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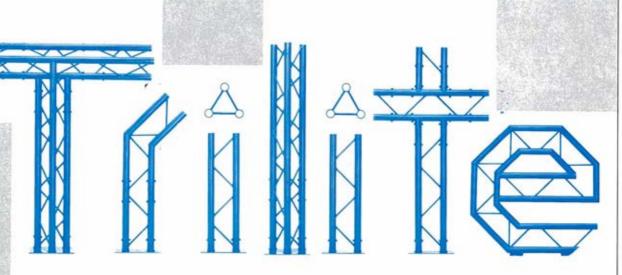
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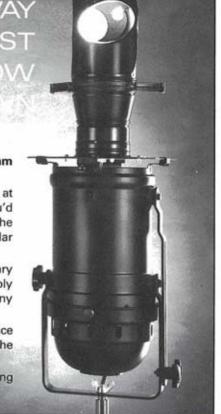
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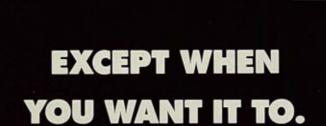
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For details of advertising in Lighting + Sound International ring Alison Hunt on Eastbourne (0323) 642639

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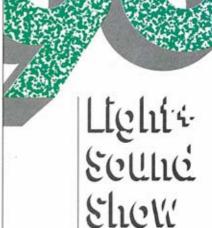
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Regular Contributors: Ben Duncan, Catriona Forcer, Tim Frost, Tony Gotteller, Mike Lethby, David Neale, Francis Reid, Graham Walne, Julian Williams.



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LIGHTING SOUND News

Now On Sale: Light & Sound Show 90

Britain's premier exhibition of lighting, sound and entertainment equipment, Light & Sound Show 90 which takes place from the 9-12 September 1990 at Olympia 2 in London, is now on sale. Promising to be the biggest and best yet, the Light & Sound Show, sponsored by PLASA, will have an additional 2,000 square metres of stand space and will, for the first time, cover four floors of the Olympia 2 venue, including the recently opened lower ground floor area.

Now recognised world-wide as one of the leading international events for the professional lighting and sound industries, Light & Sound Show 90 has expanded in order to meet the growing demand for space-only sites by companies needing to exhibit and demonstrate larger equipment and wider ranges.

The thirteenth Light & Sound Show, is expected to attract more visitors from the UK and overseas, and from an even broader crosssection of the industry. In particular, the show organiser, 3D Services, is expecting increased interest from theatre, architecture, presentation companies and film & TV production companies. With a record number of 5,500 registered visitors last year, including over 700 from overseas, David Street of 3D Services is fully confident that the show's appeal is growing wider every year.

"The lighting and sound industries have

become increasingly important during the last decade as more and more organisations realise the importance of live and public presentation," he told L+SI. "While the club and disco industry remains one of our most important visitor groups, we have recognised that many designers, specifiers and buyers from a wide range of industries are now regularly attending the Light & Sound Show."

A series of seminars held for the first time last year will be re-staged this year. Taking the form of lecture-style workshops, the seminars will provide the opportunity for everyone involved with the specification, design, installation, purchase and use of lighting, sound and presentation equipment to hear the views of many of the industry's top consultants and specialists. Details of the seminar programme will be released in the early summer.

The expanded Light & Sound Show 90 will offer many exhibitors the opportunity to take larger stands and open the way for a number of new exhibitors to take space for the first time. Stand sites are being sold on a strictly 'first come, first served' basis and any company interested in receiving information and booking details should contact: 3D Services, 12 Brentford Business Centre, Commerce Road, Brentford, Middlesex TW8 8LG. Tel 01-569 9742, Fax 01-569 9783.

Jem Go Theatrical

Jem Theatrical Supplies & Effects Co. Ltd. is a new company from the well-known Jem stable. The company has been set up to cater specifically to the more specialised needs of television, film and production companies and theatres. Products handled will include a new range of smoke and fog machines, along with a complete range of pyrotechnics with the existing hire division being further expanded.

Several new Jem smoke and fog machines are already undergoing development, and the first of these, a compact, yet powerful smoke machine, the Habana, is already in production. The range will also include a compact Heavy Fog machine and the Roadie, which is aimed at the needs of large productions where massive amounts of smoke are needed. The Roadie has an output in the region of over 500,000 cubic feet per 4 minutes!! According to JEM, orders are already on the books for these new Jem products and

production models are due soon. A Cracker machine is also under development.

Jem Theatrical Supplies is also expanding its hire division, and the full Jem range of smoke and fog machines, from a simple hand-held portable to the giant Heavy Fog 6500 machine, are available along with a full range of accessories. Experienced operators are also available if required.

Pyrotechnics will play a major role within the new company, with a complete new range of effects under development along with specialist firing hardware. Jem promise improvements over existing available systems, and plan to introduce the range shortly with further additional effects becoming available throughout 1990 as the range expands. Final details cannot be released yet, but those in the industry who have expressed interest in the new Jem Pyro system will not be disappointed claim the company.

Squire Megastores

Squire, Guildford, officially launches its new look megastore on Saturday 17th March — St. Patrick's Day — and it will be Live On Air! The Showroom will be sporting the brand new Squire Ultimate 32 × 4 lighting controller, together with the new Martin Professional lighting effects including the stunning Roboscans. A new Light Processor display will control all the new effects flown from the lighting rig.

The County Sound Radio Network Rig will be broadcasting live from the launch with Premier Radio presenter Jamie Crick on air from 10-2 on 96.4 FM to record the day's events. Prior to all this, a four day long party heralds the arrival of Squire Sound & Light's new Birmingham megastore in West Bromwich. The celebration from the 7th to the 10th March culminates in an All Day Mix Party on Saturday with special guests calling in.

The branch has re-located from Broad Street to Unit 1, Queens Court Estate, Greets Green Road, West Bromwich, West Midlands. The new megastore is 2,000 square feet crammed full of the latest technology, including a flown Trilite nightclub rig. Effects include 'intelligent' lighting from Martin Roboscans, Mini and Microstars; along with products from Lampo, Studio Due, Coemar and Fabtronic plus the full range of Squire

Photokina Prepares

According to the organisers, the 21st Photokina, to be held from 3rd to 9th October, 1990 will be even bigger and better than in 1988 when nearly 1,400 companies from 28 countries filled 170,000 square metres of hall space and attracted 160,000 buyers from 123 countries world-wide

In addition to all this, there will be Hifi, Cologne in hall 10, complementing the product range of Photokina with the complete spectrum of consumer high fidelity audio equipment. This development reflects and meets changes in both the photographic and electrical retail trades. British companies have always done well at Photokina in all its sectors. They form the largest foreign contingent, demonstrating the strength of British industry in this important forward-looking market. There will be a British group again this year, sponsored by the British Photographic Export (BPEG) and supported by DTI.

With space and shell scheme costing only £50 per square metre for a first time exhibitor, it is a very cost-effective way of developing and expanding export business. As nearly 3,000 of the top buyers from the UK visit Cologne for Photokina, it is also an ideal venue for keeping on top in the home

market.



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4 Watt Whitelight Krypton Laser





The Prisma and Midas control systems from Laser Grafix used to control the recent display by the company at Thorpe Park.

For years now there has been a gap in the laser market for a 4W whitelight laser which can provide a multicoloured beam comparable in power to the 4W Argon which has become a favourite in discotheques, writes Tony Gottelier.

In the past the laser effects companies, aware that the average customer was unlikely to fork out for a 12W mainframe, have tried various combinations of the 1 watt Krypton both red and white, with the 4 watt Argon, in an attempt to overcome this problem with varying degrees of success and

at a high cost.
"The problem was that the laser manufacturers were not making a 4W model," says Mark Brown, sales director of Laser Grafix, "but we finally convinced Coherent that there was a market and persuaded them to let us have the first one

available.'

Laser Grafix were able to demonstrate the potential of this unit successfully at Camden Palace at the end of February, so it was disappointing that the same power of unit wasn't available to a wider trade audience at a presentation of their products given at Thorpe Park at the beginning of March.

Following the Camden Palace preview, a call was received from Geoff Jones of Laser Systems to advise that they too would be offering the new

Coherent laser. At much the same time Spectra Physics drew our attention to their Model 168 Krypton whitelight laser which, they claim, delivers typically between three and four watts when new. The 168 is available, with automatic gas-fill monitoring, at a modest premium over the cost of a typical small frame Argon or Krypton from Laserpoint.

Laserpoint and Spectra Physics also announced an exclusive arrangement whereby Spectra will offer local warranty on their units, after delivery by Laserpoint's authorised distributors, through their local offices in any of 34 countries world-wide. (See feature pages 59-63)

Laserium Honours

Ivan Dryer, creator of Laserium laser shows, President of Laser Images Inc., and acknowledged pioneer of the laser entertaiment industry, has received the first Career Achievement Award of the International Laser Display Association (ILDA). Dryer was honoured in recognition of his firm's achievements in innovating laser shows and establishing many of the aesthetic conventions and business practices of the industry. Laserium premiered in 1973 and was the first ongoing, commercially successful laser show in the world.

Opus in Holland

Opus Amplification has recently opened a new account in Holland at R.L. Showequipment, Steenwijklaan 118, 2541 The Hague, Netherlands.

Any professional DJs, bands or club owners wishing for a demonstration of Opus Sound Control Speakers can contact Renee Van Der Luit on 010 31 66 66 30, who will demonstrate the Opus products and discuss technical specifications on the cabinets.

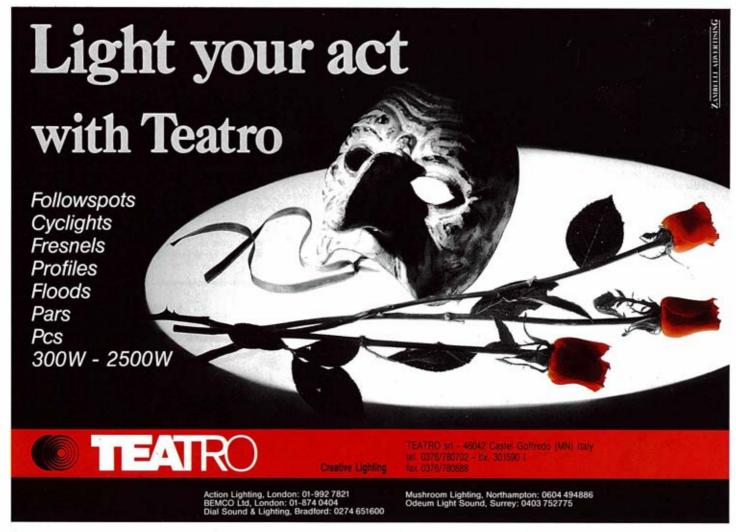
JBL for DJ Action

JBL has been chosen to supply the sound system for the 1990 Technics DJ Championships, taking place on the 20 March, at Wembley Arena. Working in cooperation with Roadstar, the team from Harman UK will provide a 40-cabinet JBL Concert Series system, flown from above the competition which will be staged in the round.

The system will be put through its paces during the evening. Nine disc jockeys, from all over the world, are competing for the title, and the featured artists include Lisa Stansfield, De La Soul and Mantronix, as well as "even bigger artists coming over from America, but we can't tell you who they are.

The Championships are the culmination of a competition that has been running in clubs all over the world since the beginning of the year, and the winner can expect to win £5,000 as well as

JBL have also been busy on the club scene with the two popular Thunderdome clubs having been refurbished with JBL Sound Power. The Thunderdome in Manchester, one of the north of England's premier house music venues, regularly packs in 1,000 people with its dancefloor system of four JBL 4771Ps and four 4788s. Over in Warrington, its sister club, Thunderdome 2 was refitted the same week with a similar sound system around the central dancefloor. The venues, which have been equipped by Central Systems of Manchester, are replacing JBL with JBL — they previously had JBL rigs in the clubs on a hire basis.



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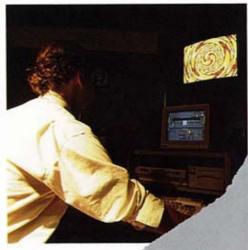






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Chris Cronin launches Total Fabrications

Following the end of his involvement with Tomcat late last summer, Chris Cronin is now in full action with his new company Total Fabrications Limited. Still on the Pershore Trading Estate, the operation employs 10 people, and as you've guessed, they manufacture and supply a range of staging and lighting equipment, including the custom design of equipment for rock and roll, theatre and television.

Total Fabrications have also opened a division in Dallas, Texas which also manufactures the complete trussing range, and projects currently being worked on include projects for Disney World.

The company will be exhibiting at the Frankfurt Music Messe in March, and showing an interesting new single hung Par Truss which has the facility to stack side by side. Side attachments enable any amount of units to be banked together, right-hand joined, and so on. "It offers new opportunities for lighting designers and will also save space on trucking," explained Chris Cronin.

Also on display at Frankfurt will be a new range of high durability Par cans with upgradeable add-on components to suit usage, a new folding truss range, and a light duty self-contained indoor ground support system with manual winch.

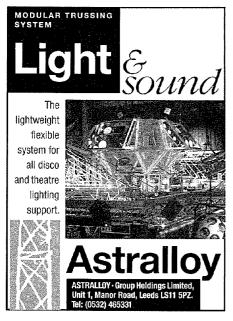
British Music Fair 1990

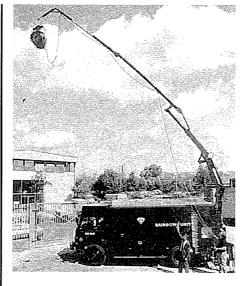
1990 will be an exciting year for the British Music Fair: a year of change. For the first time ever, applications for stand space can be accepted from companies who are not a recognised trade association member. Previously enforced restrictions preventing overseas companies from exhibiting have also been lifted, paving the way for a show with far greater international appeal.

Perhaps more significantly, British Music Fairs Ltd have agreed to open up the product base; exhibitors will no longer be restricted to showing musical instruments only. The 1990 British Music Fair wil be the first British exhibition to represent all things musical under one roof.

Musical instruments, of course, will still maintain a high profile, whilst planned new areas of activity will include representation in fields such as hi-fi, recording/pro audio equipment, midi-music, and even video and lighting technology. Among those exhibiting, will be AKG Acoustics, Audio Technica Microphones, Beyer Dynamic, C-Lab, Celestion, HW International, Harman, JBL, John Hornby Skewes, Panasonic, Sennheiser, Shure and Sound Tech PA.

This is an important move for the show's future, which the organisers hope will change the face of the British Music Fair. It will grow in size and stature as a direct result, becoming one of the most comprehensive music exhibitions in Europe. Greater emphasis is also being placed on developing new activities and attractions for visitors. For further information on the show, which takes place at Olympia from the 17-22 July, please contact Westland Associates Ltd, 23a Kings Road, London SW3 4RP. Tel: 01-730 7852.





Mobile Lighting

Park Royal lighting rental company Natural Lighting Ltd (Rainbow Lighting) has developed a new variant using Lee Colortran's remotely-controlled 12kW Super daylight fresnel.

MD Ron Dawson has mounted the flicker-free luminaire on a 50ft Atlas crane which in turn is mounted on a four-wheel drive 40kW generator truck. The result is a self-contained vehicle which can go anywhere and provide a powerful daylight source with spot/flood and pan/tilt controlled from the ground.

The 'daylight on a stick' approach is proving extremely popular on film and TV location shoots. Ron Dawson told L+SI: "We stock quite a few HMIs and use Lee Colortran's because the industry wants flicker-free. In any case, I think they are a better engineered and more professional product. I went to all the manufacturers with my idea for a cranemounted remotely controlled luminaire and Lee were the only ones able to do it."

Lee Colortran has developed remote control to an advanced level for its Super series of daylight fresnels. As well as spot/flood and tilt/pan, barndoor rotate and open/close can also be controlled remotely if desired.

Having proven the demand for his special lighting vehicle Ron Dawson is now working on a further development of the idea — a generator truck with a 12kW Super mounted on a 100ft lift crane.

Active Input from Brits

Speaking to 1,600 people at the CIBSE Annual Dinner on 7 February, Dr Ivan Dunstan, President of Comité Européen de Normalisation and Director General of British Standards Institution, highlighted opportunities for the British to participate in preparations for the single European Market.

He said that the British were already playing a

He said that the British were already playing a leading part by providing chairmen and secretaries for European committees and also by producing, where possible the first drafts

where possible, the first drafts.

He noted, however, that fewer than 1,500 European standards had been agreed — by the end of 1992/3 — 4,000 would be needed. He urged that the present level of interest and involvement be maintained saying that it was too late to try and preserve national standards.

SEDA 90

The South Eastern Discotheque Association (SEDA) hope to see at least 1,000 visitors at their forthcoming Disco Equipment Exhibition which will take place for the fourth year running at the Woodville Halls, Gravesend, Kent on Sunday 3rd June 1990.

Details of stand space are now available direct from the organisers. Jocks magazine will be supporting SEDA again this year, by printing the exhibition guide in their June edition. Anybody seeking further information should contact Mark Pantony at 359 Sutton Road, Maidstone, Kent. Tel (0622) 670352.

LDI - Orlando

Lighting Dimensions International 89, held last November in Nashville, Tennessee, brought together 160 companies on 373 stands and 3,550 professional visitors. LDI90 will be held at Orlando's Orange County Convention Center, just minutes away from the state-of-the-art film and television production facilities at both MGM/Disney and Universal Studios. Home to the world's most renowned theme parks and visitor attractions, Orlando has become one of the main resorts in America.

The organisers claim that attandance for 1990 is expected to surpass that of LD189 in Nashville, with large numbers of international visitors expressing interest in Orlando and its related film and television community. LD190 will feature a series of seminars and workshops that will take participants behind the scenes, onto the sound stages and into the theme park attractions for an on-site look at sound and lighting installations, special rigging and production techniques.

425 stand spaces are available in two adjoining exhibition halls, and to date 256 have been sold, representing 25,600 square feet. For further information, please contact Jacqueline Tien at Lighting Dimensions International in New York on (212) 677 5997.

SIB/Magis 90

SIB the international exhibition of equipment and technology for discos and dance-halls will be held at Rimini Fair from April 1st to 4th. In only seven years this show has grown to be one of the most important international venues for disco-related technical equipment. For the last three years it has been integrated with Magis the exhibition of equipment for theatres, cinemas and entertainment venues.

SIB/Magis is a meeting place for all professionals interested in the entertainment world. More than 30,000 square metres are occupied by 450 exhibitors. On offer to the 15,000 visitors coming from all over the world (20% of which are from overseas) will be everything needed to equip a club: light effects and computerised control desks, fire-retardant armchairs, movable stages, laser systems, and fog/snow machines.

In Italy there are 600 specialised companies which employ 10,000 people and reach a 2,800 billion lira annual turnover. "The entertainment industry in Italy has only recently been established," explains Nicola Ticozzi of APIAD (Association of Italian Disco and Theatre Equipment Manufacturers), "at the end of the 70s the many, diffused small businesses turned into more industrial structures."

In 1983 APIAD was established in Milan to bring together the most representative manufacturers of light effects, sound equipment and furnishing for dance-halls, theatres and shows. It provides for its membership a quality trademark for products, specialised legal and insurance advice, marketing enquiries, stands at international exhibitions in cooperation with ICE the Italian Trade Commission, and the Italian Board of Foreign Trade, updating on technical and security standards, public relations and international press offices.

At the Rimini show APIAD will have two stands from which to promote the Association, and in like fashion, PLASA will also have a stand to promote British products in Italy. We look forward to seeing you there.

Custom Trussing

A contract to design and manufacture custom lighting rigs for two Brighton nightclubs has been won by the Leeds-based specialists in modular construction systems, Astralloy Ltd. The aluminium rigs will feature a hand-polished mirror finish on all structural tubing sections, rather than the powder coating conventionally used, and nickel-plated infill panels.

Astralloy's reinforced trussing systems are available in three complementary product ranges — Astralite, Bilite and Quatralite — each based on standard components which can be supplemented by special sections. Lightweight, Minilite and Structalite systems are also available.

New Projects Consultancy

Lee Colortran, the Manchester-based lighting and control manufacturer, has established a division for consultations concerning design and installations of lighting projects for film and television studios, and theatres of all descriptions.

The section headed by director John Burgess and Brian Fitt former, BBC design and installation engineer, is able to provide a complete 'turnkey' project management package covering design, manufacture, installation and maintenance. The services include grid systems, manual or motorised luminaires and suspension equipment, dimming and control, cabling and power distribution, cyclorama systems and scenery suspension systems.

Lee Colortran has established a strong track record in the television studio field, ranging from 60 sq ft to 11,000 sq ft plus refurbishment of existing premises for small independent companies to the furnishing and construction of new studios for full broadcast television stations.

Recent projects carried out by the Lee team include the total lighting scheme for the BBC's TC1 studio in London, the design and installation of a fully-motorised and automated studio for RTE in Dublin, and the completion of three studios for Channel TV's new HQ at St Helier, in the Channel Islands

Evans Expansion

Following their successful management buyout of the TV Studio Engineering business from the Frazer Nash Group in October, 1988, the directors of Evans Stage and Studio Engineering Limited, Paul Matthews and Ian Sim, have continued to build up the operation providing an engineering service to the TV Studio industry. Evans specialise in the provision of studio designs and unique lighting suspension equipment.

They have now been joined by Tom Scharff who brings 27 years of successful experience in engineering, management and international marketing. Initially he will concentrate on the marketing aspects of the business.

The company has been further strengthened by the appointment of lan Rae as Chairman and non-executive director. He has spent 40 years in the engineering industry and retired recently as managing director of the Kee Klamp group of companies. The Evans design team have, over the past eight years, offered services to the BBC and other major TV producers in the UK and overseas.

New Drive at Fane

Fane Acoustics is introducing a whole range of new quality assurance measures. The drive for quality is a prime element of Fane policy as part of the Wharfedale plc group, and takes on board many of the Q.A. aspects which have proved so successful for Wharfedale Loudspeakers itself.

The company believes itself to be the only loudspeaker factory to conform to the exacting BS5750 quality standard and it is the group's intention that Fane should achieve similar levels of perfection. This will pave the way to the transfer of Fane's manufacturing process to Wharfedale's soon-to-be-enlarged factory in Leeds.

The key to the measures is the appointment of new quality assurance staff at Fane's factory in Batley. The team that was instrumental in achieving BS5750 at Wharfedale, Mike Cockshott and Phil Escott, are appointed as quality control manager and factory manager respectively.

With the addition of two new goods-inwards inspectors and a roving production inspector, Fane will ensure effective monitoring of quality procedures from raw material intake to finished product. A further draughtsman is also being recruited to improve drawing facilities. The company will now impose rigorous conformity standards on its suppliers.

Investment in new computer-aided test equipment is another major step towards impeccable production quality. Fane has installed three acoustic trace units for the testing of drive units to achieve the highest levels of product consistency.

Each of these developments is crucial to Fane's redevelopment strategy, which will aim to maintain the design and acoustic qualities which have made Fane a leader in the power speaker market over the past 30 years.

Celestion in Taiwan

Taipei, the capital of Taiwan, has equipped its Central Railway Station with a Celestion SR Series loudspeaker system. A consequence of being one of the busiest railway stations in South East Asia is long queues at the ticket offices combined with extensive delays. Realising the opportunities offered by a captive audience, the enterprising Taiwanese installed a 16 × 12 metre video screen which offers a continuous diet of pop promos and advertising to those on line. Sound is provided by Celestion Compacts, one above each of the 30 ticket offices.

In another part of the world, the Yugoslavian city of Maribor has equipped its cultural centre and theatre with a Celestion SR Series system comprising of SR1, SR2, SR3 and SR Compact components in a wide variety of wall, ceiling and floor mounted positions. When specifications for the project were drawn up by Maribor Radio's chief engineer, he was looking for a system capable of performing at both high and low volumes since typical events at the Maribor Theatre range from live rock, folk, operatic and classical, to plays and poetry readings. Celestion SR Compacts were also specified as control room monitors.

Laser Magic Grows

From their new facility in Seaford, Laser Magic now offers the PM 20 and the PM 21 controllers for hire or installation and have developed software products to accompany these controllers. Software to digitise graphics and produce EPROM images for the PM 20 and PM 21 controllers is available now, as is software to control the PM 21 remotely. Further software products to support the PM controllers and the Aries II are planned for future release.

In addition to supporting these controllers, the company are currently developing a range of highly modular laser control systems offering a high degree of functionality and performance. They hope to launch the new products later in the year.

Laser Magic has greatly enhanced its hire stock and can offer systems from 100m Watt Argon ion through to 25 Watts. Using Coherent's Pure Light laser system, the company claims they are able to offer the most competitive multi-coloured laser display system on the market, and all systems are available for demonstration at their offices. Laser Magic will continue to sell their highly successful range of plasma balls. These are available in a number of colours, forms and sizes. Over the last two years, Laser Magic has produced firework and pyrotechnical displays and will continue to provide and develop this service.

Hi Profile Activity

Hi Profile Technical Services, part of HPC Leisure Group, have been very active over the last few months with some major projects.

At present they are installing the audio visual, general and electrical for the new 'Thread of Life' exhibition at Kew Gardens which is due to open shortly. They are also on board ship designing, supplying and installing a complete sound and lighting scheme including the outdoor lighting for a new cruise vessel. The RMS St. Helina is owned by the government of St. Helina and makes six runs a year to St. Helina and Capetown and also calls twice a year at Tristan De Cuna.

Because of the demand for Hi Profile Technical Services they have recently taken on a technical manager by the name of Hans Schreuder. Originally born in Holland, Hans has worked world-wide on all types of audio visual lighting systems and recently completed major projects in Gran Canaria and South Africa. He is at present controlling the project at Kew Gardens.

Hi Profile retailing, part of the HPC Leisure Group have just opened their latest venture in Southport—the Good Time Cafe Bar. The venue has been developed within the group and the technical services department have been actively involved installing the electrical and sound systems using a mixture of Wharfedale, Community and Ramsa sub bass systems. The amplification has been supplied by Hi Profile Technical Services' own manufacturer of power amplifiers.

Pandora link with Rank

Pandora International Limited, the sales division of Pandora's Other Box — the Dartford-based designers and manufactures of digital equipment for the international television post-production industry — recently announced that it has signed a comprehensive licence agreement with Rank Cintel Limited.

The agreement allows Pandora to supply their highly acclaimed telecine grading system — Pogle, to customers of Rank's Ursa Digital Telecine throughout the world. The Mill, London's much talked-about new post-production company are already using the revolutionary 32-bit multi-tasking Pogle control system to drive their recently installed Ursa — the first in the UK.

Since going into full production at the end of last year, Pandora has received firm orders for 10 Pogles, including in the UK - VTR, The Moving Picture Company and Goldcrest's Cherry Video. All these top facility houses have been quick to recognise that the system could control all the special features of Ursa, including new positional effects made possible by digital techniques. Steve Brett of Pandora, told L+SI: "Telecine Controllers have tended to ignore the creative needs of the colourist by insisting on a mess of over-complicated key sequences. Pogle deliberately sets out to be as friendly as the name suggests, by adopting a graphics approach and using a cursor moved by a trackerball to select options. The 3-axis illuminated trackerballs used to alter gain, lift and gamma in the signal, are part of a fully digital control panel that does away with end stops, and therefore no awkward resets are required before using the system's Trim function."

Pandora are also installing Pogle to drive Rank Cintel's MK111 telecine machines. VTR has just this week taken delivery of its first Pogle to control their MK111 telecine — a second will be installed once VTR receive their ordered Ursa system.

Turbo Go Green?

Turbosound has recently concluded their first sale to the Seychelle Islands. The equipment, which comprises TMS-1, TMS-3 and TMS-4 full range enclosures, has been purchased for a series of appeal concerts due to be staged at the Stad Popiler Stadium to raise money for a reforestation project and many other conservation-based projects due to start in 1990.

Gilles Lionnet, the concert organiser told L+SI: "This is the first of many concerts we intend to organise to raise money for the Seychelles Environment Year. We decided on Turbosound enclosures as they are the world industry standard. Many bands have come here over the last few years with Turbosound PA systems. We were impressed. Not only did the systems sound good, but they survive in the tropical climate without problems."

Negotiations to purchase the equipment started early in the new year, and with the first concerts scheduled for mid-February, time was of the essence. Richard Frankson, Turbosound's marketing and sales manager recollects: "We thought the enquiry was just another price enquiry similar to those we get occasionally from remote places around the world and never hear from again. These people were exemplary and conducted the commercial and technical aspects of the deal in a very professional manner. We may even start to finish our enclosures in TurboGreen if events of this type become the vogue of the '90s."

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ArenaVision in the City

St Paul's Cathedral in London, one of Britain's most famous landmarks, has regained its preminence on London's night skyline through a recently switched on floodlighting installation consisting to a large extent of Philips Lighting's advanced ArenaVision technology.

Philips Lighting in Croydon was commissioned by the Corporation of the City of London to . design the scheme to mark the 800th anniversary of the founding of the mayoralty of London. Philips was presented with a complex technical brief that presented both practical and aesthetic problems and was asked to translate these into a state-of-the-art floodlighting scheme. This includes the effect of moonlight to show how Sir Christopher Wren, the architect of St Paul's, would have seen his creation in the seventeenth century when electric light was not yet invented, as well as making the building an outstanding landmark.

To fulfil this requirement, the overall effect of the scheme had to replicate the moon's natural flow of light across St Paul's architecture. Philips changed the light source from SON to metal halide to provide an ivory illumination that would match the white Portland limestone exterior.

St Paul's Cathedral was originally illuminated with tungsten lamps. Some 12 years ago, this was changed to high-pressure sodium lighting. However, the blending of SON illumination from the cathedral's existing floodlights and the City's street lighting had resulted in St Paul's no longer standing out at night. For the new scheme, metal halide lighting was used to contrast with the highpressure sodium of the surrounding street lights. Metal halide produces a very white light in contrast to the golden hue of high- pressure sodium.

The southern aspect of the cathedral - the well-known view from the River Thames painted by Canaletto - was also in relative darkness because many of the earlier luminaires had been originally sighted on buildings surrounding St. Paul's, which have since been demolished. To prevent such losses in future, Philips engineers located almost all of the new luminaires within the cathedral's boundaries.

Compact light sources with extremely narrow



The new-look St. Paul's.

beam control and very long throws were required to light the upper structure of the cathedral, as the lead-ribbed dome, the colonade, the orb, and lantern and cross soar more than 110 metres into the air. Ten ArenaVision floodlights, with the new 1800W MHD lamps, not only light up the upper half, but also pinpoint the lantern, orb and cross on top of the dome, which had not been possible previously. Three ArenaVision luminaires, equipped with new, innovative metal halide previously. lamps, emit a slightly cooler light than conventional lamps of the same type.

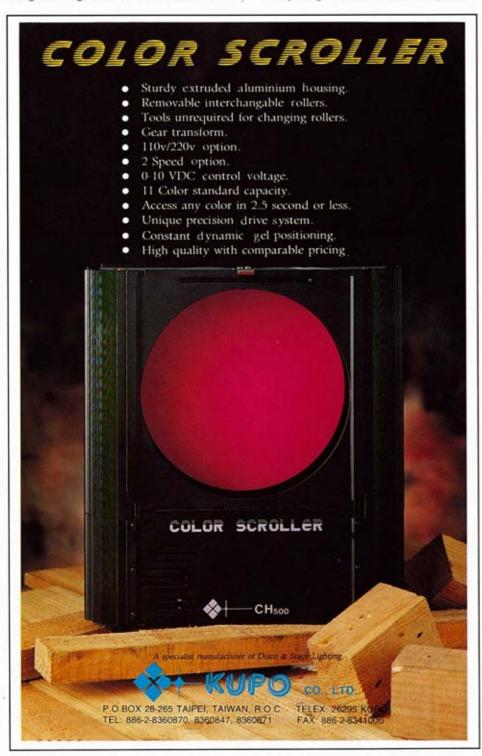
In order to reproduce the effect of the moon shining acroos the dome's curves and to highlight the shape and size of the colonnade's columns, a total of ten ArenaVision luminaires were positioned in diagonally opposite locations on the roof of the cathedral. On the south-west and north-east sides of the dome a bright patch tails away on the far side, leaving long, slim shadows contoured across its surface. When completed, the effect bears a striking similarity to moonlight. To increase the effect, the inner faces of the west front towers were lit by twin 400W floodlights.

Along the north, south and east facades of the cathedral, floodlights with 2kW lamps were installed in pairs of narrow and wide-beam luminaires which supply illumination to the upper and lower zones respectively. Smaller 400W lamps in HNF 003 luminaires were fitted to produce additional 'fill-in' light at certain points between the main 2kW luminaires, where bushes and trees would otherwise have produced too much shadow. To light the south front facade, a single 2kW luminaire has been fitted to an existing street lantern on the pavement opposite in St Paul's churchyard.

The great west front - scene of royal entrances on many state occasions - has now been lit by an array of seven 2kW metal halide wide-beam floodlights. Four of these units are focused on the west front's fascia, two more directed at the pinnacles and, lastly, an extra lamp has been installed on the roof of an adjacent building to provide much- needed illumination for the broad, granite steps.

Since the two portico areas inside the fascia required gentle illumination from within, two MNF 400 KombiPak floodlights were placed in each portico to make the columns in front stand out in partial silhouette. As a final touch, the west front's six ornamental lanterns were refurbished and fitted with Philips lamps and gear.

Observers can appreciate the colour change to metal halide from many vantage points, but most especially from Ludgate Hill and Blackfriars Bridge. By creating illumination that magnifies St Paul's architectural detail, Philips has designed a scheme that incorporates many of Sir Christoper Wren's ideas on structure and form.



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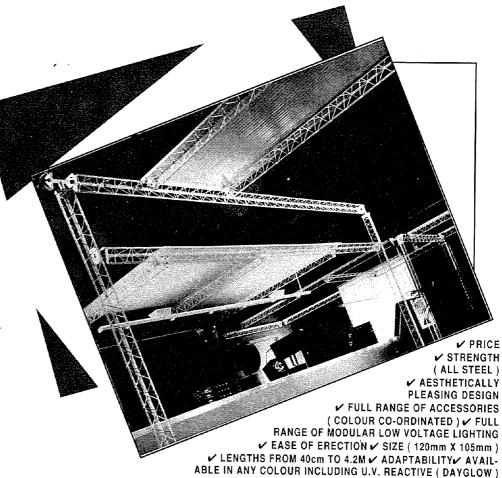
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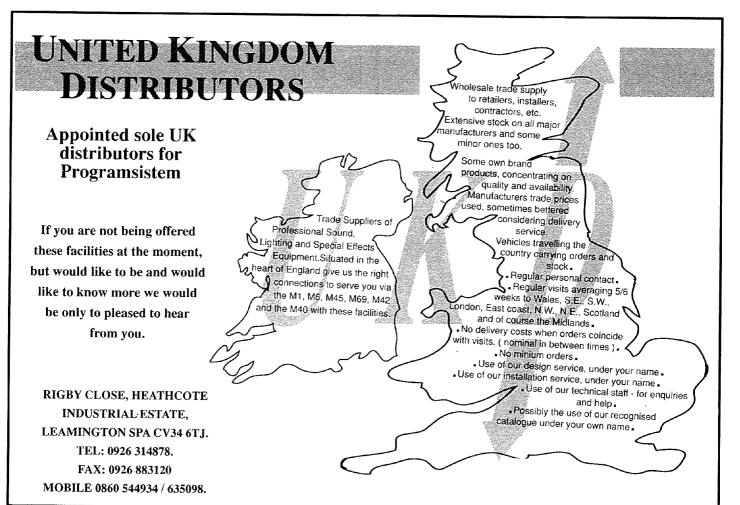
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CANOLFAN STIWDIO NEWYDD BARCUD AND LITTLE BIG ONE

L+SI looks at two new and geographically disparate production studios at Caernarfon in Wales and Brussels

Barcud was established in 1982 to provide television facilities and technical staff for independent television programme producers in North Wales, with the particular objective of creating Welsh language programmes for S4C. The founders included independent producers Huw Jones and William Aaron, and the company was set up with financial support from the Welsh Development Authority (WDA), Midland Bank and a grant from the Department of Industry at the Welsh office.

Caernarfon was chosen as the base, mainly because three of the founders lived in the area and because the launching of S4C, with a new pattern of commissioning programmes, provided an opportunity to establish television as an industry outside Cardiff. There was a belief that it was important for the producers to be as near as possible to their audience and that it would be beneficial to have Welsh speaking technicians working on Welsh programmes. Job creation in an area of high unemployment, where Welsh is an everyday language, was also a priority.

Operations commenced initially with a single camera mobile unit while editing and off-line suites were added in 1983 with a dubbing suite and second editing suite following in 1986. A significant advance in Barcud's operating base had expanded to occupy three adjacent modern industrial units on the WDA's Cibyn Estate in Caernarfon. This complex houses the extensive post-production facilities, a basic studio of 140 square metres (1,500 square feet), offices, stores and the OB vehicle base.

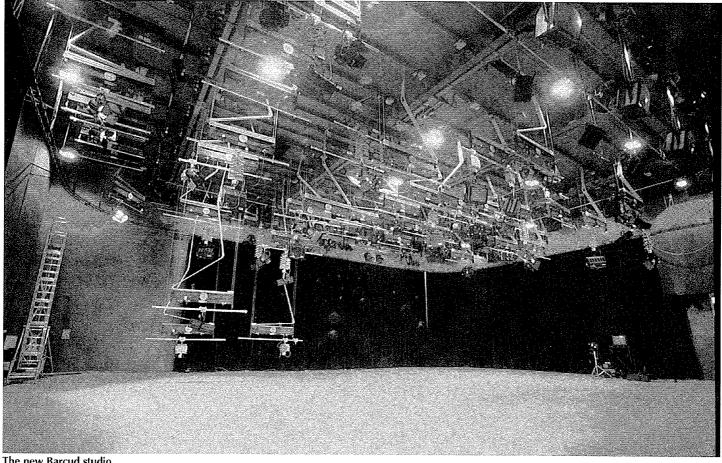
Over the years, Barcud has successfully competed for work beyond S4C programmes, winning a number of substantial contracts outside the borders of Wales. Their client list ranges from the BBC, HTV and Tyne Tees to important overseas companies such as CBS (USA) and Channel 10 (Australia); additionally many programmes have been produced for Channel 4 as well as numerous corporate videos. The staff of the company has increased from 15 in 1982 to 47 in 1990, and a high percentage of those employed are young Welsh speakers who have been trained by the company. The chairman is Huw Jones, while the day-to-day administration of Barcud is in the hands of four directors who all act as heads of department — Tudor Roberts (managing director and outside broadcast supervisor), Mike Griffiths (head of post-production), Huw Aled Jones (head of sound and deputy OB supervisor) and John Gwynedd Jones (financial controller).

In seeking to supply a wide range of programmes for S4C, the lack of a purpose-built studio regularly created problems.

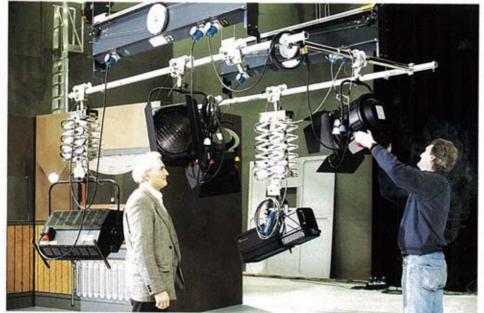
Adapting halls, theatres and factories for the purpose of recording programmes is an expensive and complex process with scheduling and location limitations. There was a danger too, that Barcud would lose a substantial portion of its studio-type programmes if a suitable building did not become available.

As Barcud commenced their investigations into requirements for the new studio, they decided to approach a number of leading companies in the television equipment industry to ascertain whether any would be able to offer a complete turnkey service encompassing feasibility studies, budgetary reports, architectural and engineering design, planning, construction, M & Eservices, studio systems and equipment. As the lighting and lighting suspension elements were expected to form a significant part of the technical installations, one of the companies approached by Barcud was Strand Lighting. A positive response was obtained from Strand, who from the outset introduced as their project partner, fellow PLASA member company, Glantre Engineering Ltd of Reading. Glantre's knowledge of construction and building services as well as of studio lighting and engineering systems was to prove invaluable.

In the early months, Glantre and Strand worked closely with Barcud to determine the



The new Barcud studio.



Setting up at Barcud.

detailed requirements and to put together preliminary designs and specifications for the studio and its anciliary spaces. Barcud were adamant in their wish to construct a studio large enough to accommodate medium scale light entertainment productions with an audience of 300 or more. The first design was based on a studio floor area of 725 square metres with peripheral production, control room, dressing room, scene dock, production and canteen areas; costs however turned out to be excessive.

On reconsideration, the critical factor was identified as being the need to allocate a considerable part of the studio area for audience occupancy. A solution (believed to be innovative) was proposed whereby the rear one-third of the audience would be in fixed seating on a first floor level gallery opening onto the studio, with the remainder on traditional retractable seating tiers extending into the studio. The audience would enter from the first floor level rather than through the studio itself, with dedicated car parking, public entrance, foyer, bar and toilet facilities being provided. In this way, the studio area could be reduced to 585 square metres (6,300 square feet) plus 80 square metres for the gallery. The additional gallery seating however, required only 30% of the extra building volume that would have been needed if the same number had to be accommodated by increase in the size of the studio itself. Cyclorama height was set at 7.25

metres with the underside of the roof beams at 9.2 metres above studio floor level.

It soon became clear that it would not be possible for Barcud to provide the studio from its own resources because of the costs involved, and it wasn't until May 1989 that all the necessary funding was organised. Tenders were immediately invited for the building and a contract signed in June with Pochin (Contractors) Ltd for construction over a tight 36 week programme with the completion date set for 9th February 1990.

The second major contract was simultaneously placed for Glantre to carry out studio engineering installations including suspension, lighting, control and dimming, tracks, drapes, cyclorama and electrical distribution. Glantre's prior involvement had meant that the studio steelwork structure had already been fully designed and coordinated to accept the studio lighting hoists, air-conditioning, ducting and trunkings.

Studio lighting hoists with lengths of 3.0 and 2.2 metres were laid out in nine rows at 1.5 metre spacings, a quantity of 62 hoists covering the main studio working area. With a double track cyclorama provided for three sides of the studio, a fixed lighting bar was installed at the optimum spacing of 2.85 metres from the inner track. Four more fixed bars were provided to carry lighting and PA loudspeakers over the retractable and fixed gallery seating areas. A generous provision of pantographs and roller trolleys was allowed for the hoists and fixed bars. These arrangements were considered by Barcud to represent an optimum cost-effective arrangement combining both motorised and fixed suspensions.

The hoist units selected by Barcud were high specification four-wire self-climbing type with aluminium housings and flip-flop



An audience of up to 319 can be seated at Barcud.

cable trays manufactured by RDS of West Germany. Overall safety provisions were to the highest standards. A feature of the RDS hoists is that the motor starters and control electronics are located in racks in the dimmer room rather than being installed in the bodies of the hoists; the advantages in accessibility are considerable.

The dimming installation consisted of six 10kW and 240 5kW Strand Permus modules with 12 20A contactor controlled non-dim circuits also being supplied. The overall studio lighting power installation was fed from a 600A TPN supply, distributed through a Federal Electric switchboard to dimmer, non-dim and hoist control racks, all of which are tidily arranged in the dimmer room.

Lighting control is a 264 channel Strand

Galaxy Three studio console located in what will become the vision control room when the drive-in scanner facilities are eventually replaced by a permanent studio camera installation. The Galaxy is provided with a number of optional features including a second channel controller and designer's femote control unit.

A full complement of Strand Quartzcolour pole-operated studio luminaires was provided. A basic semi-permanent studio lighting rig allows for each hoist to be equipped with two luminaires, one of which is of 5kW rating. Further quantities of luminaires are available for the audience area bars, and to supplement the basic hoistmounted rig. In addition, there are CSI follow spots, full cyclorama top and groundrow

lighting, profile and special effects luminaires.

The seating was supplied by Audience Systems Ltd of Westbury, these being 91 fixed seats in four gallery rows together with 228 folding seats in eight rows on the four retractable tiered sections.

Glantre's own senior Welshman, contracts director Gareth Davies, proved to be an embarrassment to the company and couldn't be allowed on-site due to his inability to speak his mother tongue. Instead, Englishmen Bob Halsey and Chas Wrieden had to be drafted in as project manager and site supervisor respectively. For Strand Lighting, the project was handled by Alan Luxford and Tony Dilley.

Little Big One, Brussels

In the Scientific Park in Brussels an amazing structure has appeared — a glass pyramid — and within this unusual addition to the city's skyline, Studio Little Big One (LBO) has based its operations. The facility is the embodiment of a dream for the studio's manager, Jean-Pierre Dauzin, who wanted to create a structure that would encompass all the production needs of video, photography, film and television.

The Studio is the only independent one to be built in Brussels. Sited close to the European Community Commission and the airport it is ideally placed to see through the much talked-about unification of Europe in the 90s.

Studio Little Big One offers a complete range of services, production and research facilities. At present research is being undertaken into development techniques, software facilities, CADCAM and high definition TV. During the production of a film a complete range of services are available such as 2D, 3D, graphics, HD image focusing and an image synthesizer.

During the opening ceremony on 31 January 1990 the building was flooded with visitors including M. Charles Pique, the Minister President for Brussels, all intent on seeing this remarkable facility.

The pyramid is a unique building designed by architect Atelier D De Wavre. Built on a 46 metre square base it rises 26 metres into the air. It has been designed as a 'total environment' which is ecologically friendly. One sixth of the roof lights are solar panels which save and provide a certain amount of the energy the building needs. The heat



Studio 1, Little Big One, Brussels. Lighting equipment includes Castors, Pollux, Arturos, Iris and Polaris.

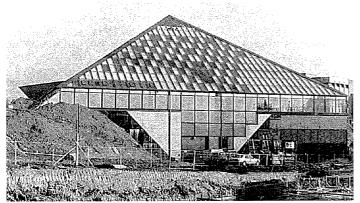
generated in the studios is also utilised to save energy. This unique aspect of the building has created a great deal of interest world-wide.

The electrical contractors AEG, sub-contracted Strand's dealer in Belgium, Luxillag, to look after the entire performance lighting. This included the installation, the cyclorama and managing the project. Luxillag contracted RDS to provide the motorised hoists. Studio 1, a 529 square metres facility, is hung with Quartzcolour luminaires from Strand. There is a mixture in the studios of Pollux's, Castors, Polaris, Arturos, (both silver and white reflectors were chosen to give a variety of softlight) Iris's, Cantata and Cadenza profiles. Studio 1 is controlled by a Gemini, and Studio 2, which is 240 square metres, by an M24. The amphitheatre which can seat 200 people is lit by Strand Minims, Harmonys and Cantatas. Strand Minims are also used to light the restaurant.

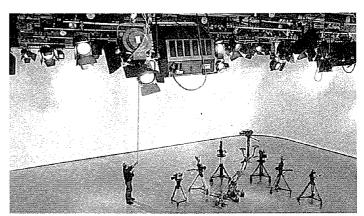
Studio Little Big One has four studios and an ampitheatre, together with restaurants, research and development laboratories and a complete range of production services. With such wide-ranging provision, the pyramid can find application in the conference, presentation, seminar and exhibition markets.



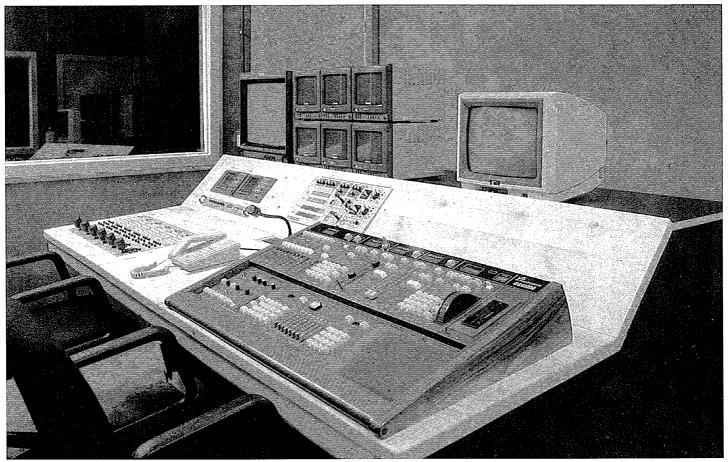
Ministerial visit: director Jean-Pierre Dauzin with ministers Georges Desir and Charles Pique (left to right in centre group).



The glass pyramid of LBO, complete with solar roof panels.



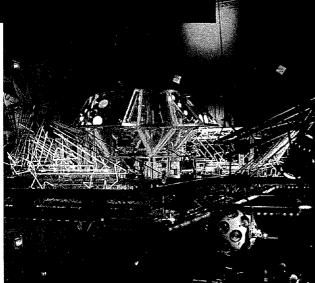
Another view of Studio 1.



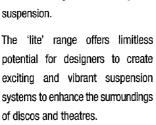
Strand Gemini memory control system in the lighting control room, Little Big One Studio 1.

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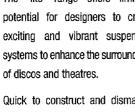


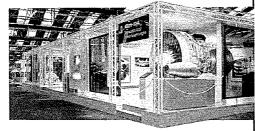


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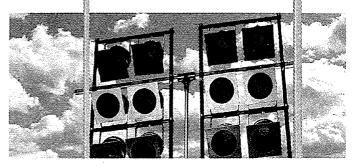
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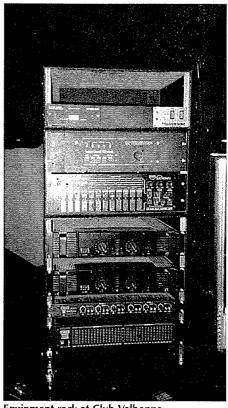
Vincent Rice visits Reading's **Club Valbonne**

Far from the multi-million pound corporate city centre and greenfield discotheque complex, designed to part the fun-loving eighteen year old from his or her latest wodge of disposables, there exist, of course, smaller, less frenetically fashionable facilities for the more conservative and perhaps older punter. Indeed, considering the changing demographic make-up of this country these clubs may inherit the entertainment dollar of the nineties.

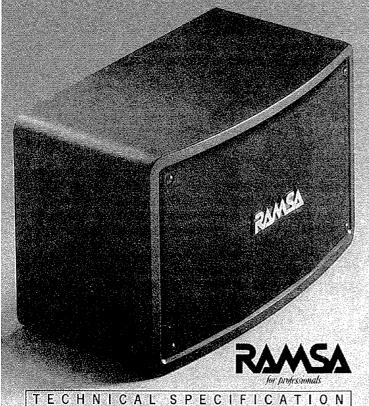
One such venue is the Club Valbonne in comfortable middle-class Reading which, judging by the opening night, wishes to appeal to the great and good of that town, and while general manager Gary Evans professes a target audience of 'over 21s' they were the oldest 21 year olds I have ever seen. This may have something to do with the shrewd connection Gary has established with the local Chamber of Commerce who had been irregular users of the club's previous incarnation as Caversham's.

The owners of the site, who also own Studio Valbonne in Maidenhead and interestingly the Mermaid Theatre, had their hands forced somewhat by Gary's natural ambition to refurbish the red-velvet-plush-with-boudoir-overtones of Caversham's into something a bit

more contemporary. He simply designed the interior himself, engaged the contractors and told the directors they really ought to send him some money to pay for it - which they did. The walls are now covered with a blue/black speckled reflective finish which is attractive, but takes a back seat to the main feature - an ultra-violet sensitive carpet in shades of blue with a Valbonne script repeat. The UV tubes neccessary for the effect abound and although the feature works well it means an embarrassed living hell for those of us with dandruff! Background house lighting is taken care of by the regulation issue mini halogen spots and pseudo-art deco wall lights. Not Tokyo's Cafe Bongo then, but a sophisticated and appropriate feel. Gary was also shrewd enough to realise that even the more mature members of his clientele grew up with the modern concept of discotheque and though 'old and boring' they expect a high level of sound quality and lighting excitement. Enter the ever-enthusiastic Simon Spragg of the Orange Discotheque Centre in Reading to design a suitable lighting and sound scheme with a budget of £15-20,000. The ancient building in which the club is housed provided the usual problem: a ceiling height over the



Equipment rack at Club Valbonne.



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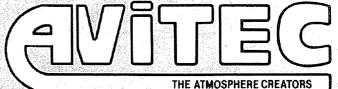
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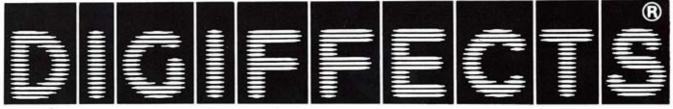
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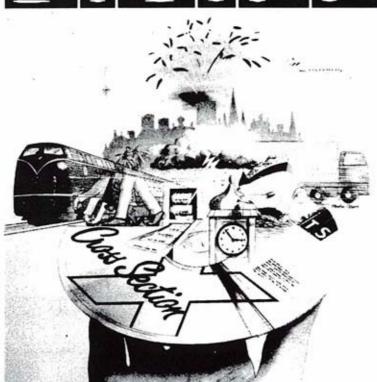
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Theatre Sound & Lighting (Services) Ltd 67 Drury Lane, London WC2B 5SP Phone: 01-836 7877/8 Fax: 01-836 7879 dancefloor of only three metres and no way of increasing it. A two dimensional rig of black painted 'DeltaLine' was considered to be the order of the day, the ubiquitous Trilite ruled out on the grounds of size and cost.

The rig consists of a square surrounding the dancefloor with four 'chevrons' of DeltaLine almost meeting in the middle, giving eight 'spokes' on which to hang the lighting; the bread and butter of which is a large number of standard Par 36 pinspot fittings. These were fixed in a slightly unusual way in that they weren't fixed at all! The yokes of the spots were undone, the free end threaded through the DeltaLine bracing and the yoke reconnected. It doesn't exactly give you precision positioning but it saves on bolts and they ain't gonna fall down. The outer square of DeltaLine is lined with Sparklites punctuated by Coemar Spartans that outline the dancefloor.

The rest of the lighting is, as is usual these days, a positive orgy of sound-activated lensed effects. Placed centrally above the dancefloor is a Nisel Spaghetti Mix, (perhaps an inappropriately three-dimensional effect for such a low ceiling) flanked by two Starballs (ditto), sweeping Starfans and four Optikinetics Par 56 Soundscanners in a horizontal orientation. More successful were the outer Moonflowers and Sundancers facing inwards onto the dancefloor. These effects come into their own in a cramped situation such as this and offer a lot of effect for a reasonable amount of money. Squeezed between the top of the rig and the ceiling were four quartered circles of matrixed neon in red, green, blue and orange which were very effective as neon always is. When in full flow, controlled by the flexible Mode U8TC Controller, the lightshow was of course spectacular and the good people of Reading Chamber of Commerce were naturally impressed. I couldn't help



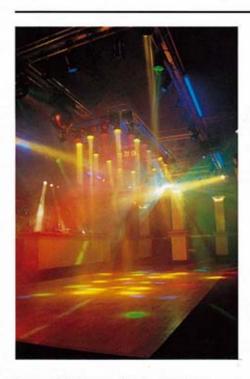
The rig, Club Valbonne.

feeling though that a little more effort in the final positioning of effects and their colour gelling would have paid dividends. Pinspots were pointing straight down which isn't the most effective position under a low ceiling and they were gelled in a seemingly random fashion in the sort of colours that I thought went out with boiled sweets!

Soundwise things were very good with four JBL Control 12s and JBL soundpower bass cabinets being driven by two Hill Audio LC800s with Cloud graphics, crossover and mixer. Things sounded well controlled although the JBL's tendency to an aggressive top end hadn't been subdued by the equalisation yet. Again a bit more effort in

finishing off may have paid dividends, but frankly that's a bit of a nit-pick.

To actually hear the system was a relief after suffering the cabaret band for what seemed an eternity. I was beginning to think that I was going to die of boredom. It then struck me how pleasant it was to be in a club where all the guests were well-dressed and polite. There was no fear of mugging or violence, drugs were not being openly used etc, etc. The band struck up their rendition of 'Yellow River' and a flood of pubescent. Spanish holiday memories came over me. Still that's my problem and not that of a club that has been well targetted at its chosen audience and will undoubtedly be a pleasant and successful place for years to come.



Nightlife at Stella's

Bromley-based Nightlife have just completed a £30,000 refit at **Stella's** nightclub in County Durham. Nightlife were the main contractors designing, supplying and installing a new disco sound and lighting system, a cabaret lighting system, stair nosings and background lighting. The sound system features a Rane MP24 mixer, together with DDA crossovers, Rane's ME15 graphic equaliser and Ohm speakers.

A custom-designed aluminium space frame is home base for 56 pin spots, eight scanners, two sweepers and effects lighting in the form of a 12 lamp Harvester. Also featured are two Ray balls, lengths of Arc Line, with two Fanlights and ultra-violet tubing. Providing the atmospherics is JEM's ZR20 club smoke machine, and control of the lighting hardware is provided by a Mode 8TC lighting control system and Arcline controller.

For the stage lighting system, Nightlife installed four Par 56s, four fresnels, and a Pulsar lighting board. The background lighting system features dichroic spots, 12 pinspots and two Mode slide dimmers. Nightlife also installed decor tubed stair nosings.

Oldham Street Dry Bar

A capacity for over 500 thirsty drinkers, served by a 25 metre length bar, with a choice of over 75 brands of whisky, 11 brands of vodka and a range of unusual beers from across the world, are just some of the lively ingredients in one of Manchester's most popular drinking houses, The Dry Bar.

Following their earlier successful design of The Hacienda nightclub, leading interior designers, Ben Kelly Pesign, were asked by the club's owners to reproduce a similar artistic and imaginative design for their proposed new bar. The Oldham Street bar incorporates many of the popular features of its Hacienda sister — the identical austerity, and generous use of natural woods including Japanese oak, American walnut and Swedish pine. Telegraph poles, unclad walls and pipes complete its informal atmosphere. Stark, uncovered floorboards, plywood chairs and a brass footrail running the length of the bar,



create a scenario reminiscent of a bar from the roaring American twenties or more recent Australian outback. The dry arid decor is further enhanced with an atmosphere of sophistication, endorsed by Manchester's young and rapidly-growing number of affluent inhabitants.

The 150 square metre bar provides a wide choice of music through its three independent sound zones. Sound reinforcemnt for the bar was provided by sound specialists Wigwam Acoustics. Director of both The Hacienda and The Dry Bar, Paul Mason, chose Wigwam following their successful installation with The Hacienda.

The sound system was designed to accommodate the bar's internal sound-reflective walls, ceiling and floor, and had to reproduce the highest quality hi-fi reproduction, with the additional flexibility to expand the sound system at a future date. Four Sherman Audio Gx-A Club loudspeakers are suspended with a central cluster for the main bar area, with two Sherman Gx-A Micro speakers used for infill. A Yamaha MV422 mixer was selected to provide multi-choice

inputs, which includes video and AV programmes, along with a Formula Sound SE219 system equaliser.

Music is sourced from Denon multiplay compact disc and cassette desks, and is faithfully relayed through HHV800 amplification to the main loudspeakers.

Since its recent opening, the bar has outlived its arid name and the second expansion phase is due to begin shortly. Wigwam are now poised to complete the final stage of the complex.

Dancin' Thru The Dark

Written by Willy Russell and the result of a joint venture between Formost Films and the BBC, the film Dancin' Thru The Dark is now on general release. Production designer Paul Joel of the BBC approached Lizard Lighting Designs of Thornhill in July '89 to discuss requirements for the film which focuses on Branskys nightclub in Liverpool. The set was erected in an ex-bingo ball, formerly a theatre, owned by Mecca. Lizard Lighting's brief concerned the lighting over the dance floor which was to be mounted on a rise and fall rig. The film's makers didn't want 'up to date' or state-of-the-art equipment, but specified slightly out of fashion equipment to reflect a typical club.

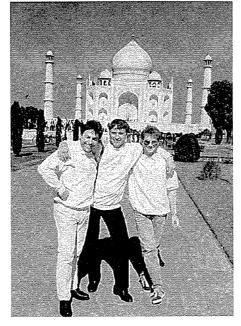
Hi-Tec Electrical Services supplied and installed the rig on a hire basis commencing mid-August '89 finally striking the set on the 1st September last year. Leeds-based Infinity International supplied and installed 60 square metres of 'infinity' illuminated glass flooring which, at the time, was the largest single floor area they had produced.

The lighting over the dance floor consisted of Par 36 pinspots, F 70 spots and Par 56 floods. Movement came from Helicopters and scanners as per the brief. The rig was custom-built by Dagar Contracts of Widnes, and although 10 metres wide the whole was lifted by one central point.

Effect lighting over stage comprised Par 64 cans with either CP61 or 650W Raylights, Strand Lekos and Par 56 Raylights, together with two smoke processors. Hi-Tec personnel had to be on the set at all times during the hire period as rigging was repositioned shot by shot for both the dance floor and stage areas during the making of the film.



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Pictured outside the Taj Mahal at Agra are Chris Bradbury (left) and Phil Roper (right) of SuperVision with Ron Peak, a senior executive from Inn Design. SuperVision are no strangers to the international market. They have four contracts in Cairo alone, and numerous other projects, in various stages, across the globe.

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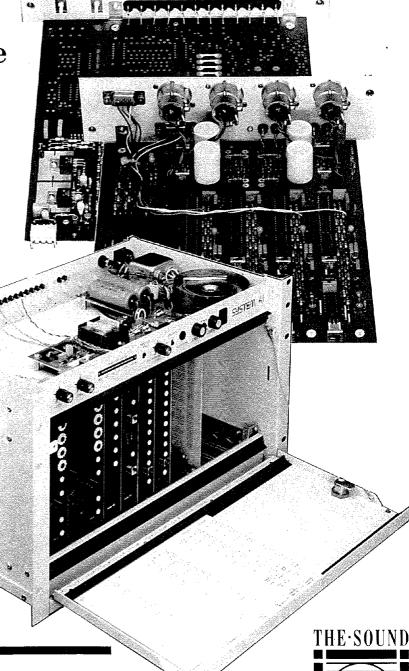
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SIM: ACOUSTIC BY DEMAND

Ben Duncan outlines Meyer Sound Technology's SIM Equalisation System

SIM (Source Independent Measurement) is a new and advanced kind of electronic processing that's capable of making music and speech performances much less dependent on the acoustics of the concert hall. Traditionally, concert halls have been built with long reverb times which have suited classical orchestral music, but not other styles. Moreover, the acoustic qualities change dramatically as an audience fills a venue, increases absorption across a wide range of frequencies and then goes on to change its temperature and humidity.

Then later, when they feel warm, they take off their coats and the absorption changes again. Stage lighting also creates dramatic changes in temperature, hence the velocity of sound. To a great extent, poor or unsatisfactory acoustics can be overcome by acoustic treatments, by using loudspeakers with suitable dispersion and by careful siting based on extensive measurements, analysis and iteration (a euphemism for 'cut & try'!). This is fair enough for permanent installations, but for touring performances, theatre and music sound designers need a rapid and flexible method to overcome and/or tune the room's acoustic characteristics.

Over the past 16 years, concert halls have been routinely 'analysed' with pink noise and graphic equalisers have then been adjusted to give a 'flat' response. But in the wake of TEF (Time Energy Frequency) analysis, sound engineers have been made increasingly aware that this technique upsets the direct soundfield at the expense of improving the reverberant portion. And a very accurate analysis requires a slow sweep, so it can take an hour or more to thoroughly analyse every frequency between 20 and 20,000Hz. Moreover, the pink noise test signal can only reasonably be applied when the audience aren't present, and when the sound system (and auditorium) is reasonably quiet. Which means that the analysis and equalisation can't possibly account for the varying effects of an audience, and the progressive changes in acoustics that occur during a performance.

SIM Development

Meyer Sound Technology's SIM equalisation

system has been developed to overcome these problems. It can measure and monitor the room acoustics non-intrusively. It doesn't require pink noise of test tones, but instead uses the actual programme material as the test signal. This means that measurement can be carried out throughout the duration of a performance. SIM compares actual performance on a line-by-line basis throughout the spectrum at the console output, with the same performance in the venue, as monitored at several mic positions. The signal's amplitude and phase can then be adjusted so the sound in the auditorium is as intended. Whatever the output of the console, it can be monitored at several microphone positions across the venue and its amplitude and phase checked always provided the signal has energy at all frequencies of interest. When used with a properly aligned sound system, the outcome is much improved sound clarity for every member of the audience.

For SIM to operate successfully, the speaker system has to be arrayable. The individual speakers need to be very linear and have low



Andrew Bruce, managing director of Autograph Sound, with the SIM system at the Piccadilly Theatre in London during the SIMing of 'Metropolis'.

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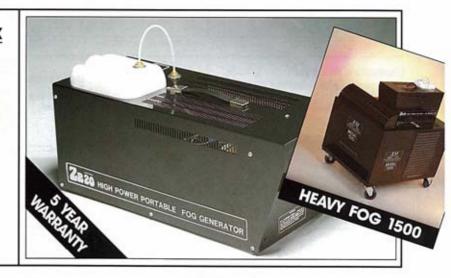


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distortion at realistic sound levels as well as having a flat amplitude and 'linear' phase response. Overall, there should be no abrupt variations in the frequency response measured across the auditorium. Thus far, the SIM system has been operated with Meyer Sound's own speaker systems. However, there's no insuperable technical reason why it shouldn't be used with other high quality speaker systems.

Using SIM

The SIM system is operated by a dedicated engineer, trained by Meyer or their agents. Several mics are placed throughout the auditorium. The positioning isn't unduly critical, but still requires a 'feel' for the

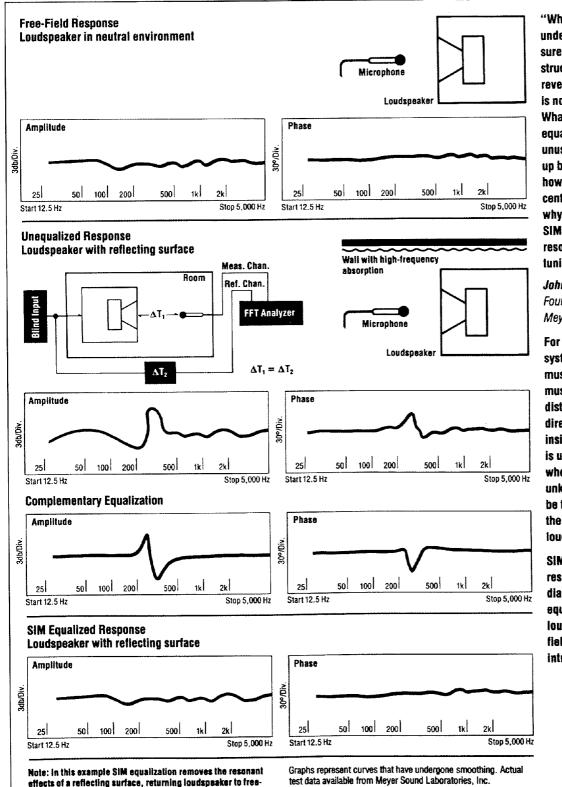
acoustics, so a representative sample of the soundfield is obtained. A microphone 'switcher' box provides phantom power, contains an SPL meter for monitoring the mics, and selectively routes the mics to the SIM engineer's position.

The monitoring is handled by a Hewlett Packard ('HP') 3582A, which is an FFT (Fast Fourier Transform) spectrum analyser. Compared to everyday audio analysers, it's much more precise for a given reading speed. It's also a good deal more expensive, but being a general purpose scientific/industrial instrument, it's readily rented almost anywhere in the world. The analyser screen displays not just the music or speech spectra, but also amplitude and frequency data, together with

a graphic display of *coherence*. Coherence refers to the machinery checking that the signal it's receiving is actually caused by the stimulus sent out by the PA. If, for example, mic No. 3 picks up noises from the adjacent portion of the audience, the coherence will be low, and the system will 'intelligently' reject the data from this mic, automatically restoring it when the coherence recovers. The brains of the system is a PC, which runs the SIMCAD software. Aside from crunching numbers, it's used to control the line and mic switchers, as well as controlling a delay line to facilitate rapid measurements of the key parameters.

4

The SIM system sees the room response (which is a complex sum of all the ripples and anomolies created by reflections and inter-



"Why SIM works will be understood, eventually. We're sure it has to do with echo structures being ordered—the reverb of an explosion in a room is not random, just complicated. What's important now is that SIM equalization does work. It's not unusual for mechanisms to show up before theory—we knew how to navigate by compasses centures before we knew exactly why they pointed north. With SIM, we have a tool to remove resonant effects and assist in tuning a performance space."

John Meyer

Founder and President Meyer Sound Laboratories

For SIM to work, the sound system's free-field performance must be a given. The speakers must be linear and free of distortion, with a known directional field. Otherwise, once inside a space, current technology is unable to determine where to begin. The only unknown in the system should be the object of measurement: the room interaction with the loudspeaker system.

SIM can remove unwanted resonances. The adjacent diagrams illustrate SIM equalization returning a single loudspeaker to its original, freefield performance, despite the introduction of a reflecting wall.

field performance.

ference patterns) as an analogous series of electronic filters. Using algorithms (calculation routines) developed for electrical network analysis, it can then compute complementary correction signals. It can do this very quickly, so the required correction can be defined before the data on which the correction is based is itself out-of-date!

Corrections to phase and amplitude prompted by the analyser's display are applied manually, using the Meyer Sound's unique CP-10 Complementary Phase Parametric Equaliser. With a resolution of 1/10th of an octave, the changes can be highly specific, being three times narrower than the usual third octave graphic equaliser. Meyer have found that finer resolution serves no purpose, because even a slight repositioning of the mics then throws up a different set of measurements. Two CP-10's are used, one in peak mode and another put in the dip mode. As the Q settings are the same, (to cover 1/10th octave in either direction), there's no accumulated delay of the electronics, which is very tiny indeed. Typically measured in nS (nano-seconds or thousandth millionths of a second), it's easily small enough to be ignored in the context of acoustics. Meyer point out

that the phase response 'doesn't just improve ... but actually goes back to zero'. This is to say that as the EQ applied is precisely targetted, it accurately cancels both the amplitude and the phase variations. Less precise systems used hitherto can smooth amplitude aberation acceptably but phase can easily be worsened. The process of smoothing a given phase response is much more critical than amplitude, all the more so when there are lots of high Q 'spiky' resonances. Though Meyer's equaliser challenges some preconceptions, it breaks no laws of physics and reminds one that 'wiggles' in the frequency domain and phase domain always co-exist.

Meyer claim that the SIM system has the ability to 'erase' the sound of the room, leaving the sound designer to his or her own devices. Overall, Meyer's SIM system means that the apparent acoustics of any room or auditorium can be changed, removed and restored to taste.

Further Reading:

John Meyer, Equalisation Using Voice and Music as the Source, AES 76th Convention, New York, 1984, preprint No. 2150.



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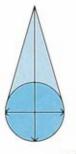
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CELESTION: LOOKING TO HIGH POWER

Tim Frost talks to professional sales marketing manager Glyn Baxter

The name may have been established since the 1920s, but the revitalised Celestion of the last two years is more interested in the future than celebrating the past. The company has also seen new key management appointed, with MD Gordon Provan joining in 1987 and Glyn Baxter professional sales/marketing manager within the last year.

With the introduction of the SR series, Celestion has taken on a new sector of the pro speaker range, going beyond drivers to full systems. The original SR1 proved very successful for the company and has been followed up with more in the range: the SR2 bass box, the small SR3 and even smaller SR Compact. These speakers have quality industrial designed moulded cabinets that compete aesthetically with the best that America or Japan can throw at the market. Definitely designer boxes.

The company is part of Celestion Industries which has activities ranging from speakers to clothing manufacture. The total speaker business accounts for around a third of the organisation's £35 million turnover, making it a substantial operation in anyone's books.

The company started in the business of PA and industrial speakers, and moved into hi-fi in the 60s with the famous Ditton range. Ditton had become so synonymous with Celestion that in more recent times there has been a certain amount of effort to drop the name from the hi-fi range, re-establishing the brand name as Celestion rather than 'Celestion-Ditton'. Now there is an equality of effort to move both hi-fi and professional speaker divisions forward.

Celestion have distributors throughout the world, with their own wholly-owned subsidiaries in France, Germany and the US, and with the appointment of Gordon Provan, the company became much more marketing-oriented.

Moving on from being engineering-led has been one of the key elements of the success of the company in recent years, according to Glyn Baxter. "It is now very much a marketing-led company and I feel that the change in policy has been responsible for the swing to the excellent business that we have now."

Many companies pay lip service to being 'marketing-led', whilst in reality keeping their old pattern of being directed by the salesman, engineer or accountant. At Celestion, the main thrust is to produce product that is designed to be as close as possible to the market needs, gaining business by building the proverbial 'bettermouse trap'.

When the market is an international one this requires a lot of intelligence gathering, and the distributors, wholly owned or independent, play a very important part.

"We market research internationally; we use questionnaires and have an ongoing market/RD-linked programme which comes out of special meetings with the distributors two or three times a year. In addition we have a long term development plan, which is fine-tuned as time goes on. The distributors discuss with us where their markets are going

and we discuss the product direction, and these are fairly aggressive meetings.

"We go through a photograph design stage and if that passes the test then we go to model stage, and take it step-by-step from there. You can't just throw product at the market and say 'get on with it'."

Celestion's pro business falls into the two distinct categories of speaker components and SR. A lot of the component business goes to OEM (Own Equipment Manufacturers) both here and for export, with a satisfying amount of OEM business in the US.

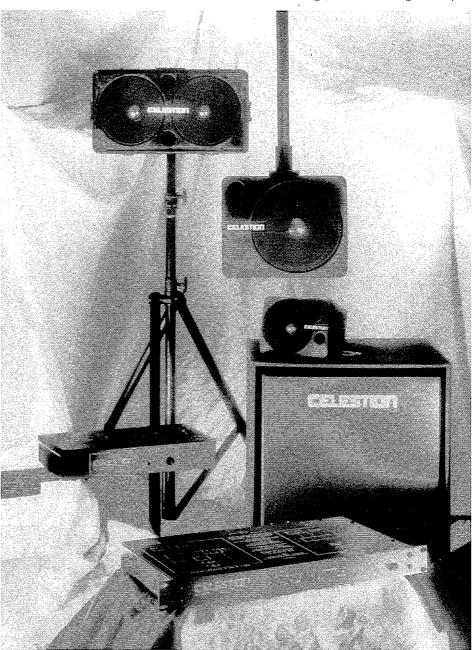
"On the OEM side we are selling a component," explained Baxter. "It must do the job day in, day out. It has to perform, and it has to work. The speaker is a major performance and cost component for manufacturers, and it is important that it delivers sound — reliably and at a reasonable cost.

"lan White, who heads R&D activity, spends a lot of time with manufacturer's R&D staff — matching components, trying to give the customer what he wants. However, much of the time there is off-the-shelf product to meet their needs."

Of the many manufacturers that Celestion supply, probably the most established relationship is with Marshall. There is no tie up between the two companies in any way — just the commercial one where Marshall need reliable, quality speakers and Celestion are very happy to have Marshall as a customer.

The popular belief that speakers haven't changed in 60 years still persists. While it is true that the basic principles are still those of the magnet, coil and cone; in terms of quality, frequency range and power handling, speakers today are light years ahead of their predecessors.

The K range, which is being developed



Celestion's SR Series: into a new sector.

now, has six drivers available in the 10", 12" and 15" categories and more to come. The highest power 15" has in the region of four times the power handling and higher efficiency, producing levels that could only be matched by between 10 to 30 equivalent speakers from the early 70s.

But in the area of drivers for back-line, some musicians are looking for that old, rich guitar sound produced by the distinctive early G12 drivers. So it was back to the drawing board for lan White to recreate the sound, but

with all the advantages of the modern driver. Glyn Baxter again: "There are those cases where customers have wanted to go backwards and reproduce 60s and 70s sounds. By careful acoustic management and using lasers to analyse an original G12, we have been able to recreate the sound with the Classic, Vintage 30 and G12M. These are getting back to the early sound, although the technology has moved on in adhesives, efficiency, power handling - all sorts of things.'

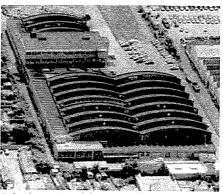
Laser analysis has played an important part in evaluating the performance of drivers and boxes. Celestion have established three groups of engineers, one each for the hi-fi and professional product development, and a third group for all-embracing research work.

The research group has two separate laser set-ups, one designed primarily for high resolution testing of diaphragms, and the second for smaller movements on larger objects like baffles and boxes. A lot of the computer software has been developed inhouse, as they are working in an area which is still relatively new. All these systems allow the engineers to bypass an awful lot of number crunching, but the programme that designs the perfect speaker is a long way off.

The biggest single research problem to be resolved is finding out how materials work in



Glyn Baxter: "We market research internationally".



Celestion at Ipswich: 170 staff.

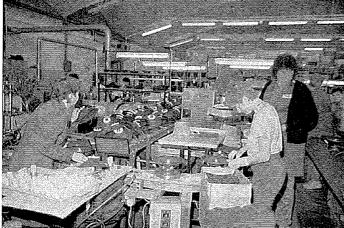
real life, rather than closing their eyes to the problem and pretending they work perfectly.

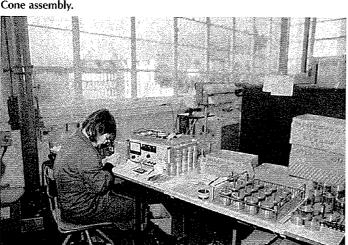
What these combined resources has allowed Celestion to do is develop the driver for the SR. This is an ingenious 8" driver that is capable of a flat response from 60 to 20kHz with the aid of a little eq. There are two ways of producing a single full range unit, one is by whizzer cones extending its range by causing resonances within the unit and the other is to try and make the driver to work as pistonic as possible, out as far as possible. As they had been doing a lot of research using lasers on hifi hard domes for some time they decided there was an ideal opportunity to take a hard dome and put in the centre of a conventional cone loudspeaker and produce the HF by pistonic radiation.

The end result is an 8" driver with a bullet dome that functions as a very extended mid range unit. The rest of the extended response is tailored by the controller.

These drivers, as with most of the elements of Celestion's products, are assembled in the Ipswich factory by a manufacturing staff of around 170. It is a big operation that starts with preparing the copper wire for the coils at one end, and quality controlling the finished product at the other. There are separate lines and sections making absolutely everything for both the pro and domestic speakers. Some of the production lines date back to the hi-fi boom of the mid 70s and are now somewhat under-utilised as manufacturing techniques have become more and more organised and finely tuned.

The cabinets for the SR series are one of the few major elements that are not produced in the factory. These are made by specialist moulding companies, and two of the three SR boxes are produced in the UK. The moulding allows great flexibility in mounting options, and that has helped make the SR series, and

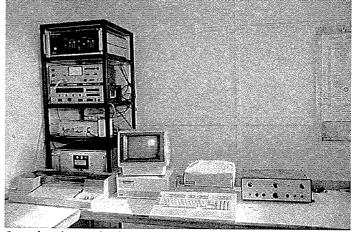




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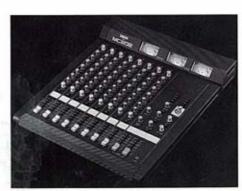
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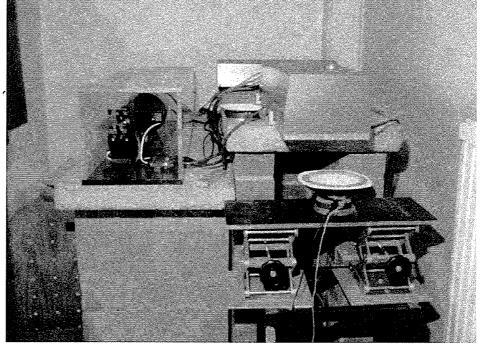
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especially the SR3 and Compact, popular in the smaller installation market — shops, pubs, restaurants and small clubs. Its perceived flexibility does create some problems though, as customers try and get a small unit to do the work of a big one, and Baxter is busy looking at ways to help users to understand how SR works and get the most out of the systems.

So where to next? Having established a stronger foothold in the quality PA component business, Glyn is looking to extend the range into the one area that Celestion has never really had any serious product — high power HF drivers.

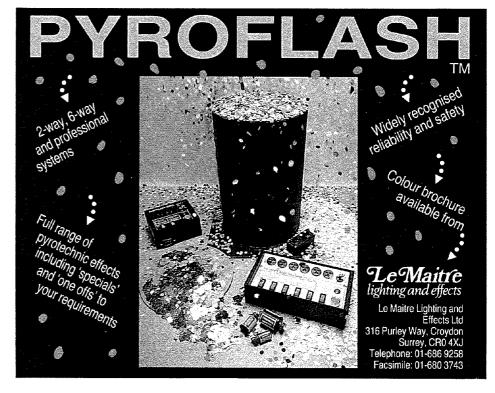
"The ongoing development will be to more PA chassis and looking for more on the HF side with a view to seriously beefing up the HF driver side — including compression drivers," he explained. "It is not frightening technology for us; in design terms we have a lot of existing technology and experience."

So after 60 years the company seems to be setting itself up for another step forward. Having done well in the American OEM market it will be taking on the Americans over here, tackling the US dominance in the high power PA component business.

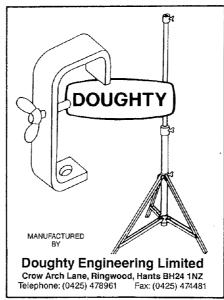


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SIEL 90: FIRST STOP IN EUROPE

Francis Reid and Ruth Rossington look at SIEL, Paris first show of the decade

Siel was the first European showbiz equipment showcase of the new decade. With only a couple of years until the much heralded 92 watershed of economic integration, what pointers did Siel offer for the future of European performance lighting hardware? What kind of firms will dominate? Will it be big internationals with comprehensive onestopshopping product ranges? Or smaller specialists with quick-response capability?

The basic decision for any manufacturer, wholesaler or retailer is whether to compete on price, on service, or on completeness of range. There are indications that it is impossible to compete on all three, and quite a challenge to do so on any two. Can direct selling by manufacturers survive? Or even selling by retail distributors handling only the products of one manufacturer? My crystal ball, its programme updated by eyes and ears at Siel, predicts an emerging pattern for the future: highly specialised manufacturers of narrow product ranges, with wholesalers distributing to retailers who are tightly focused on specific types of user.

The one major European firm who might just buck this trend is **ADB** who have the mighty **Siemens** to provide not just financial muscle but market dominance in the 'Siemens Towns' scattered over Europe.

Siemens have not forgotten that we are a people industry. On the ADB stand, I was delighted to find stability in the form of Andre Stuyckens in whom I have had confidence for nearly 30 years. (In 1963, he came within a whisker of selling me an ADB control for Glyndebourne.) Strand would seem to be the only other candidate for the really big time in both making and selling. But does Rank have enough politicoeconomic muscle in Europe? And enough long term investment faith in Strand? The industry is doubtless going to see some takeover activity. I wonder how Rank would respond to a Siemens bid for Strand?

My guess is that the biggest single shippers through Eurotunnel could be wholesalers like Cerebrum. But users will make their major buying decisions at a network of exhibitions like Siel. Indeed, this is already happening. The costs, particularly of personnel, for manufacturers appearing at an almost continuous sequence of trade fairs may be substantial, but it is at events like Siel that key decisions based on comparison can be made by buyers, and potential development areas identified by makers. Consequently, the future major marketing thrust of the manufacturers is likely to be an educational one: showing both user and retailer how to use their products effectively.

Where does PLASA stand in all this? On the evidence of Siel pretty healthy. British product showed a strong presence through what appeared to be a comprehensive French retail distribution network. But some UK sales executives are just going to have to expand their language portfolios. Your European distributors are too polite to suggest this to you directly, but many of them have expressed sorrow to me in confidence over the years. They are not looking for great linguistics, just some attempt. Perhaps PLASA should set up weekend language laboratories in multilingual light and sound conversation. (My board operator has been struck by lightning?)

So much for crystal balls. What of today? Moving lights have given way to digital dimmers as the fashionable gleam in the salesperson's eye. The lucrative prize is not so much new installations but replacing all those old analogue dimmers which have outlived several generations of control desks. Few of these old dimmer racks show much sign of any immediate intention to fail, so we users (including me) are going to have to be educated as to the benefits of change.

Some things don't change. Thomas remains king of the parcans, its Neithammer for long throws, Zero 88 for stylish packaging, Ludwig Pani for luxury, and



Thomas equipment on the Sonoss stand.



One of many searchlights: the Beam Dancer from Skywatcher.



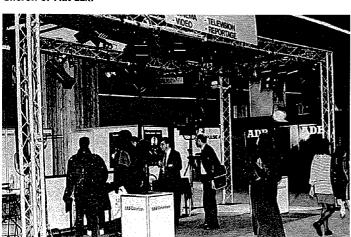
Larry Dane of Citronic (left) with French distributor Pierre Sebbah of EGTS.



Zero 88's David Catterall (right) with Jean-Paul Query of LCB, their new distributor.



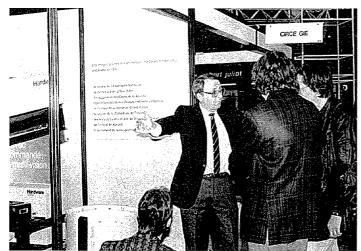
Mike Fisher and Rod Bartholomeusz of Cerebrum Lighting with Francoise Cheron of Fiat Lux.



The stand of Lee Colortran France.



The ever-busy emporium of Pariscene.



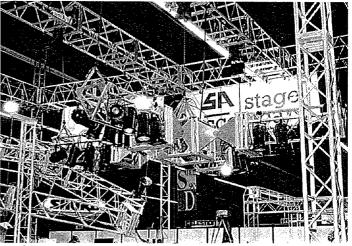
Yves Ruellan of Hardware Xenon demonstrates the beam throw.



Sapro: seven new products launched.



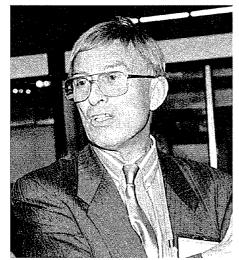
Alain Fayaux of Coemar France with Bruno Dedoro of Coemar Italy.



Another view of the Thomas set on the Sonoss stand.



Non-stop activity in the reception area of Pulsar France.



Andre Stuyckens of ADB.

Galaxy is still my favourite control.

However, if I needed to run a mixed programme of busk and plot shows, and could manage on 108 dimmers, I would look very closely at the Impuls from Arri which made its debut at Siel with Tim Burnham giving one of his very persuasive demonstrations. Each channel fader and bump button doubles as a submaster, giving, via two pages, a total of 216 submastered memories. Adding this to the system's conventional keyboard facilities (à la Imagine) and magic sheet options gives a particularly flexible desk at a competitive price.

My hunch is that customers will seek an extension to the 200 channels which are just about operationally feasible. Incidentally, another hunch is that ADB are probably wise to back the philosophy that remotes and



Arri's Tim Burnham with their new Impuls.

effects should not be integrated with intensity control but should be separate systems whose cues are triggered from the intensity desk.

Nothing much new in luminaires: the 1200 watt option has become universal and most makers have followed Strand into rotatable gates. However, anyone serious about the French market just has to offer a focus spot with a clear PC lens. And with Rosco diffusers, particularly Hamburg and Half-Hamburg, clear PCs could enjoy a more general revival.

Euro is becoming the favourite product adjective. Nick Mobsby started it all with

Eurolight, while **Eurotec** have a nice corner in fibre optics. Rosco are now offering apolyester Eurofilter (although I would have called it Eurogel), while ADB have Eurodim and the Europe series of spotlights. I expect that Zero 88 have a marketing plan coded Euro 92.

But it is the events in the east that promise dramatic change in the European market. With the currency hardening that will be part of German unification, Berlin's **Showtech** in May could well be critical to the fortunes of those who toil by lens, reflector, knobs and software. Anyone for Euroeast?

Francis Reid

Despite the hype from the promoters, Bernard Becker Blenheim, SIEL hasn't, as yet, managed to shake off its image as a domestic show. If this year's attendees are anything to go by, then it seems that the exhibition is withdrawing further into the French market. Overseas companies were not as much in evidence this year as they have been on former occasions, preferring instead to let their agents represent them.

This being said, Bernard Becker Blenheim claim that this year's show, covering 22,000 square metres, attracted over 300 exhibitors who had access to some 20,000 visitors (another hype?) over the four days. The organisers even brought the dates forward so that it wouldn't clash with other major trade exhibitions as in times past, and made a concerted pre-show effort to attract more international attendance. They engaged in a vigorous promotional campaign, with international advertising and representation at several industry trade shows.

Even though the signs indicate that every effort is being made to broaden the base of the show, it is arguably still the most domestic show on the exhibition circuit, in our industry.

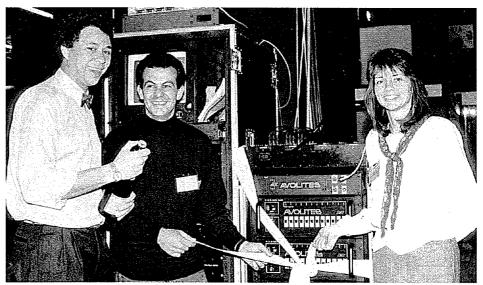
However, there was still much to be seen with several companies choosing to launch major new product lines against a Parisien backdrop.

Lee Colortran France were showing a completely new range of low voltage fittings geared towards theatre use. Amongst these were the mini Profil 90 and MR16 mini Striplight, alongside which were the usual fare of Windsor modular theatre lanterns, the budget-priced Powermaster dimmers, Baby luminaires, and the complete range of Molefay and mini Brute luminaires designed to take Par 36 120V bulbs.

Just across the aisle another British company with a French operation was going great guns when I visited the stand. Frederic Nguyen of CCTL, manufacturers of CCT luminaires in France, was demonstrating the Minuette range. Making its debut in France

was the Minuette 'Pursuit' follow spot, which, according to Frederic, is proving to be very popular.

The prize for the most new products on a stand must surely go to **Sapro**, one of the major French companies exhibiting, who displayed no less than seven. Amongst these was ColourScan, a four gobo/four dichroic colour projector with a dedicated controller that can drive up to four units. The Cannon Ray was one of the many searchlight projectors which featured at the show. It uses a 250W HLX with beam size



L+SI's Ruth Rossington goes into celebrity mode and helps to launch Avolites' new TV12/25 dimming system. Ready with the champagne is Steve Warren (left) with Oliver Bordini of Regiscene.

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A view down one of SIEL's long aisles.



Avitec's Volcano in action on the stand of Top Animation.



Looking in on the Coemar colour show.



Super Arcs on the TAS exhibit.

adjustment, and is designed for spectacular highlight effects. The PLX 250 projector throws a high power beam across two axes, and a gel in the projection gate offers colour beam conversion possibilities. Compactlystyled, it has a built-in sound-to-light feature.

Sapro's small display area was also host to the Scanlight 250 projector, and the 150 colour beam unit. The master unit is equipped with built-in sound-to-light, while its slave counterpart is synchronised to beat response. A multi-mirror projection system, the Proton, is another beat-synchronised unit and has a 250W beam. The Sound Flower 250 projector uses a 250W lamp to rotate coloured beams across two axes. Equipped with a built-in mic, it doesn't require any control facility.

There's more: the Epsom 12 beams effects projector was given its first airing at Siel. Self-governing, or sound animated by Sound Magic, Sapro's own controller, it has lamp rotation of 360° and a very high power 800W xenon lamp. A recently updated version of the double scanner Crazy Light was also shown, with its Crazy sound/light movement controller. Jivelight, as Sapro's agents in this country must be rubbing their hands with glee at the prolific output of this company. Also on the Sapro stand, I espied several ProgramSistem products, including their own smoke machine, together with Eurotec optical fibre and the Le Maitre LSX low smoke machine in demo.

Joanne Butler, was supporting Rosco's French agents on the Dimaphot stand. Prominence was given to the new Rosco Chiller Module, together with the 1300 budget fog machine. Also on view was Rosco Supergel and the new range of polycarbonate Blue Theatre Boosters, plus a new acrylic scenic paint aptly titled 'Off

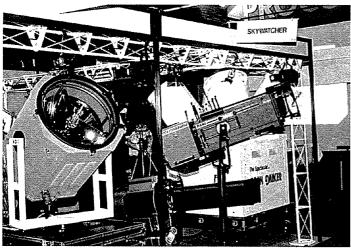
Broadway'.

Montreuil-based Hallier manufacture the MiniComète music reactivated response machine which was on the stand, rubbing shoulders with the Starlight and the Mistérelight. The largest lighting display area was devoted to Coemar, looked after by their French outfit, Coemar France, where on a stand with two open sides a healthy

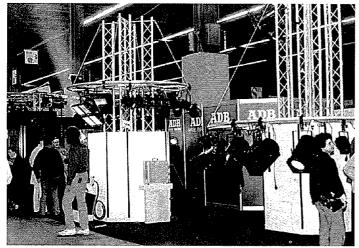


The Stacco stand. Most trussing on view was from them or British manufacturers Astralloy.

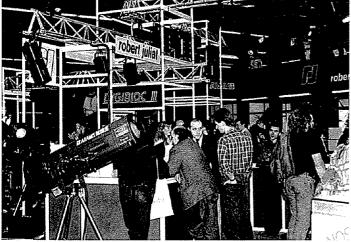




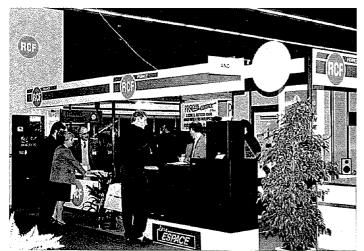
Pani and Skywatcher equipment on the Koogan International stand.



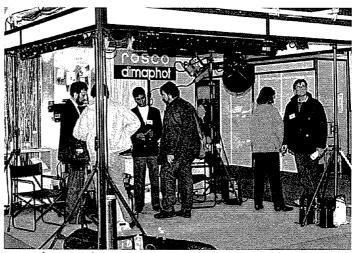
The Europe range neatly displayed on the ADB stand.



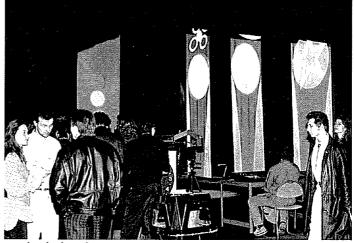
A mix of distributed and own product on the Robert Juliat stand.



The sound of France from RCF.



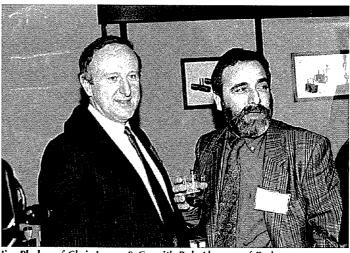
Rosco's base was the Dimaphot stand.



Another look at the Coemar display.



JEM's Heavy Fog draws the crowds.



Jim Phelan of Chris James & Co with Bob Abecera of Pariscene.

audience gathered for the regular displays of Coemar's artistic capability.

Making light work of things on the Regiscene stand were Steve Warren and Derek Halliday of Avolites who happily spent a good five hours trying to inject some semblance of dimmer know-how into my unreceptive mind. However, I did learn something. The Avolites centrepiece was the prototype version of the new TV12/25 dimming system designed to complement the existing FD series of high-density dimmers. With the TV series there are only 48 x 25 amp channels as opposed to the 72 found on the FD range, but each channel can run a 5k lamp at full load all day and every day, as the duty cycle is 100%. Aimed at the TV/Studio and presentation markets, an aluminium heat sink working in conjunction with two fans keeps the whole unit thermostatically controlled. Extensively tested, the curved filament helps reduce vibration and noise levels, and the modules incorporate a DMX512 input, three phase supply and a high level of status indication. I knew it was time to move on when the diagrams came out.

Naturally, no Avolites line-up would be complete without the QM500TD, along-side which Regiscene men, Yves le Bail and Oliver Bordini, were demonstrating the QM180 Way, the Q-Patch system, the Rolacue and Geljet Version 2. On the sound side, Regiscene were also exhibiting products from Turbosound, BSS, White, DDA, Diless and Modulation Sciences.

Citronic were exhibiting with their newly-appointed French distributor, EGTS. Larry Dane and Debbie McCaughan were assisted by Pierre Sebbah, head of the sonorisation department at EGTS. On display was the new CD Console 2450 which made its first appearance at the PLASA Light and Sound Show last September. Larry Dane informed me that two had actually been sold during the four days of the show. He also noted the positive response from the French market that their installation separates range was generating.

Diversifying their range with a new microphone, the GM 100, **Bouyer** were adding to their comprehensive handheld transmitter product line. Fane, Harrison and Martin Audio products all featured on the Camac Audio stand, and Celestion France had three new speakers from the High Tech range, together with two new amps — the 18300 and 18500. Audilec made their usual appearance on the RCF stand, and C Audio products were to be found under the wing of Sonofrance.

Mervyn Thomas and Andrea Rose were on hand to demonstrate the James Thomas' range of aluminium Par fixtures and custom trussing courtesy of French distributors, Sonoss. Also on display was a compact sound system 'The Performer' from Stage, and a new SA1600 amplifier. From Sonoss themselves, a remote controlled electromechanical chain motor, and from fellow French company Liftec, the motor commander system — a computer-controlled lifting chain mechanism, ably put through its paces by Michel Verlinde.

London Acoustical Developments products were to be found on the LAD France booth, including a range of digital samplers and mixing consoles. Hill Audio's Stage Mix console was on High Fidelity Services stand with the Kendirgi family present to demonstrate as necessary. Electronics U16 series appeared on the Ariane stand with, from the French company's own range, two projectors for disco application, the Nevada and the Butterfly. The former is a laser effect equipped with 24V lamps and a dichroic mirror, and the latter is a four gobo/four colour projector with music chronisation.

Yves Ruellan on the **Hardware Xenon** stand returned with their range of followspots and high-power projectors. The follow spots feature five lens zoom that enables beam variation, together with optimised cooling of the filters, iris and gobos.

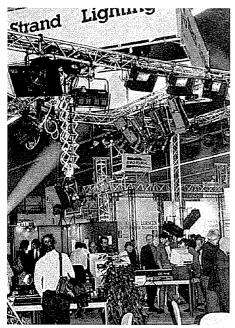
Cerebrum Lighting and sister company Presentation Consultants were supporting French distributors **Fiat Lux** who formed part of the **Stacco** contingent. On show were the Powerdrive range of lighting and audio stands and the ColourMag with MoleMags and mini MoleMags which Cerebrum's Mike

Fisher hopes will be used on Jean-Michel Jarre's forthcoming tour. Hanging from the Stacco trussing was a range of Amptown Posi-Spots and ACC Colourchanger rig. Also to be seen were White Light optical effects including projected flame and cloud effects together with a tubular ripple effect. At this the end of the first year for the Fiat-Lux/ Cerebrum relationship it was a chance for the UK company to assess how its French counterpart was doing - seemingly quite well if the grin on Mike Fisher's face is anything to go by. Incidentally, those who visited the exhibition last year may remember the impressive Arc De Triomphe structure erected by Stacco. This is a company with a big slice in the trussing market in France and a lot of their hardware was to be seen harbouring many diverse products at the show.

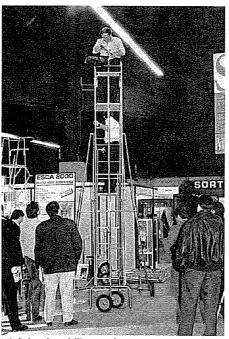
Soundtracs agents, Lazare Electronic were also on the Stacco stand and proudly displayed the new Soundtracs SPA sound reinforcement console. The SPA is a high specification, 'lightweight' console aimed at sophisticated sound reinforcement installations. Designed primarily as a front of house desk, the SPA can be reconfigured via a single switch on each group to double as a monitor desk.

Canford Audio, under the banner of Canford Audio srl established in December 1988, were showing a selection from their product range of over 4,000 items. Jenny Morgan, Canford's export manager, guided me round the Soundtech mixer, editing equipment, connectors and to the recently extended range of Bodge accessories.

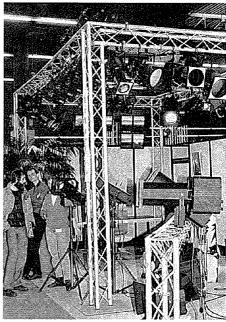
J Collyns always maintain a strong presence at Siel and this year was no exception. Their stand featured a range of stage lighting products, including the TL range of lighting consoles/effects generators, theatrical projectors and spotlights from Fal, Italy, the MK32 console, Pro 2001 mixing console, Europa modular mixing console and the new Micro MP 365. Also on show was the DJ scratcher RSC 200, along with a host of products from Chesley. Part of the stand was dedicated to the new range of professional smoke machines from JEM, who manufacture the Master Fog



Strand Lighting France — a comprehensive range.



High level mobility on the Esca 2000 stand.



CCTL launched CCT's Minuette Pursuit follow spot in France.

which Collyns sell under their own label. Jon Petts of JEM was discussing the fine tuning of the smaller version of the Heavy Fog machine as I listened in.

A further area of the Collyns floor space was given over to Austin-based High End Systems who were demonstrating, not a new concept, but a new product at the show — Lightwave Research's Intellabeam which was getting its first European showing. Released at LDI, Nashville, the Intellabeam is a highly articulate projector and was developed in less than a year to directly rival the Golden Scan after the much publicised fall-out with Clay Paky. Its features include (the list is almost endless): 12 dichroic colours, variable beam sizes, 12 gobos, together with the complete range of motorised functions which are speed

controllable. The Intellabeam is able to animate the light beam by means of an extremely swift scanning mirror assembly which can scan to 170° of pan and 110° of tilt. The system uses a MSR400 lamp (not a common feature) which, the company claim, is dimmable to 40% making it póssible to execute cross-fades from one fixture to another, and which draws only 4 amps at 240V. Better optics allow the use of these smaller lamps, the only other dimmable intelligent light of course is the Varyscan. Control is via a dedicated 24 channel programmable panel, which has nine memories, each one containing 99 scenes therefore facilitating 891 programmable scenes. It also has master and slaving capabilities, and as Tony Monday, head of international operations at High End Systems explained, the Intellabeam is not restricted to the discotheque market, but will find application in the theatre world because

of its precise, intelligent disposition. No doubt High End will be worth a visit at SIB/ Magis in Rimini as Tony hinted of more interest to come.

Pulsar France were intent on showing the versatility of OSKA. Much of the Pulsar range was to be found in the black-curtained mini showroom that has become synonymous with the famous 512 channel controller. Pulsar marketing director Derrick Saunders was keen to emphasise that whilst Clay Paky Golden Scans provide part of their income, it's the bread and butter lines which keep the company going on a day-to-day basis.



SIEL 90: 22,000 sq.m. of exhibits in one large hall.



Tony Monday of High End Systems on the J. Collyns stand: first European showing of Intellabeam.



Part of the Celco range on the Pulsar France complex.



More queues for Coemar's Jupiter show.



More equipment from major French company, J. Collyns.



Celestion France: three news speakers, two new amps.

There is no comparison!

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FEATURE	DESCRIPTION
Fading color	Fade or bump color. Fades directly from one color to another.
Rotating gobos	Rotate gobos in either direction with variable speed.
360° Continuous Pan	Uninterrupted 360° revolution.
Zoom optical system	As beam size decreases, intensity substantially increases.
Mixing gobos	Create new gobos by mixing existing gobos.
Color correction	Correct light source for TV, film and video lighting as needed.
Zoom pattern system	Control pattern size with zoom. Pattern remains in focus.
Designer option scroll	Designer choice in adding custom colors and effects for each application.
Pre-programmed cues	A library of pre-programmed movement and effects in the fixture.
Soft-edge light	Soften edge of light beam.
Basic features	HTI 400 lamp or equivalent; color, gobos and aperture/iris systems.

PC Spot.

It's obvious that there is no comparison between the PC Spot and other moving lights. Just look at how many more features we offer! For a better look at the PC Spot, contact: Pan-Command Systems, Inc. 1271 Alma Court, San Jose, CA 95112 (408) 297-7262.

Distributor inquiries welcome. Patents pending

PanCommand.

Andrew Graves was the man in charge of OSKA on this occasion. He designed and programmed the formidable lightshow, and like Merlin he held court to spellbound onlookers. Even Ken Sewell, who must have seen the show at numerous exhibitions, looked for all the world like he was seeing it for the first time.

Nestling under Pulsar's umbrella were Celco who were showing their full range of lighting control equipment including the Celco Gold, Celco 60 Major, the Celco 30 Major and the Celco Baby. New man Thomas Rheimann was on hand to assist Keith Dale and Colin Whittaker with their sales pitch. Le Maitre were also part of the Pulsar France collective. On display were the new two-way and six-way controllers. The two-way features a logic testing facility, whilst the six-way has four separate firings per channel which enables the operator to set up four separate scenes without reloading. Also on the stand was the new Icelectric budget smoke machine.

An interesting byline to Pulsar's presence at the show are the plans for Pulsar France. Clay Paky are to buy a half share in the company which will directly give more financial resources to allow expansion of the warehouse and showroom facilities, and leave some spare cash with which to heighten the market profile of the French operation. This is due to be finalised in the not-too-distant future and will coincide with the launch of new products developed by Clay Paky. One such will be the Superscan which will be first seen at SIB/Magis in early April, the low down of which will appear in our May issue. And if anybody should ever question the usefulness of attending exhibitions they should consider the parting shot from Ken: "We have over 1,000 enquiries per show".

Paris-based **Robert Juliat** were demonstrating the Avab Expert range for which they are distributors in France. Along with these they had their own range of HMI follow spots highlighting events. Teatro, Arri (see Francis Reid's comments) and Chris James & Co all made their individual appearances on the **Pariscene** stand where the ubiquitous Bob Abecera was entertaining the troops.

Zero 88 continue their relationship with Jean Paul Query, formerly with Juliat, who is now distributing their products through the newly-formed **LCB** operation. Generating a lot of interest were the four new simple lighting desks in the Level series. Designed

to complement the Betapack dimmers launched at last year's ABTT, the new range of 6,12,18 and 24 circuit desks are intended to pave the way into the education market. With a 12 month development period, David Catterall, Zero 88's sales manager, feels that the new products have filled a gap in the company's range. The entire discotheque range was also on display with the Sirius, the Orion, the Touchlight 12 and the Mercury Sigma switching pack all featured. LCB was also acting as distributor for the Neithammer range of spotlights.

This year's show, however, was dominated by the number of high power searchlights which were evident on various stands. On the Koogan International stand, long-time host to Ludwig Pani effects projectors, a very impressive searchlight, the Beam Dancer, was on display. Also to be found on Texas-based Skywatcher's stand, the light has four 250W rotating xenon searchlights with 130 million candlepower per light. The Beam Dancer moves continuously in an oval pattern at about 9 rpm swinging out 45° from the vertical and returning for a simultaneous pause which combines all four lights into one powerful beam column. Koogan's Pani equipment included the Pani BP6, BP4 and BP 1,2, but sadly Mr Sorger was not present to add a touch of Austrian flair to their demonstration.

On the **Mitecom** stand was Mitecom's own high power spotlight, whilst the **Cunow** stand was host to the Skylight, a revolving powerlight from STX. The Italian company Space Cannon displayed a new range of power spotlights on the **Music Atelier** stand. The searchlights are composed of 1-4 xenon lamps that turn around a shaft bowed in such a way that the lights revolve on an axis of 45°.

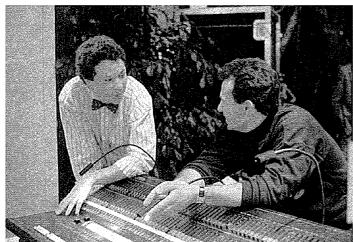
The SuperArc range of searchlights are a result of design cooperation between the two Italian companies, TAS and Xenon, and appeared on the former's stand. Available in three versions, the most sophisticated is the SuperArc 4 which gives greater floodlight angular covering than its SuperArc 3 and SuperArc 1 contemporaries. The four-light unit, like most of the searchlights, oscillates rotationally on an axis and can be supplied in 2500, 4000 or 7,500W versions. Powered by a 380V motor, its high intensity xenon lamp can be seen up to 20km away.

TAS were also displaying their comprehensive range of pinspots, along with a selection of their specialised effects lighting including the Halley (no prizes for guessing what this looks like), a single rotation multibeam effect, the Moving Star, the Dominator colour beam sound-to-light effect and the Espace range of coloured beam lighting effects. Incidentally, another current vogue was in evidence on the stand TAS's new Fog Cannon, a scenographic effect which belches out compressed fog to form large smoke rings that, after the initial spurt, roll unsteadily onwards for about 20 metres before colliding with some passerby's head and disappearing never to be seen again - an extremely entertaining sideline for the industry. Avitec's Volcano was also being aggressively demonstrated on the Top Animation stand.

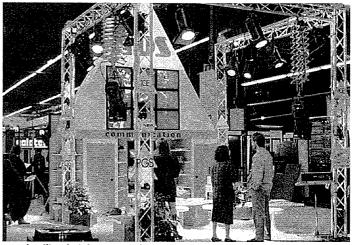
There were a few unusual products at this year's show which maintained a great deal of interest. One such was the new Discotel which appeared on the Publimooving stand. Destined to take over where television left off in killing the art of conversation, it is designed to do away with the need for legs as well. Quite simply it's a computer monitor which can relay messages to other like monitors. It is currently finding application in nightclubs and hotels world-wide where, by the digital manipulation of a few buttons, drinks can be ordered from the bar, requests made to disc-jockeys for your favourite Abba record, and it can even relay your best chat-up line to somebody at the next table, and probably with a great deal more flair. It doesn't all have to be high-tech though. One of the most ingenious products shown for the first time at Siel was a pyramid-like metal frame construction designed to facilitate high level mobility for focusing lamps and readjusting fittings in those hard to reach places. Pierre Pommier was the man demonstrating this first-timer, and he zipped around the Esca 2000 stand like a man with a mission. Of course, there was no escaping the collective of manic dancing flowers which were head-banging away on the Animation Lumineuse stand. And I'll reserve comment on what part of the anatomy the nice man on the Boulevard Haussman was exhibiting for another time.

A final word on the show is its hosting of the Disco Mix Club Convention. The international association of disc-jockeys was holding its annual rendezvous in Europe for the first time, and amongst the speakers were Bruce Forest and Ben Liebrand.

Ruth Rossington



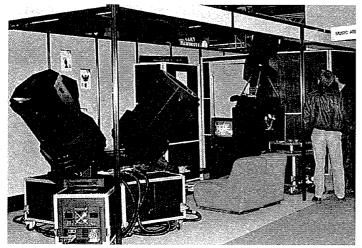
Steve Warren (left) and Oliver Bordini on the Regiscene stand.



Good ceiling height gave a chance for interesting stand design.



Niethammer followspots on the LCB stand.



Space Cannons's new range on the Music Atelier stand.



British visitors to the Disco Mirror stand include Adrian Brooks and Graham Thomas of Astralloy and Dave Winfield of Jivelight. DM's Colin Gawne (second from left) keeps a watchful eye.



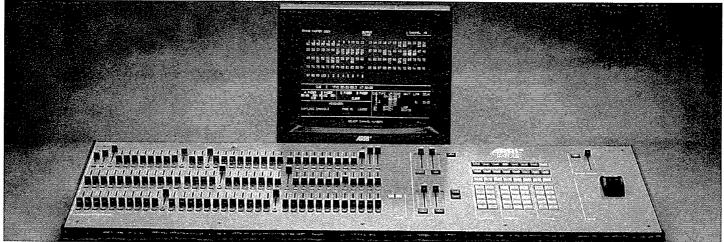
Michel Lameise of Pulsar France (left) with Thomas Rheimann of Celco (centre) and Pulsar UK's Ken Sewell.



Canford Audio srl established their French operation in December 1988.



The Zero 88 display with Sirius out front.



A closer look at one of the stars of the show, Arri's new Impuls Board.



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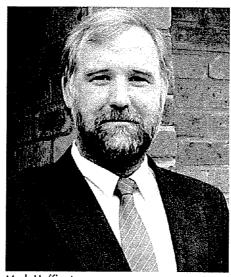
Discussing the future of the AV industry, Mark Huffington suggests theatre may have overtaken the presentation industries with the innovative use of audio visual techniques.

And how about AVS — Audio Visual and Sensual?

When I was invited to write these comments about the AV industry, I had just completed the showings of over 80 AV modules at the Images Festival. For this event I was responsible for running programmes written on eight different control systems, and catering for such a variety of different picture formats that, even with 126 projectors, we did not have enough to run two consecutive sessions without reconfiguring the rig.

I mention all this because when it came to the awards, I found myself constantly surprised. Modules which I found boring, or trite, or ineffectual, had been seen in a better light by the judges. The difference in our opinions is probably due to the subjective viewpoint that I have as an operator, technician and person who has run lots and lots and lots of presentations! My judgement is influenced by the work I have done before. I will always be guilty of making comparisons which are arguably out of context.

In this industry, quality must always be pushed to the fore, not just in the areas that the end client sees, but in all areas and methods preceding the final event. Quality so often starts with personalities. Over the past years with so much work around, far too much emphasis has been placed on the freelance technician, even to the extent that at one time the tail was wagging the dog. Seemingly, any



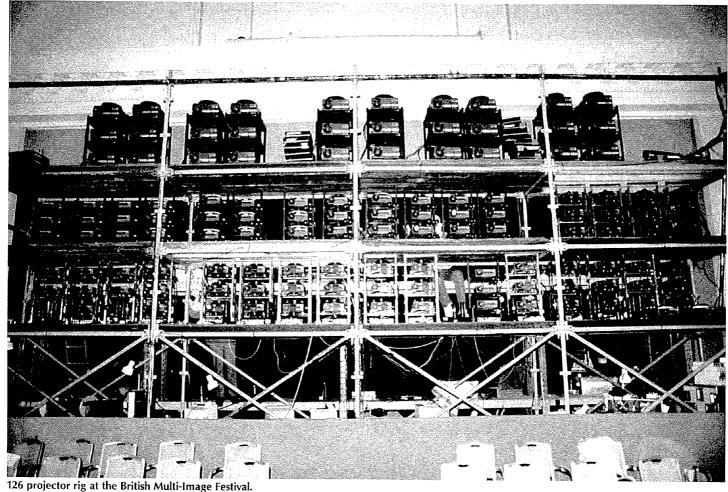
Mark Huffington.

person who had six months experience either in a permanent position in theatre or in a supply company, could suddenly pronounce themselves 'freelance', and start charging up to £150 a day for doing a second rate job and the industry let it happen.

Where is our self respect when a crew arrives on site wearing sweatshirts from a

previous show and production company? What image of quality and professionalism is that? In a period when the industry growth is looking like being less than 2% pa, the survivors will be the supply companies who show their clients the respect they deserve. I have recently been talking to a communications and management consultancy company who has just told one particular client not to do a conference — the company didn't need one, so why do one? How many other companies would, for financial gain to themselves, produce that conference. I suspect rather more than I would care to

There is still a great need for the old felt flats, six projector rig and four Bose on sticks; but they must be used in conjunction with what is actually good for the client. The end client is by no means naive, and his understanding of the use of media is often underestimated in my opinion. While I may work on 50 different presentations in a year, and the client only one or two, the client is made aware of many media alternatives through pitches involving a number of production companies. These pitches also give the client a clear insight into the methodology of a number of companies which in turn are serviced by suppliers such as myself. Ultimately the client is as aware of design and technical possibilities as any-



body. How many times have they been underestimated?

There is a constant demand for innovation. All too often this is interpreted as a requirement for something new. Why should we abandon what has been known to work and/or supplement it with something new?

Five years ago with the rapidly growing use of video projectors, frame stores, video graphics, etc, the common assumption was that the use of slides would die out. I have not found this to be true. I believe the reason for this is that not enough distinction was given to the different media available for audio visual work. Essentially, for any member of the public, the terms video and television are virtually synonymous. For this reason a great deal of work which utilises video resources will suffer in its presentation because it will be viewed as television, whereas a mixed media presentation may well have greater impact on its audience because the medium, as well as the content, can be made sufficiently different to stimulate interest.

HAVE Facilities installed the large video system used on Chess (the Tim Rice West End Musical) featuring 128 monitors in all. The success of this system is precisely because it isn't providing a conventional action replay role. Through the use of video wall technology, a variety of different media effects can be produced which constantly divert the eye in an interesting way.

It seems that the theatre has in many ways overtaken the presentation industry. With the innovative use of audio visual techniques, shows such as Starlight Express, Time, and Chess, have used video and film to great artistic effect. The London Festival Ballet, (now the English National Ballet), in their recent production of Swan Lake used scenic slide and 35mm cine projection for all of the ballet's scenery. Some might say that this has been used in opera houses world-wide for

years. It has: so why have we not learned from it in the presentation industry? 90% of shows still have a letter box screen. The wise and goahead companies that put innovation and quality together, will still be here years hence when many others have fallen by the wayside.

Maybe AV should become AVS which could stand for audio visual and sensual. We should examine adding movement to light and sound, and incorporating it within our communication concept instead of demeaning movement as an 'effect'. Would we say this of ballet?

I have worked on several presentations which have included screen movement which has not been designed into the production for purely practical reasons, such as bringing trucks on and off stage. We are seeing the growth of centrally controlled systems. This must be the next stage which audio visual must embrace.

As a technician I become involved in all of these considerations, and yet a software designer deals with the slides, a video director the videos, the designer the set, and the producer brings all the elements together in order to please the client. This set up is too diverse. The producers are rarely ex-designers or video directors or technicians and, as bringers-together-of-different-elements, they are limited in their potential to realise the scope of the media which they have available.

If I as an engineer, can appreciate the potential of an all-embracing media, where are the designers/engineers/producers of tomorrow who can realise what I believe is a necessary direction to take?

I believe we are approaching an industry recession. The causes are mostly external. I would strongly suggest however, that some are internal. For the last 10 years we have been given the task of preaching 'customer satisfaction' on behalf of our clients to their

staff. Prior to this we were explaining the difference between marketing and sales. The remainder of our work, the 'well done chaps' and the 'let us tell you all about ourselves' are dependent on the success of the client and whether he has any spare cash left.

All this work was, and is, generated by the client. It was he who went to the production houses, and in turn they went to the suppliers. It was he who knew what he wanted to say, and who he wanted to say it to. Who within the industry was looking at our long-term interests and telling potential clients why they should be using our services.

As a service industry, I would, advocate that we have spent all our time marketing our client's interests, and have not done enough to market our own. Where is the message of tomorrow which we will be asked to communicate?

Mark Huffington is managing director of HAVE Facilities Ltd which he incorporated in 1984. He is a former managing director of Theatre Projects Services Ltd.

With the experience of a large company behind him, he decided to match a small number of clients with the individual attention of a few specialists. This standard of service has inevitably led to a growth in workload and company expansion, and after five years the HAVE Facilities Group have a turnover in excess of £4 million.

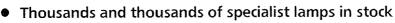
Luff Light and Sound joined HAVE in 1989, and with the recent implementation of a computer prompting company and a set company, HAVE are in a position to provide all the services for conferences from one telephone call. Above all, Mark believes in providing an individual service for each of his clients, and this has proved to be an efficient and reliable modus operandi.

HAVE moved to new premises in Lewisham last year where all of these services brought under one roof.



LIGHTING TECHNOLOGY

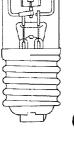


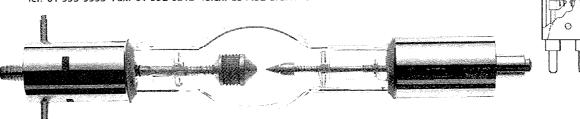


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Changing cassettes takes time, and the machine isn't known for its convenience (especially if that's where your staff are when the music stops). So you have bursts of silence. Sounds good?

Customers end up listening to what your staff likes. If you're lucky they'll have similar musical tastes. If they don't, you'll doubtless hear about it.

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It means happier customers, and possibly more of them. It probably means more money, and certainly means less work. Further information about the two Databeat systems, or for a demonstration (you won't believe your ears), without obligation, please phone John Leefe on 0635 578992. Or write to Databeat Digital Music Systems Ltd., Stable Cottage, Chapel Lane, Ashampstead, Reading, Berks RG8 8RU.





CLOSE-UP

Sam Wise and Jeff Adams discuss Allen & Heath's

SC Plus series of Modular Multi-Purpose Desks

The mixing desk on review is from Allen & Heath's SC Plus series of modular multi-purpose desks. The SC+ is available in three frame sizes, providing as standard 16, 24 or 32 input channels, one four way group module, and a master module. The review model was fitted with three different input module types: simple equalizer, sweep equalizer and stereo line input. The power supply is a separate 19" rack mounting unit.

A first for Allen & Heath, is the inclusion of a matrix output on the sound reinforcement version, which may be a unique feature on a desk of this price. This option opens the door to a host of applications in theatre sound and audio-visual productions. As well as the usual bench tests, the desk was used for a local outdoor carol concert and in the local church, to mix the sound for the worship band.

Cosmetics

The frame is of folded steel, and fitted with wooden checks stained grey to match the front panels. Four round plastic feet protect the furniture. The modules are painted dark grey, with a matt finish, and white printed legends. This provides a modern look to the desk, with good contrast for the light coloured knobs and switches. There is a padded armrest which will take an elbow with comfort, but is not wide enough for a mug or beer glass, helping to prevent getting liquid inside the electrics. There is a pre-punched panel, ready for multicore connection via 2 56 way EDAC connectors.

The tops of the knobs are colour-coded according to function. There is plenty of room for fingers to get at the controls, and the artwork legends are easy to read. The connector legends are printed upside down to make connector functions clear when working behind the desk. A good idea, except for people

like us who plug-in a small desk like this from the front.

Input Modules

There are three versions of input module. The standard input has a four band fixed frequency EQ section. A deluxe version adds sweep frequency to the two mid-frequency sections, and a stereo line input version provides three band fixed-frequency EQ. The standard mixer has all input channels filled with the one type of module, but custom configurations can be made up to order. The review model was fitted with 10 standard, 2 swept and 4 stereo modules.

The standard mono input module is designated the M110A, and as the sweep equalizer module is a variation on this theme, we can look at this module in detail, and then highlight the differences in other modules.

Standard Input

Taking the module from top to bottom, first is the balanced **Line In** socket, followed by the balanced **Mic In** socket. **Mic In** plugs up on a plastic XLR wired for pin 3 hot, and **Line In** is a stereo ¼" jack socket. Both these inputs feed a common electronically balanced amplifier. The **Mic/Line** selector switch sets the impedance and sensitivity for the input stage. Putting a mono jack plug into the line input will result in normal unbalanced operation.

The circuitry of the input stage is based around a high performance audio op-amp with a discrete PNP transistor differential input on the front end. This type of circuit provides good performance without requiring hard to find and expensive components.

Next in line is a **+48V** slide switch, which selects 48V phantom powering of the Mic socket. This is followed by an insert point, in the form of a stereo jack socket, wired Tip return and

Ring send. This commonly used system works, but is not as convenient as separate sockets, especially with no direct out connector. The insert point is taken from the output of the preamp, before the EQ section.

Next is channel Gain control. This gives a control range of 41dB. Most of the action here was at the far end of the control's mechanical range, the first three quarters of rotation giving smooth control of a 20dB range. This control didn't generate any extra noise as it was adjusted. A PAD switch gives reasonable attenuation in both mic and line-modes. This allowed a peak signal in excess of +14dBu before clipping for the mic input, and over +28dBu for the line input. Basically this means if your mic can take it, the mixer will too.

Equalisation

The EQ section in the standard module consists of four fixed frequency bands, each with 12dB boost and cut. The two peaking mids are set at 250Hz and 3.5kHz, whereas the high and low frequency shelving controls are set at 8kHz. The EQ sounded good and clean. Used with care, the character of a sound could be controlled without introducing nastiness. It's not very good at special effects, or killing feedback, and neither can it do much for a 'bad' sound. It is good though, for making a sound a little warmer, a little thinner, a little brighter, etc. etc. without making it sound like its been EQ'd.

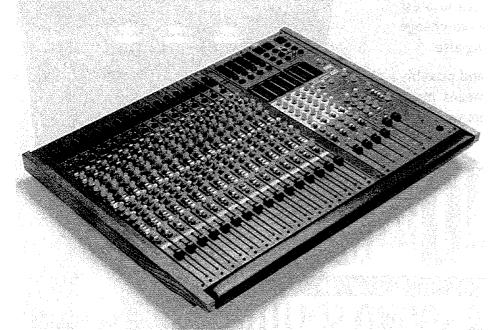
There is a switchable high pass filter, set at 80Hz, which is independent of the following EQ Out switch. This filter is in circuit directly after the input preamp, preventing unexpected overloads later in the channel. EQ bypass is a very useful for comparing the incoming sound with the post EQ sound, to ensure that things really have improved after the EQ operation, and haven't just been made different! Altogether, a simple but effective and musical sounding equaliser.

Routing

If we ignore the auxiliary section for now and move on to the group routing, we find three switches and a pan pot. Typically, the output groups are selected in pairs, either 1 and 2, or 3 and 4, or directly to the L/R master outputs. This allows use of the groups purely for controlling submixes, say for drums and backing vocals, putting everything else straight onto the stereo outputs.

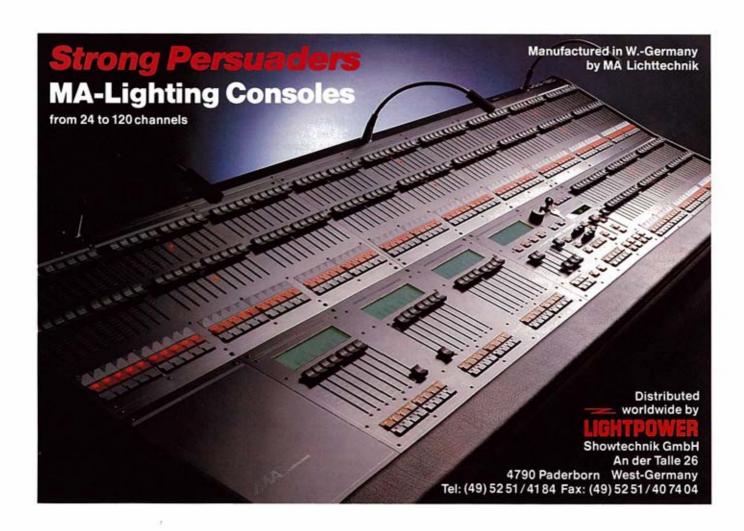
There are some mixers around which force you to put everything through the groups. That's all very well, but when you've only got four, it's hard to see the point! The main signal routing is controlled via a mute switch, which lights a red LED to indicate its operation, and a 100mm ALPS fader.

The push switches used throughout the desk are rectangular in cross section, and when released, stand ½" from the surface of the panel. The trouble is that there is little difference in the height of the switch when it is selected. This only becomes a problem in dimly-lit high stress situations, and not in bright, comfortable design offices! Of course this doesn't detract



An Allen & Heath new SC Plus matrix sound console





from the sound of a mix, but it does add to the hassles encountered in a real world live sound gig.

Auxiliaries

Allen & Heath are trying here to increase flexibility of the aux sends without cluttering the panel with hoards of switches which are rarely used. There are four aux busses, labelled A to D, each with a rotary level control. Aux A & B are primarily intended for effects and wired post-fader, while C & D are for foldback and wired pre-fader. However, there is a link area on the circuit board which allows those handy with a soldering iron to select the source of the signal for each aux channel. Individual auxes can be fed from a pre or post signal, while the prefader source for all four together can be selected pre/post eq and pre/post mute. If the auxes are linked post mute, then all channel outputs are muted when a channel Mute active, this is the safest way to go in a live sound operation. However, when recording, it is often useful to remove a track from the mix while leaving the foldback and/or effects sends intact, linking pre-mute achieves this. All together these internal links provide a very versatile and inexpensive solution to varying customer needs.

Fine Detail

The channel can be solo'd with a **PFL** switch, whose status is shown by low level illumination of the overload indication LED. In normal operation, the red overload LED lights approximately 3dB before the onset of clipping. It takes its signal from three points — just after the input amplifier, the equalizer, and after the fader. This is excellent, since no matter where in the channel the signal is hot, the overload LED will show it. From the same point, a **Signal Present** detector will light a green LED if a signal greater than —30dB is present at the fader. The brightness of the LED is roughly proportional to the level of signal in the channel, giving a simple, but useful, indication.

Each channel is finished off with a small scribble strip, for writing the channel allocation, etc. with a chinagraph. Usefully, all inputs and insert points are taken to a molex connector on the input PCB, allowing easy internal wiring to the multi-way connectors. An optional Channel Insert by-pass switch is available to allow various external wiring options.

Variations

The M115A input module is identical to the standard, except that it has two bands of sweep mid band EQ on board, along with two fixed frequency bands. The fixed frequency bands are at 10kHz and 90Hz, and the two swept bands cover a range of 60Hz to 1.2kHz for the first, and 600Hz to 12kHz for the second. That's quite a lot wider than many other sweep EQ's, but proved easy to control. Being able to tune the active frequency allows you to radically alter the nature of the sound, increasing the versatility of the equaliser.

Stereo Input

The M160A stereo input is quite different, and very useful for radio and A/V applications, providing two selectable stereo input sources. It has two ½" jack sockets, and also two phono sockets. A switch selects which pair of sockets is active. The two connector types share an identical input amp, but the phono input also allows direct connection of a record turntable when an optional RIAA preamp is fitted.

Selector switches allow both stereo outputs to be selected from either left, right or a mono sum. This makes it possible to select one from four mono feeds on a single input slot. There is a simple three band fixed frequency EQ, which allows 12dB boost and cut at 80Hz, 2kHz and 8kHz, and an EQ Out switch.

The main and auxiliary routing are almost identical to the mono modules, apart from two slight changes. The Pan Pot is replaced by a **Bal** control, which adjusts the relative gains of the left and right channels and the mute switch is replaced by a **Channel On** switch, and a green status LED. The aux sends are mono, sending equal amounts of the L and R signals to the auxiliary mixes.

The Channel On switch works in the opposite manner to the standard mute switch. Down is on, so that when the switch is up then the channel is effectively muted. The green LED lights to indicate channel on. This is because the LED also shows the status of the remote control facility. The channel card houses two relays which are accessed via a 5 pin DIN socket at the top of the panel, allowing remote control of external equipment. These are operated by a combination of the line source selector, the channel on switch, and the fader position, enabling remote start and stop of suitably equipped tape machines or record decks.

Group Outputs

There are two types of group output module available, and this is where a definite decision must be made regarding the main use of the mixer. The standard M120 group module is primarily intended for 8-track recording, and also will find many sound reinforcement applications, whereas the M126 is definitely designed with sound reinforcement in mind.

Standard Group Output

The M120 would be familiar to anyone who has used a split monitor type desk. After the input signals have been mixed onto any of the group busses, the signal arrives at the group fader via an insert point. From here the signal goes to an electronically balanced output. The operating level of this output is set in the factory to +4dB, but with a simple modification this can be set at -8dBu. The output impedance here is low enough to allow two inputs of an 8-track machine to be driven in parallel. The signal is metered by a two colour 10 segment LED display with a VU like response.

The rest of the group channel is taken up by the eight tape return monitors. The $\frac{1}{4}$ " stereo type input connectors are used in a thoughtful way. The ring accepts signals at a nominal +4dBu level, and the tip contact will receive at a nominal -8dBu level allowing easy interfacing to any type of recorder.

Each input feeds a simple monitor section. Monitor can be switched to select its allocated tape return, or the signal from the group bus. Tape monitors 1 to 4 and 5 to 8 can select groups 1 to 4 respectively. An auxiliary mix may be derived from these monitors on Aux D.

All that remains are the **Level** and **Pan** pots which mix the tape returns onto the stereo outputs. In a sound reinforcement role, the four spare tape returns can be used as effects returns. Note that there is no internal routing to allow a tape return signal to appear at an input module as you may expect with a more expensive mixer, like Allen & Heath's Saber, though this may be wired externally.

Matrix Group Output

The M126 group output module is quite different from the standard module. Instead of a tape monitor section, there is a 4 output matrix mixer, which allows you to create four separate mixes combined from the group and stereo mixes. Unusually the L/R stereo output can be mixed into the matrix. This is a good idea, increasing the versatility of the mixer.

Uses for matrix operation are numerous, and include amongst them sound effect feeds in theatre productions, vocals only feeds for central clusters, extra effects sends and 'clean' foldback feeds, to name but a few.

The signal from the group fader goes via a mute switch to the balanced group output. However, as there is no need to select a tape return signal, the group mix is also sent to the L-R bus via level and pan pots, and directly to the relevant input of the matrix mixer. The signal on group fader 1 goes to the Grp1 input on each of the four matrix channels, and so on for the other groups. The left and right mix is summed together and sent to the L-R/ext input pot, which can be overridden by an external signal applied at an Ext In socket. The Ext In socket is calibrated for +4dB signals only, and provides a cosy connection point for external sub mixers, or an effects return for a device fed from the group output.

Master Module

The M150 Master output module controls the final output level of the L/R and four auxiliary outputs, and contains the controls for the control room and headphone monitor. Also on board are two effects returns, a phantom power on switch and a connection for a BNC mounted 12 volt LITTLITE.

The phantom power switch has a red LED status indicator. The review model made a squawking noise if any output faders were left open when the switch was selected. The manual does warn of this so be careful, this is a preset control. In our view, with a phantom power switch on each channel, this facility is not really required, we understand that it is left over from the days when the SR version had no channel phantom switches. Our advice is to ignore it.

Signals routed to the L/R bus are sent to the Master faders via an insert point. Having the insert point before the fader allows you to put the whole mix through a compressor, whilst still being able to fade out without under-driving the compressor. Not all mixer manufacturers have grasped this. The fader output is then buffered, and sent to an XLR socket via an electronically balanced output (EBO) module. The output level is again preset at +4dBu, but may be set to -8dBu internally.

The two post fader L/R signals are summed together to produce a mono signal, and this is sent out via a level control to a balanced XLR socket. This L/R and Mono combination makes feeding a central cluster, or side array plus delay loudspeaker system very easy.

The four auxiliary busses are sent out to 1/4" jack sockets, after having been buffered with an amplifier with gain ranging from fully off to +18dB. Plenty of control here.

The effects returns come in via a stereo jack, in a similar manner to the tape returns. The tip connection will apply 12dB gain to the signal, and the ring contact is set at unity gain. The signal is routed directly to the L/R bus via level and pan controls. One excellent provision here is the ability to route the signal, either pre or post level, to the two foldback auxiliaries, allowing you to put reverb etc. onto the performers monitor, without tying up an input channel.

Monito

To keep all this activity in control, there is a simple control room monitor section. A signal is selected by push switches, and sent to a monitor output, and to a headphone socket. The monitor output is a stereo jack, and so requires another lead to be specially made to connect the desk into your studio monitor system. The phones output is via a 1/4" stereo jack socket mounted at the bottom right of the

monitor panel, and is rated to drive all types of headphones. The switches will select the monitor source from L/R output, Aux C or D, the mono output, and the PFL signal.

The selector switch works on a principal of priority override, in Aux C, Aux D, Mono, PFL order; so that if PFL is selected, it can't be overridden. Pre Fade Listen is available on all input channels, both the effects returns, and all group and matrix outputs. In common with many other mixers of this price, there is no way at all to monitor the Aux A and B busses.

A nice touch here is that the main L/R meters are driven from just after the selector switches, so that you are always able to see the level of the signal you are monitoring.

Unfortunately the PFL switch is not activated by a PFL sense relay, so that you must press both the PFL select on the signal you require, and on the monitor select. There is no control for the relative level of the PFL signal, so that if you monitor a quiet signal with your PFL, and then deselect on to your loud stereo mix, you are going to give your monitor system quite a rude shock. Also less than welcome is the fact that the level controls for the monitor output and the phone output are coupled. This means that if you want to monitor on your favourite high impedance phones, you will have to turn your monitor amp down on its own volume control before you can turn up the desk's headphone drive. Possibly most people don't use both 'phones and loudspeakers, but we do. Unlike the Input and Group modules, there is plenty of room here for a separate 'phones level, why not put one in?

Also, whilst on the down side, just to be extra fussy, there is no marker line down the side of the control knobs, so if you want to see the actual position of a control for any reason, you have to stand above the desk. This may sound

picky, but have you ever tried to mix several bands in an evening without making a note of each band's soundcheck positions. What about recording the control positions for that great remix while you have to use the desk for something else?

Coming Soon!

Latest news from Allen & Heath on this product is the release of the M156 module in the near future. This module will fit in place of the blank panel, or a standard input, to provide talkback, stereo playback and line up oscillator. The module features comprehensive routing of the facilities and external inputs for the oscillator and talkback.

Performance Tests

A number of tests were carried out using an Audio Precision test set. The mixer was checked for broad band and ½rd octave noise levels at standard gain settings, frequency response, maximum signal levels, fader shut off, common mode rejection, crosstalk and equaliser response. No problem was found in getting the desk to meet its published specification, and the overall performance was impressive for this type of desk.

Figure 1 shows the noise level from the Left output, with just one channel routed, set to 50dB gain, and terminated with 200 ohms. At 50dB gain, most of the noise is in fact coming from the mix bus. Equivalent input noise is good at 126.5dB. Figures 2 to 5 show the control laws of various EQ sections. These are excellent, providing for gentle adjustment in the centre where it counts.

Figure 6 shows the frequency control for the two swept mid frequencies. The traces show the different responses for equal steps of control knob rotation. The total harmonic

distortion at low signal levels was unmeasurable, because the distortion products were masked by the mixer noise. Only when the signal level was approaching the operating limit did the figure even begin to rise 0.01%. No problem here.

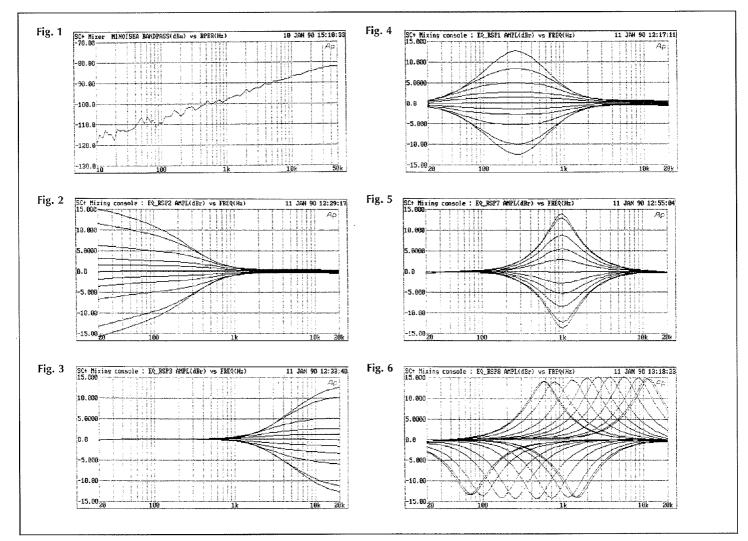
One thing that could be seen clearly on the analyser was a slight problem with the earthing arrangement. The manual states that the audio ground rail is not connected to mains earth. This then lets you have your 'reference' earth at the monitor amp or PA amp for example. It may be of interest however, that mains induced hum completely disappeared below the mixer noise level if the desk was grounded at the power supply input connector.

Conclusion

All in all the SC+ is a nice sounding, easy to use mixer, which also looks good. It is based on a no frills approach to good multi-use design, especially with the provision of the matrix output. There is evidence of design thought in the inclusion of aux sends on the effects returns, and the options available on the input channel aux sends. Plenty of expertise has gone into the tape deck remote control. Only the monitor seems to require attention.

There are many details in the circuit design which show that Allen & Heath are aware of the results that good design can bring. It is good to see a mixer in this price range with careful engineering and not too many shortcuts.

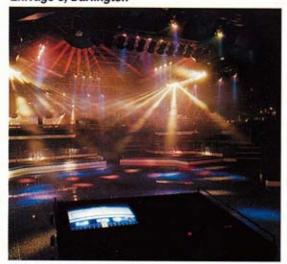
This mixing desk's overall suitability and solid performance is good, but attention to one or two small, but important details, would clearly lift its performance and features above its price class. Rumours are that more improvements are on the way, but sales of the current SC+ are already good and growing.



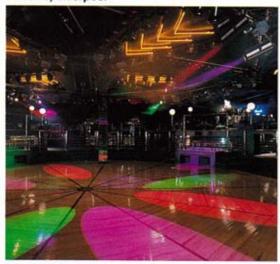


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THE DAWNING OF A NEW AGE FOR LASERPOINT?

Under siege from a battery of intelligent lights all eating away at the same fiscal cake, many laser companies have moved into different product environments. Laserpoint are amongst these, but they are also demonstrating their confidence in their root products with a major investment in laser control. Will the arrival of Aquarius herald the dawning of a new age for Laserpoint?

Tony Gottelier and John Offord investigate

It's all happening at Laserpoint these days, as I was to discover during a recent research visit to the Cambridge-based company. Andy Holmes, founder of the company, and normally ebullient at the best of times, was positively volcanic in an eruption of ideas, new products and commercial concepts.

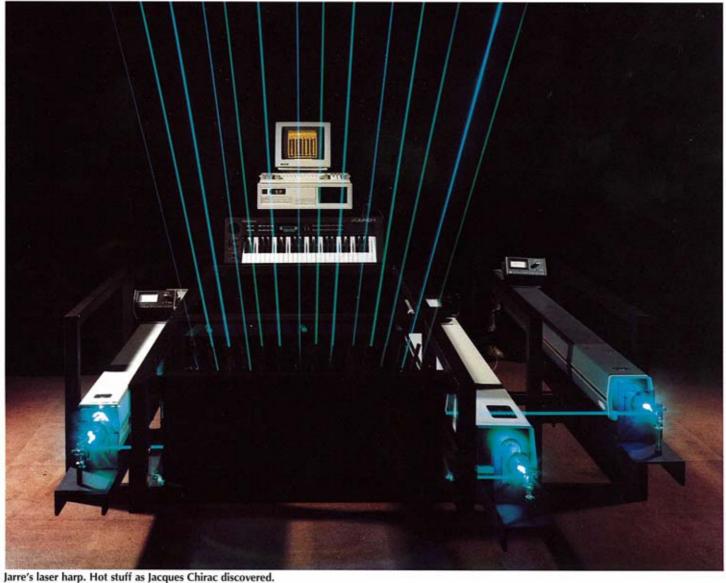
There is a considerable air of confidence in the company since the successful launch of the new Aguarius controller at last year's PLASA exhibition. Sales of the Pixelite with home-grown videowall. now electronics, are booming, exports are running at 80% of sales, AV presentations are growing apace, a new London showroom opens this month and the company moves into 'matter transfer' (of which, more later) with the launch of International Laser Consortium. All of this has been topped with a substantial injection of equity capital from a major

financial institution.

And the catalyst for all of this seems to be Aguarius, which has set a benchmark for the future of a company which has had its share of problems during the last 12 years since first setting up as a laser rental specialist. Aquarius is son of Aries, a highly successful laser control board developed for Laserpoint in 1983 and which has sold 350 units in the meantime. This time round the new baby was nurtured entirely inhouse, with only occasional external fostering from an industrial designer who provided the facial make-up.

The process started with the recognition that the available technology had moved on considerably over the seven year period since Aries butted its way onto the market. Compromises had been made between ease of operation and the software requirements of the more sophisticated graphics and animation tools demanded by today's AV operators, "The development of hires scanning led the demand," explained Andy, "The problem was that originally graphics sequences could only be produced by the expensive cellular animation technique, which was complex and cumbersome to re-edit.'

Since this information was being fed back through users with practical knowledge of the problems, the team at Clifton Road took the ram by the horns and decided to carry out a market survey amongst its 40 or so world-wide distributors to try and establish a concensus as the basis for a new format. Andy Holmes again: "We sent out a multiple choice questionnaire with about 50 or 60 questions and a wide range of possible answers. As a result, at the end of 1988 we had, what was in effect, a design brief created by our own customers. We knew that if we could satisfy these





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demands we had a winner on our hands."

At this stage George Legg, Laserpoint's chief design engineer, comes into the story. He had the task of abstracting from all this data a coherent technical brief which fulfilled the market's apirations and yet, in terms of software and processor capability, was deliverable in a practical sense. So this questioning phase moved on to one of synthesis where a clear specification for the new controller was established. All part of what George calls his structured approach to development which he presumably acquired as a discipline from a previous incarnation in marine electronics. (Is this why it is named after the water sign?)

One practical decision to come out of this process was the perceived requirement for a compact three U high, 19" panel. The problem as to how best to overcome the ergonomic problems involved in cramming all the necessary features into such a small, yet fully programmable, performance keyboard was put to a freelance industrial designer. She came up with the overall look and configured the alphabetical touch keys at what is considered to be the optimum spacing. (Strangely, this was the one feature I felt unsure of, finding the panel somewhat cramped. In fact, to be honest, I can't really see why such a powerful unit needs to be so small. I fully acknowledge that this is an 'ashtray too small for a 100 a day smoker' type comment. In every other way I liked it very much).

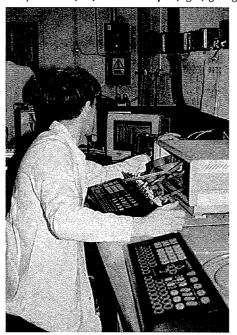
The designer's proposal for a membrane panel was initially unpopular within the company, until a way was found to give it some tactile feel. This has been achieved in a very elegant and pragmatic fashion by eschewing standard membrane switches, with their flabby feel and notorious unreliability, then embossing the rims of the different switch profiles into the membrane and setting these over the rows of mechanical momentary switches mounted on a full-size PCB behind and backlit. This has worked out really well and certainly achieves a different feel for the various sections of the board and, of course, brings the added bonus of being waterproof. (Just as well in view of the name!)

Meanwhile, George Legg's team of Lee Hearnden, and John-Michel Denhartog have produced a small but immensely powerful laser graphic tool. To list all its technical stats would be a bore for most readers, and many appeared in the post-PLASA '89 issue anyway, so those digirapping technocrats who are into all that stuff should send for the comprehensive brochure; so comprehensive in its mysterious jargon as to be almost incomprehensible to a chap like me.

A neat summary in normal everyday English goes as follows: Aquarius can handle up to eight outputs, each of which can be of the fastest scanners currently available. Optional full colour modulation and blanking on all channels, coupled to 500 frames per channel live memory capacity, means that complex animations can be achieved. More importantly, the image modification functions make the creation of graphics sequences a simple creative task, requiring a minimum of



Andy Holmes (left) and Ron Turpie (right) giving Gottelier the hard sell.



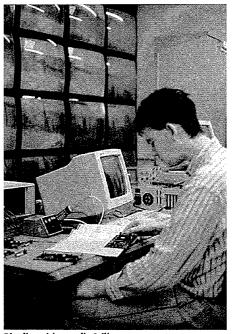
Aquarius in production.

original artwork.

In short, Aquarius is a laser controller which in its basic format performs with a low level of operator input, for example as may be required in discotheque situations, but with the software capacity and expansion ports demanded by the most taxing demands of the AV show designer.

So what are the financials of the cornucopia? Well, for a product which cost £250,000 to develop, hence the capital infusion, you won't be surprised to learn that it doesn't come cheap. At the simplest level, at £10,700, it provides an ideal discotheque laser controller. At the top end with all eight outputs and a hard disk, that figure more than doubles, yet with all the bolt-on goodies, mentioned above, adding still more to that figure, it has by then become a system to tax the demands of even the most aspiring AV man.

As Ron Turpie, ex-Meteorlites and now Laserpoint's European sales manager specialising in AV told me: "The rental companies love it. They are making full use of the FSK and SMPTE facilities, which enables them to provide precisely-timed shows for television in a way that no other



Pixelite videowall. Still more to come.

laser controller can. And the production executives know that when they run it for broadcast the whole laser show is always there in exactly the same form and timing as the rehearsals, and no human error."

At that rate, since Laserpoint claim to have sold 25 units already, they have probably justified the investment in pure cash terms in just a few months. As they forecast total sales of 500 units within five years, their faith in this particular methodology of product development should be fully vindicated.

Laserpoint have set up an intelligent production line to produce Aquarius in final assembly, making use of the ferocious amount of spare electronic assembly capacity in Cambridge, by buying-in fully loaded and tested pcbs while carrying out the final construction, wiring and soak testing themselves.

A similar production line is employed for Laserpoint's frame store cards for their Pixelite videowalls. Originally a product imported from Italy, as the monitors still are, the company has generated their own control interface and electronics for this system. The control, presently based on an



Aquarius' membrane-protected tactile performance keyboard.

IBM compatible, is scheduled to be given the Aquarius treatment eventually. Funnily enough, this was one of the few control systems based on a PC keyboard which I really felt might be hard to improve on with a dedicated board.

Certainly, at the basic level it was simple enough, largely due to the immensely clear on-screen graphics. This was one of the best graphic user interfaces I have seen (other than on a Mac), so clear and logical, to the extent that a child could use it. Wysiwyg at its very best (see illustration).

Actually, I thought that all the PC keyboard really needed was a protective membrane, to protect it from hostile environments, and that would do it.

There are several levels of operational

expansion, however, and perhaps the higher level requires more competence with a conventional keyboard, but then I would expect operators at this level to be highly computer literate. Anyway, both systems come with very well thought out manuals, models of their kind in fact. If only all computer interfaces had been so simply thought out, pre MS-DOS, techno-fear would never have taken hold as the epidemic it has become.

With videowall representing 50% of total sales, a solid eggs-in-two-baskets market platform has been established with these two products. It is surprising in these circumstances to discover that the company seems to be somewhat unrecognised in its own land. Or, at least that would

seem to be the indicator from the revealing statistic that 80% of all sales go for export.

Indeed, as if to prove the point, as we toured the plant, Sussi Christiansen, export sales director, was on the line from Tokyo. Meanwhile, Andy Holmes was projecting the United States as a major area of expansion in 1990. "In the past we have only done marginal amounts of business in North America as our priorities were elsewhere," he told me, "but this year, helped by our ability to offer long periods of credit, and yet guarantee payment in the end by Letter of Credit — one of the bonuses that came with our new partners — I am projecting in excess of one million pounds of turnover there."

Then there is his grand vision for an International Laser Consortium, the matter transfer referred to earlier. Andy once more: "The idea is that Laserpoint equipped and trained distributors throughout Europe will form a common support network linked by fax and modem. By support I mean both equipment and graphics programming. For example, with the mass of laser equipment for hired shows, sometimes it's impossible for one company to hold all the necessary stock. Just look at the Jean-Michel Jarre Docklands concert last year." Talking of which, Laserpoint made the laser harp for this event. There had been one made before for his Houston spectacular by a French company, but as we all suspected it didn't actually work. The Laserpoint version has been made functional in a musical sense with a little help from a MIDI interface. Hot stuff this, as Jacques Chirac, the mayor of Paris, was to discover when he tried it at an exhibition. The protective gloves necessary for this purpose were



Export is top priority. A combined British and Dutch initiative aimed at the French market, and Euro-Disney in particular. Avo, Thomas and Stage Accompany also took part in this event organised by Sonos the French hire company.

below spec. and started to smoulder!

As far as graphics are concerned, the plan revolves around the new London office and showroom in Jacob Street, near Tower Bridge, where a central digitising facility and graphics library will be established. To save repetition of effort, people can send in images from around the world for credit on the system and can also buy from the library sequences via telephone line, through modem straight into their own Aquarius. "Aquarius is the common link," enthuses Holmes expansively, "owning one will be a bit like being a member of the Concorde commuters club."

Maybe, it's not only the dawning of a new age for Laserpoint, but also a case of the company coming of age after 12 years, and establishing itself as a mature force in audio visual systems.





A large frame Argon and a large frame Krypton Laser were colour mixed to produce around 25 Watts of full colour laser effects at the recent opening of DHL's new computerised freight handling building at Brussels airport. The fully automated warehouse is the size of several football pitches and around 30 metres high inside, so high power lasers were essential to complement the conventional Audio Visual and lighting used to illustrate the function and technology of the new facility.

Laser beam lattices crossed through the air in precise pre-determined paths to mimic the passages of the robotic freight handling machines which shuttle about the building. One show per day for 6 days enables a total audience of 2000 to experience the efficiency of the new building in an exciting and informative fashion. Design by B Harkin Associates and AV/construction by MediaTech ensured a creative and efficient balance for the show which was clearly appreciated by both audience and client alike.





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HEATHROW FOR SOUND 90

Tim Frost checks out product at SCIF's 1990 show

Visiting Sound 90 reinforces the fact that this primarily-installation industry is settling down to a new elevated level of business and technology. For several years the bulk of the exhibitors have been presenting ranges of sophisticated conferencing and reinforcement systems. These aren't necessarily at the top end of the systems market, in fact, quite the opposite. There was no one promoting really big systems, the only large horn on show was the new version of the Toa horn first shown last year. Most were concentrating on comprehensive smaller systems aimed at the majority of the market - the small conference, factory, pub/club side of things.

Philips, who traditionally have majored on the large system, used Sound 90 to launch new systems for the small installation market. Marcie Roche, Philip's trade support 'man', pointed to the fact that: "A lot of trade users want a good simple system without spending a lot of money. Philips have never really been there for the people who wanted to buy Philips but didn't wish to pay premium prices."

Their SQ systems start with a 30W mixer/amp up to the SM40 microprocessor-based audio management system. Also on the stand were Philips crafty range of ceiling speakers which uses a single full-range driver that clips into a vast array of alternate

mountings — square, round, plastic, metal and so on.

Auditel's new product brings the sophistication of their bigger conferencing system to those needing considerably less than the 100 stations that the original can work with. The PMIC2B is for the smaller committee room applications of up to 20 mikes.

Toa, similarly, are finding this part of the market well worth cultivating, according to Harry Greenaway. "Most of the products we have here have already been shown. There are a lot of wholesale people so we have small compact systems and then the bigger systems for contractors and we are finding that more are looking for professional systems. We are getting a merge of discos, clubs and hotel systems all coming together.

For the factory and hotel systems, 19" rack mounted metalwork is still the style, but for the bar and shop background music/announcement systems, the market is used to the high style and quality finish of hi-fi. Downstairs in the basement, **Audilec** had the new smart look RCF 7000 series reinforcement and PA amps alongside another new RCF product, a three gun video projector. Competing in the good looks stakes, were the French **Bouyer** systems, and Inkel on the **Canadian**

Instruments stand also had a range of excellently finished front-ends which included simple graphic eq facilities, digital radio sections and remote control.

Another main element of the CI product range is Soundsphere — globe speakers from the United States. Peter Hamilton from Soundsphere was helping out on the stand. "Soundsphere is going better and better in Europe now, people are getting used to the system. Being a sphere it has a lot of power in a small 'box'. The equipment solves problems that cannot be easily resolved with directional systems, and has been used in sports areas like ice rinks where professional sound designers have virtually given up." Apparently a third of their US business is in churches, a market that Peter admits is even tougher over here.

Radio mics, one of the major growth products, were also very much in evidence. Beyer, Shuttlesound and Howland West all had selected items from their ranges on show, including Beyer's new pocket transmitter, with a similar size receiver on schedule in the next few months. Not a surprise, but noteworthy nevertheless, were new radio mics on both the Eagle and Audio Technica stands. Both available now, AT are in the middle of the lengthy process of getting their unit DTI approved.

Which leads on to one surprise - the



No, Beyer aren't into satellite dishes, it's their parabolic mic reflector now available in green.



The range of DNH speakers.



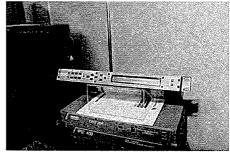
Peter Hamilton and his Spheres.



RCF demonstrating the stylish ELISA source/amplifier.



Toa's new horn — redesigned to avoid legal difficulties.



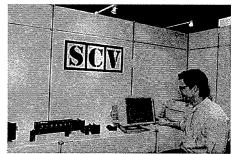
The Peavy CEQ 28 programmable graphic.



Klotz UK's Brian Latham.



HGM busy with every possible style of speaker.



Mark Burgin demonstrates Acousticadd.

Technically Superior High Temperature Filters

The most durable filter available

There is a growing need in the modern production environment for filters able to withstand higher temperatures than ever before: the development of more powerful lamps has been parallelled by the introduction of new generations of

The Lee Filters approach to heat considerations has been evolutionary.

From product

Having pioneered the use of modern resin material in general filter production, the company has now harnessed the power of a new kind of polycarbonate to produce the new Lee HT range: a series of filters resilient enough to withstand the rigours of the toughest, hottest situations.

In a programme of gruelling tests, the Lee HT polycarbonate grades lasted better than any other filter currently available. Placed for the 30 degree an

perature of 285 degrees C, HT filters retained their physical integrity.

That's the kind of performance which makes the HT series ideal for prolonged use, and in situations where lamps are difficult to reach.

Available in sheets 0.56 M x 0.53 M, or rolls 4M x 1.17M, Lee HT polyc nates conform to BC2n

grades, with manufacture performance, of When it comes to polyester lighting individually coded and printed to ensure complete traceability. Lee polyester filters are manufactured to the most stringent standards. The company pioneered the science of modern filter production, applying state of the art technology to the first principals of colour physics to produce filters of unsurpassed colour quality. product is its product that the systems ensure c gated the fundamentals and commission the equipment wh makes such high production standards From colour mixing to spectrophotometric development through to continuous one company has it all.

By now you must be tired of all the technical guff that manufacturers put into their ads. Well, as you probably already know that Lee manufactures the best range of filters in the World, we thought we'd give you this nice restful seascape to look at instead.

We don't need to tell you we're the best



A DIVISION OF **LEE** Colortran Ltd.

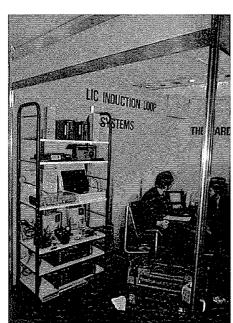
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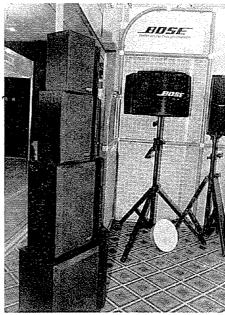
The Sound Department's siren. Fortunately, they didn't switch it on.

presence of the DTI with their own stand and staff to hand explaining some of the whys and wherefores of every form of legal radio transmission and illegal interference. One wonders if this indicates a welcome new level of interest in the radio mic market by the DTI. If so, they should infuse some of it into their press office!

There was little in the way of high power speakers, except for the mega-loud Siren system on the Sound Department stand, designed primarily for the 'five-minute warning' application. The majority of speakers were either ceiling mount or club/ pub installation units of varying power. HGM Sound had all of their speakers to match every possible style of interior decor. Harman had a couple of new cone drivers on show plus heavy duty cradles for units like the Control 5. Their 'triple tuned' subbass systems, SB1 and SB5, are also going great guns, and there were rumours of the new CADP software, but nothing seen working. Shuttlesound, Ramsa and Bose had their computer design packages running. As well as the Modeler software, Bose had two newish sets of speakers. The 305, a higher power and improved style 301, is just



LIC's systems.

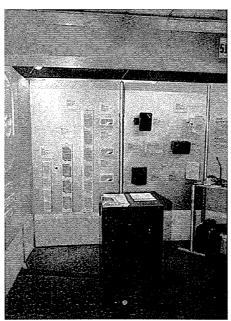


Bose's new XL range.

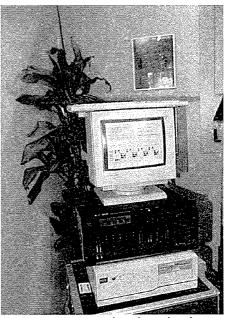
beginning to come into the country in quantities. Also Bose are distributing the Irish manufactured XL series which range in price from £99 to £169 a pair and are doing well in low-cost installations.

The only driver manufacturer at the show was **Volt Loudspeakers** who are making and showing several drivers for PA and installation applications including a high power 8", and units with built-in protection.

As the market broadens there are more specialist products appearing. Some are existing and 'low' technology, others supplying completely new products. LIC's speciality is induction loop systems with varying amplifier sizes and a new small portable package for temporary installations. The company were also introducing a range of IR systems. Benefitting from the merging of entertainment and installation products, Peavey are gaining a share of the installation market. Their Bob Pickwoad showed off their latest high-tech unit, a programmable EQ. The CEQ20 is a 28 band 128 memory digitally-controlled graphic. Unlike other units, this one has its own builtin noise source and analyser and can combine curves. Not quite a poor man's



Bouyer speakers and conference systems.



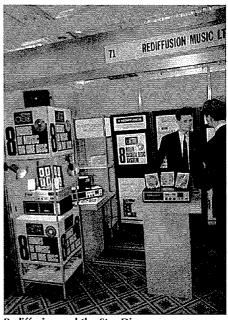
New computer control package for the Toa SAOR system on the LMC stand.

SIM, but it will have several applications as a comprehensive all-in-one unit at under £500 list.

Klotz UK showed both ends of the spectrum of technology that encompasses the industry. On the one hand they had cables and Neutric connectors and at the other, optical fibre links for both audio and, with a new unit on show. MIDI data.

Other miscellaneous products that come to mind from the show include 'Anglepoise' type mic stands from **Howland West**, the long play CD system from **Rediffusion** that puts reduced bandwidth music onto their own StarDisc CDs thus squeezing eight hours of continuous music from a single CD, and amplifiers from **C Audio, Hill** and **Crest** (watch out for remote control features in the near future).

Yes, the show was well attended. Yes, using the long-term car park parking was a little more organised — although the 'special Sound 90 day rate' turned out to be the normal rate. Yes, the coffee was still overpriced by a factor of three. The industry and the Sound 90 shows have stabilised, and with its new improved level of working is generating few surprises.



Rediffusion and the Star Disc.

Still No 1

It's been some time now since the GE Pinspot became the world's best selling disco lamp. Since then sounds have come and gone. Discos have appeared and vanished.

But the Pinspot is still on top.

Which brings about an interesting question. In such a volatile world how can one lamp reign supreme for so long?

The answer is surprisingly simple.

It's simply that no other disco lamp comes close to matching its qualities. No other lamp is as sturdy or as easy to handle or made to the exceptionally tight tolerances that GE demands. And being a sealed beam unit is also a big advantage. Because it means that dirt, dust or smoke don't stand a chance of getting inside.

Finally, the Pinspot is an honest lamp (which is more than you can say for some). It delivers what it claims to deliver.

The GE Pinspot.

Even after all these years, it's still spot on.

The GE Pinspot, Still Spot-on.

We don't just sell lamps we sell expertise



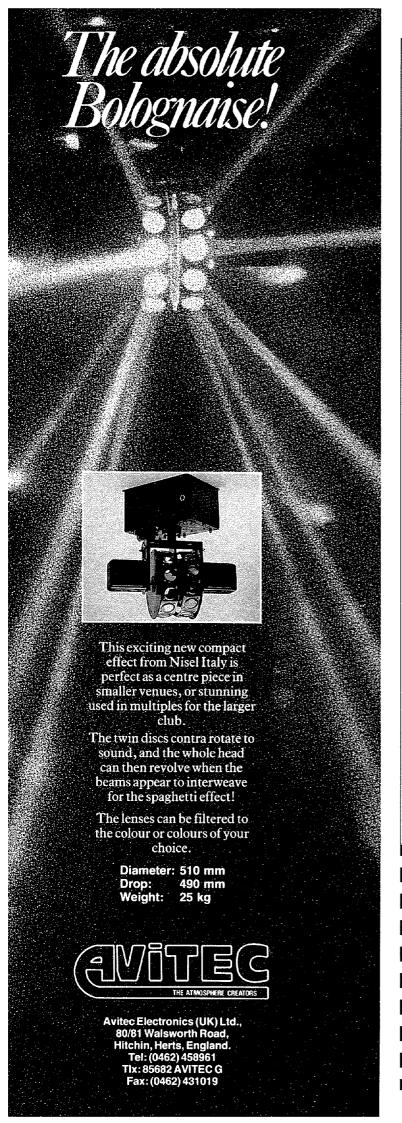
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EQUIPMENT/Jews

Quartz Console in Production

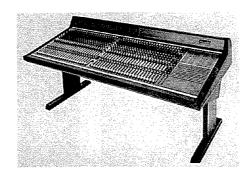
Initially launched under the development project code name of PCX, the new Soundtracs Quartz is now in production, and sales have already taken place in America, Italy and the UK.

The Quartz creates a new dimension of costeffective 24 track consoles which, combined with
recently introduced analogue and digital multitrack
machines, provides a previously unobtainable
package, claim Soundtracs. It is a 24 bus inline
console with computer mute automation of channels
and auxiliaries. In common with all other Soundtracs
products, it is the result of lengthy research and
development to design the console with the highest
sonic purity and integrity which features all the
facilities required for 24 track music production.

The on-board midi muting is an extension of the system used on the PC Midi console which has become so popular that it has become an industry standard for MIDI studios and programming suites. Mutes may be written in real time as 'note on/note off'. Alternatively, up to 100 muting patches may be stored in memory, and may be triggered from a MIDI sequencer, enabling mute playbacks to be locked to timecode.

By virtue of being an inline design, the Quartz is much narrower (only 2.2m) than a traditional split console with the same number of inputs. The console is particularly suitable for a 24 track midi production emvironment, where space is a limiting factor. On mixdown the tape monitors may be over 100 inputs. In order to minimise noise and crosstalk, all group and master busses have been electronically balanced.

The console has many features such as stereo auxiliary and four band all sweeepable Eq with options including stereo inputs and additional effects



return inputs, which have previously only been associated with more expensive consoles. Frame sizes to accommodate 32 and 48 modules are available, both with patchbay as standard. The Quartz will be demonstrated at the Frankfurt Music Messe running from March 21-26. For further details, contact Soundtracs in Surbiton on 01-399 3392.

LimeLite Professional

Future Software Systems have recently announced the introduction of their new video typewriter system LimeLite Professional. Based on the highly successful LimeLite video typewriter, LimeLite Professional offers simple colour coordinated text editing features with dramatic text presentation options, ambient graphics, scheduling of text, pictures and animated 'Flying Logos.' These features make LimeLite Professional ideally suited for point-of-sale information, instant messages for conventions, concerts, presentations, video captions et al.

A number of hardware configurations also ensure

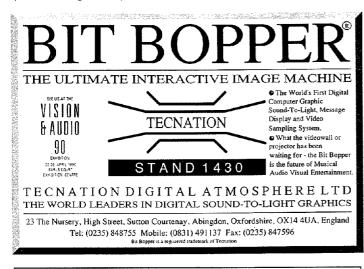
that it fits the specification and budget, by providing a range from simple installation to a full 'no operator, auto starting, broadcast standard' system. The scheduling system not only allows a multitude of messages to be played back serially, but also at predefined times of the day, at constant intervals, or at random intervals. The pictures and 'Flying Logos' can all be generated by Future Software Systems from customers artwork, freeing the customer from the need to understand or buy sophisticated animation systems. For further information contact Future Software Systems at Maidenhead on (0628) 24318.

Flexible Display Lighting

Orbit Strip is a new flexible low-voltage spotlight system which has been added to the range of Crompton Raak products from Crompton Lighting, a Hawker Siddeley company. The Orbit Strip is designed to accept three, four or five Orbit Spots in a fixed position, all controlled by a single electronic transformer simply attached by a practical mounting bracket.

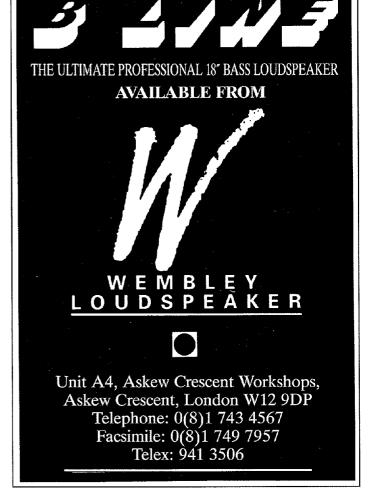
This transformer is self-regulating and will allow lamps of varying capacities to be used up to a maximum capacity of 210W. It is equipped with both short-circuit and overload protection, resettable when the power is disconnected. Combined with the transformer, the multi-lamp Orbit Strip range is particularly suitable for use in situations where a transformer cannot be placed above the ceiling. Manufactured in white extruded aluminium, the system can be mounted separately or linked together to create many display lighting variations.

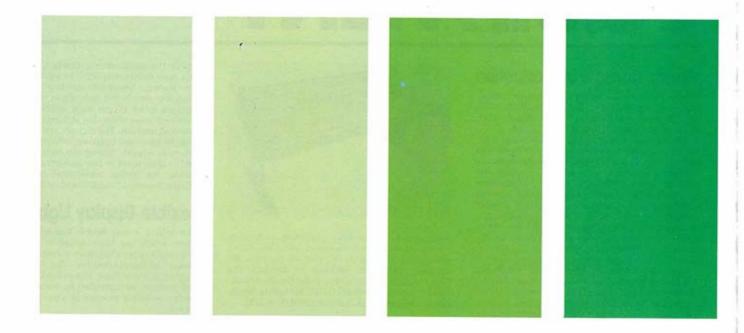
A wide selection of accessories can be used with the Orbit Spots, including filters and barndoors. For further information contact Jane Carter at Crompton Parkinson in Northampton on (0604) 30201.





Mushroom Lighting, Northampton 0604 494886 Odeum Light Sound, Surrey 0403 752775





What's mysterious, comes from the sea, lurks in forests, and is green all over?

Supergel Green Gel

Like Kermit says, it isn't easy being green. There are so many jobs to do.

Sometimes you must carry a scene by creating pastoral effects. Luckily, there are Supergel 86A, 89,90 and 94 gels. They generate a wide range of naturalistic illusions, from dense forests to airy fields.

At times you must become the sea itself. It's a good thing there are Rosco blue-green gels that show up as light reflected from water.

Other times you're called upon to effect mystery or danger. Supergel has several green gels perfect for the role.

These days a green gel even has to be an electronics genius, acting as a Chromakey background for video. For this job, we developed 385 Chroma Green. Or re-create the period look with 388 Gaslight Green.

So many jobs to do. So many roles to play. It's a good thing Rosco has so many green gels.



Roscolab Ltd., Blanchard Works, Kangley Bridge Road, Sydenham, London SE26 5AQ. Tel: (01) 659 2300. Fax: (01) 659 3153. Telex: (01) 895 3352 ROSLAB G. Also at New York, Hollywood & Madrid.



SUPERGEL

The Ultimate from Squire

Squire Sound & Light recently launched the new four channel lighting controller, the Ultimate 32 × 4. The controller's features include four channel operations with 32 different programmes. It is multi-functional with auto programme change, pattern hold, beat flood and flood.

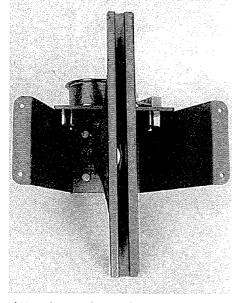
It is compact and solid due to the quality transformers inside, and its triggering to sound-tolight is remarkable, say the company.

Stylish in appearance, it sports the Squire logo, and is ideal both for quality mobiles and small wine bar/club installation where it can be left to work all night on auto pilot. In the not-too-distant future, the controller's eight channel counterpart, the 32 × 8 will be on the market, details of which will be available in due course. For further details, contact Squire in Guildford on (0483) 502121.

High Frequency Horn

To control high frequency sound dispersion in short throw, wide arena applications, Vitavox has developed the SR4000 vertically-aligned slot radiator horn. The horn is designed to overcome the problems of narrowing projection angles, unpredictable beaming effects and erratic frequency response characteristics associated with all types of bullet radiators.

Providing a well defined 120° horizontal \times 50° vertical dispersion characteristic between 6kHz and 18kHz, the SR4000 has good control down to



4kHz and up to 20kHz. With a 220Hz exponential flare rate, the horn has an effective cut off at 1kHz.

The horn is suitable for use in virtually any application where defined and tightly controlled frequency dispersion is a critical factor, say the company, such as professional in-house systems in studio theatres and cinemas, near-field high frequency coverage in touring concert sound systems and studio control room monitors. Overall dimensions of the horn are 240mm wide \times 300mm high \times 220mm deep. The unit weighs 1.5kg and is finished in matt black. Further details are available from Vitavox in Stanmore on 01-952 5566.

Multiscan Developments

Moonflower Multiscan is a firework of light and colours. 50 laserlike beams are projected with high light intensity far into the distance. Its special features include a complete bundle of lightbeams which can be turned 40° by means of the integrated scanner up and down in the horizontal.

The synchronised music control system of the scanner and reflector turn the Moonflower Multiscan into a very special experience say SLE, its manufacturers. Thanks to the optimised high-intensity optic the light intensity of the 150watt bulb corresponds with the light intensity of the 250watt used previously. The ingenious ceiling attachment allows its additional use as a central effect. The Moonflower Multiscan is thus a true

multifunctional projector. It is also available in a high power version with mercury arc and the new music-animated auto-colour system.

Also newly developed by the company is the Butterfly Multiscan. Thanks to high intensity optic, six extremely bright laser-like sheets can be projected in five brilliant colours — each sheet spanned at an angle of 6° to the next, using a 150 watt bulb. The beams of light sheets are scanned to music by the built-in automatic music control. As in the Moonflower Multiscan the built-in scanner directs the beam of light sheets to music, with the elegant design being similar to that of the Moonflower Multiscan. The Butterfly is also available with a hi-power mercury arc lamp and the new music-animated auto-colour system. Further information can be obtained by contacting SLE in W. Germany on (49) 7621 8521.

Mobile Link gets Airborne

A miniature portable microwave system, previously only the prerogative of professional broadcasters, is now available through Sammys, for hire by independent users of video, for air to ground or shore to ship vision links. The lightweight package of transmitter, receiver and aerials is the product of a joint business venture between Sammys and TV2, a Northamptonshire company specialising in microwave links.

The equipment is designed for use with Video Assist and ENG (Electronic News Gathering). Depending on geography and the antennae being used, the video link can be applied for a distance of anywhere between 10 yards and 68 miles, on line of sight or with use of a mid-point relay. Its use means that the shooting of a pop promo or concert, using Video Assist or ENG cameras, can be done without cables on stage or at the back of an auditorium. It is also designed for use with helicopters or other aircraft, high cranes, jibs and vehicle and camera rigs.

Specifications include full frequency agility, dual audio channel and level switching, 12vDC current operation and most importantly, approved legal frequency allocation at 3,5Ghz and full broadcast specification. The transmitter, which weighs only 1.6kg is a convenient 114mm in width, 178mm length. A qualified Sammys technician is part of the conditions for hire and seven days notice of use is required.

During the past 30 years, Sammys, now based at a new purpose- built complex at Greenford, Middlesex, has been meeting the production needs of the film and commercials industries. The company's managing director, Barry Measure, told L+SI that the video link is just one of a number of new product developments which will keep Sammys abreast of film makers' requirements in the 90s. "As well as providing the link system we can also advise on the equipment's application. It is an extremely versatile product and one which will add considerably to our service and consultancy role," he added. For further details, telephone Steve Campbell at Samuelson Film Services on 01-578 7887.

DMS 100SM

A new version of Studio Power's popular DMS 100 is now available. The loudspeaker designed jointly by Russell Kauffman (Studio Power) and Colin Wonfar (Incatech designer) is known as the DMS 100SM.

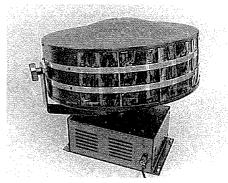
The new speaker uses not only a 1" metal dome tweeter but also an 8" metal coned bass unit in a medium sized reflex enclosure. A design feature of the enclosure is the use of four front to back bracing struts positioned directly behind the screw holes for the bass unit. 50mm length screws are used which bite into the bracing struts thus giving a very strong mechanical bond between the driver and the cabinet. A further bracing strut is mounted across the cabinet to strengthen the side walls. A sealant is used to further bond the unit in place.

The cabinet is 22mm (approx 1') thick, an unusual feature say the company as most cabinets are between 15-19mm. This extra thickness gives additional rigidity, produces less colouration and a tighter bass.

The combination of the metal coned bass unit

and cabinet construction offers excellent control, Studio Power believe, on bass transients and a very open mid-range. This is the first Studio Power loudspeaker to offer a bi-wire facility which should make it a good partner for the new Incatech Quattra Amp that has been designed specifically for bi-wire speakers.

For further details contact Studio Power in Guiseley on (0943) 870057.



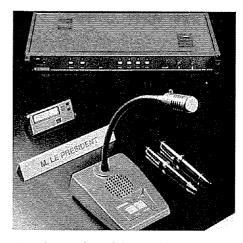
Meteor's Xylon

The Xylon by Meteor introduces a new era in the entertainment lighting market. Built to use inexpensive quartz lamps, this effect produces a higher lumen output than any of its imported counterparts, claim the company, by using real glass lenses and a proper optical path. The Xylon controller included with the unit provides a remote command centre for audio activation, motors and both lamp circuits. Using Meteor's own MMX system, installation is as simple as connecting the control wire (common telephone cable) to the Xylon and the controller. For more information contact Meteor in Madison on (205) 772-9626.

Versatile Conference System

Planned Equipment Ltd have introduced a new conference system to meet the increasingly sophisticated demands of today's market. Technically-advanced, attractively styled and easy to use, the system is extremely flexible and allows up to 50 consoles to be installed very quickly. The heart of the system is the EC400 power unit. Housed in a 19" rack-mountable grey, metal cabinet, it has a 7W output, six modes of operation, record/playback socket, volume and treble/bass controls, and an output for an additional amplifier.

Facilities for the individual delegate are provided by the EC411 console, a single unit comprising a gooseneck uni-directional electret

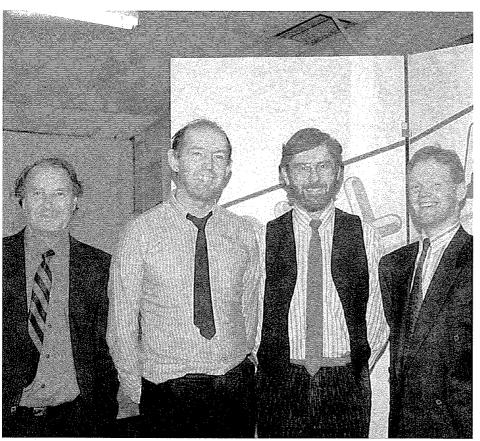


microphone, 'talk' push-button plus speaker's LED indicator, balanced pre-amplifier and 100mW built-in loudspeaker. The chairman's console, EC410, has a specification similar to that of the EC411. It can be located anywhere in the system and has the ability to override all other consoles. A secretary's console, EC412, is available with the additional features of headset and 'record' connectors. For further information contact Peter Barnett, marketing manager, at Planned Equipment on 01-841 6251 extension 201.

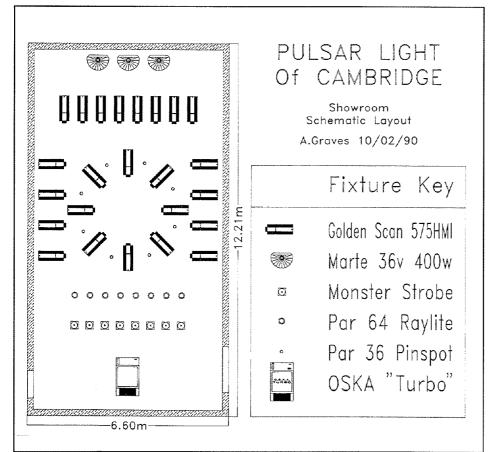
CAMBRIDGE LIGHTS

New production and demonstration showrooms at Pulsar and Starlight have put Cambridge even more firmly on the lighting map.

John Offord visited both new facilities



Derrick Saunders, Ken Sewell, Paul Mardon and Andy Graves: a new approach at Pulsar Light of Cambridge.



Schematic layout of Pulsar's new showroom.

Pulsai

Major developments at Pulsar of Cambridge include a spend of £120,000 to bring in an additional 6000 sq.ft. of space. The new first floor area increases the overall space to 35,000 sq.ft., and 93 staff are now employed at the complex.

"We decided to take the opportunity to improve the working atmosphere," explained director Ken Sewell. "In addition, it has enabled us to remove some bottlenecks in production and at the same time create a demonstration studio and better facilities for sales and product support."

And these aren't the only changes. "We've changed our way of dealing with customers; we've got a bigger responsibility to our distributors and through them to the end-user," continued Ken Sewell. "We have to educate the customer to the capability of the equipment."

The last couple of years has seen the lighting industry move towards intelligent lighting together with integrated control systems capable of controlling complete lighting environments. The technology involved has placed a burden on the installer and designer in terms of technical back-up and programming skill, and it's Pulsar's view that the manufacturer cannot expect the installer to carry on unaided.

Project support manager Andy Graves has the task of making sure that any technical and training problems are looked after. "The actual end-user feels better when they see where the equipment is made," he told me. "We want him to feel that he has a direct line to the manufacturer."

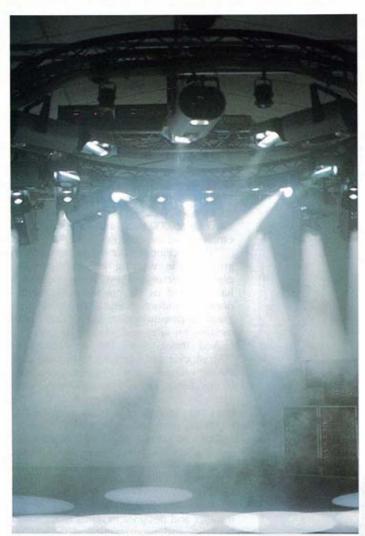
This also applies to product in operation. "Customers will call and say 'how can I get this effect' — on OSKA — and a bond is developed through this kind of contact."

"We are now into much more sophisticated products," interjected director Paul Mardon. "We plan to hold training seminars every two or three months to serve both existing and potential customers, supporting over a dozen major distributors."

As if to emphasise Pulsar's commitment to its products and users, sales director Derrick Saunders reminded me that any customer who's ever bought a Pulsar product can come back and have it serviced. "Very few of our product lines have been dropped — they've been continually improved, of course, but I'm amazed at what continues to sell."

Pulsar's new demonstration studio is, as you would expect, OSKA and Golden Scan dominated, and one of the daily highlights at Pulsar is to witness Andy Graves struggling to stop Derrick Saunders selling the gear that's installed, putting a Golden Scan or two in his car, and driving off to the latest distributor in a panic for stock.

To serious business, Ken Sewell and Paul Mardon aim to get two-and-a-half times the





Two scenes from Pulsar's OSKA/Golden Scan show in their new demonstration showroom.



A close-up of Pulsar's rig.

output from their present factory. "It's a discipline for us to achieve that," said Paul. "We are offering high-tech with highsupport, coupled with a loyalty to our clientele."

And as if to further prove the point, Ken Sewell told me as I was leaving that they were about to install £100,000 worth of processing equipment that will automatically insert circuit boards and other components.

Starlight Design

A few miles to the west of Cambridge, and still in the county, Starlight Design have also recently expanded their production facilities and opened a new showroom. Established in Bourn, Graham and Marion Smith's company has now expanded considerably with the acquisition of a new light industrial unit four miles away at Great Gransden.

Administration will stay at Bourn for the time being, but the new premises has given Starlight 4000 sq.ft. to play with. Half has been taken over for production, and the rest split between storage and the showroom.

Starlight's range of all-British product is expanding in leaps and bounds, and the equipment on demonstration is totally of their own manufacture, a confident step and a bold one too. It works well for Starlight in two ways: every piece of equipment can be viewed in operation in the right environment, and as far as installation and design is concerned it also proves the company has got what it takes when it comes to providing the right ensemble. Particularly, of course, as they are also looking to expand the installation side of their business.

Equipment installed is as follows: pinspots, light curtains, scanners, 2-lamp scanners, 4-lamp scanners, 2-lamp waver, 4-lamp waver, 8-lamp waver, Par 56 lanterns, nodding scanner, Starfan, Starfan waver, Mini Harvester, Harvester One, Harvester Two, Starship, Starflower, Snowflower, Dichroflower, Shooting Star, Starblitz, Starbeam and Rainbow. To that you just add some fog, speakers, amps and Design Line and you have the Starlight all-British light show — impressive too.

By the way, if you haven't noticed, and want to avoid those long pre-recorded changed number announcements, Starlight can now be contacted on (0954) 718841 (fax 718846).

For details of the



Light and Sound Show September 9-12 Olympia 2, London

> Contact: David Street 3D Services

(for contact information see advertisements on pages 5 and 9 in this issue)



Starlight Design's all-British display.



KEEPING SOUND GOING

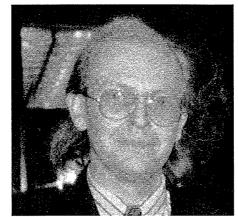
Tim Frost talks to Paul MacCallum of Wembley Loudspeakers

"We get work from other people's misfortunes." Paul MacCallum the man who is Mr Wembley Loudspeakers, doesn't necessarily relish this fact, but as the country's largest speaker repair centre, the company performs a very necessary service.

Established in 1971, Paul took control five years later and last year moved the company from its old, rather less than elegant, base to a new unit next door to the Sound Department - still just about in Wembley. The company is active in both speaker repair and as a chassis and box builder. The service side has throughput of around 40 drivers a month of all shapes and sizes. Paul has seen the pattern of users change over the years. "In the early 70s it was 80% rock and roll and live music, with very few hire companies. Then all of a sudden we found ourselves doing work for the hire companies, and the live music side dropped, which also reflected the cut back of live venues. Now 80% is on the disco side and the rest is for hire companies with the occasional Fender or Vox speaker for the live musician."

As PA systems and installations have become more sophisticated, there is a lot more limiting and speaker protection being used, which has cut back some of the causes of speakers blowing up. Paul observed that, apart from old age, the most common cause of speaker failure is down to amplifier size. "The majority of failures are due to old age and fatigue or some form of abuse. The demand for more bass-end is one cause, where people are not using enough power. The level is turned up, the amp clips and that's it."

At all levels from Goodmans to JBL, the cost of repairing a speaker is well under half the cost of replacing it. For a £40 Celestion it is around £15, for a £200 JBL, reconing is under £80. "Usually the cost of repairing a speaker is a fraction of the cost of replacing it. American manufactured speakers are quite expensive to repair as we only use the manufacturer's original parts. We have all our own cones for the British speakers, but we also now have stock of original Fender kits — some 400 cones. We did work for Canned Heat who had some 1950's Fenders and we



Paul MacCallum: keeping old favourites going.

had all the original bits, I don't know who was more surprised, them or us."

In those cases, Wembley are in the nostalgia business, keeping old favourites running. Paul is constantly surprised by the number of people who don't realise that speakers, especially the cheaper ones, can be repaired. He tries to let his customers down gently when they cotton on to the fact that they have thrown away quantities of perfectly fixable drivers.

With the intimate knowledge of how other manufacturers resolve driver design problems, that comes with repairing them, Wembley produce their own speakers. "We looked at two or three other manufacturers and looked at ways of combining some of the best features of each of them," Paul explained, "our 18" speaker is the only one with a double suspension, with one on the coil and the other on the cone. For the metalwork we have married up a standard frame and a customised magnet.

"It has a heavy duty four layer voice coil which is actually two coils wound one on top of the other. By using two different coils you can get 4, 8, 16, or 32 ohms. By putting these bits and ideas together we have come up with a good unit. It goes down to 25Hz and performs better than we had predicted."

The drivers are used in a range of boxes, primarily designed for discos and installations. There are several boxes in the range

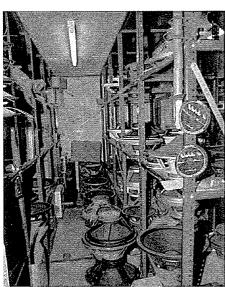
from a bass tin to the compact Maxi-Cube. One of the more ingenious is the Juice Box, a two-way system that can be reconfigured for vertical or horizontal operation by switching over the name-plate and HF driver. It is one of the few boxes that can be made to look quite different from vertical to horizontal operation.

The Maxi-Cube is a 10" general purpose speaker for background sound. As this can be pretty loud nowadays, Paul has designed the system to cope with high levels. "The Maxi-Cube is a little 10" cube with 130W 8" co-ax made for Wembley by Volt Loudspeakers. We prefer to string these up in parallel across a bigger amp rather than use 100V line, then if one goes down it doesn't take the whole chain down with it." To achieve this, the cube is available in impedances from 4 to 64 ohms.

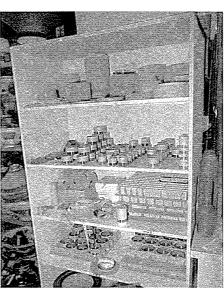
The boxes are all assembled at Wembley using cabinets built by specialist woodworking companies. Paul is not wedded to one supplier and whilst there I looked at a new version of a standard unit that had just come in from one of the companies. "We like the companies who bother to make suggestions," Paul explained. "This one has put in a few of his own ideas, it is more reinforced than the original and better finished."

Changes and new boxes are always being worked on. The Top Box which uses a 10" in a fibreglass flare may well appear in a new guise for Frankfurt, to make it match a little closer the 2820 bass bin. This is the direction that Paul would like to continue. "Our own products are doing well with a lot of business especially in the bass units, which are going to installation companies and the big reggae/soul mobiles in various boxes. What we would like to do in the future is consolidate and add some new lines."

With 10% of his business going for export he also sees the opportunities and dangers brought by 1992. "I think the 1990s is going to be difficult. We have to be careful about the Italians and the Spanish as they are starting to get good product. When the tariffs do come down, it will be interesting to see what will come over here and what British companies are going to export."



Drivers awaiting attention.



Parts awaiting a blown up speaker.



Speaker re-coning in progress.

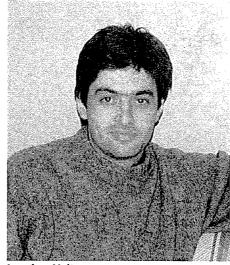
ON TOUR Catriona Forcer

The last time I interviewed Jonathan Holt he was lighting designer for Rick Astley. Today, he is working as lighting director for Barry Manilow who seems to be continuously on tour. His UK tour has received much praise from the music press and certainly it's a very enchanting show. It was a theatrical production with an impressive computercontrolled slide projection on the cyc.

My second interview is with Derek McVay. He is one of the directors of Front Line, a production company based in Falkirk, Scotland. He is also lighting designer to one of today's most popular bands - Deacon Blue. More recently, he has been touring with Del Amitri. His opinions on today's lighting business are forthright, and I was only too pleased to let him air them.

Barry Manilow Manchester Apollo LD: Jonathan Holt

Last summer, Ionathan Holt left the Rick Astley World Tour early to take up the lighting for Barry Manilow. He explained how different it is to work for someone like Manilow who produces a slick, Broadway type show as opposed to rock and roll. "There were too many breaks on the Rick Astley tour and so when Barry's original LD, J. T. McDonald, decided to leave after 18 months to do Debbie Gibson, I stepped in," he explained. "Last June I was rushed out to see eight of Barry's shows on Broadway and three in Las Vegas. In that short period I had to get to know the show and to start operating it. Then Rick Astley decided to go out, and because Barry hadn't definitely decided to go out on tour, I went with him. Two days before Rick actually went out, Barry decided to tour! Fortunately, I had picked up a good Vari*Lite operator in Australia, Paul



Ionathan Holt.

Kent, and he got on well with the band. I trained him during the first two weeks of the tour and he finished the last two weeks for me whilst I went to do the Barry Manilow rehearsals.

"The rehearsals were a bit of a nightmare as I hadn't been left much information, and Barry expects you to know the show first time round. That's the challenge of working with someome like him. He really notices the lights from the size of the follow spots to the colour of the gels and the angle of the lights. I didn't re-design the show, and in the programme IT is listed as the designer and I'm the director. It was easier for me to take over JT's design and I'm happy to keep it that way. There are some new songs which I've designed different looks for.

"The main feature of the show is the cyc which was put together by Kevin Doon with 50 slide projectors run by two computers. It's good because I don't have to worry about the background and we work together contrasting and complementing the colours. It's another dimension that adds more depth to the look of the show. On the first electric I've got about 80 lamps including lekos, gobos and colour changers. Then there is a box truss with 120 lamps and a fourth electric with a further 36 lamps and colour changers. There are four outfront follow spots and two on stage.

"It's a theatrical show and one of the most interesting things is that the director, Kevin Carlisle, has worked with people like Judy Garland. On this show, we also have musical directors, comedy writers, lyricists and choreographers. They are very picky and they expect everything to be right, especially timing. Because it's a Broadway show, it has theatrical parts in it like losing the lights at certain points, with only the spots on, so that they can change the scenery. I've learnt a lot about theatre lighting - or rather a lot about what I didn't know! It's good for discipline because Barry expects it to be perfect every night and that's not always easy as we go from arena-size venues to city halls.

"It's a relaxed set-up until about half an hour before Barry arrives and then everyone starts to get a bit worked up because he can walk in and demand this, that and the other. Like most stars, he can be temperamental. He won't think twice about calling me in the morning to say that he wants to do three songs we've never done live before, and all for that day's matinee. This leaves about half an hour to reprogramme.

There's no limit to this tour. Eventually Barry gets tired, goes home, sits in his house, gets bored and then wants to go out again. It's a nice little family and we all get on well together. I'm the only English guy on the tour, so I insist on having another with me — in this case John Harper. We've been touring since September doing mostly the East Coast and Mid West of America. We ended up doing six shows at the Universal Ampitheatre in Los Angeles leading up to New Year's Eve. The tour only goes to the UK in Europe because it's a big show and it's quite expensive to put on. We're going to Japan and maybe Singapore. Then we go back to the USA so that Barry can fulfil commitments in Vegas and Atlantic City. They'll build up some other US dates around them and there is some talk of an extensive Canadian tour.

There is a big contrast between working for a big name like Barry Manilow and someone like Rick Astley. Rick was fresh and full of ideas, but he got bored very quickly instead of trying to perfect what he was doing. Barry will persevere to get it perfect every night.'



Barry Manilow: LD Jonathan Holt.

Barry Manilow: Equipment List

 $21 \times 7'6"$ Thomas pre rig truss sections

4 × 90° Thomas pre rig truss corners

× Thomas variable corner

14 imes 8' Telestage truss sections

4 × Telestage corner blocks $18 \times \text{Verlinde 1 ton electric chain hoists}$

5 × Verlinde quarter ton chain hoists1 × 12 way motor controller

× 4 way motor controller

All necessary rigging 2 × Lycian HTI 400 short throw follow spots

 1×12 way intercom system

277 × Par 64 lanterns

 \times 6 \times 22 Leko

40 × 6 x 16 Leko

 $8 \times 6 \times 12$ Leko 3 × Par 64 floor lanterns

2 × 9 Lite -- Par 36 ACL $4 \times 400W$ far cyc light



Barry Manilow at Manchester Apollo.



Barry Manilow: Equipment List (cont.) 32 × LSD ColorMags c/w control 1 × AVO QM500 180 channel console 2 × AVO 72 way dimmer rack 1 × AVO 48 way dimmer rack All necessary cabling 1 × 60' × 30" black truss border

2 × 10' × 22' black legs 4 × 10' steel scaff poles

4 × 12' aluminium scaff poles 50 × slide projectors (Kodak colour cells) 2 × Eagle projectors 40 × 20 back projection 1 × 2k Zenon 35ml projector × Barco video projector × Sony video camera

Cracked oil machine 1 × Rosco 1500 smoke machine

Deacon Blue Wembley Arena LD: Derek McVay

During the last few years there has been a renaissance of Scottish bands, but little in the way of production services north of the border to support them. That is, until Alisdair Gibson, Steve Marr and Derek McVay formed Front Line, a company which can provide all production needs including lighting, staging and trucking, together with invaluable advice to inexperienced bands. Front Line doesn't attempt to compete with English companies, but prefers to offer its services to indigenous bands. Over the last three years they have worked with Deacon Blue, Texas, Hue & Cry, Love & Money, and on Wet Wet Wet's first tour.

Front Line claim they never chase bands as some other lighting companies do. As a small production company, they believe that it's very difficult to offer good service to everyone if you've got too many people on your books. They keep a

small amount of people who, they claim, get a better service than they would from a larger lighting company, simply because they get individual attention.

Front Line admit that they are not the cheapest company by any means. They acknowledge that bands can go down south to larger lighting companies and get better deals with which they could never compete. Derek McVay has strong views about this aspect of the industry: "I think it's wrong for large companies to offer very low prices. It leads people to expect companies to be cowboys, and I find that upsetting. If you are in this business you've got to have a professional attitude. You've got to believe that the service you are offering is worth something. When I hear of people undercutting, I think that the service can't be worth it. We've lost tours because people have undercut us by doing it for next to nothing. But what do they put on the road? I've seen it happen, and it's a load of junk. If you want the best gear that looks good and works properly, you should expect to pay for it. We don't mind if people try to take our business away, because we feel that we offer a service which secures it beyond their reach.

"Every tour which we put out has a large amount of new equipment on it. We try not to have a warehouse full of lamps because you can hire in lights cheaper than you can buy them. We are the only company north of Manchester to have a large range of Avo dimmers and Celco boards. We'd like people to know that if they come up north and their board goes down, we can replace it.

"We're trying to show that, although we come from the 'provinces', we can do it as well as the larger companies. We'll do it our way and it will work; we can go into places like Wembley Arena and do a good production. The last Deacon Blue tour was a totally Scottish production, apart from the PA. The bands and people of Scotland are proud, and even if they screw up, they are trying to achieve something here, instead of just going south. It's gratifying to have worked with bands like Deacon Blue and Texas from the times when

they were playing the local pubs."

McVay used to be a musician until he moved into sound. He met Deacon Blue and decided that he wanted to work with them. As they already had a sound man, he changed to operating the lights. For him, the past three years have been taken up with Deacon Blue who are constantly touring. He was fortunate enough to fit in an eight week tour for The Sugarcubes which he really enjoyed. Deacon Blue have been on a world tour since April of last year. Starting in the UK, it moved on to Australia and America. The band then had a few weeks off to do some TV work, after which they returned to America, and then finally to the UK culminating in two sell-out Wembley dates which apparently raised the roof! January and February of 1990 were spent touring Europe with a reduced rig in small clubs.

McVay again: "One of the main things about being a lighting designer for Deacon Blue is that the band doesn't want a light show. The lighting is there to enhance the band's performance. Deacon Blue are on stage, the lights are highlighting them, the PA is amplifying them, but it is their show. They are trying to communicate with people and they are not trying to disguise the performance or prissy up the show in any way.

"With Deacon Blue I can't script a song or write the tour at production rehearsals as Ricky, the lead singer, often changes the tempo or the way a song is. You have to be prepared for it. I get the set list just before the doors open and I will 'busk' the show with Ricky and the band. I have to watch them very intensely. Ricky uses his hands a lot to convey things to the band and himself. They're not hand signals to the crew, but I can interpret his body language into the lighting. I may be doing something that I want, but I'll change to something that I normally wouldn't have added in a certain song because, having worked with him so long, I know where Ricky is going. I write the basic cues and then I change them every night to capture the right atmosphere. I'm never bored, and the work keeps me on my toes.

The Celco board is ideal for this type of show because you can add and swap while the show is still running. Avo boards are wonderful if you've scripted the whole show. Once you get used to the layout of the Celco Gold, it's really an easy board to run. I know that I can go from my cue masters to my chase really quickly. The buttons don't confuse you on a Celco - it's clearly stated where you're going and what you're hitting. I like the service that Celco gives, and their service engineer Mike Rotham is excellent. I phoned him up four days before Christmas to come and fix a board and, although he was busy, he dropped

everything to get to us.

We do a lot of work for television, especially the BBC, and we are trying to get Celco boards used more in that area. We've used them on several programmes including the big launch of 1990 in Glasgow which featured two Celco Golds.

"I'm not really into high-tech. There's all this talk about non-generic lighting which is Par 64s, but you do end up in a high-tech jungle. I'd rather use things like simple colour changers such as Rainbows which are excellent and, of course, work well with Celco boards.

"Where will the technology stop? And who is it for? Is it the boffins who want it, or the LDs who think they want it? I don't see the point of flinging up ridiculous amounts of lights. Whose benefit is it for? Is it for the punters or for the LD's ego, or do the band feel that they should have this huge show behind them?

"On the European tour I haven't got half the lights that I had at Wembley, but I still get the effects and dramatics that I want. One of the partners in the company has been out on a couple of tours with only half a dozen lights, and it's been wonderful. Even if you use things in a traditional format, like a simple back truss, as long as you hit the right lamp at the right time, you've achieved the effect. You don't have to have 20 lamps in different positions. One of the problems of working as a lighting designer is that you tend to go for the overkill rather than the underkill, which can sometimes be more enhancing."

McVay believes that Roy Bennet is the best LD in lighting today because he always does the right thing for whoever he works for and that, according to McVay, is the sign of a good designer. John Featherstone is also in the running, but he's been 'eclipsed by Roy', and so is Pete Barnes because he has the ability to apply a light or a strange bit of technology to great effect, but in a way that is so obvious you are left kicking yourself for not thinking of it first. McVay thinks that it is a great pity that there are not more females in the industry, and he greatly admires the work of Jane Spiers.

He went on to talk about the future. He likes to think that he will always find the time to go out on tour. "Even if I ended up being paid huge sums of money to design a show, I'd still want to tour with it. It's not always a good idea to have an operator take over your show. I've gone out as an operator before and it's a bit like wanking with boxing gloves - it takes forever, but you get there in the end! It's a difficult position to be in and you've got to sympathise with anyone in it, because they are bound to have their own artistic ideas, but the designer overrides them. When you compromise

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too much one way the show suffers. In some ways it's better never to compromise.

"I think that people could get on a lot better in this business. I hate all the cut throat things that go on. I think it's all wrong. In the end, you've got to have some sort of humanitarian aspect of what aspect of what your work is. People are always trying to shit on each other. I'm naive. So many people get stomped on who don't deserve it, and it's simply because the company wants to make money or get the prestige of having a certain band in their stable. Some companies have so much, but they still step on people to get more.

Equipment List: Deacon Blue

6 × Thomas floor cans

24 × Bar 6 Thomas Par 64 No 1s

8 × Bar 6 Thomas Par 64 No 5s

2 × Bar 6 Thomas Par 64 No 2s

24 × Bar 4 Thomas Par 64 ACLs

12 × Thomas ground rows 1kW

16 × Bar 6 Thomas Par 64 ray lights

1 × Bar 6 Thomas profiles

6 × Sil 30* profiles

10 × Molefay 8 lite units

24 × Rainbow colour changers (4 with moving

24 × Eagle dichroic colour changer profiles

Both systems digital DMX512

6 × Rainbow MoleMag colour changers digital

1 × Celco 90 way Gold

1 × Celco 30 way Series 2

2 × Avolites 72 way dimmers

4 × Pani HMI 1200 follow spots 3 × Supertroupers

2 × Genie 10's

2 × turbo fans

12 × Arc line tubes

8 × snow machines

2 × 8' 'Angels' custom built

1 × Victorian lamp post

European Tour

8 × Bar 6 Thomas Par 64 No 1

4 × Bar 6 Thomas Par 64 No 2

3 × Bar 6 CCT condensor profiles 650W

8 × Bar 4 Thomas Par 64 ACLs

6 × CCT condensors 650W

10 × Thomas floor can rays

6 × Thomas ground rows 1 × Avolites 72 way dimmer

1 × Celco 60, way Major

1 × Genie 5 24 × Rainbow colour changers

Digital DMX512

1 × Multiplex unit link light

2 × manual chain hoists

2 × Genie super towers



PLASA News

Standards Officer



George Thompson

For some time now the Professional Lighting and Sound Association has been aware that serious attention needs to be paid to the subject of electrical and mechanical standards for equipment produced by members. A subcommittee chaired by Tony Akers was set up to take a preliminary look at the situation. It soon became clear that, for any effective work to be done, it would have to be by someone who could devote more time to it than any member of the Association could spare. As a result it was agreed that a professional engineer should be appointed to the part time post of Standards Officer.

George Thompson was appointed to this post with effect from March 1st. A Chartered Engineer and corporate member of the Institution of Electrical Engineers, he has over 40 years experience in the electronics and communications industry. Most of this time has been in Government service working on radar, navigational aids, long distance radiocommunications, computers and technical publications.

He sees his first task as the setting up and maintaining of a data-base of standards which are, or will become, applicable to the industry. By using this information on national and international legislation, members can ensure that their product meets all the legal requirements of the country in which it is to be sold.

Talking Turkey

In April, the London Chamber of Commerce and Industry is to hold a seminar entitled 'Turkey Towards the 21st Century'. The seminar will discuss why the Department of Trade and Industry has indentified Turkey as a priority market in its Forward Plan, and will focus on opportunities for UK companies to develop trading relationships with Turkey. Speaking at the seminar will be Lord Trefgarne, the UK Minister for Trade and Sir Timothy Daunt, the Ambassador to Turkey. Presenting the Turkish viewpoint will be H E Kamran Inan, Minister of State, Ali Tigrel, head of the State Planning Organisation, Ali Tigrel, U/Secretary Ministry of Tourism, and H E Nurver Nures, the Turkish Ambassador. For further information, please contact Chris Sogno at PLASA Head Office.

Expo Musica

Unfortunately, there wasn't enough interest to justify DTI support and the deadline for applications has now passed. Many members already have Spanish distributors and will therefore still be represented at the Show. In addition, PLASA will have a stand and will be promoting the Association, this magazine, and the Light & Sound Show.

Light & Sound Show 90

From Monday 5th March, booking is open to all comers, and organiser David Street has reported encouraging trends with many exhibitors taking larger stands this year. Among first timers at the show will be Peavey Electronics (newly accepted PLASA members), Arri GB, White Light, Specialist Lamp Distributors, Colin Eades Partnership,

Martin Audio and Allen & Heath. The Light & Sound Show brochure, first seen at Siel, is currently being translated into German, French and Italian for use at future exhibitions.

Sounding Out

Vice-chairman of the Association and chairman of the sub-committee on sound, Tony Kingsley, plans to hold an informal meeting for any PLASA members involved in sound-related fields. The aim of the meeting is to discuss the current role of PLASA, and how the Association can better serve those members within the sound sector in the future.

The PLASA office in Eastbourne will be pleased to hear from members who have ideas for discussion.

Paris View



Promoting PLASA at SIEL: Chairman Kevin Hopcroft (right) with Light & Sound Show organiser David Street pictured on stand in Paris in February.

FRANKFURT MUSIC FAIR

March 21-26, 1990. Frankfurt Fair Centre, Frankfurt, West Germany. UK Representatives: Collins and Endres, 18 Golden Square, London W1R 3AG. Telephone: 01-734 0543.

SIB/MAGIS

April 1-4, 1990. Rimini, Italy. UK Enquiries: The PLASA Office, 7 Highlight House, St Leonards Road, Eastbourne, East Sussex BN21 3UH. Telephone: (0323) 410335.

HSITT

April 11-14, 1990. Milwaukee, Wisconsin. National Office: 330 West 42 Street, Suite 1702, New York NY 10036. Telephone: (212) 563 5551.

PUB.CLUB & LEISURE SHOW

April 3-5, 1990. Olympia 2, London. Enquiries: Angex Ltd. Europa House, St Matthew Street, London SW1P 2JT. Telephone: 01-222 9341.

VISION & AUDIO 90

April 22-25, 1990. Earls Court, London. Enquiries: Emap Maclaren Exhibitions Ltd, 840 Brighton Road, Purley, Surrey CR2 2BH. Telephone: 01 660 8008.

SHOWTECH

May 8-10, 1990.
Berlin, West Germany.
Enquiries: AMK Berlin, Ausstellungs-Messe-Kongress GmbH Messedamm 22, D-1000 Berlin 19, West Germany.
Telephone: (30) 3038-1.

EXPO MUSICA

May 16-20, 1990. Madrid, Spain. Enquiries: IFEMA, Avda de Portugal, s/n Casa de Campo 28011 Madrid 1101. Telephone: 470 10 14.

APRS

June 6-8, 1990. Olympia 2, **London**. Enquiries: APRS, 163a High Street, Rickmansworth, Hertfordshire WD3 1AY. Telephone: (0923) 772907.

ABTT TRADE SHOW 90

June 28-30, 1990. Riverside Studios, **London**. Enquiries: ABTT, 4 Great Pulteney Street, London W1R 3DF. Telephone: 01-434 3901.

PLASA LIGHT & SOUND SHOW

September 9-12, 1990. Olympia 2, London. Enquiries: David Street, 3D Services, 12 Brentford Business Centre, Commerce Road Middlesex TW8 8LG. Telephone: 01-569 9742.

PHOTOKINA

October 3-9, 1990. Cologne, West Germany. UK Representative: Tony Pitman, 12/13 Suffolk Street, London SW1Y 4HG. Telephone: 01-930 7251.

DISCOTEC/HOGATEC 90

November 5-9, 1990.
Messe Dusseldorf, **Dusseldorf**.
Enquiries: Dusseldorfer Messegesellschaft GmbH,
NOWEA. Postfach 32 02 03 D-4000 Dusseldorf 30,
West Germany.
Telephone: 0211 45 60 01.

LIGHTING DIMENSIONS INTERNATIONAL

November 17-19, 1990. Orlando, Florida. Enquiries: Pat Mackay or Jackie Tien, Lighting Dimensions, 135 Fifth Avenue, New York, NY 10010, USA. Telephone: (212) 677 5997.



PROFESSIONAL LIGHTING AND SOUND ASSOCIATION

ABRACADBRA (SALES) AND HIRE LTD. 314 Nelson Road, Whitton, Middx TW2 7AH. Tel: 01-898 1127 Contact: Darryl Hayden

A.C. LIGHTING LTD. Unit 4, Sp.armast Industrial Park, Lane End Road, Sands, High Wycombe, Buckinghamshire HP12 4JG. Tel: (0494) 446000 Fax: (0494) 461024 Telex: 838829 Contact: David Leggett

ACTION LIGHTING LTD. 367 Uxbridge Road, London W3 9RH. Tel: 01-993 1684 Fax: 01-992 0212 Telex: 894452 Contact: Paul De Ville

ADAM HALL SUPPLIES LTD.
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Contact: John Allondale

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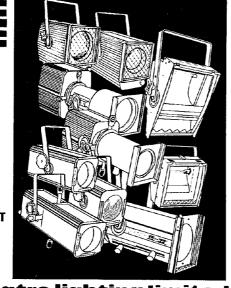
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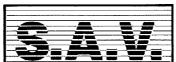
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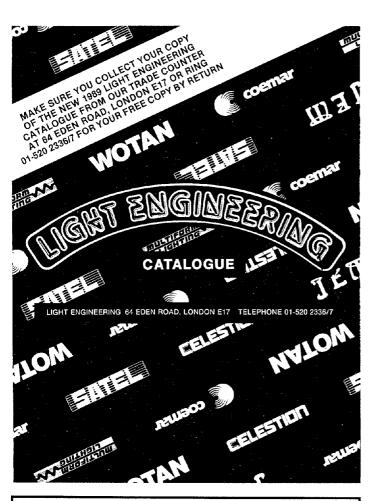
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VIEW POINT

The Age of Complacency

Louise Stickland

Here we are, entering a new decade amid enthusiastic predictions of progress and forward motion. What better time to draw attention to the essential conservatism (both political and artistic), of the rock and roll lighting industry. I would like to do this with reference to two specific political points: a prevailing attitude towards women, and a derision of 'art'.

I think it's important to remember the background with which we enter the 1990s. We've had 10 years of Conservative government, and that ideology has consequently permeated our culture and thoughts in numerous insidious ways. It is a doctrine which exalts greed, competition, wealth, privilege, compliance, obedience . . . I could go on.

Not surprisingly, the supposedly 'rebellious' and 'permissive' world of rock and roll has not emerged unscathed from this! In the quest for those good(!) old 'Victorian Values', nowhere has it found a more suitable niche than in the way the lighting industry treats women. I find it hard to believe that a whole industry can be so out of touch with modern perceptions of women. To hear comments like 'vou're not a feminist are you?' (in horror) in a world where feminism is mainstream, serves as a reminder that in this particular little microcosm of society, we're still in the Dark Ages.

As with any male-dominated profession, women trying to break into this sphere face the proverbial 'uphill struggle'. Once the initial hurdle of being taken seriously is overcome, then one has to deal with anything from blatant sexual harrassment to intimidation to constant

undermining of confidence.

At present in the UK, you can count the women in hiring and management positions at lighting companies on the fingers of one hand. This makes for an uneasy dependence on men and male attitudes for those of us who want the chance to become technicians, riggers and designers. These conditions aren't helped by the lack of formal training required for entry into our industry.

When women first desired to enter the legal and medical professions, they faced similar, if differently expressed, hostility - but that was 100 odd years ago. Perhaps it is that male psychology, and fear of any threat to what they have been socialised into thinking of as their unalienable power bases, hasn't changed in



Louise Stickland.

100 years. And perhaps, our self-righteous society hasn't progressed very much in that respect in 100 years. Or maybe we are witnessing the unconscious triumph of a return to those unsalubrious Victorian morals.

This brings me to the second area in which I feel the rock and roll lighting industry has become stuck, waist deep, in the quagmire of progress - artistic expression. If ever there was a case for conformity and conservatism it's in the lack of respect attributed to art and thought, in so much of lighting. The 'stuff art, this is rock and roll' school is dated. It's time for something new and more intelligent.

However, those designers (known and unknown) who pioneer eccentric, simple or anomalous ideas and images have been the subject of much derision . . . namely being called 'pretentious', 'arrogant', 'arty' et al.

As lighting is a technical art form, one might think that being 'arty' was a pretty fundamental qualification. There is nothing wrong with being interested in presenting ideas in a radical and provocative way. This is where progress lies. But this also contradicts conservatism. which could appear to be the problem.

If the industry is to move forward aesthetically, we need to break these constraints. At present there is a lack of stimulation amd emotional depth involved in rock and roll lighting. We have become too smug, complacent and blinkered; thus rock and roll lighting has become a victim of conservatism desperately lacking in any vitality.

I can already hear the barrage of: 'But what about the budgets?'; 'The time involved'; 'The dreadful gigs on that itnerary' . . . and anyone thinking along these lines is missing the point. I'm not talking in physical terms, I'm talking about the psyche, and the mental stagnation

which seems so prevalent.

I also believe (contrary to many a good colleague) that politics and art are inextricably linked, and I cite the history of art as evidence. So, if the 1990s are to see any advancement in the field of rock and roll lighting, the first step, I believe, is to free ourselves from that idea, central to Conservative philosophy, that art is unimportant. I rest my case with a quote from Andre Breton. It's out of context, but could as easily be applied to lighting as to painting, and needs no further explanation: "The most fabulous source of unfindable images.'

Louise Stickland was a student at Sussex University before she joined Chameleon Lighting and commenced her career as a lighting designer. At Sussex she studied history, specialising in nineteenth century sexual history. For the last two and a half years, she has been on tour constantly with various bands, and she is shortly to leave for America and Japan with Ian McCulloch.

VIEWPOINT

If you have a view to offer on any aspect of the lighting and sound industry, why not air it in this column?

Send your Viewpoint to: The Editor Lighting and Sound International 7 Highlight House St Leonards House Eastbourne East Sussex BN21 3UH

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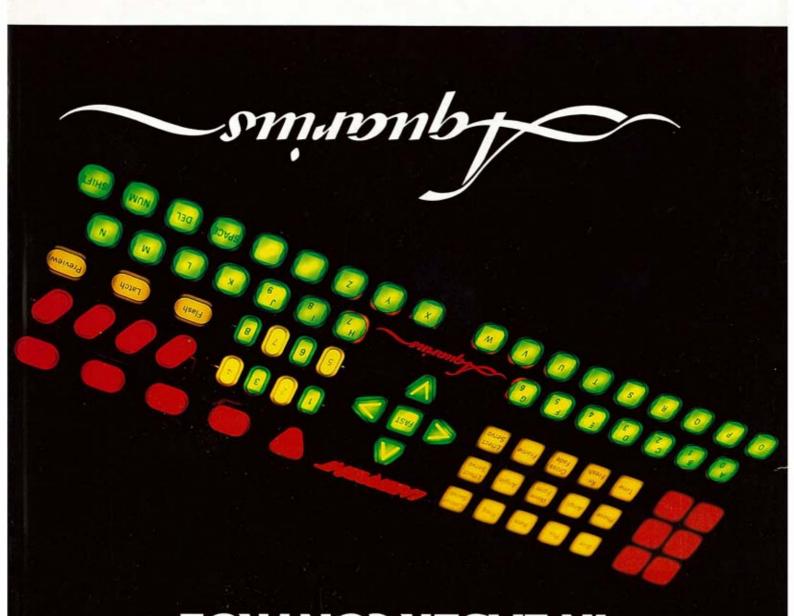
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