brand was so well-known

that they had goodwill everywhere. Not so, said the court - at that time their beer was *not* known in the UK and their goodwill was attached to some other jurisdiction. Both were entitled to sell their product here, since both had goodwill but neither had it in the UK.

Having established goodwill, the prospective plaintiff must be ready to demonstrate that the defendant has made a 'misrepresentation in the course of its trade'. The misrepresentation will often be the production of a product designed to mimic that of the plaintiff. Often, the product will be an inferior copy. The counterfeiter will

"Having established goodwill, the plaintiff must demonstrate that the defendant has made a 'misrepresentation in the course of its trade'. The misrepresentation will often be a product designed to mimic that of the plaintiff. Often, the product will be an inferior copy. The counterfeiter will hope that his product will sell because of the false association."

hope that his product will sell because of the false association. The test is subjective. It requires the court to evaluate the two products and to determine whether the purchaser would be misled.

In very public disagreements, Coca-Cola recently attempted to prevent the supermarkets from stocking lookalike products. They failed, because the lookalikes were clearly labelled and identified with other manufacturers. Each instance must, however, turn on its facts and the ingenuity of the counterfeiter is boundless.

Whether the public are misled is often not as easy to prove as it may seem. In the Jif Lemon case both companies commissioned extensive market surveys to prove confusion. In the end the judge(s) decided on the basis that once purchased, the identifying tag could be

removed and the products were then indistinguishable.

There are, as must be apparent, serious deficiencies in seeking to rely solely upon the law of passing-off. The law is strictly territorial and will not provide any protection to a foreign company trading in the UK through an agent or distributor. The goodwill in the jurisdiction will generally attach to the business which deals with the product. The law relies upon demonstrating that there is, or will be, confusion. This will often require the potential plaintiff to resort to expensive market survey evidence.

In order to obtain a remedy from the court, the plaintiff must then establish that they will be caused damage by the actions of the copyist. The inferiority of the counterfeit or clone will often be sufficient. The courts will readily infer that the originator's trade integrity will be damaged by the presence on the market of inferior lookalikes.

The creation of an association (false) with the originator is also sufficient.

In some cases, the mere recognition of the right to license a product may be sufficient. In the case of Mirage Studios v Counter-Feat Clothing, the creators of the Ninja Turtles sought to prevent 'lookalikes'. Whilst the court was forced to accept that there was no right to protect the 'idea' of the Ninja Turtles as such, the public did recognise that such

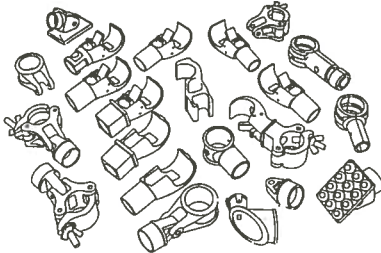
characters were often licensed by the creator and that the production of lookalikes misrepresented the existence of such a license. This is stretching the point perhaps, but the court could be forgiven even if it was only because of the defendant's chosen trading name!

Assuming that all of the above can be shown, what then? Most cases involving passing-off are either resolved or at any rate brought to a head by the granting of an injunction to prevent the conduct complained of. Those that go to a full trial and a permanent injunction are relatively few and far between.

Ultimately, if the defendant has the money, they may be required to account for all of the profit which they have made from their unlawful actions. Unfortunately, most copyists are unlikely to be worth powder and shot!

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

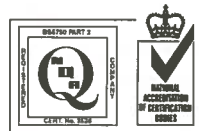


ALISCAFF LTD
Unit 2 Hotspur Ind Estate
West Road, Tottenham
London N17 0RJ
Tel: 0181-808 5005
Fax: 0181-801 9851

HIRE AND SALE

Of Sound, Lighting and Effects
IN THE MIDLANDS

Central
Theatre
Supplies



0121-778 6400

LIGHTING SOUND *International* RECRUITMENT PLUS

A NEEDLE IN A HAYSTACK?



We are looking for self motivated Sales Agents currently calling on Commercial Sound and Communications installers throughout the UK and EU to introduce these contacts to our ever widening product range of public address and sound system accessories - paging microphones, amplifiers, line volume controls etc. - to support our existing marketing base. And to sell a new, exciting, product about to be launched

Please write to me, Tony Walker, Chief Executive

CUSTOM HOUSE GROUP LIMITED
Public Communication & Information Systems

P.O. BOX 66, UCKFIELD, EAST SUSSEX, TN22 3ZR, ENGLAND.
Tel: +44 (0) 1825 732601 Fax: +44 (0) 1825 732730

HIRE CO-ORDINATOR



We are looking for a person to assist with the day to day management of our busy hire department. The position requires an electrically competent person to relevant City and Guilds standard who has P.A.T. testing experience and is capable of organising the hiring out and maintenance of performance equipment (sound, lighting, staging, special effects, etc.). A thorough knowledge on all theatrical subjects plus a patient approach to inexperienced customers will be essential qualities required for this position. You will require a clean, current driving licence. **All applicants must be computer literate in Windows, numerate, have an excellent command of English and a first class telephone manner.**

We are an equal opportunities employer.

C.V and written application to Adrian Sant,
AJS THEATRE LIGHTING & STAGE SUPPLIES, HIGHTOWN IND ESTATE,
CROW ARCH LANE, RINGWOOD, HAMPSHIRE, BH24 1ND

ENTECSOUND & LIGHT

ENTECSOUND & LIGHT have a vacancy in the sound department. The successful candidate should ideally have working experience of Live Music, Television and Conference Industries, must have a good telephone manner, sales ability, be able to get on with people, work as part of a team and have a clean driving licence. Responsibilities will primarily be to serve existing clients and acquire new ones, organise crews, equipment, transportation and general logistics. Salary negotiable according to age and experience, benefits to include company car and profit share scheme.

Application and C.V. to:-

Ms Noreen ORIordan,

ENTECS, 517 Yeading Lane, Northolt, Middlesex. UB5 6LN.



Europe's largest manufacturer of Pro Audio Loudspeaker Components / Speaker Systems and Public Address Sound Reinforcement Systems have a vacancy for an:

EXPERIENCED TECHNICAL SALES EXECUTIVE

to head our Professional Audio Division.

You will be part of a specialist team dedicated to developing RCF as a market leader in the United Kingdom.

The ideal person should have an active interest in loudspeaker systems, practical and theoretical technical knowledge, with a minimum of two years experience within the industry.

You will be responsible for developing and servicing our dealer / contractor networks throughout the UK and Ireland. The position will also entail on-site product demonstrations combined with system design ability.

The position offers an excellent salary plus company car and all the other benefits associated with a progressive company.

Please apply in writing enclosing your CV to:-

LINTON SMEETON - SALES DIRECTOR
RCF Electronics (UK) Ltd.
2 Blenheim Court,
Hurricane Way,
Wickford,
Essex SS11 8YT
Tel: 01268 570808 Fax: 01268 570809

PROJECT MANAGER

Excellent Package

Midlands

MCS, a member of the Chrysalis Group Plc, require an experienced Project Manager who will be based in the Midlands area to manage installation projects, utilising Company and proprietary products and contract labour.

The successful candidate will have experience within the audio/visual industry, preferably with lighting systems, excellent communication and inter-personal skills. Self-motivation is essential and the ability to work with a minimum of supervision.

The Project Manager's role will encompass the specification of the audio and visual systems solutions for a variety of clients, ranging from background music to high profile display. Project Managers are required to work in close liaison with National Accounts Managers offering technical advice and project costing. Project Management, contractor and staff engineer supervision will be required for all projects under the post holder's control with responsibility for efficient completion.

Reflecting the responsibility of this position we offer an excellent remuneration package consisting of a competitive salary, company vehicle and company pension scheme.

Applications in writing enclosing a full CV and current salary details to:

Irene Scofield, MCS, 2 Pincents Kiln, Calcot, Reading RG3 7SD
Facsimile (01734) 303369

RECRUITMENT PLUS



LONDON AREA SALES MANAGER PRO-AUDIO PRODUCTS

The job is for you if you are an experienced, successful and well-connected salesman with extensive knowledge of the requirements of the commercial pro-audio, installation, hire and disco 'sides' of the sound-reinforcement industry....
if you are technically sound in the appropriate fields....
if you know you can justify a good salary, bonus and fringe-benefit package.



If this is YOU, then include a current photograph and write now for an Application Form to:
John Hornby Skewes & Co. Ltd.,
Salom House, Parkinson Approach, Garforth,
Leeds LS25 2HR.

**TO ADVERTISE YOUR VACANCY IN
LIGHTING + SOUND INTERNATIONAL
CONTACT: BARRY or JANE
Tel: 01323 642639 Fax: 01323 646905**



DHA Lighting is a busy design and manufacturing company based close to the West End in the heart of London. The company employs over 25 people producing gobos, slides, moving effects and Digital Light Curtains for the entertainment industry. Due to continuing growth DHA now requires a:

Business Manager

To take responsibility for day to day management and operational issues and play a key role in the strategic development of this growing business. MBA or similar qualification and IT/Systems experience preferred

Manufacturing Manager

To manage and develop expanding manufacturing facility. The job requires an energetic all rounder, with substantial administrative abilities. Hands on experience in a manufacturing environment an advantage

Senior Manufacturing Technician

To head small team assembling complex, high tech lighting equipment. Proven experience in manufacturing precision, mechanical assemblies required

*Salaries dependent on age & experience.
Please apply in confidence including CV to:-*

Nikki Scott
DHA Lighting Limited
3 Jonathan Street
London SE11 5NH

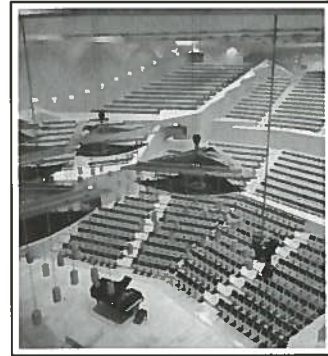
- NEW LOOK -

SOUND + COMMUNICATION SYSTEMS International

SERVING THE SOUND REINFORCEMENT, SOUND INSTALLATION,
AUDIO VISUAL AND MULTIMEDIA INDUSTRIES



April/May 1995



Systems and Installations In Detail
Major Exhibitions Reviewed
Standards and Regulations
In-Depth Company Profiles
Latest News, Views and Products

SOUND+COMMUNICATIONS SYSTEMS INTERNATIONAL

History: In mid-February PLASA completed the purchase of Sound & Communication Systems magazine from Pirate Publishing Ltd in a move that will consolidate the recent merger of the Association with the Sound & Communication Industries Federation (SCIF).

The title will be re-launched in April (on a bi-monthly basis for the initial period) and, to identify it as a sister to PLASA's highly successful Lighting+Sound International, its name will be subtly changed to Sound+Communications Systems International. Of more significance is the change in the small print under the title: 'Serving the sound installation, sound reinforcement, audio visual and multi-media industries'.

Editorial Profile: S+CSI will cover the sound installation, sound reinforcement, audio visual and multi-media industries focusing on the application of these technologies in a wide range of projects. It will also report, evaluate and assess products and systems in the pro-sound and communications market. The 'new' magazine will have a broader format and dovetail with Lighting+Sound International which will retain its pre-eminent position in the field of live performance and creative presentation.

Target readership: Key individuals responsible for the purchase, installation or design of sound reinforcement and multi-media technology. The magazine will also be available to professionals working within the industry.

Contacts:

For further details on advertising contact either Barry Howse or Jane Cockburn on
tel: (01323) 642639 or fax: (01323) 646905

SECOND TAKE

John Watt's view from beside the camera

If this column has gathered a regular readership it may be something of a surprise to find it taking a scientific turn. However, the sometimes unpalatable truth is that the creative use of light involves physics along the way. This may not come as news to that rarefied breed that have 'done' the BBC lighting course, but the rest of us have had to learn the hard way.



- If we had ever spent enough time away from earning a living to read Book One, it would have said somewhere near the front that light travels in straight lines - it's a damned nuisance, but we are stuck with it. I know you could swear that some followspots begin to droop on long throws but it does travel in straight lines. Secondly, and this is a revelation to most directors and designers that I work with, it's invisible. This adds 10 minutes at least to any planning meeting as the brief says that there is definitely to be no smoke on this show (Bruce wouldn't like it) but we need to see those two lovely 'beams of light' from the followspots on the reverse shot.

Thirdly, where these invisible light rays can be turned round by using a mirror, they doggedly follow another rule - angle of incidence equals angle of reflection - which is quite handy when you need to see a reflection of yourself, but less useful when trying to light a shiny object.

If these three simple rules could be communicated to the set designers of this world, it would save me, for one, a lot of grief. I would have them carved over the door of every Art College, together with a reminder that if the set doesn't reflect the appropriate colour back into the lens, then all will remain velvety black and the show may just make passable radio.

- OK, so I have to admit it, I am a frustrated designer. If only more would compromise 'the look' just enough to allow the lighting man a chance to produce the look they want! Shiny sets seem to be the vogue at the moment and the only hope of making them come alive is to drench the 'fourth wall' in light. Usually this is where the audience sit and they seem to lose the will to live above about 3000 lux. If only those rays of light would bend it would be a different story. As it is, thankfully, some designers do change direction and so the team spirit wins through and

minor triumphs appear on screen from time to time. They are a diverse breed, these designers (or art directors if they prefer), and a few years back were responsible for pushing their more conservative lighting colleagues into taking apparently unwise chances in the way they lit things, and, more importantly, in the way they thought. Lighting hardware still prevents lighting designers from being as flexible as they would like to be, but even so the right chemistry between the two can produce exciting results.

The word 'scenery' seems inadequate and old fashioned to describe the creations which form the environments created by the set designers of today. It's not only that they have all become green (wood is just not part of the vocabulary any more), but that steel clad in Plexiglas, fibreglass, BP materials or vinyl seem to be the order of the day.

- There I go again describing trends as though they are something new. Some of the materials are newish, but designers have always found ways of building their dreams, sometimes giving the lighting man nightmares in the process.

The late Bob McGowan, one of life's lovable eccentric talents produced a huge rostrum for a 50 piece orchestra at YTV in the late sixties. Its surface was a compound curve made of brushed aluminium nearly 60 feet across. The drum rostrum at the eye of this set also had a compound curved top. The plan view was inspired by a portion of the female form and remained our secret throughout the production. The images of the brass section climbing the slope to their positions made a lasting impression only equalled by the chippys armed with hacksaws cutting each chair leg individually to follow the curve. The music stands would have suffered a similar fate were it not for the fact that Bob more or less invented the continuous music stand which in this case swept up and down over the curves in perfect sympathy and incidentally louvered off the keys before they bounced (angle of incidence = angle of reflection) onto the cyc.

Of course, this freestyle approach is not without its hazards for the lighting man. Bob's set, after the initial concept, continued to evolve in the set builder's workshops. Such drawings as existed soon became redundant and I remember in desperation drawing my own ground plan very late one night sitting amongst the welders and tin bashers trying to coax aluminium sheets into Bob's flowing lines. I am still not enough of a free-thinker to go into a studio without a plot. So it could be a recipe for disaster or a bit of magic, sometimes you have to chance your arm. On that occasion it was all right on the night.

The ATW300 Series captures many of A-T's professional microphone secrets in a miniaturised, rugged and lightweight group of wireless solutions. See them now at your music store or call us for full information pack and dealer location.

dti APPROVED

ATW 300
WIRELESS MICROPHONE SYSTEMS

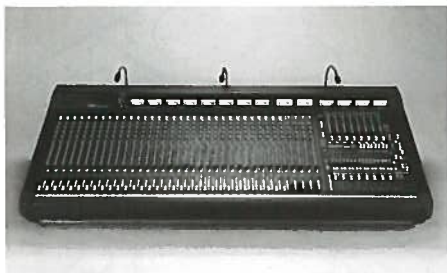
audio-technica
INNOVATION PRECISION INTEGRITY

Technica House, Royal London Industrial Estate, Old Lane, Leeds LS11 8AG TEL: 0113 277 1441 FAX: 0113 270 4836
distributed in Eire by: SOUND PRODUCTIONS LTD. Tel. Dublin 922351 Fax: 922676

80-ATW

EQUIPMENT NEWS

Yamaha PMs



The Yamaha PM3500 FOH Console.

Yamaha have introduced two new mixing consoles - the PM3500 front-of-house and PM3500M monitor desk.

The 8-bus desks feature a lightweight, compact frame, and offer mute automation and MIDI control, VCA groups, full stereo matrix facilities, and the same input, EQ circuitry and sonic characteristics as the PM4000. The PM3500 is available in 24, 32, 40 and 48 input frame sizes, all with four stereo input modules as standard. The PM3500M comes in 44 and 52 input frames. Apart from audio routing, the desks are identical and offer a standard user interface.

On the PM3500, input can be assigned to eight mix busses and the stereo master bus, with eight aux sends per channel individually switchable for pre-post-send. On the PM3500M, a total of 18 aux sends are provided; the first 12, stacked in pairs, are switchable between stereo and dual mono operation with a further four dedicated mono sends and a dedicated stereo send.

Input channels, aux returns, and the output bus are all under automated mute control. The 128 scene memories can be recalled via a 10-button numeric keypad, by eight direct recall 'hot' keys, or by MIDI programme changes. The PM3500 can also send programme changes when a scene is recalled, allowing external effects units to follow changes on the mixer.

Channels can be individually muted and un-muted under MIDI control, allowing complete MIDI mute automation from a sequencer. Two mute safety features are provided: a 'check mode', which lets you preview a scene before selecting it, and 'mute safe' switches on all channels that lock the channel in its current state.

The PM3500 features a new 12 x 4ST + 4MN matrix configuration, with four of the eight matrices offering stereo output. This configuration allows the user to set up a total of five stereo mixes, including the master outputs.

The new input channel design offers comprehensive tone control, for both FOH and monitor applications. A full four bands of parametric EQ are available, with high and low shelving filters, switchable inserts, eight VCA control assigns, and direct channel outputs. Yamaha's new VCA grouping system, independent from audio grouping, offers improved sonic quality. VCA group switches next to each channel fader allow the user to assign that channel to any combination of groups, for control by one or more of the VCA master faders.

Input peak LEDs are provided on individual channels, with Sigma peak indicators to warn of clipping on the busses. Finally, if the levels on the group, aux, stereo, matrix or cue outputs are too high, a peak LED in the output VU meters flashes to warn of possible clipping.

For more details contact Yamaha-Kemble in Milton Keynes, telephone (01908) 369269.

DMXPort

Howard Eaton Lighting Ltd has introduced the DMXport.

The DMXport is a dual line opto-isolated RS485 buffer and has been developed to ensure that the connection of any portable or rental equipment does not interfere with permanently installed equipment. This is achieved through the provision of a buffered DMX signal at each outlet point in the venue.

A data activity LED on each line verifies the presence of the DMX signal, while the power LED provides confirmation that the internal isolated power supply is on. Temporary equipment can be spurred off from the permanent distribution system, safe in the knowledge that the cable or equipment faults will not affect the rest of the lighting rig.

The DMXport is compact and each unit requires a 12-24VDC supply, normally fed around the building with the screened data cable. A DMX multiway provides power and data isolation for up to 80 ports.

The DMXport is the latest addition to the range of DMX data distribution products designed by Howard Eaton Lighting in conjunction with Andera Limited.

For further information contact HELL in Lewes, telephone (01273) 400670.

Double Gobo Rotator

DHA's latest addition to their Moving Effects range is an improved design for their double gobo rotator. The rotator retains its unique feature of independent control over speed and direction of each gobo, but the design adjustments mean it can now produce much finer results.

Available for ETC Source 4, CCT Silhouette, Lee Colortran, Strand and Selecon lanterns, the new style gobo rotator will now take B-size glass gobos, as well as the more usual metal gobo. The glass gobos can be placed less than 1.5mm apart so that both can be in sharp focus at the same time. The new design also means that, with metal gobos, a number of different focusing options can be achieved by rearranging spacers.

All double gobo rotators are fully compatible with the whole DHA Varispeed range.

For further information contact DHA in London, telephone 0171-582 3600.

Laserpoint Wall



During the recent Television Show in London, Laserpoint launched the Theatrewall.

The compact rear-projection videowall gives 54" diagonal screens with a depth of only 52cm in either standard (4:3) or widescreen (16:9) aspect ratio format. Features include 600 line resolution, infra-red remote controlled digital convergence and source control, noise reduction filters and viewing areas of either 3.6sq.m or 5.3sq.m.

The company has also announced the introduction of the Chromaspace Digital Decoder.

The Chromaspace is a stand-alone unit comprising a precision digital multi-standard decoder with high performance analogue input and output processing. Composite and SVHS balanced inputs are offered, together with aperture correction and colour transient improvement as standard.

For further information contact Laserpoint in Cambridge, telephone (01223) 212331.

Videosel III

A new videowall processor from Videosel is available via Owl Video. The Videosel III features a full digital multi-standard chip set which offers high picture resolution.

It can be controlled in various ways and gives the user the option of single or three-field interpolation. It can drive up to an 8x8 videowall, and by daisy-chaining up to four cases, control can be extended to a 16x16 set-up. Two input cards can be installed in each card frame, giving dual source capability, and each input card features three composite and one y/c input which can be switched within the software.

For details contact Owl Video Systems in Uckfield, telephone (01825) 766123.

LONDON LASER
Company

EXHIBITIONS
CONFERENCES
PRODUCT LAUNCH
TV & FILM
OVERSEAS

**FOR THE VERY BEST IN LASER
ENTERTAINMENT.....CALL NOW**
SALES HIRE DESIGN PRODUCTION

CANBURY HOUSE, 24 TOLWORTH CLOSE, TOLWORTH, SURREY, KT6 7AW
TEL 0181 399 1754 FAX 0181 399 0931 MOBILE 0836 766599

ASLEEP IN THE STALLS

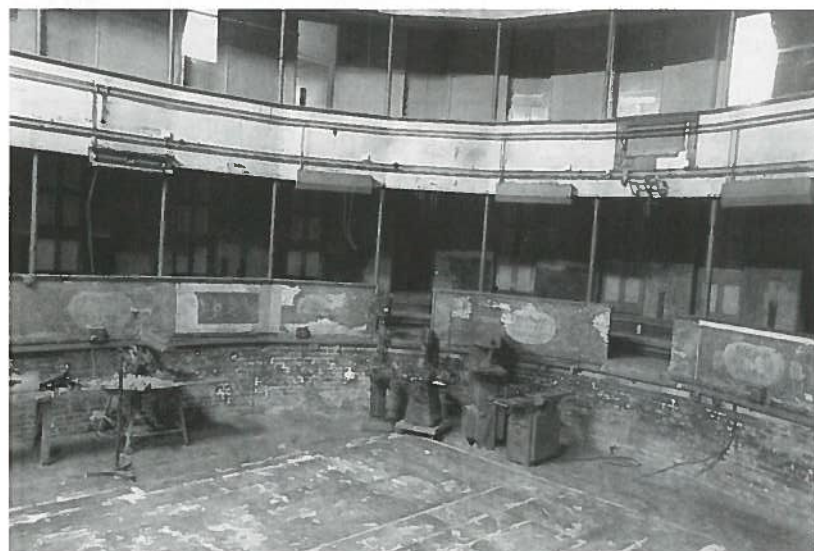
The last time I set foot in the Festival Theatre in Cambridge was well over 30 years ago, when it was the Arts Theatre's costume store. I collected various pairs of ill-fitting tights and a particularly unpleasant codpiece for various minor roles in John Barton's Marlowe Society production of both parts of *Henry IV*. It started the theatrical careers of Derek Jacobi, who played Hal, and Ian McKellen as Justice Shallow, but all it did for my acting ambitions was convince me that there were some rather more talented folk around. Still, it was great to take part in such company, and the experience was not without its fun moments. Those codpieces were a problem, and several of us managed to forget them by dress rehearsal, which produced a stern note from JB: "Codpieces will be worn at all times." Diffident murmur from the back: "Does that include those of us with small parts?"

The news that the Marlowe were to perform in the old Festival, reopening it for the first time in over 50 years, brought me hot-foot back to the old *Alma Mater*. It's a splendid and suprisingly well-preserved nineteenth century playhouse with quite a chequered history. Built in 1816 by William Wilkins, who was architect of the National Gallery in London and whose wonderful screen is the front wall of King's College in Cambridge, it was known as the Theatre Royal, Barnwell and operated as part of the circuit owned by the architect's father. Macready played there and Charles Dickens gave readings, but it later fell on its own hard times and became a mission hall. Improving texts ("Trust in the Lord", "Prepare to meet thy God") still decorate the three horseshoe balconies.

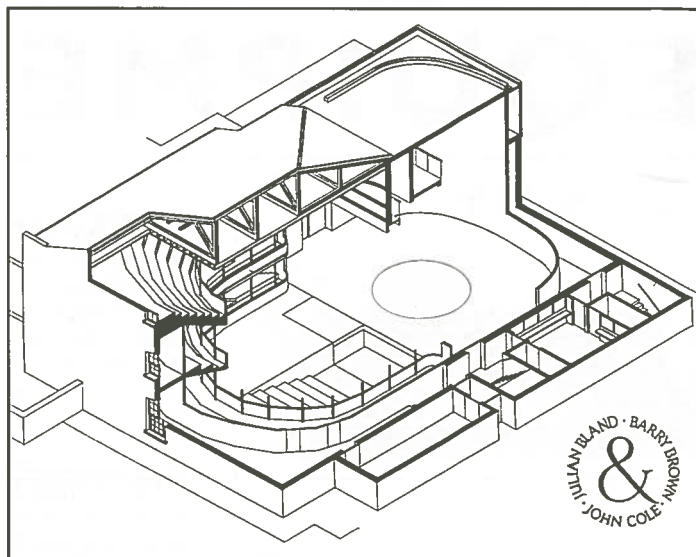
In 1926 the remarkable Terence Gray bought the now-derelict space and reopened it as the Festival Theatre, the start of eight years of remarkable innovation including a *Twelfth Night* on roller-skates. Harold Ridge put in one of the first cycloramas in Britain, and lighting was always a key element in Gray's anti-naturalist shows. He got rid of the pros and footlights, building a forestage out into the auditorium. After Gray's retirement in 1933 it wasn't long before the Festival shut its doors again, but not before George 'Dadie' Rylands put on a 1934 *Antony and Cleopatra* for the Marlowe, the first time women were allowed to take part in a University production.

With the Arts closed for redevelopment (and crossing its fingers for a windfall from the Lottery), the Marlowe has had to look around for a venue. Last summer they lit upon the Festival, and began extensive planning to reopen it for their 1995 show, *The Lady of Pleasure* by the Caroline playwright James Shirley. A professional director and designer, Gordon Anderson and Tom Hadley of 606 Theatre, were brought in, and it is Hadley's concept that has brought the whole theatre to unified life. This January a group of students took up residence in what became known as 'Camp Fezzy', taking out a century's rubbish by the skipload, cleaning, cabling, painting, carpeting.

They still had plenty to do after term started, and worked on with undiminished eagerness between lectures. A couple of job lots of cinema seating went in, one from the Ritz in Brixton, and an enormous number of student-hours later, not to mention a three-day technical, the theatre opened to the public on 10 March for the show's two-week run.



The fashionably distressed interior, showing the faded 'improving texts'.



Architects Bland, Brown & Cole's schematic for the restoration.

Only in the world of student theatre do you find the reserves of enthusiasm, technical ingenuity and sheer free labour that can make a project like this possible. The result was impressive in terms of both lash-up theatre restoration and polished production values.

The well-lit, but unprepossessing, exterior of the theatre, no wider than a house front, gives you no idea of what to expect inside. First comes a fairly spacious foyer, with music stands around its carpeted walls illustrating various stages of the restoration. A neat bar in one corner is lit by minibulbs in a row of sand-blasted milk bottles suspended above it, a design motif which is taken up once inside the theatre by the one major set item, a huge chandelier of more sand-blasted bottles - this time I'd guess claret empties. Following the iconoclastic Mr Gray, Tom Hadley

has ignored the usual configuration and built a shiny black stage beneath his chandelier in the arc of the first circle, with more of the audience in tiers on the stage in front of the famous cyclorama, which is used for atmosphere. There are entrances in front of the pros on either side, another going down under the stage and one in the centre of the circle itself.

This last becomes a small acting area, lit by birdies, for a second-act scene in which the seventeenth century's gaming tables become a 1995 one-armed bandit. For the production is set firmly in our time, with the student actors looking rather uncomfortable in the latest designer gear. I suppose it's not meant to fit all that well . . .

The stage itself is rather more elaborate than at first appears, lightly furnished with a couple of Rowland Emmet chairs and techno-toys such as a TV and a sound system. Into it are set a number of shaped recesses from which props such as wine, magazines, even snooker cues are fetched in the course of the play. The tour de force is a large central area which opens up to reveal a king-sized bed.

Returning after the interval, the audience finds that this area has become a practical bath, in which the heroine gives a very satisfactory (and completely gratuitous) glimpse of her equipment before going off to dry out. Apart from specials for the stage recesses, lighting designer Matthew Attwood has an impressive rig of spots and floods hung on and above the balconies to give effective and well-directed lighting states for the play's many scenes (Terence Gray used 35 circuits). Techno-jazz by the group *9 Lazy 9* adds contemporary flavour.

For the audience, the experience of sitting in this old theatre, looking fashionably distressed (the theatre, that is) in the manner of Peter Brook's *Bouffes du Nord* in Paris, adds a lot to the evening. Not everything is peaches and cream - theatre critic Michael Billington sat next to me on the aisle in a heck of a draught and hasn't stopped snuffling since - but apart from that the space has a definite warmth of its own.

The Cambridge Arts want to develop it as an experimental studio, and will have gained usefully from the students' efforts. Their temporary wiring has been certified as efficient enough to remain in place for future productions, and presumably the milk-bottle bar will remain in place. Anyone want a ten-foot green chandelier?

Ian Herbert

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

DIRECTORY

Lighting + Sound
Equipment Sale/Hire
Installation and Design

TSL A LTD

specialists in
audio visual
presentation

Studio 9, 75 Filmer Road,
London SW6 7JF
Telephone: 0171-371 5020
Fax: 0171-371 0503

**BDS
CASES**

Designers and manufacturers
of flight cases
BDS Northern - Tel: 0161 873 8181
BDS Southern - Tel: 0171 624 2134

**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

LIGHTING HIRE & SALES
Philip L. Edwards
(Theatre Lighting)

5 Highwood Close, Glossop,
Derbyshire SK13 9PH.
Tel/Fax: 01457 862811.

The
**Fibre Optic
Lighting
People**

We manufacture and distribute all fibre optic
lighting materials, Parflex harnesses and conduits,
Parflex polymers, light sources,
theatre curtain washers, spot ball and buller lenses,
side emitting fractured fibres, ceiling fittings
and large bore fibre optics.

Examples of our fibre optics may be viewed at our
London showroom, from subtle backgrounds to
fibre optic fireworks. Leaflets available.



Trade & Export call Paul Raymond
Par Opti Projects Ltd
67 Stirling Road
London W3 8DJ
Tel: 0181-896 2588 Fax: 0181-896 2599

DONMAR Ω

**ELECTRICAL CONTRACTING
LICENSING CERTIFICATION
NATIONWIDE SUPPLY & SERVICING:
ARRI, GREEN GINGER, PULSAR
STRAND LIGHTING & ZERO 88**

Technical Support Mon-Sat until 23.00 hrs.

DONMAR LTD. 54 CAVELL STREET LONDON E1 2HP
INSTALLATION & SERVICE 0171-790 6624
SALES 0171-790 1166 FAX 0171-790 6634

**ICEC
APPROVED
CONTRACTOR**

Dial SOUND & LIGHTING
Stereo Sound & Effects Lighting Specialists

CLAY PAKY

zero 88

ROSCO

Panasonic

PULSAR

JBL

DENON

FEAVEY

ABSTRACT

RAMSA

POWER DRIVE

MODE ELECTRONICS

SHURE

BOSE

OPTIKINETICS

TECHNICS

CITRONIC

TEATRO

LeMaitre

JEM

DIAL SOUND AND LIGHTING
Unit 4G Wharfedale Road, Euroway Ind. Estate, Bradford BD4 6SG.
Tel: (01274) 651600 Fax: (01274) 651190

NORTHERN LIGHTS

Tel: 01524 845584 Fax: 01524 845583

89 SCOTFORTH ROAD LANCASTER LA1 4SD

CXM MODULAR MIXER — CX233 MIXER/ZONER
CXF FIXED FORMAT MIXER

CX-Cloud

CLEARLY BETTER SOUND

CX122 MIXER/ZONER — CX335 COMPRESSOR/LIMITER
CV AMPLIFIER RANGE — PROFILE DISCOTHEQUE CONSOLES

WORLDWIDE DISTRIBUTION
TRADE & EXPORT TERMS AVAILABLE

The SEARCHLIGHT Co.

HIRE OR BUY AND LIGHT UP THE SKY
Tel: 01954 718118 Fax: 01954 719066



**Hire Point
Software**

The computer system for
L, S & A/V Hire efficiency!

- Tried & Proven since 1986
- Comprehensive, Powerful & fully integrated
- Hire/Rental contracts, quotes, inventory, stat's reservations, VAT/GST/PST S TAX, Options — Multi-user, Bar code, accounting
- Back up service
- Bank managers loan not required

Phone/fax now:-

UK

Rick - Hawthorn Theatrical 01644 410 122
Mike - Lighthouse Technical 0181 802 2088

US & Canada

Keith - Score Systems (519) 748 2770

Australia

Tim - Hire Point Software Fax (+61 2) 824 0554

**FABRIONIC
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

54-56 Tenfor Road, Moulton Park Ind Estate,
Northampton NN3 1AX
Fax: 01604 492856

FOR SPEEDY INFORMATION
TO LIGHTING + SOUND
Telefax: (01323) 646905

ANYtronic

manufacturers of
high quality:-

- ★ Strobes
- ★ Lighting Control Equipment
- ★ Amplification

trade & export
enquiries most
welcome

Anytronic Limited

Units 5 & 6 Hillside
Industrial Estate
London Road, Horndean
Hants PO8 0BL, England

Tel: (01705) 599410
Fax: (01705) 598723

Strand Lighting

- Stage & TV Lighting
- Lighting Control Equipment
- Effects Projectors
- Colour Filters
- Dealers throughout the UK

Grant Way (off Syon Lane),
Isleworth, Middlesex TW7 5QD

0181 560 3171

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 - 813555
Fax:- 01304 - 813502
Telex:- 965324. Power G

Question

**How many technicians
does it take to change
a light bulb?**

Answer

One (from PA LIGHTS)
01524 388 044

LIGHT & SOUND Productions

EQUIPMENT RENTAL & SERVICES

6 Vine Street, St. Helier,
Jersey, Channel Isalnds.
Tel. 01534 78351
(0860 740584)



Professional Loudspeaker
Repair
Specialists for all Makes
of Power Units

also
Manufacturers of 'Deuce'
Mini & Maxi Cube
'B Line'
(the ultimate professional
18" Bass 500 Watt Loudspeaker)

Sound Systems custom designed and
manufactured for all sizes of venue.
Mobile Systems from 100 Watts to 20k

Unit 4, Askew Crescent Workshops
Askew Crescent, London W12 9DP

Tel: 0181-743 4567
Fax: 0181-749 7957

different by design...

lite alternative LTD

ph 01706 627066
fx 01706 627068

*fibre optics,
comprehensive
lighting services*

VARI*LITE

authorised series 300™ dealer

NU-LIGHT SYSTEMS LTD

DISRIBUTORS OF EFFECT
LIGHTING AND CONTROL
TO THE LEISURE INDUSTRY
ALSO
EXCLUSIVE UK IMPORTERS
OF FLY AND LA NOVALIGHT

Nu-Light Systems Ltd,
Unit 1, Anthertons Quay,
Off Liverpool Road,
Warrington
Cheshire WA5 1AH.
Tel: (01925) 243075
Fax: (01925) 243077

VILLA AUDIO

Professional Systems House

THE COMPLETE PRO-AUDIO SERVICE

Hire
EV Deltamax concert system,
Bi-Amped monitors, Soundtracs
boards. Large dry hire stock.

Installations
Theatre, Clubs, Churches, Hotels

CHELMSFORD
(01245) 361694

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.
Tel: 01703 917003 LPC G

The Fibre Optic Lighting People



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

STARDREAM



S.A.V. LIMITED
**AUTHORISED WHOLESALE
DISTRIBUTORS**

FOR
NJD TOA
zero 88 LeMaitre
PULSAR Hill
SONY. Hill
OPTIKINETICS REVOX
JEM BOSE
POWER DRIVE MODE ELECTRONICS
TEATRO

Party House, Mowbray Drive,
Blackpool, Lancs.
Tel: (01253) 302602 Fax: (01253) 301000



TUBECLAMPS YOUR VERSATILE CONNECTION

Together with
galvanised or light
weight alloy tube,
they form all types of
structures. Smooth
and free from sharp
edges, easy to erect
and dismantle they
are ideal for stage
and grid lighting
work. Competitive
prices include for a
galvanised finish.

TUBECLAMPS LIMITED
PO Box 41, Petford Street
Cradley Heath, Warley
West Midlands B64 6EJ

TEL: (01384) 565241 FAX: (01384) 410490



837 GARRATT LANE
LONDON SW 17 0PG
TEL: 0181 944 1400
FAX: 0181 944 0141

THE CLASS STUNFLASH II



2.5Kw FLASHPOWER
RIPFLASH OUTPUT
BRIGHTNESS CONTROL
MANUAL REMOTE CONTROL (SUPPLIED)
STYLISH 2 COLOUR CHASSIS

Call our office for details

CHARLES FISHER

S.T.A.G.I.N.G L.I.M.I.T.E.D

**EXHIBITION and CONFERENCE
DESIGN and CONSTRUCTION**

*Specialists in Something
Different*

Straw House Farm, Kirkby Road, Ripon, North Yorkshire HG4 3JU
Tel: 01765 701604 Fax: 01765 701389

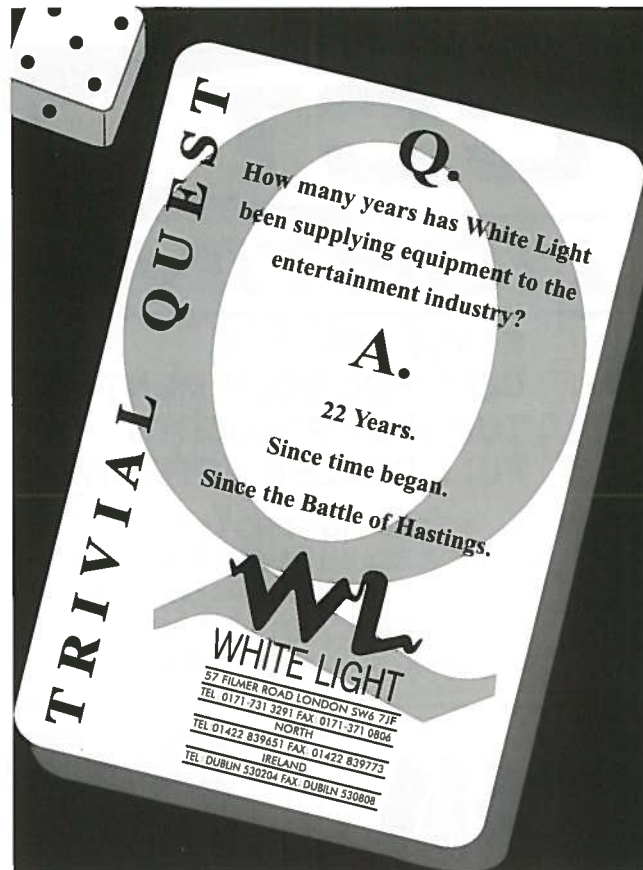


EUROPE'S LIGHT & SOUND SHOW

EARLS COURT 2, LONDON
10-13 SEPTEMBER 1995

EXHIBITOR BOOKING
INFORMATION NOW
AVAILABLE

Ring P&O Events for details
on 0171-370 8215



SALES — INSTALLATION — SERVICE
OF PROFESSIONAL LIGHTING
AND EFFECTS EQUIPMENT

190 PAGE CATALOGUE LISTING 1,000's OF
TECHNICAL PRODUCTS INCLUDING:-

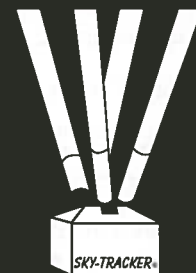
PULSAR
MAGLITE
ANYTRONICS
LE MAITRE
AEROTECHNICS
ROSCO
OPTIKINETICS
LEE
JANDS
GAM



Unit 1, Chelsea Bridge Business Centre,
326 Queenstown Road,
London SW8 4NE
Fax: 0171-498 8845

Tel: 0171-498 7272

SKY-TRACKER®
BY
THEATRE · PROJECTS



Providing a unique lighting
spectacular for any special event

Tel: 0181-575 5555

D & D  *Lighting*

Suppliers of Lamps
to the Leisure Industry

65 Ainslie Wood Gardens, Chingford, London E4 9BL
Tel: 0181-532 9989



PROFESSIONAL LIGHTING
AND SOUND ASSOCIATION

JOIN US!

For full details and a
Membership
Application Form
please write to:
Nicola Evenden
PLASA
7 Highlight House
St. Leonards Road
Eastbourne
BN21 3UH

HARLEQUIN

PERFORMANCE
FLOORINGS

BRITISH HARLEQUIN PLC

Kent House • High Street
Farningham • Kent DA4 0DT
Telephone 01322 865288 • Fax 01322 864803




Stage •
Dance •
Event •
Show •
Display •
Television •

UNITED KINGDOM
DISTRIBUTORS

Appointed sole uk-distributors for ProgramSistem

Trade Suppliers of Professional Sound,
Lighting and Special Effects Equipment
Telephone: (01926) 314878
Fax No: (01926) 883120
MOBILE No: (0860) 544934

 Situated in the heart of England gives us the right
connections to serve you via the
M1, M6, M45, M20, M42 and the M40 with these
facilities.

- Wholesale trade supply to retailers, installers, contractors etc.
- Extensive stock on all major manufacturers and some minor ones too.
- Some own brand products, concentrating on quality and availability.
- Manufacturers trade prices used, sometimes bettered considering delivery service.
- Vehicles travelling the country carrying orders and stock.
- Regular personal contact.
- Regular visits averaging 3/6 weeks to Wales, S.E., S.W., London, East coast, N.W., N.E., Scotland and of course the Midlands.
- No delivery costs when orders coincide with visits (nominal in between times).
- No minimum orders.
- Use of our technical staff - for enquiries and help.

If you are not being offered these facilities at the moment, but would like to and would like to know more, we will be only too pleased to hear from you.

Rigby Close, Heathcote Industrial Estate
Leamington Spa CV34 6TJ England

CCT LIGHTING

- STAGE LIGHTING
- CONTROL EQUIPMENT
- TURNKEY PROJECTS
- FULL DEALER NETWORK

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

DHA

- ◆ The complete gobo service
- ◆ Projection slides - all formats
- ◆ Animation effects
- ◆ Fibre optic equipment
- ◆ Digital Light Curtains

• 3 Jonathan Street • London • SE11 5NH • UK •
 Tel: +44 (0)171 582 3600 • Fax: +44 (0)171 582 4779

FOR COMPETITIVELY PRICED

FILTERS

CONTACT
FIRST LIGHT

TEL: (0850) 349913
 or (01795) 886209

MEC SYSTEMS THE ULTIMATE TRUSS

MECcano for BIG BOYS

FOR TRADE ENQUIRIES AND
 CUSTOM RIG DESIGN

Tel: 01424 893 424
 Fax: 01424 892 178

The Garage, Bexhill Road,
 Ninfield, Battle, East Sussex,
 England TN33 9EE



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

UNIVERSAL FIBRE OPTICS

MANUFACTURERS OF
 FIBRE OPTIC EQUIPMENT

FOR LIGHTING AND DISPLAY
 • HARNESES • LIGHT GUIDES •
 • SIGNS • FIBRE OPTIC DISPLAYS •
 LIGHT SOURCES AVAILABLE
 FROM 50w TO 150w

BUYING DIRECT MEANS:
 LOW PRICES • FAST DELIVERY
 PROMPT AFTER SALES SERVICE

GALLOWESKNOWES,
 LENNEL ROAD,
 COLDSTREAM,
 BERWICKSHIRE, TD12 4EP

TEL: 01890 883416
 FAX: 01890 883062

P.A. music Lighting • Sound • FX • Video
Hire & Sales
 Whatever you are
 running We can help
 you make it a Success.
0181 • 883 4350

Trafalgar Lighting Ltd

Tel 0181 887 0082

Sales & Hire Of:
 Lighting, Control,
 Trussing, Mains
 Intellabeams,
 Sound Equipment

Used Equipment Bought & Sold



DORIS



CYRIL



& ROGER

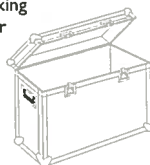
Are Waiting To Hear
 From You At
LIGHT ENGINEERING
 64 Eden Road London E17 9JY
 Tel: 0181-520 2336
 Fax: 0181-509 1332

Quentor Cases

Quality custom-built
 transportation cases
 made **FAST!**

Phone (01603) 721604

We specialise in making
 transit cases fast. For
 a simple briefcase
 or for complex
 rackmounts call
 Quentor - you'll
 be glad you did!



Quentor (EC) Limited
 Units 4 & 5 Fitzmaurice Court,
 Rackheath Industrial Estate, Norwich
 NR13 6PY.

Tel: (01603) 721604 Fax: (01603) 721992

The Fibre Optic Lighting People



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

**FOR SPEEDY
 INFORMATION TO
 LIGHTING + SOUND**
 Telefax: (01323) 646905 or
 Telephone: (01323) 642639

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

HOWARD EATON LIGHTING LIMITED

DESIGN AND MANUFACTURE
 OF SPECIALIST LIGHTING EQUIPMENT AND EFFECTS

LIGHTING DESIGN CONSULTANCY

DIGITAL DIMMING SYSTEMS

Telephone: (01273) 400670 Fax: (01273) 401052

Northern Light

Lighting & Sound Equipment Hire & Supply
 Technical Equipment for the Leisure & Entertainment Industry

Sale • Installation • Hire

Stockists for Strand, Hall Stage, Roscolab, DHA,
 Tecpro, Allen & Heath, Bose, Tannoy, Toa, AKG,
 Le Maitre, Slick Systems Trussing.

Manufacturers of Socket Boxes, Working Light and Specialised control systems

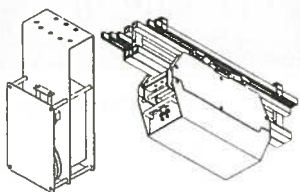
Edinburgh 0131-553 2383
 (Fax 0131-553 3296)

Glasgow 0141-440 1771
 (Fax 0141-445 4406)

Specialist Technical Equipment and Services for the Entertainment and Allied Industries

Triple E

TRACKS, MOTORS, CONTROL SYSTEMS
AND SCENERY AUTOMATION



TRAC-DRIVE LINEAR-DRIVE

Our comprehensive range of manual and motorised
UNITRACK systems is available for sale or hire.
Catalogue available on request



The Triple E Group

Tel: 0171-237 6354 Fax: 0171-237 7650
B3 TOWER BRIDGE BUSINESS COMPLEX
CLEMENTS ROAD, LONDON SE16 4EF

THE TOTAL PACKAGE

- Lighting, sound, communications, rigging, audio visual, conference and projection.
- For theatres, halls, studios, leisure and presentation.
- In-house electrical contracting service.
- Schemes prepared.
- UK and worldwide.



GLANTRE ENGINEERING LTD.
20 Richfield Avenue,
Reading, Berks. RG1 8EQ
United Kingdom
Tel: 01734 64 00 00
Fax: 01734 64 00 64
Telex: 846522



THINK

Dramatec Effects Ltd



CONTROL

- Products to get you moving
- From simple AC, DC and Linear motor drives to computer controlled sets
- The Electronic Control Experts

15 Hunton Bridge Hill, Hunton Bridge
Kings Langley, Herts WD4 8PX
Tel: 01923 263751
Fax: 01923 261727

THEATRICAL AUTOMATION

GERRIETS

GREAT BRITAIN LIMITED

*MADE TO ORDER &
CUT GOODS SERVICE*

ALWAYS IN STOCK:

FILLED CLOTH

SHARKSTOOTH GAUZE

SCENIC COTTON

BLACK WOOL SERGE

plus

PROJECTION SCREEN
MATERIALS IN SINGLE &
DOUBLE WIDTH

And much much more

call us

0171 232 2262

**FOR SPEEDY INFORMATION
TO LIGHTING + SOUND
Telefax (01323) 646905**

MOTOROLA CERAMIC SPEAKERS

PULSAR DEVELOPMENTS LTD
MARLOW, ENGLAND
TEL: (01628) 473555
FAX: (01628) 474325

LET'S GET TECHNICAL

IF YOU'RE LOOKING FOR INFORMATION ON ANY SUBJECT, YOU MAY NOT HAVE LOOKED IN THE RIGHT PLACE. PLASA'S TECHNICAL BOOK SERVICE OFFERS A WIDE RANGE OF BOOKS COVERING ALL ASPECTS OF THE INDUSTRY

TELEPHONE (01323) 642639

P.J. LIGHTING (Products)

Trade Supplier

Manufacturer of stage & disco lighting equipment.

Parcans, Pinspots, stands, Par-Bars, Equipment Satnds etc.

Tel: 0121 515 2125

Unit 14, 35/37, Nursery Road, Hockley, Birmingham, B19 2XN.

Automated SEARCHLIGHTS - we design & build to sell or hire (single or multi-beam)

Skylites International

TEL: 01376 584799 Mobile: 0378 709989

Also for Hire:
12 WWII Anti-aircraft
SEARCHLIGHTS



SEMINAR TAPES

Recordings of the seminars which ran throughout the PLASA Light & Sound Show are now available from the offices of Lighting + Sound International. The full programme appears in the August and September issues of the magazine.

*The tapes cost £10.00 each +VAT
Please telephone Lee Baldock on (01323) 642639
or fax through your order on (01323) 646905*

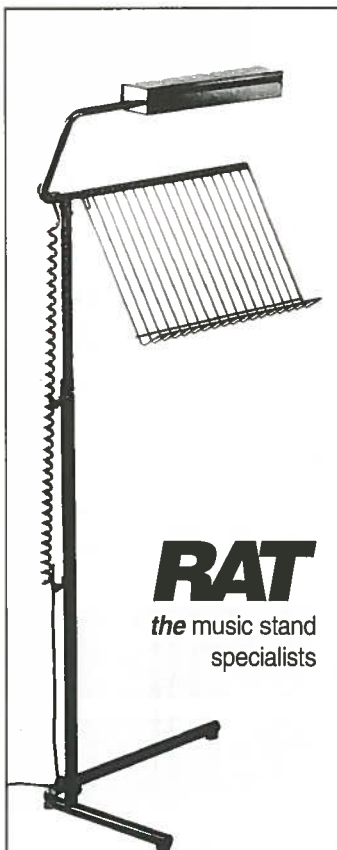
THE SOUND LIGHT WORKSHOP
GAYWOOD FARM,
HOLE LANE,
EDENBRIDGE
KENT TN8 6SL
Tel: (01732) 866551
Fax: (01732) 866552



THE EFFECTS CO.

contact us for full details of this great range of special effects smoke machines and pyrotechnic equipment and accs.

Now Available



RAT
the music stand specialists

R.A.T. (Music Stands) Limited
41 High Street, Brentford, Mdx, TW8 0BB.
Tel: 0181 847 3331, Fax: 0181 568 1059

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) 3 561 5255
Fax: (61) 3 561 5277

SYLVANIA

Special Products Group
SYLVANIA LIGHTING INTERNATIONAL
Tel: (32) 16 80 03 69 Fax: (32) 16 80 03 67
SYLVANIA LIGHTING INTERNATIONAL
PTY Ltd
Tel: (61) 43 28 31 11 Fax: (61) 43 28 26 05



AUSTRIA

SYLVANIA

Special Products Group
SYLVANIA LIGHTING INTERNATIONAL
Tel: (32) 16 80 03 65 Fax: (32) 16 80 03 67
LTV
Tel: (43) 1 60902 Fax: (43) 1 6090220
MTEC Vertriebsges.m.b.H.
Tel: (43) 7242 60 860 Fax: (43) 7242 60 740



LUDWIG PANI

A1070 Vienna, Kandelgasse 23
Tel: (1) 521 08-0 Fax: 526 4287
Range of follow-spots and projectors
Exclusive Agent for Strand

VARI*LITE®

VARI-LITE AUSTRIA
Tel: (43) 1 609 02 Fax: (43) 1 609 0220

BELGIUM

SYLVANIA

Special Products Group
SYLVANIA LIGHTING INTERNATIONAL
Tel: (32) 16 80 03 65 Fax: (32) 16 80 03 67
LUXILLAG
Tel: (32) 2 242 59 28 Fax: (32) 2 242 11 54
PPV-LIGHTING
Tel: (32) 2 648 70 45 Fax: (32) 2 648 69 97



litestructures

Astralite Bilite Quatralite Minilite
POLYPHONIC Tel: 071 32 44 30



Tel (03) 4892856 Fax (03) 4890562

VARI*LITE®

VARI-LITE BENELUX
Tel: (32) 16 60 76 48 Fax: (32) 16 60 88 61

CANADA



Tel: (613) 836 5856 Fax: (613) 836 6491

DENMARK

SYLVANIA

Special Products Group
SYLVANIA LIGHTING INTERNATIONAL
Tel: (32) 16 80 03 69 Fax: (32) 16 80 03 67
BICO A/S
Tel: (45) 42 84 54 45 Fax: (45) 42 84 20 55



ON THE SPOT



GØGLER
L Y S

GØGLER LYS SALG AS

DENMARK

Grønnegade 61 • DK-8000 Århus C
Tlf +45 86 12 19 66 • Fax +45 86 19 08 35
Toldbodgade 55 • DK-1253 København K
Tlf +45 33 32 96 96 • Fax +45 33 32 96 99

FINLAND

TFP MARKKINOINTI OY

Import and Export of Lighting and Scenic
Equipment. Exclusive distribution in Finland for
Jands, CCT, Rosco and Tomcat.
Always interested in new product ranges for
theatre, concert and television.
Contact: Juha Ihanamaki,
Telephone: INT+358+31+2143933
Fax: INT+358+31+2133077. Address:
Hatanpaanvaltie 4A, 33100 Tampere, Finland

SYLVANIA

Special Products Group
SYLVANIA LIGHTING INTERNATIONAL
Tel: (32) 16 80 03 69 Fax: (32) 16 80 03 67
ELECTROPOWER OY
Tel: 358 0 17 54 00 Fax: 358 0 65 93 95



FRANCE

Clay Paky & Pulsar SARL

Batiment 4, 5/9 Rue Marcel Paul
94800 Villejuif, FRANCE
Tel: 010331 49588686 Fax: 010331 49588687

VARI*LITE®

VARI-LITE FRANCE
Tel: (33) 1 41 14 01 00 Fax: (33) 1 45 07 96 79



Tel 20 03 55 73 Fax 20 03 55 78

SYLVANIA

Special Products Group
SYLVANIA LIGHTING INTERNATIONAL
Tel: (33) 1 64 29 62 14 Fax: (33) 1 64 29 62 83
ESL
Tel: (33) 67 69 27 17 Fax: (33) 67 69 00 89
EXPELEC
Tel: (33) 50 60 32 93 Fax: (33) 50 60 37 80
GOTE S.A.
Tel: (33) 50 60 23 14 Fax: (33) 50 60 21 87
LOPILUX
Tel: (33) 1 34 10 43 43 Fax: (33) 1 34 10 49 63
MHD
Tel: (33) 46 64 41 89 Fax: (33) 46 65 54 40



litestructures

Astralite Bilite Quatralite Minilite
S.E.D. FRANCE TEL: 27 25 48 38



TO HIRE
ALL OVER
THE WORLD
THE ONLY ONE INTELLIGENT
4 KW XENON WITH 16 COLOURS
Tel: (33) 1 49 63 23 69
Fax: (33) 1 49 63 23 90

GERMANY

Clay Paky & Pulsar Vertriebs GmbH
An Der Talle 26, D-33102 Paderborn
GERMANY
Tel: 010 49 5251 14340
Fax: 010 49 5251 143490

VARI*LITE®

VARI-LITE GERMANY
Tel: (49) 221-582088 Fax: (49) 221-5801979



GILDESTASSE 55
49477 IBBENBUREN
Tel.: (49) 5451-59 00 20
Lichttechnik Fax: (49) 5451-59 00 59

AMPTOWN LICHTTECHNIK GmbH
Wandsbeker Str. 26, 22179 Hamburg
Tel: (49) 40-64600440
Fax: (49) 40-64600445

SYLVANIA

Special Products Group
SYLVANIA LIGHTING INTERNATIONAL
Tel: (32) 16 80 03 65 Fax: (32) 16 80 03 67
COEMAR
Tel: (49) 731 60 12 05 Fax: (49) 731 62 852
ECKERT BUEHNENLICHT
Tel: (49) 202 59 20 58 Fax: (49) 202 59 15 03
LIGHTPOWERSHOWTECHNIK GmbH
Tel: (49) 5251 41 84 Fax: (49) 5251 40 74 04
LIGHTRONIC
Tel: (49) 40 753 40 54 Fax: (49) 40 752 13 17
LMP
Tel: (49) 5451 59 000 Fax: (49) 5451 59 00 59
STEINIGKE SHOWTECHNIC GmbH
Tel: (49) 931 46 971 Fax: (49) 931 46 901
STIERS GmbH
Tel: (49) 89 22 16 96 Fax: (49) 89 231 704 25



litestructures

Astralite Bilite Quatralite Minilite
LMP LICHTTECHNIK TEL: 05451 590020

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



Tel: (0221) 534081 Fax: (0221) 534083

GREECE

SYLVANIA

Special Products Group

SYLVANIA LIGHTING INTERNATIONAL
Tel: (32) 16 80 03 69 Fax: (32) 16 80 03 67
BON STUDIO
Tel: (30) 1 380 96 05 Fax: (30) 1 382 78 68



HONG KONG

SYLVANIA

Special Products Group
SYLVANIA LIGHTING INTERNATIONAL
Tel: (32) 16 80 03 69 Fax: (32) 16 80 03 67
SYLVANIA LTD
Tel: 852 369 55 31 Fax: 852 721 86 21



VARI*LITE®

VARI-LITE HONG KONG
Tel: (852) 2715-7878 Fax: (852) 2761-1593

ENGINEERING IMPACT LIMITED

6/F, Bk 2, Tien Chu Ctr.
IE Mok Cheong St. Kowloon
Tel: (852) 2711-0222 Fax: (852) 2761-0633

ITALY

SYLVANIA

Special Products Group
SYLVANIA LIGHTING INTERNATIONAL
Tel: (33) 1 64 29 62 14 Fax: (33) 1 64 29 62 83
GP ELETTRONICA
Tel: (39) 90 71 81 81 Fax: (39) 90 71 81 81
ILCS.r.L.
Tel: (39) 6 89 62 96 Fax: (39) 6 89 32 61
TECLUMENS.r.L.
Tel: (39) 376 77 92 00 Fax: (39) 376 77 93 83
TECNITRON ELETTRONICA
Tel: (39) 831 39 21 36 Fax: (39) 831 39 28 41



litestructures

Astralite Bilite Quatralite Minilite
SPOTLIGHT S.A.R.L. TEL: 392 71 4078



Tel: (031) 773539 Fax: (031) 773798

TEATRO

Teatro Srl, via Ubertini 3
46042 Castel Goffredo (MN), Italy.
Tel: +39 (0)376 780702 Fax: +39 (0)376 780888

Manufacturers of stage lighting.
Profile, fresnel, PC, flood, cyclorama, followspot.
"With a touch of Italian elegance"

JAPAN

litestructures
Astralite Bilite Quatralite Minilite
H.I.TO TEL: 81 33 667 3268/9

NETHERLANDS

SYLVANIA

Special Products Group
SYLVANIA LIGHTING INTERNATIONAL
Tel: (32) 16 80 03 69 Fax: (32) 16 80 03 67
ULTREX LAMPS LIGHTING B.V.
Tel: (31) 20 65 33 663 Fax: (31) 20 65 33 672



LIGHTING SOUND RIGGING

Flashlight®

Flashlight Utrecht Holland Sales B.V.
Tractieweg 190
3534 AP, Utrecht
Tel: 030-44 48 42
Fax: 030-44 76 06

Trilite

Tel: (020) 6332307 Fax: (020) 6332044

JANSEN & JANSEN

light sound & rigging
Isolatorweg 36, 1014 AS
Amsterdam-Sloterdijk, Holland
Tel: (31) 206 821 821
Fax: (31) 206 828 326

litestructures
Astralite Bilite Quatralite Minilite
STAGE TELEPHONE 03402 45780

NEW ZEALAND

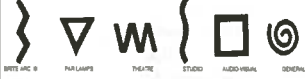
SELECON

Manufacturers of high quality stage and display luminaires - Zoomspots, Fresnels, PC, CYC, Floods, L. Voltage, Metal Halide Display Spots. Dealer enquiries to: 26 Putiki Street, Grey Lynn, Auckland 2, New Zealand
Tel: 64 9 3601718 Fax: 64 9 3601719

NORWAY

SYLVANIA

Special Products Group
SYLVANIA LIGHTING INTERNATIONAL
Tel: (32) 16 80 03 69 Fax: (32) 16 80 03 67
LARNS FARNES A/S
Tel: (47) 2 16 29 30 Fax: (47) 2 16 47 39



litestructures
Astralite Bilite Quatralite Minilite
AVAB NORGE A/S TEL: 47 2 11 3030

PORTUGAL

SYLVANIA

Special Products Group

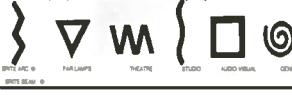
SYLVANIA LIGHTING INTERNATIONAL
Tel: (32) 16 80 03 69 Fax: (32) 16 80 03 67



SINGAPORE

SYLVANIA

Special Products Group
SYLVANIA LIGHTING INTERNATIONAL
Tel: (32) 16 80 03 69 Fax: (32) 16 80 03 67
SYLVANIA LIGHTING INTERNATIONAL LTD
Tel: (65) 734 38 55 Fax: (65) 733 04 98



SPAIN

SYLVANIA

Special Products Group
SYLVANIA LIGHTING INTERNATIONAL
Tel: (33) 1 64 29 62 14 Fax: (33) 1 64 29 62 83
COMLUX ILLUMINACION
Tel: (34) 1 405 06 94 Fax: (34) 1 405 09 62
FRESNEL S.A.
Tel: (34) 3 210 73 51 Fax: (34) 3 219 94 60
GRAU LUMINOTECNIA S.A.
Tel: (34) 3 325 76 11 Fax: (34) 3 426 30 29



VARI*LITE VARI-LITE SPAIN

Tel: (34) 1 464 1092 Fax: (34) 1 479 58 25

litestructures
Astralite Bilite Quatralite Minilite
SPOTLIGHT S.A. TEL: 34 3 4008117

SWEDEN

Autotrack
The NEW powerful sky- and eventlight for in- or outdoor use. HMI/MSR 4000 W lamp Pan-Tilt-Focus-Shutter-Colour Soft-Set™ and DMX-512
EVEN-T-TRADE Sweden
Tel: (46) 8 730 21 61 Fax: (46) 8 730 11 37

VARI*LITE®
VARI-LITE SCANDINAVIA
Tel: (34) 1 468 654 1855
Fax: (34) 1 468 652 8358

SYLVANIA

Special Products Group
SYLVANIA LIGHTING INTERNATIONAL
Tel: (32) 16 80 03 69 Fax: (32) 16 80 03 67
TEATERTEKNIK AB
Tel: (46) 8 640 92 90 Fax: (46) 8 640 93 94



litestructures
Astralite Bilite Quatralite Minilite
TEATERTEKNIK A.B. TEL: 08 40 92 90

AVAB

Salsmästaregatan 32B
422 46 Hisingen Backa Sweden
Tel: (46) 31 585200
Fax: (46) 31 582999

SWITZERLAND

POWER LIGHT

Fabrikmattenweg 8, CH-4144 Ariesheim
Tel: (41) 61 701 82 28 Fax: (41) 61 701 8338
Equipment rental and services. State-of-the-art lighting equipment for TV, stage and concert productions, exhibitions and product launches throughout Europe. Xenon Trouper, Paris, Avo, Celco, Thomas, Verilinde, Strand, CCT, Sky Trackers and searchlights At the heart of Europe!

SYLVANIA

Special Products Group
SYLVANIA LIGHTING INTERNATIONAL
Tel: (33) 1 64 29 62 14 Fax: (33) 1 64 29 62 83
BACKSOUND
Tel: (41) 21 36 68 68 Fax: (41) 21 36 78 88
ECM S.A.
Tel: (41) 91 93 25 61 Fax: (41) 91 93 38 09

SYLVANIA LIGHTING INTERNATIONAL
Tel: (32) 16 80 03 65 Fax: (32) 16 80 03 67
DIGI LIGHT SHOW
Tel: (41) 31 961 60 40 Fax: (41) 31 961 40 10
MINILUX
Tel: (41) 56 74 13 66 Fax: (41) 56 74 13 62



litestructures
Astralite Bilite Quatralite Minilite
A.S.L. ELECTRONICS TEL: 061 361 2220

THAILAND

SYLVANIA

Special Products Group
SYLVANIA LIGHTING INTERNATIONAL
Tel: (32) 16 80 03 69 Fax: (32) 16 80 03 67
SYLVANIA (Thailand) LTD
Tel: (66) 2 254 77 86 Fax: (66) 2 254 33 69



USA

VANCO

New York
Tel: (914) 942 0075 Fax: (914) 942 0099
Orlando
Tel: (407) 855 8060 Fax: (407) 855 8059

TMB ASSOCIATES PRODUCTION SUPPLIES & SERVICES

2102 W. Kenmere Ave.
Burbank, California 91504
Tel: (818) 842-9652
Fax: (818) 842-1064

TOMCAT®

Staging, Lighting and Support Systems
Serving your tour and fabrication needs in the USA
Tel: (915) 694 7070
Fax: (915) 689 3805

Trilite
Tel: (804) 752 2570 Fax: (804) 752 2888

DAYMAX

Metal Halide Lamps
• Stage • Film • Disco • Theatre •

ILC Technology, Inc
399 Java Drive
Sunnyvale, CA 94089
Tel: 408 745 7900 Fax: 408 744 0829



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

UNITED KINGDOM

litestructures
Astralite Bilite Quatralite Minilite
CEREBRUM LIGHTING TEL: 081 949 3171

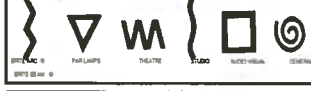
litestructures
Astralite Bilite Quatralite Minilite
LITESTRUCTURES TEL: 0924 240800

SYLVANIA

Special Products Group
SYLVANIA LIGHTING INTERNATIONAL
Tel: (44) 274 59 59 21 Fax: (44) 274 58 06 32
ACLIGHTING
Tel: (44) 494 44 60 00 Fax: (44) 494 46 10 24
ACTION LIGHTING
Tel: (44) 81 965 68 00 Fax: (44) 81 965 09 50
ACTION LIGHTING (North) LTD
Tel: (44) 61 876 05 76 Fax: (44) 61 876 05 17
ARRI (GB) LTD
Tel: (44) 81 848 88 81 Fax: (44) 81 561 13 12
CPLIGHTING
Tel: (44) 81 547 05 00 Fax: (44) 81 547 08 84
DCLIGHTING
Tel: (44) 235 77 07 15 Fax: (44) 235 77 07 20
INTERNATIONAL LAMPS LTD
Tel: (44) 992 55 44 11 Fax: (44) 992 58 77 66

LAMP MERCHANT
Tel: (44) 932 23 10 10 Fax: (44) 932 23 25 87
LIGHTING TECHNOLOGY GROUP
Tel: (44) 81 965 68 00 Fax: (44) 81 965 09 50
MGC LAMPS LTD
Tel: (44) 473 46 18 75 Fax: (44) 473 24 00 81
MICO LIGHTING LTD
Tel: (44) 532 56 71 13 Fax: (44) 532 57 23 58
PKE LIGHTING LTD
Tel: (44) 61 72 84 593 Fax: (44) 61 72 84 594
PRIMARC (MARKETING) LTD
Tel: (44) 734 59 67 77 Fax: (44) 734 50 59 64

SPECIALIST LAMP DISTRIBUTORS LTD
Tel: (44) 71 708 07 51 Fax: (44) 71 708 22 51
SPECIALIST LAMP DISTRIBUTORS LTD
Tel: (44) 61 873 78 22 Fax: (44) 61 873 80 89
TECHNICAL LAMPS LTD
Tel: (44) 81 979 66 52 Fax: (44) 81 979 90 07
VALIANT ELECTRICAL WHOLESALE LTD
Tel: (44) 71 736 81 15 Fax: (44) 71 731 33 39



Trilite
Tel: (01582) 411413 Fax: (01582) 400613

TEATRO
Teatro Srl, via Ubertini 3
46042 Castel Goffredo (MN), Italy.
Tel: +39 (0)376 780702 Fax: +39 (0)376 780888


Manufacturers of stage lighting
Profile, fresnel, PC, flood, cyclorama, followspot
"With a touch of Italian elegance"

JAPAN

litestructures
Astralite Bilite Quatralite Minilite
H.I.TO TEL: 81 33 667 3268/9

NETHERLANDS

SYLVANIA
Special Products Group
SYLVANIA LIGHTING INTERNATIONAL
Tel: (32) 16 80 03 69 Fax: (32) 16 80 03 67
ULTREX LAMPS LIGHTING B.V.
Tel: (31) 20 65 33 663 Fax: (31) 20 65 33 672



LIGHTING SOUND RIGGING
Flashlight®
Flashlight Utrecht Holland Sales B.V.
Tractieweg 190
3534 AP, Utrecht
Tel: 030-44 48 42
Fax: 030-44 76 06

Trilite
Tel: (020) 6332307 Fax: (020) 6332044

JANSEN & JANSEN
light sound & rigging
Isolatorweg 36, 1014 AS
Amsterdam Sloterdijk, Holland
Tel: (31) 206 821 821
Fax: (31) 206 828 326


litestructures
Astralite Bilite Quatralite Minilite
STAGE TELEPHONE 03402.45780

NEW ZEALAND

SELECON
Manufacturers of high quality stage and display luminaires - Zoomspots, Fresnels, PC, CYC, Floods, L. Voltage, Metal Halide Display Spots. Dealer enquiries to: 26 Putiki Street, Grey Lynn, Auckland 2, New Zealand
Tel: 64 9 3601718 Fax: 64 9 3601719

NORWAY

SYLVANIA
Special Products Group
SYLVANIA LIGHTING INTERNATIONAL
Tel: (32) 16 80 03 69 Fax: (32) 16 80 03 67
LARNS FARNES A/S
Tel: (47) 2 16 29 30 Fax: (47) 2 16 47 39



litestructures
Astralite Bilite Quatralite Minilite
AVAB NORGE A/S TEL: 47 2 11 3030

PORTUGAL

SYLVANIA
Special Products Group
SYLVANIA LIGHTING INTERNATIONAL
Tel: (32) 16 80 03 69 Fax: (32) 16 80 03 67



SINGAPORE

SYLVANIA
Special Products Group
SYLVANIA LIGHTING INTERNATIONAL
Tel: (32) 16 80 03 69 Fax: (32) 16 80 03 67
SYLVANIA LIGHTING INTERNATIONAL LTD
Tel: (65) 734 38 55 Fax: (65) 733 04 98



SPAIN

SYLVANIA
Special Products Group
SYLVANIA LIGHTING INTERNATIONAL
Tel: (33) 1 64 29 62 14 Fax: (33) 1 64 29 62 83
COMLUXILUMINACION
Tel: (34) 1 405 06 94 Fax: (34) 1 405 09 62
FRESNEL S.A.
Tel: (34) 3 210 73 51 Fax: (34) 3 219 94 60
GRAULUMINOTECNIA S.A.
Tel: (34) 3 325 76 11 Fax: (34) 3 426 30 29




VARI*LITE
VARI-LITE SPAIN
Tel: (34) 1 464 1092 Fax: (34) 1 479 5825

litestructures
Astralite Bilite Quatralite Minilite
SPOTLIGHT S.A. TEL: 34 3 4008117

SWEDEN

Autotrack
The NEW powerful sky-and eventlight for in- or outdoor use. HMI/MSR 4000 W lamp. Pan-Tilt-Focus-Shutter-Colour-Soft-Set™ and DMX-512
EVENT-TRARDE Sweden
Tel: (46) 8 730 21 61 Fax: (46) 8 730 11 37



VARI*LITE®
VARI-LITE SCANDINAVIA
Tel: (34) 1 468 654 1855
Fax: (34) 1 468 652 8358

SYLVANIA
Special Products Group
SYLVANIA LIGHTING INTERNATIONAL
Tel: (32) 16 80 03 69 Fax: (32) 16 80 03 67
TEATERTEKNIK AB
Tel: (46) 8 640 92 90 Fax: (46) 8 640 93 94



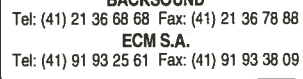
litestructures
Astralite Bilite Quatralite Minilite
TEATERTEKNIK A.B. TEL: 08 40 92 90

AVAB
Salsmästaregatan 32B
422 46 Hisings Backa Sweden
Tel: (46) 31 585200
Fax: (46) 31 582999

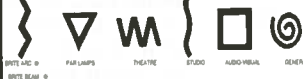
SWITZERLAND

POWER LIGHT
Fabrikmattenweg 8, CH-4144 Arlesheim
Tel: (41) 61 701 82 28 Fax: (41) 61 701 8338
Equipment rental and services. State-of-the-art lighting equipment for TV, stage and concert productions, exhibitions and product launches throughout Europe: Xenon Trouppers, Paris, Avo, Celco, Thomas, Verlinde, Strand, CCT, Sky Trackers and searchlights
At the heart of Europe!

SYLVANIA
Special Products Group
SYLVANIA LIGHTING INTERNATIONAL
Tel: (33) 1 64 29 62 14 Fax: (33) 1 64 29 62 83
BACKSOUND
Tel: (41) 21 36 68 68 Fax: (41) 21 36 78 88
ECM S.A.
Tel: (41) 91 93 25 61 Fax: (41) 91 93 38 09



SYLVANIA LIGHTING INTERNATIONAL
Tel: (32) 16 80 03 65 Fax: (32) 16 80 03 67
DIGI LIGHT SHOW
Tel: (41) 31 961 60 40 Fax: (41) 31 961 40 10
MINILUX
Tel: (41) 56 74 13 66 Fax: (41) 56 74 13 62



litestructures
Astralite Bilite Quatralite Minilite
A.S.L. ELECTRONICS TEL: 061 361 2220

THAILAND

SYLVANIA
Special Products Group
SYLVANIA LIGHTING INTERNATIONAL
Tel: (32) 16 80 03 69 Fax: (32) 16 80 03 67
SYLVANIA (Thailand) LTD
Tel: (66) 2 254 77 86 Fax: (66) 2 254 33 69



USA

VANCO
New York
Tel: (914) 942 0075 Fax: (914) 942 0099
Orlando
Tel: (407) 855 8060 Fax: (407) 855 8059

PMB ASSOCIATES
PRODUCTION SUPPLIES & SERVICES
2102 W. Kenmere Ave.
Burbank, California 91504
Tel: (818) 842-9652
Fax: (818) 842-1064

TOMCAT®
Staging, Lighting and Support Systems
Serving your tour and fabrication needs in the USA
Tel: (915) 694 7070
Fax: (915) 689 3805

Trilite
Tel: (804) 752 2570 Fax: (804) 752 2888

DAYMAX
Metal Halide Lamps
• Stage • Film • Disco • Theatre •
ILC Technology, Inc
399 Java Drive
Sunnyvale, CA 94089
Tel: 408 745 7900 Fax: 408 744 0829

STRONG INTERNATIONAL, INC.
FOR THE WORLD'S BEST FOLLOWSPOTS
4050 McKinley Street, Omaha, Nebraska 68112
Tel 402-4534444 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

UNITED KINGDOM

litestructures
Astralite Bilite Quatralite Minilite
CEREBRUM LIGHTING TEL: 081 949 3171

litestructures
Astralite Bilite Quatralite Minilite
LITESTRUCTURES TEL: 0924 240800

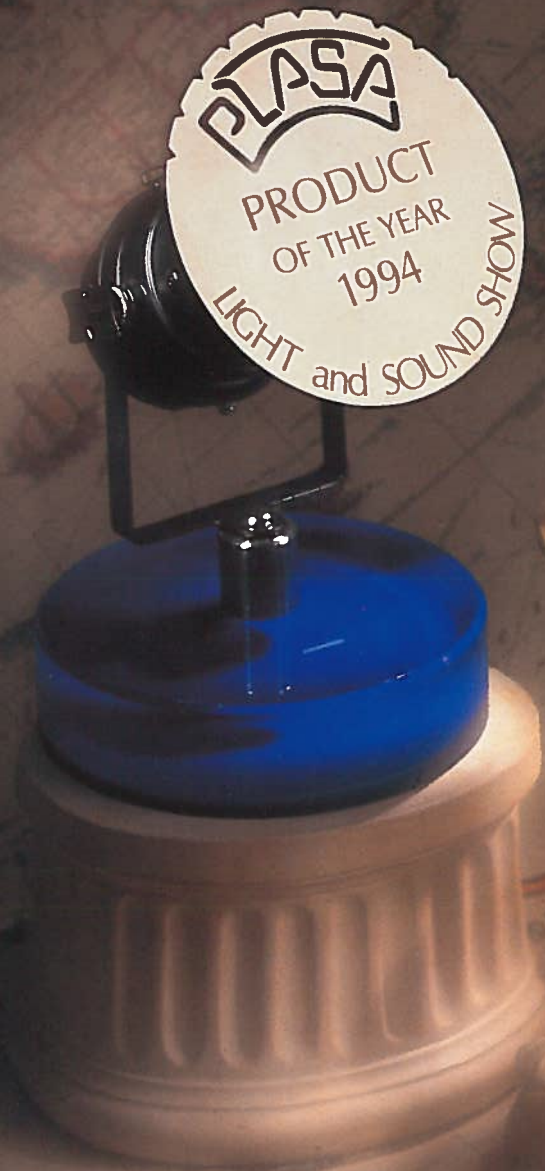
SYLVANIA
Special Products Group
SYLVANIA LIGHTING INTERNATIONAL
Tel: (44) 274 59 59 21 Fax: (44) 274 58 06 32
AC LIGHTING
Tel: (44) 494 44 60 00 Fax: (44) 494 46 10 24
ACTION LIGHTING
Tel: (44) 81 965 68 00 Fax: (44) 81 965 09 50
ACTION LIGHTING (North) LTD
Tel: (44) 61 876 05 76 Fax: (44) 61 876 05 17
ARRI (GB) LTD
Tel: (44) 81 848 88 81 Fax: (44) 81 561 13 12
CPLIGHTING
Tel: (44) 81 547 05 00 Fax: (44) 81 547 08 84
DCLIGHTING
Tel: (44) 235 77 07 15 Fax: (44) 235 77 07 20
INTERNATIONAL LAMPS LTD
Tel: (44) 992 55 44 11 Fax: (44) 992 58 77 66
LAMP MERCHANT
Tel: (44) 932 23 10 10 Fax: (44) 932 23 25 87
LIGHTING TECHNOLOGY GROUP
Tel: (44) 81 965 68 00 Fax: (44) 81 965 09 50
MGC LAMPS LTD
Tel: (44) 473 46 18 75 Fax: (44) 473 24 00 81
MICO LIGHTING LTD
Tel: (44) 532 56 71 13 Fax: (44) 532 57 23 58
PKE LIGHTING LTD
Tel: (44) 61 72 84 593 Fax: (44) 61 72 84 594
PRIMARC (MARKETING) LTD
Tel: (44) 734 59 67 77 Fax: (44) 734 50 59 64
SPECIALIST LAMP DISTRIBUTORS LTD
Tel: (44) 71 708 07 51 Fax: (44) 71 708 22 51
SPECIALIST LAMP DISTRIBUTORS LTD
Tel: (44) 61 873 78 22 Fax: (44) 61 873 80 89
TECHNICAL LAMPS LTD
Tel: (44) 81 979 66 52 Fax: (44) 81 979 90 07
VALIANT ELECTRICAL WHOLESALE LTD
Tel: (44) 71 736 81 15 Fax: (44) 71 731 33 39



Trilite
Tel (01582) 411413 Fax (01582) 400613

AUTOPILOT

Finally...
something
the Whole World
can agree
upon.



In USA - WYBRON, INC. • 4830 List Drive • Colorado Springs, CO 80919 • 719 548 9774 • FAX 719 548 0432 Visit us on the World Wide Web at <http://www.wybron.com>
In Europe - WYBRON LTD • Acton Business Centre • Unit G04 • School Road • Park Royal • London NW10 6TD • 44 081 838 2254 • FAX 44 081 838 2253



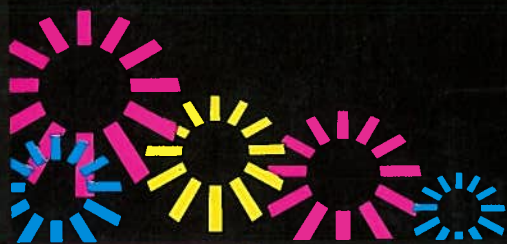
Don't be Sad!



Be Creative

Use the biggest selling creative moving light console to date - The Navigator.

The new V3 form expands on a tried and tested formula to offer control of 40 moving lights in various flavours - including video wall!



Be Different

Synchronise lighting and video walls simply and effectively by using - The Celco VIDEO M9.

Treat your video wall like a ten channel dynamic backdrop to create a multitude of colours and effects.

Control all visual elements from any DMX console or run in 'stand alone' mode.

Navigator M9 Personality available too.

Be Sensible

Select the most flexible dimmer around - The Fusion 1210.

100% pure digital and so easy to install.

Be in Touch

Celco, Hawley Mill, Hawley Road,
Dartford, Kent DA2 7SY, England
Tel: + 44 (0) 1322 282 218
Fax: + 44 (0) 1322 282 292

