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THE ENTERTAINMENT TECHNOLOGY MONTHLY

FULL DETAILS ON
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ISSUE INCLUDING
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PROGRAMME AND
BACKSTAGE
LONDON



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- By heck - Yorkshire's Rat & Parrot packs a punch
- The CAD Files: first in a two-part survey of lighting packages
- Hey Mr Producer! - 30 Years of Cameron Mackintosh
- Everything's rosy for The Garden in Gothenburg
- Artistry of lighting design for Isla Mágica, Seville
- Girls on tour - Janet Jackson and Shirley Bassey

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LIGHTING & SOUND *International News*

Production Arts and LSD Join PRG

L+SI Exclusive: During a recent visit to the US, L+SI received confirmation of a story that had been keeping industry tongues wagging for some months. Gagged until such time as the move became official, we can now confirm that the Production Resource Group, LLC (PRG), founded by Jere Harris, has acquired Production Arts Lighting. Production Arts, one of the higher profile companies in the industry, has built a strong reputation for itself providing systems integration, lighting rental and large-format projection systems to all segments of the entertainment industry.

The company was founded in 1971 in New York City and has grown to include locations in New Jersey, Los Angeles and London. Steve Terry, executive vice-president at Production Arts told L+SI: "This is a winning combination. Production Arts and PRG share the 'do it right or don't do it at all' philosophy. By joining forces we have strengthened both companies. The PRG/Production Arts combination will provide a new level of service and technology to our clients."

With this acquisition, the Production Arts Systems Group, led by Steve Terry, will become the lead member in the newly established PRG Systems Group. The focus of this group will be to draw on the diverse resources of PRG and offer a single-source, comprehensive package of equipment and services to the installation market.

John McGraw, president at Production Arts, will be responsible for integrating the BASH and Production Arts operations. McGraw commented: "I am very pleased about this association. The size and strength of PRG will offer a major benefit to the entire 'family' of Production Arts' employees and customers."

In a second move sure to fuel speculation about which company might be next, PRG has also announced its merger with Light & Sound Design



John McGraw (left) and Steve Terry outside Production Arts' Moonachie, New Jersey HQ.

(LSD) - a leading provider of performance lighting equipment with a strong presence in the concert touring market. LSD was established in 1975 and grew rapidly to become the major touring lighting rental company in the US - it now has branches in Los Angeles and Nashville in the US, and London and Birmingham in the UK.

Nick Jackson, President of Light & Sound Design told L+SI: "We made the decision to join PRG because we can offer our clients increased services and value, without sacrificing the aspects of LSD that are so important to us and our clients." Jackson will continue in his present position as President of Light & Sound Design. The management team of LSD will continue to be shareholders of LSD and will also become PRG shareholders.

PRG has been on the acquisition trail for some time and BASH, Vanco and Scenic Technologies have all become part of the 'super' group. The industry is now watching very carefully to see where Jere Harris, CEO of PRG, will cast his net next. It seems likely that Europe, and in particular the UK, may be worth watching.

See No Comment - page 42

Scan Warehouse Is Down But Not Out

Following our brief news piece in the last issue on the liquidation of The Scan Warehouse, further details have emerged of the scale of the problems left by the Wickford-based company.

Fronted by John Bowman-Daniels and Yvonne Marsh and registered as Sound & Vision but trading as The Scan Warehouse, the company went down in April, leaving in its wake a trail of creditors owed over £180,000 between them. One of these, a PLASA member, was owed in excess of £50,000, whilst several other members also featured on the list, two being owed sums as significant as £18,000 and £20,000 respectively.

A meeting of the 35 creditors took place in late May, but it seems unlikely that any of the companies owed money by The Scan Warehouse will receive a penny.

Bowman-Daniels and Marsh have now started a new company - Sharpstone Ltd trading as The Scan Warehouse - also based in Wickford.

Backstage London

As we go to press the finishing touches are being put to the programme for Backstage London, a two-day post-PLASA experience produced by LDI (Lighting Dimensions International) in association with the World-ETF. This two day exploration of entertainment design and technology in theatre and themed environments will take place in London from September 9th-11th, 1998.

The preliminary schedule includes three performances (theatre or opera) and visits to clubs, themed attractions and restaurants. If you wish to register for a place on Backstage London, see the booking form on page 22.

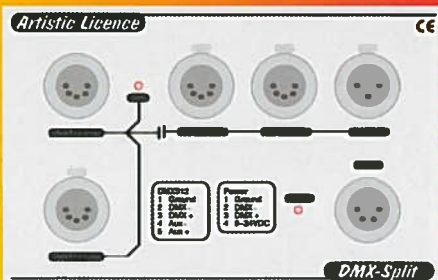
The full programme will be published in the August issue of L+SI.

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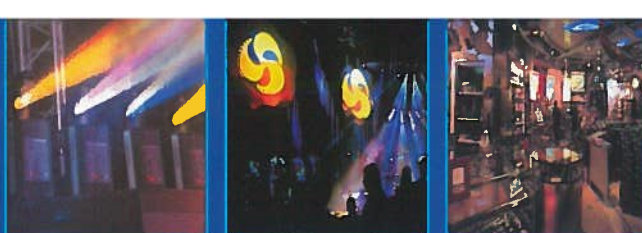
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Mackie Acquires RCF and Fussion Audio

Major news has broken from across the pond this month. Mackie Designs Inc has announced its decision to enter the high-performance speaker market with the acquisition of Radio Cine Furniture (RCF) Spa of Italy, and Fussion Audio Inc of the US. "Following the introduction of the HR824 studio monitor (Mackie's first speaker) the market has confirmed that it will support Mackie's entry into new product categories. Providing we stick to the goal of providing the best available technology for the lowest possible price, I believe that users will continue to buy our products," company founder and CEO, Greg Mackie, told L+S.

RCF, of course, is very well known in the audio industry and a company with a long tradition in speaker technology. In business for almost 50 years, it represents the upper-end of the pro audio speaker market, with strong engineering and manufacturing skills. Fussion is a start-up company formed by ex-RCF acoustic engineers who have developed significant proprietary active loud-speaker technology and maintained close ties with RCF. Mackie's chief operating officer Roy Wemyss added: "The acquisition ensures that Mackie now has the potential to move quickly and effectively on this new strategy. We look forward to the effects the combined team will bring."

Arturo Vicari, managing director of RCF, is confident the move will benefit both companies: "RCF has focused on the development and production of high quality sound delivery products. The marriage of this accumulated knowledge with Mackie, well known as a leader in electronics, will create an entity with great potential. The synergies of the combined operations and the opportunity for growth and innovation are very compelling. Equally important to both companies is RCF's established presence in the European market, with should benefit from the acceleration of the European unification."

Glantre's Big Ceiling



As we mentioned briefly in our report from EnTech in Sydney last month, British firm Glantre Engineering has completed the installation of the world's largest plunger ceiling in the concert hall of one of the world's largest buildings, the Petronas Towers in Kuala Lumpur. The inaugural concert, held on June 19th, made full use of the intricate acoustic design of the hall.

Glantre, working in conjunction with Theatre Projects Consultants USA and the acousticians Kirkegaard Associates, supplied and installed much of the equipment in the hall, including point hoists, loudspeaker hoists, orchestra platforms, projection screen, stage decking and piano lift, as well as the plunger ceiling which consists of seven sections and weighs 150 tons. The ceiling allows the acoustics in the venue to be adjusted for different forms of music.

To achieve smooth operation, the ceiling has been mounted on 56 alternately rotating screw jacks. It has a vertical travel of eight metres and incorporates a sprinkler system within its acoustic panels. Constructed from pre-cast, glass-reinforced gypsum with a steel framework, the ceiling is hidden from view by an acoustically transparent decorative aluminium grille.

Turbosound Management Buy-Out

The Turbosound division of the Harman Pro Group has been purchased in a management buyout by an investment group comprised of existing and former Turbosound management and two principal customers.

The new owners include Michael O'Flynn, who has been associated with Turbosound since 1982, and who will serve as chairman. Returning as MD is Alan Wick, who served in that position during the company's successful growth period. Martin Reid is appointed to the position of director of marketing and strategic development. Two principal distributors join the group of partners, including Danny Abelson of Audio Independence, Turbosound's US distributor and Paul Griffiths, MD of Fayewood plc, owners of Expotus, who distribute Turbosound products in the Far East. Turbosound operations will remain in the present factory in Partridge Green, West Sussex.

Alan Wick told L+S: "We see Turbosound as a company with considerable opportunity for growth in both the touring and fixed installation markets. Our plan is to make substantial investments in our R&D resources to develop new technologies. Furthermore, we intend to concentrate on improved customer service and technical support."

"As our new ownership consists of a diverse group of experienced managers and our two largest customers, we have a well-balanced team to guide the company," added Michael O'Flynn.

Precision Devices, based in Cornwall, does not form part of the sale, but will remain a supplier to the new company.



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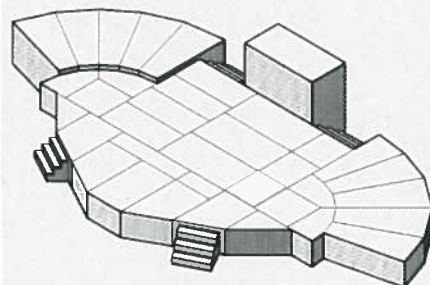
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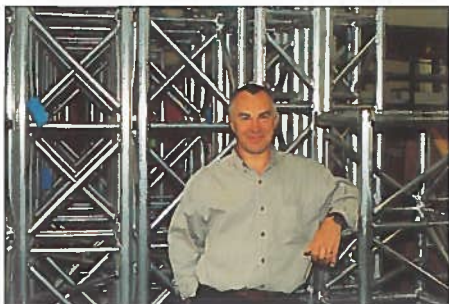
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Total Alterations



Peter Johns of Total Structures at the company's Ventura facility: further expansion is on the cards in the next six months.

L+SI Exclusive: During a recent visit to Total Fabrications Inc in Ventura, California, L+SI had a chance to learn more about a number of major changes taking place within the company. Prime amongst these is the news that the company has changed its name to Total Structures Inc. The name change reflects the company's move into the realm of complete structure design and construction.

In the past 12 months, Total has built a large number of complete structures including large grids, giant video screens, artistic and thematic structures and modular and expanding load-bearing stage roofs. Plans for the immediate future include freestanding, modular, temporary structures with applications for the government and military, in addition to projects for entertainment and corporate clients.

Peter Johns of Total Structures commented: "We will of course continue to sell our high quality truss to our customers in addition to finished complete structures."

L+SI was offered an exclusive preview of one of the first products that will come out under the new name. Following consultation with Martin Professional and High End Systems, the company are launching the Intelligent Pre-Rig (IPR) designed to carry three moving yoke fixtures in the truss for transport. The heads and yokes of the fixtures are protected during trucking and storage by custom-designed bungee nets that provide additional shock absorption. Once the truss arrives at a venue, the heads are lowered on a fixture bar through the bottom of the truss.

The IPR has been designed by Total Structures President Ian Coles: "It's an alternative for trucking around a lot of air in empty truss and cases for your moving yoke fixtures, not to mention the time-saving aspects involved."

The UK and Singapore offices will retain the Total Fabrications name.



The Intelligent Pre-Rig system.

Light Jockey Comp Progresses

Clay Paky and Pulsar's second World Light Jockey competition, the final of which will take place at London's Hippodrome during the PLASA Show this September, has its first finalist. The Italian leg of the competition, held recently at the Capriccio Discotheque in Arcene, was won by Alessandro Aiello from Palermo.

The competition will now continue with the remaining legs in Germany, France, Spain, England, Holland and Argentina. For further details contact Pulsar on +44 1223 366798.

Telex Communications Acquires Shuttlesound

Telex Communications (Telex/EVI), already holding a 45% stake in Shuttlesound Ltd, purchased the remaining 55% of the shares to become owners of the company in mid-June. No immediate changes to the company's operating philosophy are envisaged, but Telex aim to use their vast resources to enhance customer service.

The acquisition has been achieved with the minimum of disruption: Paul Barretta replaces Graham Allen as sales manager, reporting to Telex vice-president Davis Merrey, whilst three additional staff have been recruited to bring the sales team up to strength.

The company will now trade as Telex/Shuttlesound (for MI products) and Telex/PAG (for its Concept Sound catalogue).

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The Wapentake

The Grosvenor House Hotel houses The Wapentake - a rock venue that delights in playing early rock classics by the likes of Steppenwolf and Led Zeppelin. Wapentake is an ancient Yorkshire word, its roots deep in Viking heritage, which roughly translates as: 'Put up your weapons and show obeisance'. A formidable lady known as Olga presided over the bar for 24 years. When she retired last year, The Wapentake closed.

However, Sheffield is home to a small enclave of roadies, many of whom drank at the Wapentake when they were students at the local Poly. One interloper was Martin Nicholas, perhaps most famous as Wet Wet Wet's LD, but not a shy man when it comes to lighting the purveyors of heavy metal. A friend of his, ex-Def Leppard roadie Bob Murphin wanted to develop a bar/club in the city, and thus was Nicholas asked to design a new interior for the Wapentake. The owners of the establishment, Trust House Forte, weren't interested on spending on the interior: formica tables and awful plywood booths along the wall. Like an East German Palace of Fun, it had a certain minimalist charm. But all that has now changed.

Nicholas and Murphin have kept a stripped-back look, but added in a touch of rock 'n' roll. The Japanese Oak, banded every couple of metres across the counter top with black iron girdles. A quick glance from this location would lead you to believe you were in a jauntily-lit underground car park, but it's in the detail where the theme emerges.

"I collected over 600 All Area Access laminated tour passes and had them fitted beneath glass table tops," said Nicholas. He's also collected other, more substantial, tour memorabilia. An old Avolites 96-way three pre-set desk is embedded in a large lean-on table in the snug. The snug's walls are a shrine to Geoff Grainger's drawing skills, lighting plots of Metal, ancient and modern from the vaults of his office at LSD have been papered across 10sq.m of wall around the Avo' table. Photographs by Ross Halfin, a renowned rock photographer, also line the walls. There's also an early LSD 60-way above the combination DJ rostrum/stage area, and AC/DC's original custom-built 100-channel manual will soon decorate the lobby at the foot of the stairs.

The DJ booth is a three-sided affair with an Electro-Voice Delta flown each side and a pair of EV bins built into the centre panel of the rostra. Supplied by SSE, the system is driven by a pair of



Crown 2400s and a Crown 600, run through a Yamaha two-band graphic and a BSS Omnidrive. For the DJ, there's a twin CD Denon 2000F with remote control panel, a pair of Technics turntables (lots of old vinyl on show in this booth) and a Rane A/B mixer. For live bands the booth very cleverly dismantles, the Jap' Oak front panels dropping down to form the stage, whilst the bins pull out and to the side where the Delta's can be lowered onto them, and the control and amps are in a rack which can be wheeled out and to the side. All a live band need do is turn up with their backline and a desk, plug into the 60 and 30 amp stage gear supplies, and away they go.

Lighting for the whole bar is functional rather than 'live band' as it were, but still carries the rock motif. Nicholas purchased 120 MR16 Parcan-style Birdies from Total Fabrications and with one or two exceptions, has used them everywhere. Nice touches include halos of coloured light tucked up into old air conditioning ducts, solitary spots onto Halfin's portraits are the singular light source that reflect down onto the booth tables. An ADB Eurorack controls the whole system: "It's perfect for this kind of installation," said Nicholas. "It's easy to programme and it's easy for any of the bar staff to switch from one setting to another. It defaults to a five second cross-fade on every change unless you tell it otherwise." There are other little touches to the lighting: in the stairway Nicholas has used old 18" speaker chassis as shades over wall-lights, and an incarnation of Iron Maiden's Eddie will soon be on the landing illuminated by an old followspot.

The grand re-opening saw a visit from the band UFO, in true r'n'r style, sweeping up in a stretch limo. All this started from an idea Nicholas developed in the back of a bus on tour, but from tiny acorns as they say . . . Plans are already afoot to develop a chain of Wapentakes.

Steve Moles

The 1998 Tony Awards

The 1998 Tony Awards, presented to the year's best productions and performers on Broadway, offered a fascinating battle between two highly acclaimed new musical productions: Disney's *The Lion King*, and Livent's *Ragtime*.

Ragtime held more nominations but, in the end, the contest was won by *The Lion King*, which collected six awards: best musical, best director and best costume design for Julie Taymor (the first woman to win the director category), best choreography (Garth Fagan), best set design for British designer Richard Hudson, and best lighting designer for Donald Holder, who also received a nomination in last year's awards. The other set design nominees were Bob Crowley for the short-lived Paul Simon musical *The Capeman*, Eugene Lee for *Ragtime*, and the Quay Brothers for *The Chairs*. Holder won the lighting award from Paul Anderson for *The Chairs*, Peggy Eisenhauer and Mike Baldassari for *Cabaret* (which also won the best revival of a musical award, and for which British director Sam Mendes received a best director nomination), and Eisenhauer again, this time with Jules Fisher, for *Ragtime*. *The Lion King* is expected to hit London soon, once Disney find a theatre large enough to house it.

Ragtime, meanwhile, took the awards for best featured actress in a musical (Audra McDonald, collecting the third Tony of her career), best musical book (Terrence McNally, from the novel by E.L. Doctorow), best score (Lyn Ahrens and Stephen Flaherty) and best orchestrations (William David Brohn, absent from the ceremony because he was in London working on Cameron Mackintosh's *Hey Mr Producer!* concert). *Ragtime*, too, is expected in London before too long, probably moving into the Prince Edward Theatre once *Showboat* completes its run there.

In the straight-plays categories, the London hit *Art* took the best play award, though its director Matthew Warchus lost out to Garry Hynes for *The Beauty Queen of Leenane* for the best director award.

The Tony Awards were televised in a three-hour programme split across two channels. This year's ceremony also celebrated New York's current theatre revival, with presenter Angela Lansbury noting that there are currently 18 musicals running on Broadway; it seems likely that the flow of new musicals across the Atlantic will be in the Easterly direction for some time to come!

Rob Halliday



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OR VICE VERSA**

Stage COLOR 1200

A 4-disc cyan, magenta, yellow and amber colour mixing system provides an infinite number of rich hues plus a full range of pastel shades - sure to meet the approval of the most discriminating lighting designers. The exclusive GTC (Gradual colour-Temperature Correction) system provides gradual correction of colour temperature differences from one luminaire to the next. You can choose between three diffusion intensities



(including one with an exclusive 50° beam angle), and special effects such as concentric twin-coloured beams and ultraviolet light.

These are just some of the great features you will find in Stage Color 1200, the most powerful and imaginative washlight for advanced applications currently on the market. Stage Color is revolutionary, thanks its easy conversion into the Stage Zoom 1200 effects projector.

Just change the head on your Stage Color 1200 to turn it into a fantastic effects luminaire, Stage Zoom 1200. Or you can convert the other way round.

The basic unit for both fixtures is electrically and mechanically identical, so you can build up the luminaire you need at the very last moment, even just before the show begins! And do it yourself, with no need for expert help.

Both luminaires use an HMI 1200 lamp, the number one choice for professional use. Both luminaires also have generous pan (450°) and tilt (252°) angles with smooth movements and microstepping resolution selectable between 8 or 16 bit.

Hot restrike and lamp control from the desk, along with automatic repositioning after any accidental movements. The convenient transport lock on the moving body make this a highly practical unit.

The standard unit is equipped with an electronic ballast, although a conventional electromechanical system is available as an option.

Stage ZOOM 1200

The 12°-24° lens with zoom and focussing controlled from the desk gives you a wide range of projection angles. The CMY colour mixing system offers an almost limitless palette and is supported by two colour-temperature correction filters (3200 and 5500 K).



The frost effect offers complete linear variation, allowing a spectacular transition from a

hard-edged beam to an increasingly diffused wash. Stage Zoom 1200 is also packed with graphic effects including static gobos, rotating gobos and rotating prisms. They are all fully combinable and all with indexed positioning through 540° so that a given effect can be repeated on several luminaires. These are just some of the exciting new features of Stage Zoom 1200, the sophisticated new moving-body effects projector. Stage Zoom is revolutionary too, thanks its easy conversion into the Stage Color 1200 washlight.

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PROFESSIONAL SHOW LIGHTING

NEWS Shorts

Orbital, the London-based sound rental company, has recently made a massive further investment in d&b audiotechnik loudspeakers and amplifiers. d&b supplied a further 61 E3 loudspeakers, 16 902s and 12 602s, together with matching PI200 mainframe amplifiers. Orbital have also added a further 25 Lab Gruppen I200C four channel power amplifiers to their hire stock, taking their Lab Gruppen inventory to over 50 units.

The *Searchlight Co's* SkyTubes and SkyGuys were recently used at Wembley as part of the pre-match entertainment for the FA Cup Final.

Edinburgh-based lighting company *Black Light* in association with *Vari-Lite* and *Zero 88* is sponsoring the Queen Margaret College drama department third year showcase.

Rosco/DHA Gobos

The 1st of June marked the beginning of a new agreement between Rosco and DHA Lighting for the production and, for the first time ever, the worldwide marketing of the two companies' complete ranges of gobo designs. The relationship between the two companies dates back to 1984, when Rosco acquired many Colortran designs which were merged with the existing DHA images to create a wider catalogue of gobo images. In the ensuing years, this catalogue has grown to encompass some 900 designs and both companies enjoy close working relationships with lighting designers which is expected to stimulate even more new products.

The full range of DHA gobo designs will now be available to the American market for the first time, with Rosco marketing the full catalogue of gobo designs worldwide. Rosco's agreement with DHA is exclusive, except in Britain where the two companies will work in tandem with Rosco marketing DHA's images and DHA also marketing the Designer range of gobos from Rosco in the US.



Pictured above is Diane Grant of DHA (left) with Kees Fritjers and Anna Western of Rosco.

PCM Motor School Follows PLASA in September

PCM have announced the eighth and ninth Columbus McKinnon Motor Schools, which will take place at PCM's HQ at Prenton, Wirral during the week following the PLASA Show in London, which runs from the 6-9th September at EC1.

Once again, two concurrent two-day courses, each accommodating 35 places, will take place from 15th-

17th of September conducted by CM's Wally Blount. The course is designed to familiarise users and owners of Lodestar motors with the operational theory, design philosophy, safety aspects, internal workings and trouble-shooting methods.

For further information call John Jones or Chris Jolley at PCM on 0151-609 0101.

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THE SHOW-LIGHTING REVOLUTION



Stage COLOR 1000

Stage Color 1000 is the washlight that solves colour temperature variation problems at the source thanks to the use of a 1000 Watt halogen lamp.

Designed and built for the needs of television and the theatre, this luminaire uses a 3-filter CMY colour-mixing system to give the exact colour required.

A frost filter of the latest generation provides a wide aperture and perfectly uniform light intensity over the entire illuminated area.

With ovalized projection, electronic dimmer, beam stopper and strobe, the features of Stage Color 1000 are guaranteed to satisfy even the most demanding lighting designer.

WASHLIGHTS ALLOWING TOTAL MASTERY OF COLOUR

Only Clay Paky could make washlights so quiet (no risk of disturbing the hushed atmosphere of the theatre and television studio) and with such mastery of colour, offering an infinite choice of hues and perfect colour temperature correction.

These fine luminaires also share generous pan (450°) and tilt (252°) angles with smooth movements and microstepping resolution selectable between 8 or 16 bit. Both fixtures have automatic repositioning following



any accidental movements thus eliminating time-consuming realignment procedures, together with a convenient moving body lock system for easy transport.

Stage COLOR 575

Stage Color 575 uses a tried and tested HMI 575/SE discharge lamp with optional hot-strike and on/off control from the lighting desk.

The 4-disc cyan, yellow, magenta and amber colour mixing system can generate infinite variations of tone, with a range of beautiful pastel shades to create special atmospheres not possible using conventional 3-colour systems.

The luminaire is complete with GTC, the exclusive Gradual-variation colour Temperature-Correction system.

3 filters for 3 different intensity frost effects, special effects, ovalized beam, beam stopper, strobe and mechanical dimmer are just some of the features of Stage Color 575, the washlight that offers the maximum creative potential supported by unparalleled reliability.

ABTT: The Sequel

As promised in our brief report from the ABTT Trade Show in London last issue, we've set aside space in this issue to catch up with some of the key news stories that emerged from the show.

Northern Light unveiled their new Integrated Stage Management desk. This began development some six months ago and is their first range of desks to feature touch screen control for cueing, effects and SM facility selection. The system, which should reduce theatre cable infrastructure and can interface with other control systems within a project, has touch-screens which can be configured to individual theatre requirements and can include video pictures. The future may deliver programmable desks which can be programmed off-site - a development which will surely be picked up by consultants first and then the rest of the industry. As noted last issue, this was the product that deservedly collected the ABTT Product of the Year award.

There is major news brewing from the camp of **Teatro**, but that will have to wait until the next

issue. Meanwhile, we can report that the new IGBT dimmers from IES are beginning to make their mark, largely because being choke-free, they are silent in operation - welcome news to techies and acoustic consultants who constantly battle with dimmer hum.

Our Rimini report covered **Lighting Technology's** link to **Mad Lighting** and at the ABTT Show, details of the company's new trading partnership with **Cerebrum** were announced. The move is designed to exploit the individual strengths of both companies. John Lethbridge remains as managing director of Cerebrum, whilst LT's Jack Exell has transferred from their Park Royal HQ and is now based at Cerebrum's New Malden facility to provide the vital link between the two companies. Cerebrum has also secured the UK distributorship for Rainbow colour scrollers and MA Lighting desks, control and dimming equipment - a deal struck at Rimini.

Lightfactor, as UK distributors for **Mad Lighting**, were showing the latter's Q-Scan aimed at the theatre market, the subject of some controversy at its earlier showing in Rimini where



Gregor Joy (left) and Jonathan Allen with Northern Light's award-winning SM Desk.



Peter Coles of Lightfactor (left) with Scott Callis of Mad Lighting and Q-Scans behind.



The familiar faces of Don Hindle (left) and David Manners of CCT with Com-Spec.

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one particular company had an almost identical product on stand which didn't go unnoticed by Mad, who are now doing all in their power to prevent further copies emerging into the market.

We've already covered the alliance between **AVAB transtechnik** and **Multiform** and ABTT was a chance to underline the new relationship with the first showing in the UK of the Presto 610 - a product which the two companies worked on jointly. This is a convection-cooled single or three-phase dimmer pack which has six outputs capable of controlling up to 10A of resistive or inductive lighting. Further joint products are promised.

CCT had the prototype of a new colour mixing scroller - the Com-Spec - which uses four channels to control two scrollers. The product allows for an infinite range of colours to be mixed and slots perfectly onto CCT's Freedom range. Production should kick-in shortly and you can expect to see the first off the line at the PLASA Show in September. CCT also had the first UK showing of the new Freedom Condensor Profiles. These have a double condensor system and, at the moment, two dedicated lens tubes.

Harkness Hall are currently working on the new Hereford Courtyard Arts Centre pencilled for completion in August, where they are installing 10 counterweight systems, 27 hemp sets, an electric projection screen, stage curtains, masking flats and acoustic tracks and curtains. The company are also involved in the revitalisation of the Odeon at Leicester Square, where they will refurbish the flying two-ton screen frame.

... continued on page 18

THE COMPACT REVOLUTION



Stage COLOR 300

Presenting an ultra-compact washlight with a high-quality Fresnel lens, plus an efficient and spectacular fading frost effect with perfectly linear variation.

The innovative frost system provides a unique 50° aperture with uniform light intensity over the entire illuminated area, which greatly reduces the typical loss of brightness associated with conventional diffusers.

The CMY colour mixing provides an infinite varied palette, allowing lighting designers to choose exactly the right tone of colour for each scene. With a dimmer and beam stopper on separate independent channels, Stage Color 300 achieves a level of performance previously available only from far larger and more powerful luminaires.

PINT-SIZE FIXTURES WITH BIG PERSONALITIES

Clay Paky have revolutionized the world of compact luminaires, making them so efficient and versatile that they are ideal for any type of environment and application. Both models use either the HTI 300 discharge lamp, offering the same features as the more powerful HTI lamps from which it is derived, or the brand new HMD 300 with a 3,000 hour average life-time and colour temperature in excess of 5000 K. Equipped with a highly practical automatic repositioning device to correct accidental movements, both luminaires are also designed



for easy handling thanks to a convenient transport lock on the moving body. The wealth of functions provided by Stage Color 300 and Stage Light 300 makes them an ideal duo for professional and discotheque applications. Thanks to Clay Paky, top-level performance and compact dimensions are no longer conflicting requirements in the world of professional show lighting.

Stage LIGHT 300

Presenting an ultra-compact effects luminaire equipped with electronic focusing and a manual zoom lens for a wide range of projection angles. This unit provides unique features for a fixture in this category.

36 colour combinations, 2 filters for colour temperature correction and special effects filters combined with refined graphics equipment including 6 rotating gobos with indexed positioning through 540° and a 3-face prism. There is also a mechanical dimmer and a high speed strobe.

The superlative performance and features of Stage Light 300 rate it as the most advanced compact moving body effects projector on the market.

Selecon have four patents pending on their new Pacific range of lanterns, which tells you all you need to know about its unique features. Two years in design and intended to comply with the CE regulations for all markets, not just the professional, it is one of the first luminaires to feature mainly plastic components, and offers a combination of zoom or fixed lens with two versions available - 12-28 zoom and 28-50 zoom.

For **White Light**, ABTT was the ideal show at which to launch Enliten - their new architectural lighting products division headed by Paul Simson. The company handles architecturally-biased products from a large number of manufacturers and, in addition to the already extensive stock, will shortly introduce a new 70W HQI Mini Profile/logo projector and 150W HQI Par with interchangeable lens option.

Triple E's Uniclamp, designed to enable lanterns on a bar to be rolled along the bar courtesy of a dual set of wheels, is now in full production. Originally developed for the Royal Opera House, it will surely find much wider application in both lighting and audio sectors.

Stagetrack, specialist in safety curtains, lifts, and counterweight systems, are currently involved in a project for Sainsbury, who are building a new theatre in Chesham as the existing theatre is about to be knocked down to make way for a new supermarket. That's progress for you.

XTBA launched Backtrack, a real-time DMX recorder that allows full back-up of shows in real-time. The product, which has been a year in development, can also be used as a show controller and sound files can also be linked to it for dark ride/museum applications.

At the close of last year **SES Film & Television** belied their name and won the contract to supply all the power distribution to the Royal Opera House. The contract includes 90 outlet boxes, 2,000 sockets (some of which have been custom-designed) and all the control panels.

There were, of course, many more companies at ABTT, several with products that have already been covered within these pages: **Glantre** and the Canadian-manufactured **Spiralift**, **Lee Filters' 700 Series** designed in collaboration with Rick Fisher, David Hersey and Mark Henderson, **ADB control**



LD Robert Ornbo (left) and consultant Ian Albery (right) flank Derek Gilbert of Glantre.



Matthew Genner, Brian Skipp, Susan Finnie and George Dashper of Stagetrack.



Chris Cook and Fiona Fehilly of XTBA with the new Backtrack system.

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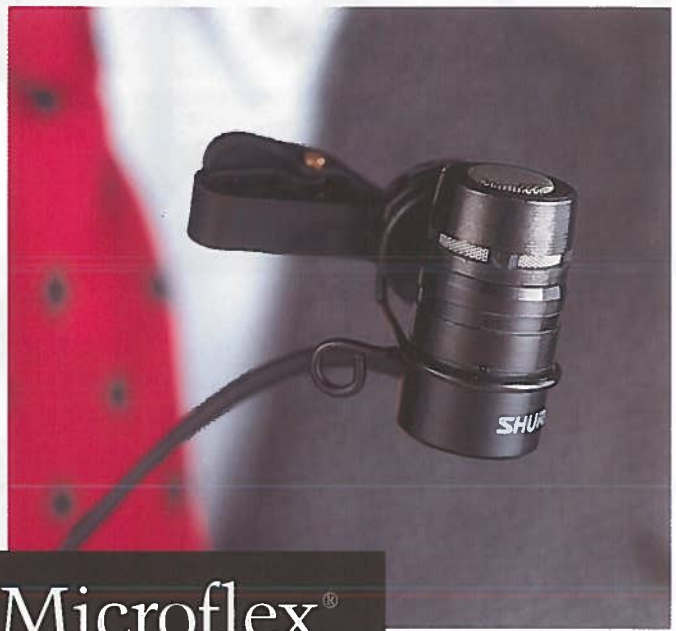
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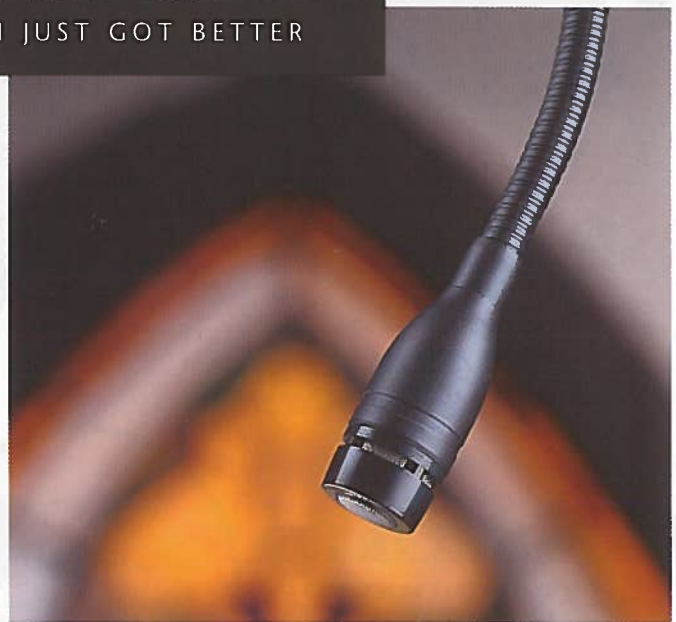
and dimming systems (look out for a major feature on an ADB-led installation at the Shanghai Grand Theater in September), **Vari-Lite** and their eponymous automated lighting, **AC Lighting** with their impressive portfolio of desks, software, lighting and accessories, **Sennheiser** and their infra-red theatre equipment and radio mics, **LMC's** live sound reinforcement line-up, **LSC UK** with the Atom and Axiom desks, **Pulsar**, with the LDI-launched Stage Color range from Clay Paky, the real-time clock effect and a host of gobos from **DHA** (who will be profiled next issue), staging specialists **Maltbury** with the Metrodeck staging system, originally designed at the request of the Barbican Centre, **Zero 88** with an enhanced version of their popular Betapack range, **Andolite** with their internally wired lighting bars, **Trantec** (BBM) recently purchased by TOA, proprietary audio from **Marquee**, flooring from **British Harlequin**, **Steeldeck** and their Nivoflex range of platforms, **Decoupe** with the new MDG fog and haze generators and Robert Juliat's new followspots, **Rosco** with special effects paint, Supergel colours and for the first time in the UK, the Alpha 900 fog machine, **ETC Europe** lighting and control products, **Le Mark** and their award-winning Blacktac, plus the new slipway cable securing tape, **Stagetec** who recently completed the Rose Bruford installation (more on that in the next issue), **Stage Technologies'** award-winning Nomad! system, **Unusual Rigging** theatre flying systems and last, but not least, **Rope Assemblies** who launched a set of new wire safety bonds for luminaires, and a new wedge socket.

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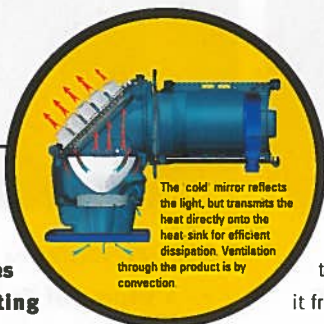


the Pacific range

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



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

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

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

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



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Industry Faces

Leading sound design and rental company, Autograph Sound Recording, have waved farewell to **Julian Beech** - a director of the company for 19 years - who has taken early retirement due to ill health. Beech will not only be missed at the Autograph HQ, but also across the audio and theatre world. Prior to his appointment at Autograph, he spent seven years

as the first ever sound manager at the RSC, followed by head of sound at the South Bank's National Theatre when it opened in 1975. He has been responsible for the sound design of many shows including *Five Guys Named Moe*, *The Sound of Music* and *42nd Street*.

As a result, the company have appointed **Terry Jardine** as a company director. Jardine joined Autograph nine years ago and has since become one of their principal sound designers. Autograph have also expanded its team further by appointing **Ed Corin** as hire manager. Corin is familiar with Autograph and the audio industry after many years as a sound operator on a number of theatre shows and tours.

Lamba plc have made several recent appointments to the main board. **Gareth Collyer** becomes technical director, **Damon Crisp** export director and **Gerry Frost** sales director, in recognition of an aggregate of 25 years' service to the company. All three have been key figures in the company's evolution, having accrued a wide market knowledge.



Lamba's line up of **Chris Osborne**, **Gareth Collyer**, **Damon Crisp**, **Frank Irish** and **Gerry Frost**.

with architectural projects at Strand Lighting.

MAD Lighting have appointed **David Linger** to the position of UK sales manager. Formerly key accounts manager with Coe-Tech, Linger brings to the role a wealth of experience in the lighting industry.

Paul Ballard, formerly of The Definitive Laser Company (now in liquidation), has joined Hertfordshire-based Laser Grafex as project manager, heading the laser, monumental slide projection and waterscreen hire and sales department.

John Rolison has joined the Bandit Lites sales office in Knoxville, Tennessee. Rolison previously spent 14 years with Stage Equipment and Rental in Orlando and has a degree in theatre design and technology.

Indicative of the increasing activity at Kingston Industrial Estate, Birmingham is the announcement of yet another addition to the Total Fabrications Ltd (TFL) sales team. Barely three months after the arrival of Jane Hewett, the company welcomed **Chris Higgs** into the fold. He joins TFL as manager of their Hoist and Rigging department.

NEWS Shorts

September 1998 marks the 30th anniversary of the founding of *Bandit Lites*, by Michael Strickland in Kingsport, Tennessee. From its beginnings with eight home-made lighting fixtures, the company has grown to become one of the best-known companies in the touring industry, incorporating the following divisions: touring, special events, corporate events, film and video, sales, specification and installation.

Symonds Group's acoustic department has been appointed as overall acoustic consultant for the Millennium Dome. The company's principal role will be to evaluate the acoustic properties of the dome, and use this information to advise on the selection of a sound distribution system for live theatrical and musical events.

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White Light Supply System to RSC

White Light have been selected to supply a complete new lighting control system to the Royal Shakespeare Company's Royal Shakespeare Theatre in Stratford-Upon-Avon.

After months of testing the various alternatives, chief electrician Clive Morris and the Stratford crew selected a system based on Strand's 500 series range of lighting consoles and making use of the advanced possibilities of Strand's ShowNet networking system. In what will be one of the most complex lighting control systems ever installed in the UK, Stratford's new system will incorporate a 550i main console with four monitors, a 520i sub-console for moving light programming, a FileserverPC, a backup PC, a designer's PC, a stage manager's PC and both wired and wireless hand-held remotes. The entire system will be linked by Ethernet, with DMX fed to the theatre's dimmers from a Strand SN103 network node.

White Light were appointed a Strand Trading Partner earlier in the year, and through sister organisation The Service Company, have access to ex-Strand service engineer Anthony Bridges, who has worked with Strand and the Stratford crew to design the new system.

In a separate deal, White Light are also supplying the Royal Shakespeare Company with a variety of new lanterns to replace stock damaged by the recent floods at Stratford-Upon-Avon. The new equipment includes 40 Source Four profiles and both 5k tungsten and 2.5k HMI fresnels with scrollers.

Shanghai's 'Crystal Palace' Opens this Autumn

Four years after building began in 1994, the prestigious Shanghai Grand Theater is set to receive its official opening in autumn with the first production a performance of *Swan Lake* which will open on October 28th.

There are several unique features to the theatre, not least its impressive glass frontage and inverted roof (which weighs more than the Eiffel Tower) now one of the most noticeable features of the Shanghai skyline. The government-funded project has turned to some of the key manufacturers in the industry to specify the technical elements. The main auditorium will seat 1800 people and the stage, engineered by Mitsubishi, is the largest in Asia. The complex



lighting systems have been provided by ADB, working with local distributor ACE. The spec includes over 800 ADB luminaires, Vision 10 desks and a veritable army of Eurodim 2 dimmers all pre-wired by ADB. Audio for the theatre system, again spec'd by ACE, will be

based around a JBL speaker system with Soundcraft control.

Pictured outside Shanghai's new theatre is Raph Janssens of ADB (centre, right) with members of the both the theatre's technical crew and the ACE team, together with PLASA MD Matthew Griffiths (centre, left).

A major feature on the new theatre will appear in a future issue of L+SI.

Neg Earth at Glastonbury

Once again, London-based Neg Earth Lights supplied the lighting equipment for the two main stages at the legendary Glastonbury festival in Somerset.

For the first time, Neg Earth have been able to incorporate the Starlite Mk5 fixture into the festival equipment specification, since its launch at the PLASA show last year. However, this is not the first time that the fixture has been used in a festival environment. The Midland 97 festival late last year also contained a number of the fixtures, again supplied by Neg Earth Lights. Joining the Starlites at Glastonbury, were Golden Scan HPEs from Clay Paky, Studio Colors from High End and conventional colour changers, along with a handful of generic fixtures. Primary control for both stages came from Neg Earth's stock of Flying Pig Systems Wholehog II consoles.

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BMW in San Diego



Ocean State Rigging recently supplied structural and rigging services to the San Diego launch of the new BMW 3 Series. Working to a design carried out by West Sussex-based Bill Harkin Associates, Ocean State built the main structure for the launch, which consisted of two 15m high arches, one standing vertically at the rear of stage and one inclined towards the audience at the front, spanning a 34m stage. The arches were counterbalanced to concrete weights, the smallest of which weighed 8,800lbs, via four masts positioned to the rear of the stage and two main masts, one either side of the arches.

Each arch consisted of 18 2.4m stretches of Slick MaxiBeam truss, with specially-fabricated corner sections providing the correct angle for each join. The structure was pre-fabricated at the company's Hertfordshire base and shipped over to California to cope with time restrictions. The company's crew chief Phil Howard led an eight-man crew for load-in and -out, while a four-man crew remained on site throughout the show.

The audio visual element of the show, created by Nigel Greening and Adrian Little of production company Park Royal Productions, was based on the show they designed for the European launch of the 3 Series in Sardinia earlier this year. The rear arch carried a semi-circular front-projection screen, which was used for the projection of high definition video from Barco 9200s, and scrolling imagery from an ETC 7k PIGI projector with double-scroller and dimmer shutter.

The big reveal of the three BMW cars was preceded by a fanfare of sound and lighting, before the projection screen was dropped by triggering electromagnetic catches, and it slid down into a trench hidden behind the forestage. Lighting for the event was provided by LSD from LA, and designed by John Pope of Lighting Design Services. The sound system, which comprised EAW KF850 and SB850s for the main PA, with additional Apogee AE5s and SSMs under the forestage as front-fills, was provided by local supplier Nelson Sound, and utilised almost entirely BSS-based processing, with control from a Yamaha PM3500. Sound design was by Martin Pilton of Martin Pilton Sound.

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Vertigo Scale the Stock Exchange



At the recent flotation of the Anglo-French company Alstrom, Vertigo Rigging were part of a complex team of companies that ensured a successful and high profile press launch. This took place at the prestigious Stock Exchange building itself in the Corporation of London, with less than two weeks' notice.

Production managed by Adrian Cole for Auditoire, the idea was to unfurl a giant 30m x 15m banner across the front of the Stock Exchange. Vertigo, in association with French rope access company Versant, was to achieve this feat with 12 abseilers descending from the 300ft Stock Exchange Tower.

The event required the fixing of 63 chemical anchors to the front of the building. (These also had to be removed afterwards). Vertigo provided the rescue equipment and a two-person rescue team (Ken Mehmed and JT) on standby in the event of any climbers experiencing difficulties. Dry run rescues were performed on the Saturday prior to the Monday event, under the watchful eyes of Des Hillier. Vertigo's Tim Roberts commented that the demands made by the venue, the complex nature of spectacle in a densely populated area and the erratic weather conditions constituted an unpredictable two weeks!

The photo above shows John Teahan and Ken Mehmed at work on the Stock Exchange. **Photo: Rob Brown**

Jesus Christ: Risen Again

Further to our story in June's L+SI on the production of Jesus Christ Superstar in Luton, a call from lighting designer Paul Gavin put us straight on the matter of where the Avolites Diamond III console used for the event was sourced. We mistakenly gave the impression that Avolites had supplied the console, but while Avo did indeed lend equipment and support to the production, the Diamond III was, in fact, personally loaned by Paul Gavin.

Apologies to Paul, who deserves a mention for his kind assistance. He also added that he'd then lent the desk in question out again, this time to a well-known Park Royal-based lighting control equipment manufacturer (not entirely unrelated with this story) for use in the jazz tent at Glastonbury.

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NEWS Shorts

Xena nightclub in Ryde, Isle of Wight, has undergone the second phase of its development with the installation of a low-capacity, secondary room within the leisure complex. Reading-based *Sabre International* have again installed the sound system, opting for Cerwin Vega! V series speakers. Sabre's Dave Hawkes chose four of the V152 top cabs, one in each corner of the room, with a pair of SUB18s in a single block. The PA will be fed from the main system downstairs or run independently, sourced from the room's own DJ.

The *Liverpool Community College* is introducing two new courses aimed specifically at those wishing to pursue careers in the live production and music industry. From September 1998, the College will be running the two EDEXCEL programmes in Music Technology and applied Theatre Technology. For details, contact LCC in Liverpool, telephone 0151-734 2622.

Soundcraft/Amek Line-up



Two recognisable names in live sound recently presented a formidable line-up of new touring consoles to the industry, as Soundcraft and Amek joined forces for the first time. At a special mini-exhibition at John Henry's Rehearsal Studios, an invited audience of engineers and sound suppliers were given hands-on demonstrations of four new desks. For the first time in the UK, a 56-channel Amek Recall RN was on show, fitted with new input modules featuring mic amps and EQ.

Also making its UK debut was Soundcraft's new flagship monitoring desk, the Series Five monitor. The desk shares a similar feature set to the Soundcraft Series FOH console, and adds to this the comprehensive routing and output control required from a monitor board. A third unveiling - the new SM20 Monitor console - addresses the growing trend towards the use of in-ear monitoring systems. This console is available in three sizes providing 40, 48 or 56 inputs into 20 outputs which are globally switchable to mono or stereo. One of the highlights was the Soundcraft series FOH console. Side by side with the Amek Recall RN, it gave a powerful summary of the live sound portfolio on offer from these sister companies.

Imagined Oceans at the Royal Festival Hall

Composer Karl Jenkins is continuing the success of his catchy, ethnic-style music of his *Adiemus* albums with a new release, *Imagined Oceans*. With his new orchestra, the Karl Jenkins Ensemble, Jenkins recently gave a performance of the new material - inspired by the possibility of water on the moon - in front of 2000 people at the Royal Festival Hall in London.

The stage layout consisted of raised platforms up to six feet high surrounding the conductor's position, and a horse-shoe of music stands. Unlike most orchestras who appear at the RFH, the 27 musicians and three singers wore casual attire, setting a more relaxed and informal tone for the performance.

The lighting for the event, designed by Joe Atkins of Beautiful Neptune Design, drew on elements from rock and roll and theatre, utilising Vari*Lite VL5s, VL5Arcs and VL6s, along with ETC Source Fours and Par cans. Atkins also hung four white gauzes behind the musicians to create depth. He explained: "This gave me the ability to change the mood and capture different aspects of the music's appeal, whilst still leaving the view of the vast RFH organ pipes open."

Atkins then added to the overall effect by focusing Clay Paky Mini Scan HPEs onto the organ pipes, creating moving, watery images.

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Avolites at the Opera



The austere deco splendour of the Grand Temple of the Freemasons Hall was one of the more surreal settings for a performance of Handel's Samson - part of the recent Covent Garden Opera Festival.

Lighting for the performance was designed by Ivan Morandi, who has carved a niche for himself as a specialist in opera and recital lighting in addition to that of more off-beat performance art projects. Samson was directed by Aiden Laing. The work was to be produced without set, presented as a choral piece with lighting consequently assuming elemental importance in terms of generating atmosphere and effect.

Morandi's brief was that the lighting should co-ordinate intimately with the direction and movement of the singers, and should be interesting and experimental. In the past, he has introduced moving lights to opera with mixed reviews - and this very difficult project was no exception.

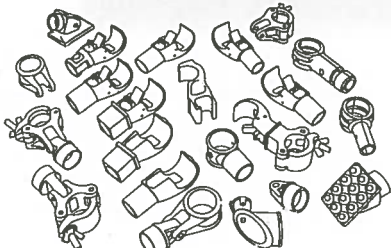
Morandi has long been a fan of Avolites' products, and for this show he chose an Avolites Pearl 2000, a console with which he is very familiar and one that could be programmed quickly and easily under the extreme time pressure and lack of rehearsal time.

To preserve and accentuate the domed ceiling of the Grand Temple, he designed trussing which arched upwards following the curvature of the roof. This proved a huge challenge to the rigging department to locate in the exact desired position. Lighting instruments were carefully selected for their maximum flexibility (and for keeping within the budget of course), so the rig ended up with 14 VL6s, 12 VL5 Arcs, 30 Source Four profiles and 24 Pars.

Morandi's lighting had to be subtle but simultaneously expressive and scenic whilst at no time detracting from the singers. He emphasised changes, lifts, drops and drama with colour, movement, gobo work - all administered with intense delicacy and feeling in sympathy with the performance. The VL6s were used to work on the performers and to create weird beams, while the 5s produced the main colour washes.

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PLASA Industry Dinner and AGM is Fitting Close to a Year of Development for Association

PLASA hosted a highly successful Annual General Meeting on Wednesday June 9th in the salubrious surroundings of the Marriott Forest of Arden Hotel in Meriden, Warwickshire. The meeting was attended by 107 people, representing 60 Member companies - a record attendance for a PLASA AGM and a significant increase on the previous year's attendance.

Following last year's success, the AGM was again preceded by an informal dinner at the hotel on the Tuesday evening. PLASA Vice-Chairman Colin Whittaker welcomed 93 people to the evening event, which was topped by two excellent after-dinner speakers. Radio 4 sports commentator Garry Richardson gave an entertaining view of the perils of live sports coverage, and was followed by the inspirational Richard Noble, the former world land speed record holder and the irresistible force behind the first ever supersonic car, Thrust SSC, which went into the world record books late last year. Richard kept the entire audience rapt for well over an hour, before answering questions about his endeavours.

After an all-too-brief night's rest, the crowd reassembled for the meeting next morning. PLASA Chairman Paul Adams welcomed the members and gave his report for 1997. After introducing the two new members of the executive committee - Mick Hannaford of Lightfactor and Sammy DeHavilland of Deco Leisure/Dare Audio - Paul went on to outline the main points behind what has essentially been a year of progress for the Association. Following a period of financial consolidation, PLASA was for the first time in a position where surplus funds could be made available for supporting important new initiatives. These included continued industry research and progressing a recognised training policy through the development and formulation of industry job descriptions.

Adams highlighted the results of initial industry research conducted by PLASA in recent months, which showed that the PLASA membership was divided into five main sectors - manufacturer, distributor, installer, hire/rental and production services, with some companies operating in more than one sector. Results from the 258



PLASA Chairman Paul Adams addresses the meeting.



Guest speakers Garry Richardson (left) and Richard Noble (second, right) with PLASA's Paul Adams and Colin Whittaker.



Making merry: Freddy Lloyd (Zero 88), Coral Cooper (Vari-Lite), Peter Brooks (Zero 88) and Rick Wilson (Le Maitre), with Wayne Howell and Tracy Patterson (Artistic Licence).



Tony Cockell (left) and Sandra Cockell (right) of Formula Sound, with Mike Reay of EMO Systems.

... continued on page 34

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PLASA members who took part in the research indicated that the PLASA membership was turning over in excess of £658m per annum.

Another area highlighted was the continuing relationship between PLASA and its sister associations, ESTA in the United States and VPLT in Germany, as partners in the World Entertainment Technology Federation (World-ETF). Now in its third year, the World-ETF exists to encourage the exchange of technical information, improve communications between associations and implement protocols. Paul stressed that the World-ETF was actively encouraging other associations to join, to increase worldwide communication within the industry.

Paul then added that as this was his third PLASA AGM as Chairman, he had almost completed his term of office and would be standing down before next year's meeting to allow the election of a new Chairman. He then congratulated Matthew Griffiths on his appointment earlier this year as



Rick Salzedo of Avolites in discussion with P&O Events' MD, Jonathan Goold.

managing director of PLASA, and thanked him for his work as executive committee member and PLASA Treasurer over the past eight years.

Matthew followed with the Treasurer's report for 1997, pointing out that David Hopkins OBE had now taken over the role of Treasurer and would be presenting the 1998 report at next year's meeting. Matthew reported that PLASA was now well on course to reaching its specified aim of achieving financial reserves of £400,000 to safeguard against the potentially damaging effects of a bad year for the PLASA show.

In last year's Treasurer's report, he had reported his concern over the financial performance of the publishing division, with losses for 1996 of £31,000. New measures introduced during the year, including much tighter control over finances from within the publishing division, and the eventual move to new printers for PLASA's magazines at the end of 1997, had led to a profit of £14,000 in 1997 - a turnaround of over



Colin Freeman of Penn Fabrication (left) with Terry Douris of Stage Two.

£45,000. In 1997, the publishing division accounted for 26% of the Association's turnover, while the PLASA show accounted for 65%.

James Brooks-Ward, show director of the PLASA Light & Sound Show, represented show organisers P&O Events at the meeting. James gave a presentation which charted the development of the PLASA Show since the commencement of P&O's involvement in 1991, and outlined how new areas were now being particularly addressed for the future. In addition to plans for the 1998 PLASA Show, James also gave a report on the successful PLASA Presents Light & Sound Shanghai, which took place in April. He then took a number of questions from the floor about specific PLASA show matters, as well as the Shanghai show.

The event was a fitting close to a successful year, and PLASA is now looking toward new initiatives for 1999 and beyond. Next year's dinner and AGM will be on the 16-17th June.

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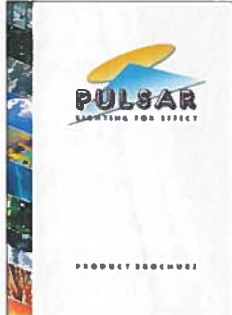
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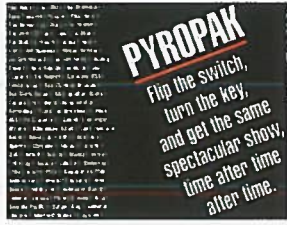


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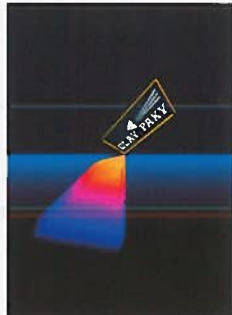
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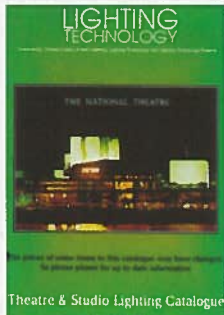
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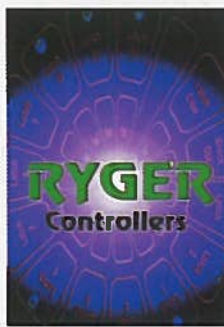
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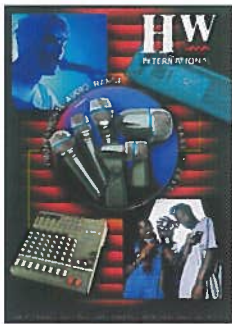
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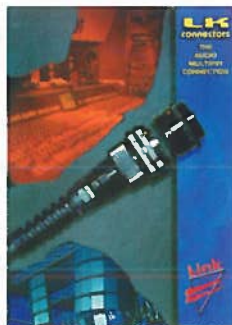
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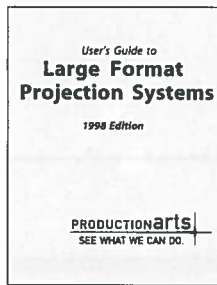
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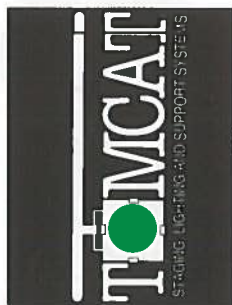
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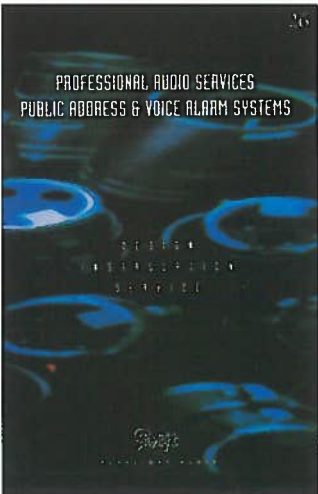
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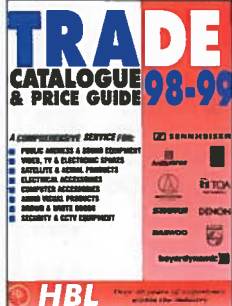


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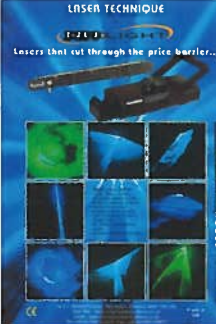
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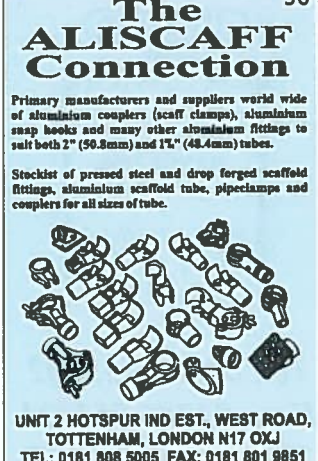
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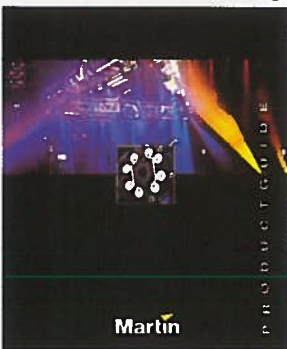
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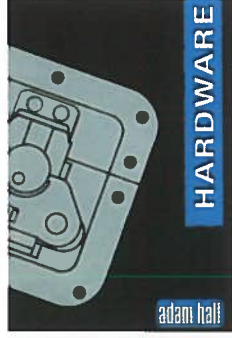
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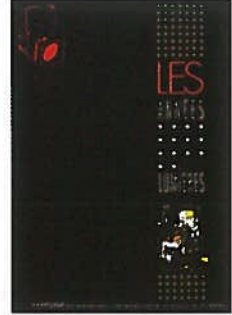
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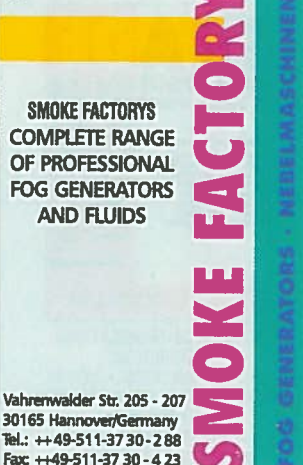
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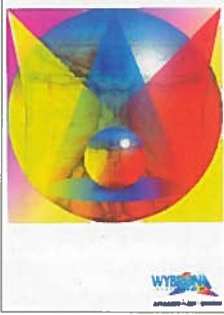
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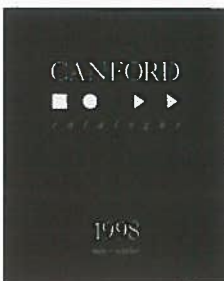
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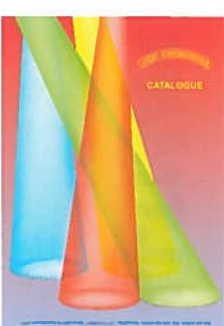
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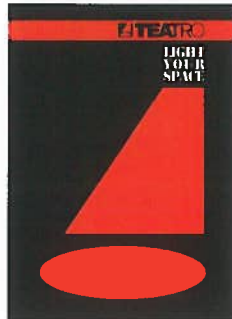
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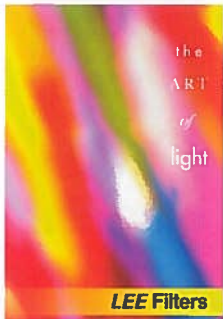


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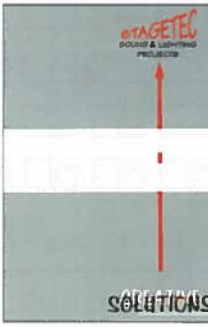
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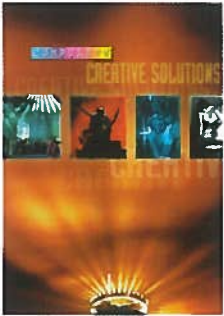


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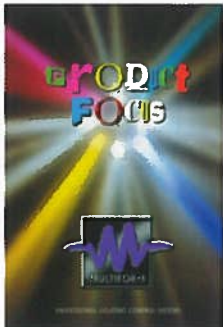
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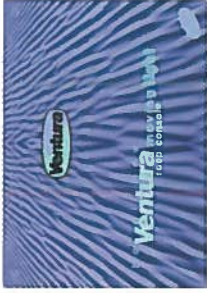
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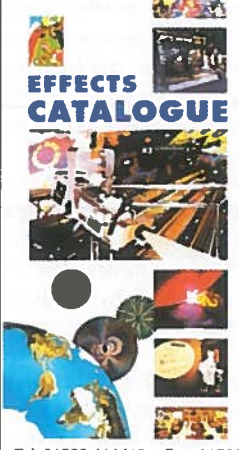
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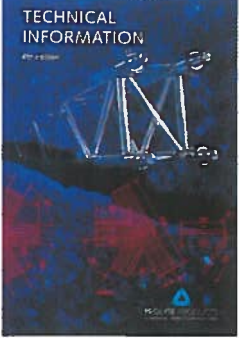
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Tony Gottelier

No sooner had we seen off one perceived threat to manufacturing in the entertainment lighting sector, where one maker seemed to be planning to hijack the means of production through anti-competitive pricing, than a new war machine comes lumbering over the hill, with its sights trained on the means of distribution.

This time the battle lines were drawn in the United States, but soon the action spilled over into the UK, where it now promises to escalate. The first signs were innocent enough: in 1995, a company called Harris Production Services with offices in New York and Las Vegas run by Jere (pronounced Jerry, but short for Jeremiah) Harris, together with its associate Scenic Technologies, acquired Vanco Lighting Services, a major entertainment lighting distributor based in Orlando. With the declared intention of forming a strategically situated nation-wide distribution chain for the entertainment industry, the new grouping changed its name to Production Resource Group (PRG).

Then in April 1997 PRG announced that it had reached agreement to take over (or to 'merge with' in the euphemistic financial jargon), BASH Theatrical Lighting. BASH centred in North Bergen, New Jersey, are a major provider of entertainment technology to Broadway shows and touring theatre companies. By coincidence, BASH also had offices in Orlando and Las Vegas and consequently at the beginning of this year BASH and Vanco moved into a combined 60,000 square foot facility in Orlando under the Vanco banner. Simultaneously, PRG announced the creation of a 130,000 square foot development in Las Vegas to weld BASH into the grouping there. In January an audio division was created with the acquisition of Promix.

During the last few weeks there had been persistent rumours, emanating from across the Pond, of other major moves afoot and sure enough, as confirmed on

"Putting all the emotional stuff about corporate rock and roll to one side, though creativity and financial acuity ever make uncomfortable bedfellows, I have severe reservations about this manic urge-to-merge..."

our story on page six this month, PRG have now swallowed up Production Arts, whose massive central warehouse is located within minutes of the BASH NY HQ, and even more staggering, only 11 days previously they announced a 'merger' with the UK's Light and Sound Design. The latter gives PRG not only a presence in the UK, but also a foothold in LA and Nashville; furthermore, it gives them unparalleled access to the concert, rock and roll and touring markets.

So now we have, in PRG, a huge horizontally-integrated conglomerate offering a cornucopia of services across the board in every discipline to every function that entertainment technology embraces. Putting all the emotional stuff about corporate rock and roll to one side, though creativity and financial acuity ever make uncomfortable bedfellows, I have severe reservations about this manic urge-to-merge and, indeed, about its benefit to our industry as a whole. From cottage industry to corporate colossus in 20 years takes a giant leap of faith.

What I find intimidating is that we are not by nature an industry of big players and creativity has found a way of expressing itself largely as the result of that. The fact that we have the capacity to do extraordinary things - just look at the logistics of any major rock tour - does not mean that we

are natural partners with big business day to day. I also find the monetary aspects of these deals somewhat disturbing and take pause to ask, who benefits other than the participants themselves?

Well of course, you will find that the bankers and lawyers will come top of the food chain in this particular feeding frenzy, and all will demand their pound of flesh. So let's say that the Harris war chest was in the order of \$200 million dollars, and I don't see how it could be much less, how will he fund the interest payments? Clearly there will be some severe rationalisation with accompanying attrition, and doubtless the combined forces will use their massive buying power to squeeze the manufacturers until the pips squeak - after all, PRG is now a virtual cartel. In turn, that could inevitably lead to a further spate of combinations as the makers are forced into ever bigger groupings in self-defence.

The net result of all of this will be a reduction in choice, which cannot be a good thing, and the stifling of creativity, which is even worse. People only need to look at the recent history of leveraged buy-outs and the connected junk bond scandals in big business to see that this could all end in tears.

Production Arts was a centre of excellence in its sphere as was LSD as the world's most successful production company, but when you cut through the PR hype and the cant about 'business as usual', can we really believe that will remain so? It is human nature that ego will swiftly play its part, and if events follow the path of most alchemies of this sort, the profiles of characters like Nick Jackson and Steve Terry, who have given so much, will swiftly fade to grey, if not to black. Others being courted with bouquets of bonds please take note.

It is likely that Harris's ultimate ambition is for PRG to go public, and that the real rewards of mammon will be reaped at that point. However, this will take some time to come to fruition as investors will be expected to have very short memories if PRG go for such a share issue in a big way in the near future. And this has been a massive investment by any stretch. Anyone tempted to buy in should check out the current share prices of previous public offerings in our sector. No, I can only see real benefits to the venture capitalists and virtually no one else in this one.

I had planned to tell you more about Mark Fisher's plans for the vast performance space at the Millennium Dome this month, but the unexpected events in the corporate sector that unfolded in the meantime seemed to warrant more urgent coverage. So, I will return to Fisher's grand vision in the next edition.



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WIDE OPEN SPACE

*Say it loud, I'm large and I'm proud. Ross Brown visits
Leeds' Rat & Parrot, the UK's biggest pub*



It's a quintessentially British concept, the pub. And it doesn't matter whether you share John Major's vision of warm beer and afternoons watching the local cricket team, or realise that we've lost the Empire, don't all live in delightful villages in Kent and prefer your pint soundtracked at 120bpm, a pub is a pub is a pub. Yes? Sort of. Maybe. Errm . . .

There is a very definite line in the sawdust that can be drawn between the vast majority of our social drinking establishments - 'light cocktail jazz' defines wine bars, 'handbag house' equals club, 'Glenn Miller, fairy cakes and the Dashing White Sergeant' kind of suggests an afternoon at a tea dance (possibly the first time a tea dance has been mentioned in L+SI I would think) - these places are definitely not pubs. But does that mean that a pub is defined as a venue for lager tops, darts, shove ha'penny and quizzes on a Thursday night? Maybe in my little corner of West Yorkshire, with its moors, sheep and Friday nights spent 'at club', but over the rolling hills in the Big City they tend to do things a little bit differently.

For, across in Leeds, stands a pub so large, so enormous, so downright bloody big that the

"The Rat & Parrot is the latest in a long-line of über-pubs that are slowly creeping their way across the UK, invading every provincial area in this green and pleasant land."

title of pub doesn't really do it justice. But, before the PR spin doctors get on the phone insisting that the Rat & Parrot is not a pub but a café bar, and in the interest of fairness, this is what they say: "Rat & Parrot is a stylish bar café, developed to provide people with a sophisticated and fashionable meeting place, and now firmly established as a stylish venue in many town and city centres. It provides all-day food, full table service and a wide range of drinks, including teas and coffees - combining a relaxed atmosphere during the day, with a more vibrant mood in the evenings.

"The essential quality of the brand is its broad appeal to a wide range of customers, from business people, shoppers and tourists to

the younger and more fashion-conscious who come later in the day looking for a lively and enjoyable night out. Day long table service, a wide-ranging menu, and similarly extensive drinks portfolio all enhance Rat & Parrot's versatility, while sophisticated music selection helps adjust the mood to suit different customer profiles as the day progresses."

That'll be a pub then. It may well serve coffee and sandwiches during the day, so what. There's a guy down my local who occasionally gets out his acoustic guitar and 'sings' tunes about maidens leaving Liverpool never to return (a.k.a folk music), but that doesn't make it a live music venue. The Rat & Parrot may have a 'sophisticated music selection' but in my local we call it the landlord and his tape deck, switching between sixties classics at lunchtime to eighties classics when the joint really gets jumping.

If it's open until 11pm, serves as a popular meeting place on a Friday night and is known more for its alcohol than its cappuccino - it's a pub. And there's not one damn thing wrong with that, something the marketing people seem to forget.

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Rat & Parrot in Leeds is like no pub you'll have seen before. It is the latest in a long-line of über-pubs that are slowly creeping their way across the UK, invading every provincial area in this green and pleasant land. You're sure to have spotted them. They have a 'wacky' name dreamt up by young men in red braces somewhere in Soho (Aardvark and Tangerine anyone?), an eye for creative detail seldom seen in your 'traditional' ale house and the backing of a major brewer, in this case Scottish & Newcastle.

Apparently, we like the homogenised nature of these places - well, the marketing people say we do. "Over the last few years, in response to demand from customers and proven success, S&N Retail has been developing its portfolio of branded pubs. What this means is that brands like Chef & Brewer, Rat & Parrot, John Barras & Co, Old Orleans, Lodge Inns and T&J Bernard, are carefully developed to appeal to particular types of customers.

"Brands are groups of pubs which provide consistent, named offers to appeal to particular types of customers, and together they provide a wide range of marketable propositions to allow S&N Retail to satisfy the particular demands of each customer group."

Those of you for whom English is your first language may understand, but for others this means that whether in Leeds or Loughborough, Edinburgh or Exeter if you see a Chef & Brewer or an Old Orleans - then you know exactly what you're going to get inside. Corporately, this means consistent quality. In reality, it means that you could be in Leeds, Loughborough, Edinburgh or Exeter and, short

of a good old regional accent, would have difficulty telling the difference. Some people like this, apparently.

It's hardly surprising that S&N should choose Leeds as the venue for its latest venture. Lately it seems that anyone who is anyone wants to open a landmark venue in the unofficial capital of the North (sorry Manchester, but no amount of trendy BBC2 programmes, failed Olympic bids and gobby guitarists from Burnage can compete with Harvey Nichols, sweetie). Indeed, regular readers may even remember First Leisure's attempt to relocate Club Barcelona 15 miles from Batley to Leeds. Anybody who is anybody wants to be a part of Leeds. I mean, if a Bradford lad like me (why do I feel like a member of AA?), can appreciate the draw of the City (large student population, more blue chip HQs than you can shake a white rose at and a reputation as a 24 hour party town), then it's hardly surprising when it occurs to the nation's brewers.

Leeds is the first development in S&N's plan to extend the Rat & Parrot brand, from 43 outlets to 70 over the next year, creating 1,300 jobs and costing a cool £21.5 million. And, to be fair, the venue is a great one.

Flanked by Yates on one side, Morrisons supermarket on another and nestled nicely between the city's bustling legal quarter and its equally energetic universities, there's no doubting that the Rat & Parrot will be popular. The venue itself is the former Music College, but it's unlikely that former students or teachers would recognise the place since it was transformed. The main bar area is overlooked by a mezzanine, allowing the beautiful people

of Leeds to stare down upon even more beautiful people (we're an attractive county).

A huge half-dome white chandelier surrounded by 18 single pendants dominates the centre of the ceiling. Weighing only 60 kilos and measuring 3m in diameter and 1.9m in height, the fitting floods the venue with light, perfectly setting off the wooden arched beams that give the venue an old world feeling - presumably inherited from the previous occupants. At one end of the main bar area sits the most important piece of furniture the venue possesses: covered by 60 pumps and serving an estimated 5,000 drinks a day, the bar is the usual type (long, wide, flat, wood) and behind it sits the usual array of spirit dispensers and wine bottles (why have these cross-hatched faux wine cellars suddenly begun appearing behind bars across the nation?). But, it's what's above the bar that dominates the eyes (rather than the taste buds) at this end of the main drag. A four panelled mural of pseudo-Biblical scenes, painted in - to my untutored palette anyway - a Raphaellesque (the painter rather than the Ninja Turtle) style.

Now, to the technical bit - this is Lighting+Sound International after all. The lighting is groundbreaking and the speaker set-up uses previously untested products to achieve an effect never before seen in Europe. That would be how the PR people would write it and, in truth, the overall effect is pretty impressive but the products used are, in the main, fairly standard.

The sound within the venue is near to perfect, testament to the work carried out by Bose from the first stages of the renovation

work and Stewart Hamilton's Unique Systems, who installed the system. Rob Brooks, sound system designer for Bose, and the man responsible for the Rat & Parrot installation, said: "It's one of the smoothest Rats we've ever done, due in the main to our good relationship with S&N." But what about the size of the place? "It's just a scaling thing, especially because the installation is reasonably standard. Everything went smoothly, possibly even worryingly so!"

Bose used their Modeler system to plan the layout of the system before so much as a hanging bracket was screwed to a wall. Once the shell of the building was complete, Brooks and his team visited the site to verify the accuracy of the PC simulation, making a few minor tweaks due to a change in ceiling heights.

The source equipment used is a Denon twin cassette, a Cloud CX132 mixer zoner, a Rane RPM26 DSP-based audio processor and two Biamp RC11 four channel VCA controllers, whilst the business end of the system is completely (and unsurprisingly) Bose-based.

A total of 51 speakers (broken down to 22 Bose 203 loudspeakers, 18 Bose 502A Panaray loudspeakers, three Bose 502B Acoustimass bass modules and eight Bose FreeSpace Model 32 Flushmount loudspeakers) cover the massive venue, powered by eight Bose 1800 Mk5 professional power amplifiers and one lonely Bose AmPlus 100 music amplifier.

Where the sound is bog-standard - but damned impressive - the lighting uses a mixture of the usual and the unusual to light this extraordinary pub. As well as the aforementioned chandelier, the other wall lights and pendants were supplied by Edinburgh-based R&S Robertson. A combination of single and double-armed wall brackets and 10 blackboard-illuminating picture lights, the lighting is simple and effective - which is all it should be.

Except for one small thing . . . enter stage left, Northern Lights. Lighting the arch above the bar where the Ninja Turtle-inspired paintings sit was going to be a problem. Normal

lighting could have been used but, as Northern Lights' John Fleming admits, the problems of bulb-changing were considerable. "It caused horrendous problems. If a bulb had gone, we'd have had to get a scissor-lift in to change it!" And I thought my hall was a problem. Using typical ingenuity, Northern Lights suggested the use of four fibre optic cables which although not cheap at £1500 a shot were, according to Fleming, "cheaper when compared to the cost of getting plant in to change a bulb."

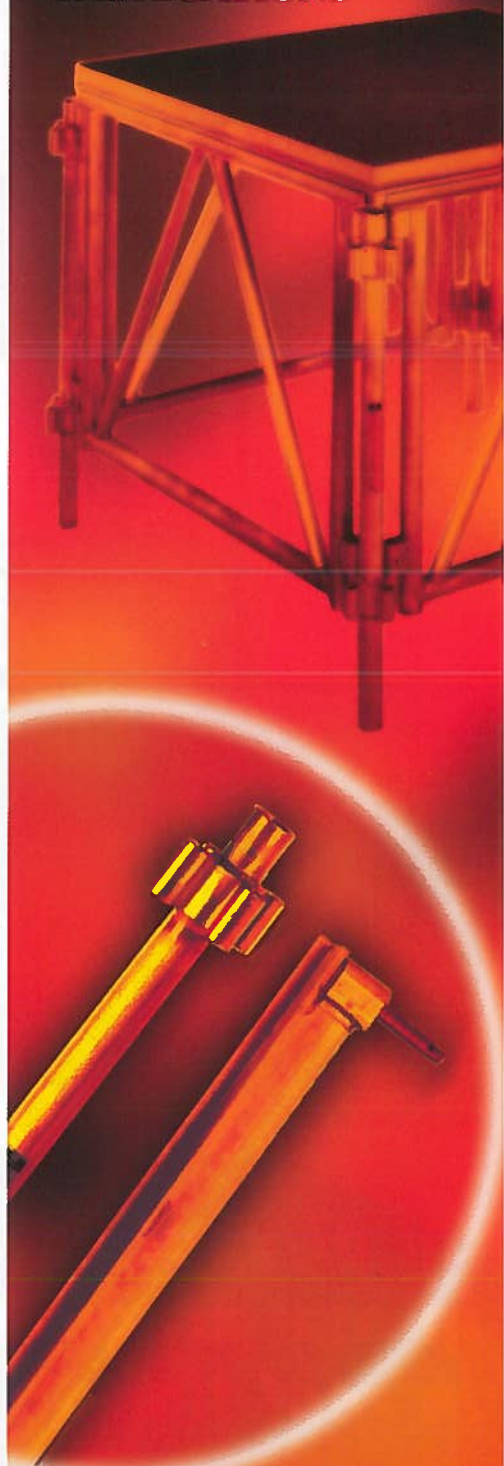
So the Rat & Parrot's got 51 Bose speakers and fibre optic cables light the way to the toilets, and my local's got half a dozen cheap and cheerful tweeter-less fake mahogany-covered boxes and gets a flashing rope light in every New Year's Eve - but does that lift it from the lowly status of pub into the dizzy heights of café bar?

If there's one thing that Leeds isn't short of, it's places to get a decent cup of coffee but neither is it exactly crying out for bars either. Whilst extolling the virtues of Rat & Parrots per se, S&N says that not only were they the first bars to open coffee bars (what!) but their popularity reflects the growth in coffee culture, as we increasingly adopt the café lifestyle of our continental cousins.

So we haven't grasped this idea before because we didn't have the venues, right? Wrong. Coffee culture thrives on the Continent for a variety of reasons mainly because it's hotter. But, brushing aside the associated benefits of heat - pavement-side seating for instance (you would not want to sit on the edge of Woodhouse Lane in Leeds, I assure you) - there is one simple reason why we don't have a 'coffee culture' (sounds like some bacteria growing in an old cup of Nescafé), we have pubs. And, in these enlightened nineties, you'd be hard pressed to find in a major city centre like Leeds - or even out in my backwater - a pub that didn't serve coffee, tea and even Lemsip, if you asked nicely enough.

So . . . the Rat & Parrot, Leeds. Venue: stunning. Decor: passable - dodgy in places. Lighting: practical. Sound: fantastic. Name: go on, admit it . . . you're a pub really.

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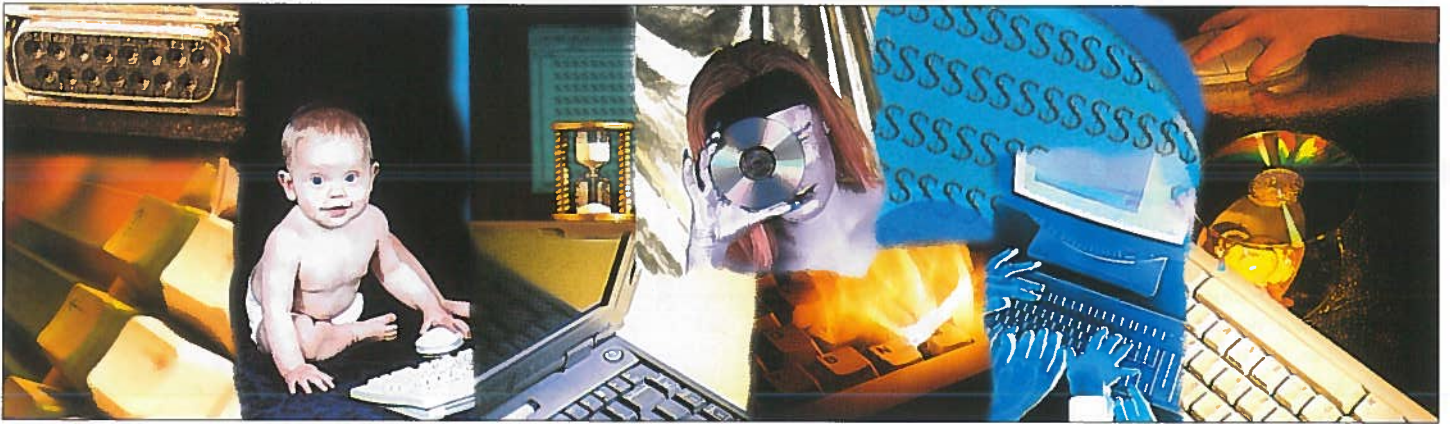


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THE CAD FILES

In the first instalment of a two-part survey, Rob Halliday examines the pros and cons of CAD packages for theatrical lighting design . . .



They seem like ideal companions. Lighting design, which involves managing a huge range of ideas, symbols, data, cues, plans and paperwork, and the computer, which is supposed to be very good at dealing with information. Indeed, for almost as long as computers have been commonplace, people have been trying to use them to help with the process of designing entertainment lighting. Often their tools have been general purpose products cobbled together: a simple drawing program for positioning symbols, maybe a database for keeping track of the rig, perhaps a spreadsheet for preparing cue sheets, all accompanied by the usual paraphernalia of catalogues, swatch books, and set plans on pieces of paper. It worked - but, unless you were repeating and modifying a design many times (which is why the big show designers embraced this technology so readily), it wasn't necessarily worth the effort.

The other problem, of course, was cost. In their early days, Modelbox - one of the early pioneers in this field - used a CAD (Computer Aided Design) package running on someone else's mainframe computer, with every bit of computer time charged for. Later, PCs could manage simple drawing programs, but often struggled to hold two or three programs open at the same time and certainly creaked when you tried to link those programs. The Apple Macintosh excepted, most were also pretty poor at presenting plans graphically. And machines of the speed required were costly, especially when you added in the desirable extras, such as a large monitor. Certainly beyond the reach of most jobbing lighting designers, not renowned as the best-paid bunch of people in the world.

This is all now changing. For £700 or so you can now buy a 200MHz Pentium PC. Around £1000 will take you up to a Pentium II machine or a larger monitor. Apple Macintoshes based on the new, high-speed G3 processor are available for about the same price. All of these machines have the power to handle plan drawing and paperwork with ease, and bring even more demanding tasks, such as rendering images of what the lighting might look like, into

reach. Rendering - creating realistically-lit 3D images - is the kind of work that used to take hours or days of computing time; now it's at home in a reasonable time. That's progress.

More importantly, these new machines mean that the hardware that is just below the 'cutting edge' is available for spectacularly low prices, especially from dealers selling second-hand machines from large corporations. Buying in this way also avoids some of the sickening feeling that results when the machine you bought for £1000 falls to £700 just after you've handed over the cash. That, too, is progress.

With the increasingly affordable hardware now meaning that more and more people are looking seriously at using computers for lighting, quite a wide range of software has appeared to help them, and that's what this piece is really here to examine. What's interesting, looking at the 10 packages considered in the course of this survey, is how each manages to be different and none manages to be perfect. This is a reflection of the infinite number of approaches there are to designing lighting - and different meanings of 'lighting design'. Traditionally, that has meant imagining a lighting concept in your head and, through experience, translating that concept into a collection of symbols representing real lights on a paper plan. The designer or electrician then uses that plan to generate other information - equipment lists, colour lists and so on. At the simplest level, a lighting CAD package would aid with placing the symbols, avoiding the need to deal with huge pieces of paper, stencils, pens and ink. And speeding the process up - copying or repeating groups of symbols, moving things around without fuss. Just about any line drawing or CAD program will do this - you just need to add symbols, either by drawing your own, using those supplied by some manufacturers, or purchasing an electronic symbol library in the same way that you used to buy a set of stencils.

Better would be if the program could generate the paperwork, too. Ideally, your system should be able to produce all of the information you'd traditionally produce by hand, but do it live as you draw the plan. It

should also let you edit the paperwork and show those changes in the plan. And if it could do other computer-type operations - replace all of the narrow Par cans on the downstage two-bars with medium ones - so much the better. This is where lighting CAD packages (either self-contained or add-ons to standard CAD programs) start.

Increasingly, though, the specialist packages are starting to take things further - while at the same time presenting an interface that feels like a traditional drawing board rather than an engineer's CAD system. They include data about real-world lanterns, and can show you how wide the beam from a Source Four 26 degree would be at that throw from that bar, in plan or section view. They include colour libraries, so that you can say 'L106' and have the beam turn red - maybe the symbol, too (a very useful option, especially when looking at a large rig 'zoomed out' on a small monitor). They can tell you how bright the light will be on stage. Now, as computing power has increased, they are even starting to go beyond that. Packages that let you position real lights with real colours and real gobos then turn them on and see the results in solid, shaded 3D are now available. You may not always need to do this. But when you do need to see how the uplit shadow from a diva on a staircase lit by a footlight Minulette, say, falls on a painted backcloth, there's nothing to match them, short of being in the theatre and trying it for real - which isn't usually an option at the design stage. Some packages even let you program these lighting looks into cues, which can then be transferred into a real lighting desk when you arrive at the venue.

Several programs, led by CAST Lighting's innovative WYSIWYG, take a slightly different approach, spurred on by the increasing use of automated lighting. They again simulate real lights, but let you plug in a lighting desk to 'drive' the virtual rig in real time. Countless shows of various styles have been pre-programmed in this way.

At the moment, the problem is that none of the packages offers everything. The program that will do quick, accurate 3D rendering won't

let you produce the neatest, tidiest looking paper plan (always a tough issue, since paper plans usually aren't the kind of accurate 3D representations of a rig that you need when rendering virtual beams; think of how people usually draw booms). The program that has the best paperwork options may not show gobos in lamp beams. And so on. They are all starting to add each other's functionality, but at the moment it really is a case of finding the set of compromises that suit you best and living with them, or of using a couple of different programs.

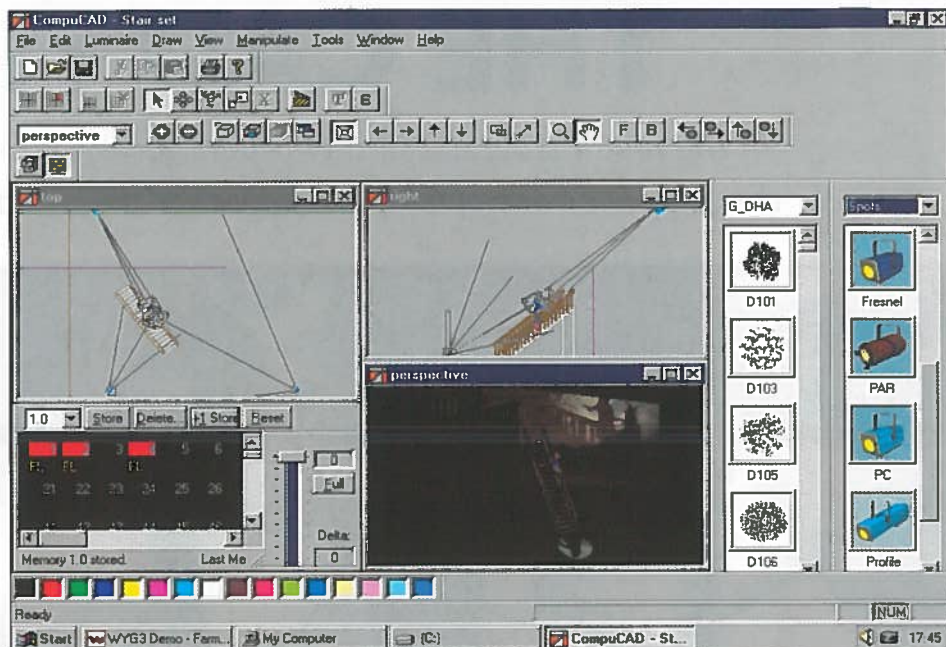
There are two final issues for anyone wanting to use computers for design. One is that few designers work in isolation. A lighting designer usually needs a set plan to work from; if this arrives on paper it first has to be re-drawn into the computer, wiping out many of the time savings CAD can produce - and if you need to do this you either need a lighting program that lets you draw set plans or a separate CAD program as well. The trick is to get everyone using CAD, but even then the different programs they use have to be able to share the same files. The two standards are DXF and DWG, both formats of the AutoCAD package. Neither are perfect, but most programs can read them.

Other formats exist, and you should check that everyone involved in a project can swap files before deadlines loom! Rig data is also more useful in electronic rather than paper form, but the electrician may not own the same software. Traditionally, the solution has been to establish a common file format and carefully shuffle information between two programs. WYSICAD's free WYSIPAPER module is a neat alternative solution.

The second issue is cost. The cheapest packages we've looked at here cost £250 - add in the price of a computer and even that is a fair amount of money. Is it worth it to a jobbing LD, especially compared to the cost of pens and tracing paper? Increasingly, yes - as shown by the fact that more and more people are using CAD. Reasons they cite include being able to play around with a design more easily, check beam angles, keep all of the information for a show in one place, and carry lots of shows with them (on a laptop) so that they can work on other projects in quiet moments of the current one. They also end up with old projects neatly archived on disk rather than in piles of crumpled folders and rolled up tracing paper. Some still have a drawing board for playing around with ideas on a large scale, but then draw the final project on the computer.

And, in this high-tech age, you can find out whether computer CAD suits you, and then which program would suit you best, for yourself - provided you already have a computer and a connection to the Internet. Most are freely downloadable in one form or another, some letting you try the full program for 30 days, others giving you a version with the save function disabled.

Across this and the next issue, we aim to give you an overview of each program, its strengths and weaknesses, to give you an idea of which might suit you. But you should then go out and try them for yourself. Be warned, though: once you've been bitten by the CAD bug, it's very hard to turn back . . .



CompuCAD

CompuCAD is a lighting design package manufactured by Compulite, long-time producer of lighting desks, dimmers and moving light yokes. Like many of the company's other products, CompuCAD appears to be well thought out, nicely implemented - and undeservedly under-rated.

On opening, the program allows easy access to recent files or the creation of a new plan based on either an empty space or a series of standard building layouts. Theatre or set plans in DXF format can also be imported, and the program contains a useful collection of other 3D building blocks and textures.

These are presented in 3D space, with four view windows opening on the screen. CompuCAD then offers a number of ways of working: you can either leap straight in and start drawing lights, or you can take a more thoughtful approach, listing the areas that need to be lit then generic lights or groups of lights to light them. All of this information remains active throughout the design process.

When you do start placing lights, you first have to insert rigging positions since the program won't let you hang lights in free space. Its rigging library includes the usual generic bars, booms, ladders and trusses, but also useful extras such as floor plates. You then place a generic lamp type on the rigging position and either set a beam angle or pick a real world fixture. The fixture library is quite comprehensive, even including photographs of many of the models. It doesn't include any automated lighting equipment, however.

When placed, an outline of the lamp's beam is shown and can be dragged to the required focus position. The beam angle of variable-angle lamps can be altered, and colour or gobo can be added. The colour library includes numbers and names, and double colours can be used. The gobo library has pictures of the gobos, since the program can render beams including the gobo shapes. Indeed, while we're just getting used to programs starting to offer gobo rendering, CompuCAD allows the angle of the gobo within the lamp to be rotated. It also allows the edge focus of lights to be controlled, though

this has more effect on open beams than lamps with gobos.

Scenes can then be rendered - a process which is slightly slow, especially for complex rigs, though you can render just a particular area of a window. The images produced are the most theatrical-feeling of any of the programs here. The beams look like real beams (even producing a passable model of that most difficult of fixtures, the beamlight), and the interactions of colours, gobos, shadows and scenic elements are superb. You end up playing with it for hours, placing lights and making up cues (using the built-in versions of several Compulite desks) to see the results.

There is also a 2D rig view available for editing or printing. This is acceptable, but won't satisfy those looking for the perfect paper plan; generic lamp-type symbols are used rather than symbols for specific fixtures, and there is only a limited amount of control over text fields. The paperwork options are also fairly limited: you can sort the instrument list by any field and resize each field, but can't actually save those different views.

This is a really useful tool for LDs wanting to try out ideas in a virtual world. CompuCAD renders quickly and has a very theatrical feel.

PROS: Comprehensive fixture and gobo libraries, with pictures. Modelling of real-world fixtures. Rendering has a real 'theatrical' feel. Cue storage through 'real' lighting desk model. Supports structured or unstructured approach.

CONS: Paperwork, 2D plan and 2D symbols limited. No way of copying real fixtures or editing parameters of multiple fixtures. Have to pick fixture by optical property - can't just pick a known model. Occasional oddities in editing fixtures (beam angle sets itself to an invalid number). No moving lights in library.

CompuCAD is available from . . .
 Compulite, Israel
 Telephone +972 3 540 1268
 Stagetec (UK) Ltd
 Telephone (01753) 553552

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ADVANCING THE ART OF LIGHTING

52 CAD SURVEY: TABLE SHOWING THE REQUIREMENTS AND FEATURES OF THE FIVE PACKAGES REVIEWED IN THIS ISSUE

| PACKAGE | REVIEW VERSION | MANUFACTURER | MACHINE | NEEDS | MIN PROCESSOR | MIN SYSTEM | MIN MEMORY | PROTECTION | SUPPLIED ON | MAIN AIM |
|-----------------------|----------------|---|---------|-------|---------------|------------|-------------------------|---------------|-------------|---------------------------|
| CompuCAD | 1.20 release 1 | CompuLite | PC | N/A | Pentium | Win 95 | 16Mb RAM, 75Mb HD space | Dongle | CD-ROM | Plan & rendering |
| Martin Show Designer | 3 | Lighthouse Holland BV/Martin Professional | PC | N/A | Pentium | Win 95 | 16Mb RAM, 30Mb HD space | Dongle | CD-ROM | Rendering & visualisation |
| Stardraw 2D | 3 | Starlite | PC | N/A | Pentium 75 | Win 95/NT | 16Mb RAM, 10Mb HD space | Serial number | CD-ROM | Plan |
| Stardraw Professional | 1st Release | Starlite | PC | N/A | Pentium 75 | Win 95/NT | 16Mb RAM, 10Mb HD space | Serial number | CD-ROM | Plan & rendering |
| WYSICAD | 3.01.00.23 | CAST | PC | N/A | Pentium | Win 95/NT | 16Mb RAM, 20Mb HD space | Dongle | CD-ROM | Plan & visualisation |

| PACKAGE | IMPORT FORMATS | EXPORT FORMATS | FULL CAD | LAYERS | 2D PLANS | 3D PLANS | BEAM DISPLAYS |
|-----------------------|-------------------------------|--------------------------|----------|--------|----------|----------|--|
| CompuCAD | DXF, BMP, JPEG, TIF, PCX, TGA | DXF | No | Yes | Yes | Yes | Yes, with colour mixing, variable angle lamp support, gobos, surface interaction, shadows |
| Martin Show Designer | DXF, BMP | - | Yes, 3D | No | Yes | Yes | Yes, with colour mixing, variable angle lamp support, gobos, moving lights, surface interaction, shadows |
| Stardraw 2D | DXF, DWG, FCD, BMP, JPEG | DXF, DWG, FCD, BMP, JPEG | Yes, 2D | Yes | No | No | No |
| Stardraw Professional | DXF, DWG, FCD, BMP, JPEG | DXF, DWG, FCD, BMP, JPEG | Yes, 3D | Yes | Yes | Yes | Not of fixtures: generic spotlight lightsource |
| WYSICAD | WYSIWYG 2, DXF, DWG | BMP | Yes, 3D | Yes | Yes | Yes | Yes, with oval PAR beams (not rotatable), gobos, moving lights, surface interaction |

| PACKAGE | PHOTOMETRIC DATA | RENDERING | FIXTURE LIB | USER CUSTOMISABLE LIBRARY | ML SUPPORT | COLOUR LIBRARY |
|-----------------------|--|--|---------------------------------------|---------------------------|------------|---|
| CompuCAD | No | Yes | Yes (generic symbols, data, pictures) | No | No | Yes (Lee, Gam, Rosco, Chris James); beams display in colour |
| Martin Show Designer | Yes, lux and chromaticity at any point | Yes | Yes (generic symbols, data) | Yes | Yes | Yes (Lee, Atri, Martin); beams display in colour |
| Stardraw 2D | No | No | Yes (symbols) | Yes | No | Yes (Lee, Rosco) |
| Stardraw Professional | No | Yes, using generic lightsources rather than fixtures, no shadows | Yes (symbols) | Yes | No | Yes (Lee, Rosco) |
| WYSICAD | No | Yes, rendered views with limited control, no shadows | Yes (symbols, data) | No (updates via Web) | Yes | Yes (Lee, Gam, Rosco); beams display in colour |

| PACKAGE | GOBO LIBRARY | TRUSS LIBRARY | RIG DATABASE | PAPERWORK |
|-----------------------|---|---------------------------|--------------------------------------|---|
| CompuCAD | Yes (DHA, Rosco, Gam), with pictures; gobos can display in beams | Yes (generic truss types) | No; lists and totals | Instrument schedule sortable by any field |
| Martin Show Designer | Yes (Rosco, Gam, Martin) | Yes (generic truss types) | No; printable lists only | Printed output of instrument schedule, patch |
| Stardraw 2D | No | Yes | No; lists and totals | List by any lamp attribute, must be manually set-up each time |
| Stardraw Professional | No | Yes | No; lists and totals | List by any lamp attribute, must be manually set-up each time |
| WYSICAD | Yes (Rosco, DHA, Vari* Lite, Martin, High End), with pictures; gobos can display in beams | Yes | Yes. Links between plan and database | Instrument schedule, numerous lists and calls, hanging schedule |

| PACKAGE | SEARCH AND REPLACE | COPY/PASTE WITH FUNCTION FILTERING | PATCHING | CUE STORAGE | WYG-ALIKE |
|-----------------------|------------------------------|--|---|-------------|--|
| CompuCAD | No | No | Yes: channel/ circuit/ DMX with universes | Yes | In forthcoming version |
| Martin Show Designer | No | No | Yes: channel/ circuit/ DMX with universes | No | With optional DMX input hardware |
| Stardraw 2D | No | No; field editing across selected lights | Yes: channel/ circuit/ dimmer | No | No |
| Stardraw Professional | No | No; field editing across selected lights | Yes: channel/ circuit/ dimmer | No | No |
| WYSICAD | Yes via filters in paperwork | Yes, in paperwork | Yes: channel/ circuit/ DMX with universes | No | With WYSIWYG (£1750-£3290 for full WYSIWYG package, depending on channels) |

| PACKAGE | LINK TO DESKS | ON-LINE HELP | MANUAL | CRASHES DURING TEST PERIOD? |
|-----------------------|--|---------------------|--------------------------|--|
| CompuCAD | Ovation 4D, Micron 4D, ASCII cue files; via Ethernet in v1.3 | Yes | No | Yes, when switching to 2D view with text in information block; locked up when importing 4th or 5th plan in a session |
| Martin Show Designer | Can act as a lighting controller with optional DMX output hardware | For some operations | Yes | No |
| Stardraw 2D | No | Yes | Yes | No |
| Stardraw Professional | No | Yes | Yes | No |
| WYSICAD | With WYSIWYG: Autofocus out | Yes | Introductory manual only | Yes, intermittently when using Mini Console |

Martin Show Designer

Martin Show Designer is the product formerly known as Highlight Design. The package was created, and is still being developed, by Lighthouse Holland bv, but it now has the global marketing muscle of Martin behind it.

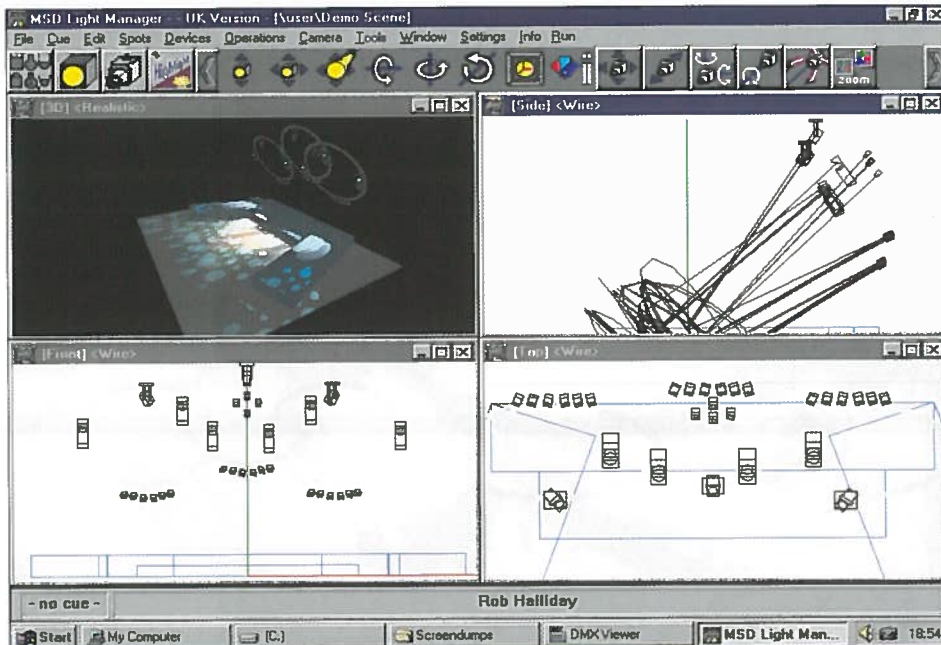
MSD makes no real claims to help you produce old-fashioned paper lighting plans. But it does claim to be the 'ultimate lighting design software', offering lighting and rendering based on real-world lighting equipment. Both WYSIWYG-type functionality and direct control over DMX rigs are also available in the latest version, through an option DMX in/out card.

When running the package, the first thing that becomes clear is how subdivided it is, with separate programs for drawing objects, defining material types, creating or editing spotlights, editing colours, editing gobos, combining objects into scenes, lighting those scenes, rendering scenes and then actually driving the virtual rig from a desk. Though it could be argued that this keeps each individual program tidy, it does lead to constant hopping between programs and opening and closing different types of files.

The programs connected with creating or lighting scenes all operate in 3D, each opening four small windows giving different views into the workspace by default. Each window has its own set of controls so that while lighting, for example, one could display a wireframe view, one with light beams and one a rendered view, though you can only work in the wireframe views. Lights from the fixture library can be placed freely in space or attached to bars or trusses; the library supports both fixed and moving lights, but its contents aren't at all comprehensive. Lights can then be focused by dragging their beams around the 3D workspace or using a view that effectively puts you in the lens looking out! Colour and gobos can be added and the rig can be patched, with support for moving lights and DMX universes. Once completed, simple plans, instrument schedules and patch lists can be printed, though these can't be viewed or edited on screen.

The Light Manager program allows channel levels to be set and recorded into cues. Cue states can be displayed with either wireframe or solid beams, or can be fully rendered using the Rendering program. There are options controlling speed vs. quality, but rendering is a start-then-wait operation. You can continue to work in other windows while rendering takes place, though. Rendered views show colours and gobos interacting with other beams, surfaces (including translucent surfaces) and surface textures defined in other parts of the program; it is possible to produce some fantastic images with enough time and patience, though they are strictly static images; you can't move your viewpoint around them without re-rendering.

Rig plans can then be transferred into the Off-line editor, which allows the rig to be driven, WYSIWYG-style in a wireframe view, from a DMX console through Martin's optional DMX in/out card. It's a shame that there's no provision for any kind of virtual console to allow the rig to be driven without the card or a



desk - in this situation all you can do is look at a virtual simulation of a switched-off rig!

This is an interesting product, a real tool for lighting designers wanting to experiment with real equipment in a virtual environment. WYSIWYG now offers similar functionality in a better-integrated package and with more support for turning out an old-fashioned plan and paperwork. But for rendering real-world lighting looks, MSD still seems to have the edge. It's just a shame it can't render them more quickly - MSD's fixtures at Stardraw Professional's speed would be some package! However, Martin are currently working on a new version of the package so maybe these issues will be addressed.

PROS: Superb rendering from real-world fixtures using real-world gobos and colours. WYSIWYG-type functionality available.

CONS: Rendering is slow. Can't move camera around rendered images. No real rig database. Limited fixture library. Too many separate programs. Operation isn't always intuitive. Little on-line help. No virtual console in WYSIWYG-type module.

Martin Show Designer is manufactured by Lighthouse Holland BV and marketed by Martin Professional . . .

*Martin Professional, Denmark
Telephone +45 87 42 88 88
Martin Professional PLC, UK
Telephone (01622) 755442*

Stardraw 2D

Stardraw 2D is a bit of an odd-one-out in this company. Given that it is produced by a lighting company (Starlite, manufacturer of moving lights), advertised in the lighting trade press and has publicity that mentions lighting plots, you'd expect it to be a lighting CAD package. In fact, it isn't: Starlite have instead created a generic CAD package, which happens to come with a set of lighting symbols.

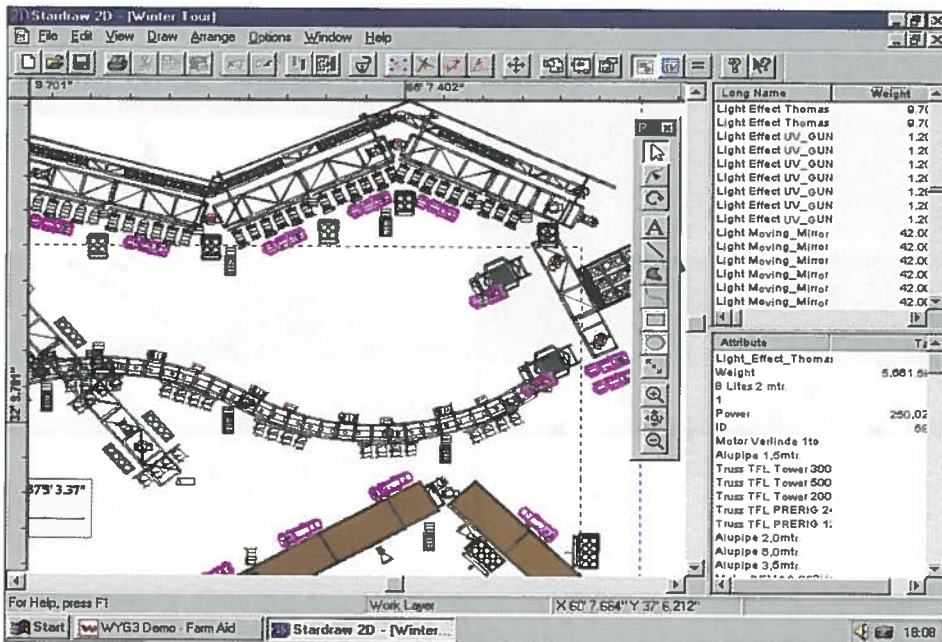
As they admit, they could just as easily advertise it in the widget design trade press. That's why the symbol library also contains loudspeakers and other bits-and-pieces.

In the context of a round-up of lighting programs, this makes it rather hard to judge. There's no denying that it's a good CAD program - it operates quickly and is quite well featured, yet at the same time presents an uncluttered face and is therefore quite easy to get going with. It will read and write DXF and DWG files, allowing it to communicate with other CAD packages. And it can export information to database files, allowing the creation of equipment lists.

But it also demonstrates very clearly why a CAD program doesn't become a lighting program just by giving away a set of symbols. The program has no understanding of what the data means. You can't say 'list all the lights on LX1', for example, unless you've gone to the trouble of separating LX1 onto its own layer. Which isn't something that a lighting designer really wants to think about.

Symbol handling is also a mixture of the good and the bad. The symbol library is quite comprehensive, but contains a real mish-mash of styles - some simple outlines, some detailed technical drawings - that makes drawing a neat plan hard. Some fixtures don't seem to have symbols (or have symbols whose scales are completely wrong, so they appear as tiny dots), but you can still place them on the plan - later leading to a great deal of confusion when they show up in the paperwork. You can draw your own symbols (using the program itself), but attaching information fields to new symbols is fiddly. Symbols placed on lines or bars don't blank out the line beneath it. If you rotate a symbol, all of its text rotates with it, making information hard to read. And of course there's no way of displaying beam sizes.

There is a colour library, but it appears as one enormous list of Rosco and Lee colour (with both colour number and name) that makes picking the one you want quite slow. Version 3 of the program does, however, allow you to edit a light's attributes across multiple selections, the program opening a window listing the common attributes that you can then



Above, Stardraw 2D and, below, Stardraw Professional, from Starlite Systems Technology.

alter as required. Version 2 didn't allow multiple selections to be edited in this way.

Two paperwork displays are available: an 'instrument schedule' type list that can be freely re-arranged to list different light elements (though there seems to be no way of saving different list views, so every time you want a 'list by colour' you have to remake it from scratch), and a total list (confusingly including zero counts of deleted items) really designed to be exported to a database or spreadsheet for further processing rather than read directly.

If you want a program to help you design lighting, then Stardraw 2D is not for you. But if you want a program for bashing out lighting plans, or any other kind of technical drawing (including the theatre plans that some of the other lighting programs can't create themselves), then you should give it a look. Compared to other 'real' CAD programs, it is efficient and quite reasonably priced.

PROS: Uncluttered interface. Quick. Easy to use. Large lighting symbol library. Drag-and-drop makes placing symbols on plan very easy. Unlimited undo/redo.

CONS: Has no real understanding of lighting. Symbol styles inconsistent, and some obvious symbols missing (e.g. no ETC fixtures on the CD-ROM). Poor paperwork options. Tally includes zero-count of deleted items. Zooming in-and-out of a plan sometimes causes symbols to vanish.

*Stardraw is available from . . .
Starlite, UK
Telephone 0171-511 4400*

high quality general purpose CAD program rather than a lighting design assistant; lighting for rendering is based on three generic types of light rather than real-world modelling of theatrical lanterns.

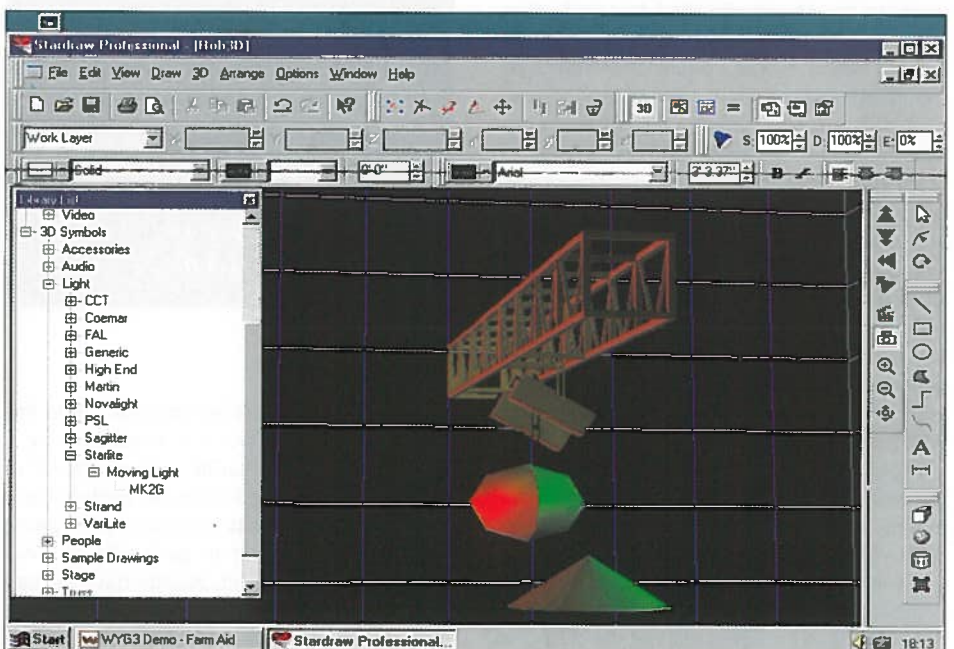
In fact, the program's biggest drawback is that, though it features a common interface throughout, it feels like two different packages bolted together. Open a new file and you're asked if you want it to be '2D, without lighting' or '3D, with lighting'. When you then open the symbol library, there are two versions of every item - a flat, diagrammatic symbol (as with 2D, these of inconsistent styles) and a 3D version. But, unlike MicroLux and MiniCAD, which switch to the 2D or 3D version of a symbol depending on the view you're using, Stardraw Professional makes no connection between them and lets you place either type in either view. In 2D mode, 3D symbols appear as grey boxes. In 3D mode, 2D symbols appear as paper-thin outlines that vanish if you change the background colour to black. In the paperwork views, the two different kinds of symbols are listed separately - you get a '2D Cantata' and a '3D Cantata'. This makes it hard

to create a dual function 2D/3D plan, and difficult to make sense of the equipment lists.

If you concentrate on 3D working, though (2D mode is as per Stardraw 2D), Stardraw Professional has considerable strengths. Its main asset is that it is very, very fast. In most 3D programs you work in a wireframe display until you've roughed out what you're trying to do, then get the program to go and generate a solid version. Stardraw produces solid objects all the time and still feels zippy, even in its animated 'fly-by' mode. It only really starts to slow with hugely complicated drawings with multiple light sources when you turn the level of detail right up - even then the waits aren't unacceptable, though it could do with some way of indicating that it was working while processing these images.

You can light 3D images: spotlights, point and directional sources can be placed in the drawing and coloured as required. Positioning and aiming these light sources is hard work, though (you specify position and direction using X-Y-Z co-ordinates rather than placing them in the drawing). And the program doesn't contain any information about real-world lighting fixtures; you can make fixtures light up by manually adding a 'spotlight' lightsource to them, but this is hard work and not always completely accurate; the program doesn't support oval beams, for example. You can't use the colour library to colour your light sources either. That said, you can use the program to produce some beautiful presentation images, especially when you add bitmapped images to complex shapes and then light them carefully. It doesn't currently offer any ways of producing images including shadows, however; that's why it is so fast, but it limits its ability to render 'theatrical'-style scenes.

The summary is pretty much as for Stardraw 2D. If you want a program to help you design theatrical-style lighting using real-world equipment - checking beams, examining where shadows fall, producing paperwork, this isn't it. But if you want a versatile package that would let you bang out plans and also create well rendered presentations of what a set and lighting rig might look like then Stardraw Professional has a lot to offer. It's just a shame



Stardraw Professional

Stardraw Professional is big brother to Starlite's Stardraw 2D program. In fact, Stardraw Professional and Stardraw 2D v3 are the same program; if you buy the 2D version your key code just doesn't enable the 3D part. The extra £465 (inc VAT) gets you 3D CAD functionality and rendering. Again, like 2D, Professional is a

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that the program won't really let you create the 3D rendered image and the 2D rigging plan and paperwork from the same file - which surely should be the real advantage of this kind of software.

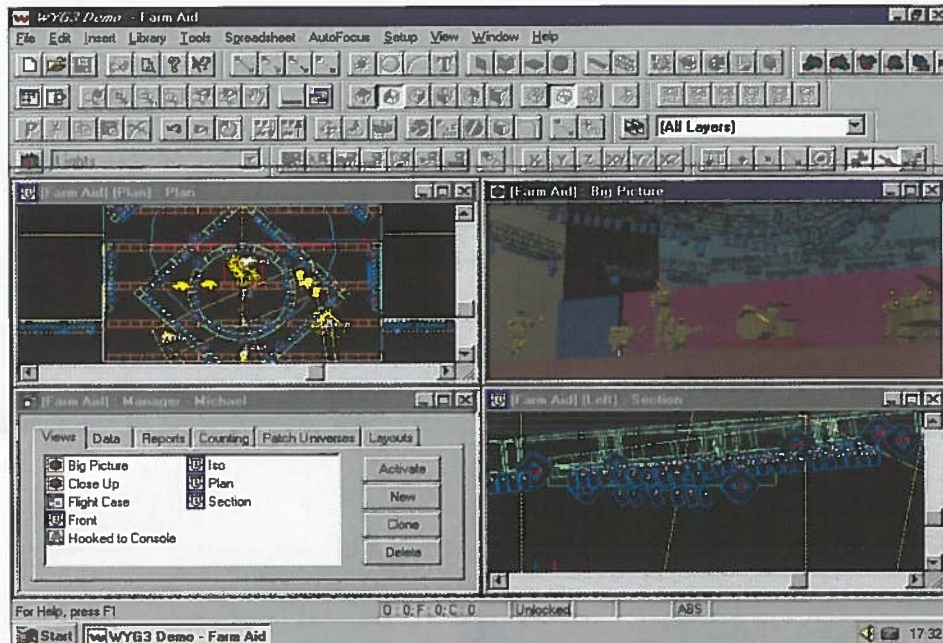
PROS: Very fast 3D engine. Uncluttered interface. Easy creation of complex shapes and images. Large symbol library. Handles a wide range of file types. Unlimited undo/redo. 2D pros as per Stardraw 2D.

CONS: Separation of 2D and 3D functionality, with separate, unlinked 2D and 3D symbols. Can't use real-world fixtures to create lighting. Generic lightsources hard to place and control. Can't render shadows. Poor paperwork options. 2D cons as per Stardraw 2D.

Stardraw is available from . . .
Starlite, UK
Telephone 0171-511 4400

WYSICAD

CAST Lighting sprang to fame some years ago with the launch of the innovative WYSIWYG visualisation program. They now have two new packages extending its functionality. WYSICAD is a full-feature lighting CAD program that can be upgraded to the new WYSIWYG 3, bringing your drawing to life. WYSIPAPER is a brilliant marketing ploy: a paperwork program that is



available for free, providing a neat solution to one of the biggest problems of lighting CAD - how to get the rig information to an electrician who may not own the same software.

Opening WYSICAD for the first time is quite scary: hundreds of tool bar buttons appear, leaving you very little room to work on a 14" monitor! They can be freely re-arranged or turned off, however, with all of the functions still available through menus. Like the old WYSIWYG, WYSICAD offers quick ways of defining standard venue types (pros-arch,

arena, black box) or you can import DXF or DWG plans from other CAD programs. You then have to define rigging positions - frustratingly, there is no way of freely placing lights in the program. These can either be bars or sections of real truss picked from the truss library.

Lights are then picked from the comprehensive fixture library and placed on the rigging positions. This is fine for lots of one kind of light, but slow if you're constantly switching lamp types. A 'flightcase' allows you

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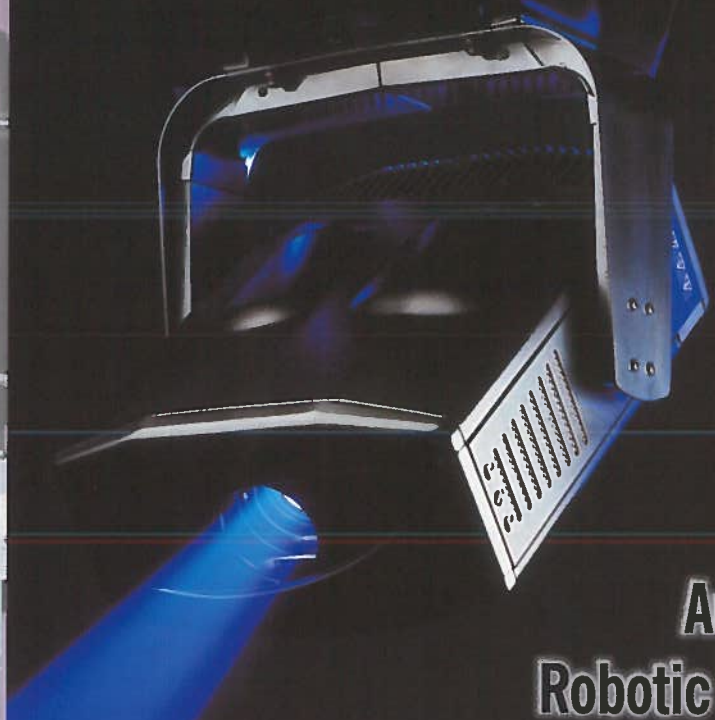
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Issue 3 Solder Side

to collect the lights you need for a particular project together in one place, though this metaphor, used to manage many aspects of a drawing, does become strained at times. It's also a shame that there's no way to quickly change one lamp for another (a 26 degree Source Four for a 19, perhaps), or of creating arrays of lamps.

Once placed, lights can be focused: you can either point a light somewhere (seeing the beam size as you go, though variable angle lamps just show their widest beam) or you can define 'focus points' on stage then point lights at those focus points. What's brilliant is that if you move a focus point, all of the lamp symbols aimed at it re-orientate themselves!

The program is especially good at handling the complications of modern rigs - moving lights, scrollers and other accessories, though some of these - notably gobos and the bulbs in Par cans - can only be set in the paperwork views. Lamps can be numbered and patched one at a time or using the Quickpatch command. They can then be turned on and moving lights moved around - CAST provide a mini-console for those not using the full WYSIWYG version of the program, though this can't record cues and setting it up seems needlessly fiddly. The number of windows that end up scattered around the screen (with different ones for the plan, the rig simulation, the paperwork and so on) can also get a bit intimidating.

WYSICAD offers huge arrays of paperwork options (these also available in WYSIPAPER), all of which are customisable and offer versatile editing facilities. The trouble is, the program is

generally so good that when you find something it won't do (for example, it will count the different types of gobo holders required, but not the different scroller sizes or backplates), it disappoints all the more.

That said, the program comes closer to being a complete lighting environment than any other; even (when using WYSIWYG with certain lighting desks) the lighting CAD 'holy grail' of only having to type everything once. It's not cheap, and its plan drawing may not yet be versatile enough to satisfy those who want the neatest paper plans, but it really does show the future of lighting CAD systems.

PROS: Fast. Easy to use. Good libraries with full support of moving lights. Focus positions. Good beam displays including colour and gobos. Easy for others to view paperwork with WYSIPAPER. Upgrade to WYSIWYG and your rigs can come to life!

CONS: Number of different windows (and tool bars!) can be intimidating. Having to put a light on a rigging position. No colour names, just numbers. No gobo pictures. Built-in console should be more versatile and easier to set up. Text around symbols should be more easily customised. No settings for variable-angle lamps.

WYSICAD is available from . . .
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CAD-RELATED SITES ON THE INTERNET

<http://www.mckernon.com/> - John McKeron's web site. Includes full data about Lightwrite, along with information about the Advantage symbol library and the AutoPlot MiniCAD macros.

<http://www.esta.org/homepages/fieldtemplate/s oft/softcopy.html> - suppliers of traditional lighting stencils and CAD symbol libraries.

<http://www.diehlgraphsoft.com/> - the web site of the manufacturers of MiniCAD.

<http://www.engsw.com/PowerCADD/Symbols/ Symbols.html> - the manufacturers of PowerCAD. This page shows examples featuring the Advantage symbols.

<http://members.aol.com/wsidesys> - site of Eric Cornwell, author of Virtual Light Lab and other programs that, though not strictly lighting CAD packages, are useful lighting tools.

<http://kafka.uvic.ca/~bkeith/> - links to various lighting CAD packages.

http://www.total.net/~hughc/H_Links.htm - links to various lighting CAD packages.

<http://www.home.earthlink.net/~adschaefer/ma cstage.html> - links to various theatre-related Macintosh packages.

<http://www.modelbox.co.uk> - early player in the lighting CAD field, and holders of one of the most comprehensive collections of CAD theatre drawings in the world.

<http://www.abtt.org.uk/forum/autocad> - the ABTT's site, with discussions about their new CAD initiative.

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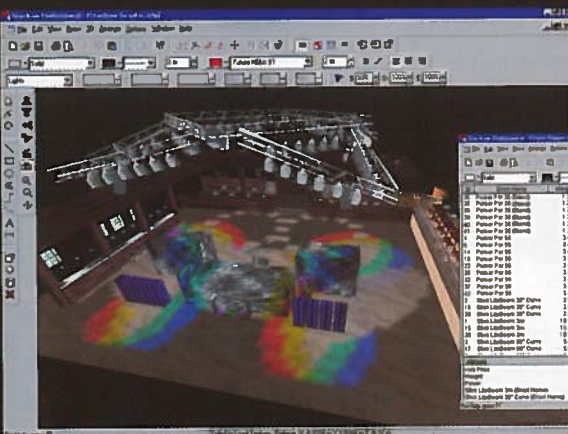


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Ascetic in the Stalls . . .

Ian Herbert

Things are looking up for LDs - the setless play is on its way. I've been watching a number of productions lately in which the lighting and sound are the stars - or at least an essential part - of the staging.

It started with Mitch Sebastian's *Pippin* at the Bridewell. Previous Bridewell musicals have featured clever and economical designs, often by Bridget Kimak, which made good use of the theatre's unusual space. Such set as there was for *Pippin* - no offence to designer Timothy Meaker - took advantage again of the built-in swimming-pool substage to improvise some handy traps, but the big money went into Chris Ellis's saturation lighting rig and Fergus O'Hare's sound, with the result that what was originally a happy hippie show converted into a techno-thrash extravaganza. It was very loud, very grungy and very effective. There was also an emphasis on costume, with Paul Clarke laying on some splendidly sexy outfits, but since they were so skimpy I reckon he managed his part of the deal on the usual Fringe minimum outlay. Every actor-dancer was mic'd, and the levels were big enough for the Albert Hall, where the lighting wouldn't have been out of place either.

You can't really count John Gardyne's production of *The Rink* at the Orange Tree as part of this setless phenomenon, since its goes without saying that an in-the-round production isn't going to go mad on scenery. I drag it in more to contrast its complete absence of mic'ing and correspondingly discreet three-piece band. *Pippin*'s five-piece sounded like a full stage combo, without ever dominating the actors.

In Tim Supple's *Twelfth Night*, the band is the main visual feature, since Melly Still's decor is for most of the evening a plain set of steps to the rear wall of the Young Vic. In the absence of any actors dressing the stage, the eye naturally goes to the collection of unorthodox instruments that face it. Unfortunately, the eye also inclines that way fairly often when there are actors on stage.

Adrian Lee and his musicians scrape, bang and blow their way through the play in a fairly continuous soundtrack on zarb, darabuka, bendir, kemence, sarangi, 'ud, gu zheng, sitar and the like - more like an advanced scrabble board than an orchestra. The most distracting instrument of all is the glass harmonica, simply a set of wine glasses containing different levels of water which produce notes when their rim is stroked, and which need constant tuning in the form of replenishment from a big Pyrex jug. Pity the poor cast. In such circumstances, the lighting designer - either Paul Anderson or Paule Constable - has the opportunity to star, but since a splashy lighting plot would be highly unsuitable for what is a mellow, low-key production, they very sportingly concentrate on the subtlest of day-night, morning-evening states in a triumph of understatement. Pity they can't black out the band.

At the Bonn Biennale, a fascinating showcase of new work from all over Europe (28 different shows in 11 days) whose first few performances I was lucky enough to take in last month, this trend for understatement continued, with examples in the best and the worst I encountered. You could add in Corcadorca's *Disco Pigs*, which took a 24-hour break from the Arts to come over, for that too relies only on a club mix of light and sound to support its two hyperactive teenagers in their decor-free night raid on 'Pork City'. As it happens, the pieces I draw to your attention, one with a strong recommendation, the other with a health warning, were both the work of French directors. To start with the pits.

Jean Michel Bruyère worked for a long time with a bunch of street kids from Senegal to make *Poèmes à l'Infect* or *Odes to Filth*. He recorded them, filmed them, wrote down their poems. Now they're on tour with this show, which starts with a short film of their raw, arresting prose and poetry read by an actress to the accompaniment of arty still shots of the boys. Then you progress into a theatre space, where the first effect to hit you is a set of powerful floods shone directly into your eyes. If you're going to look at the kids, it implies,

let's give them a good look at you first. When you get your sight back you find them sitting in the front row of a set of raked tiering which echoes your own seating in front of them. Upstage left, on a kind of treadmill, an elderly African starts a long, fruitless walk, miming to a rather beautiful, if monotonous, song.

You've been led to expect, both by the video and by the show's title, that you'll hear more of the boys' creative efforts, but no. They just look at you. Just occasionally, one of them may come up to the on-stage stand-mic and shout or scream into it for a few seconds. At one point an audience member is selected, led out and stood on a pedestal in a spotlight, another human exhibit.

It's left to the soundtrack and the lighting person, again, to make something of this arid event. The press shot in the programme suggests that in the Paris première there was rather more of an attempt at invention here, but in Bonn (perhaps because of the short fit-up time that festivals offer) there wasn't much variation from the banks of blue floods over the stage and the white side-stage spot clusters which occasionally supplemented them.

You can possibly see all this as a work of art, or a profound social statement, as the honest Bonn selectors certainly did. Most of the audience, however, came away feeling two kinds of exploitation. They felt they had been exploited themselves, and they felt that the boys, too, were being exploited. The strange discovery was that it is the boys themselves who wanted the tour set up, and who establish what happens on any evening. The tempo and length of their 'performance' is determined by them as they go along. All of which increases my respect for the board operator who presumably has to improvise their plot, but further decreases my respect for a director who can see merit in what is ultimately just a bunch of surly kids being surly, for whatever charitably-inspired reason.

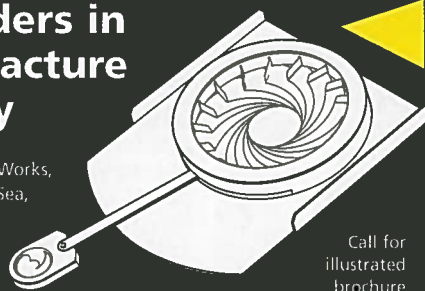
Much more to enjoy in another bare-stage production, *Pereira Prétend* (According to *Pereira*), Didier Bézace's ravishing adaptation of a novel by the Italian Antonio Tabucchi about a Portuguese editor drawn involuntarily, but inexorably, into the anti-Salazar resistance movement. It's told, Shared Experience style, by three actors who move about a wooden lozenge of a stage. They are helped immeasurably by the precision lighting of Dominique Fortin and the equally precise sound of Laurent Caillon. The lightest of sound scores - a well-placed bird cry, an occasional wave breaking - gives all the context the actors need, and the lighting takes us imperceptibly from smoky office to dusty square to sunny beach. Now that's what I call art - or is it craft? Let's argue about that in another column.

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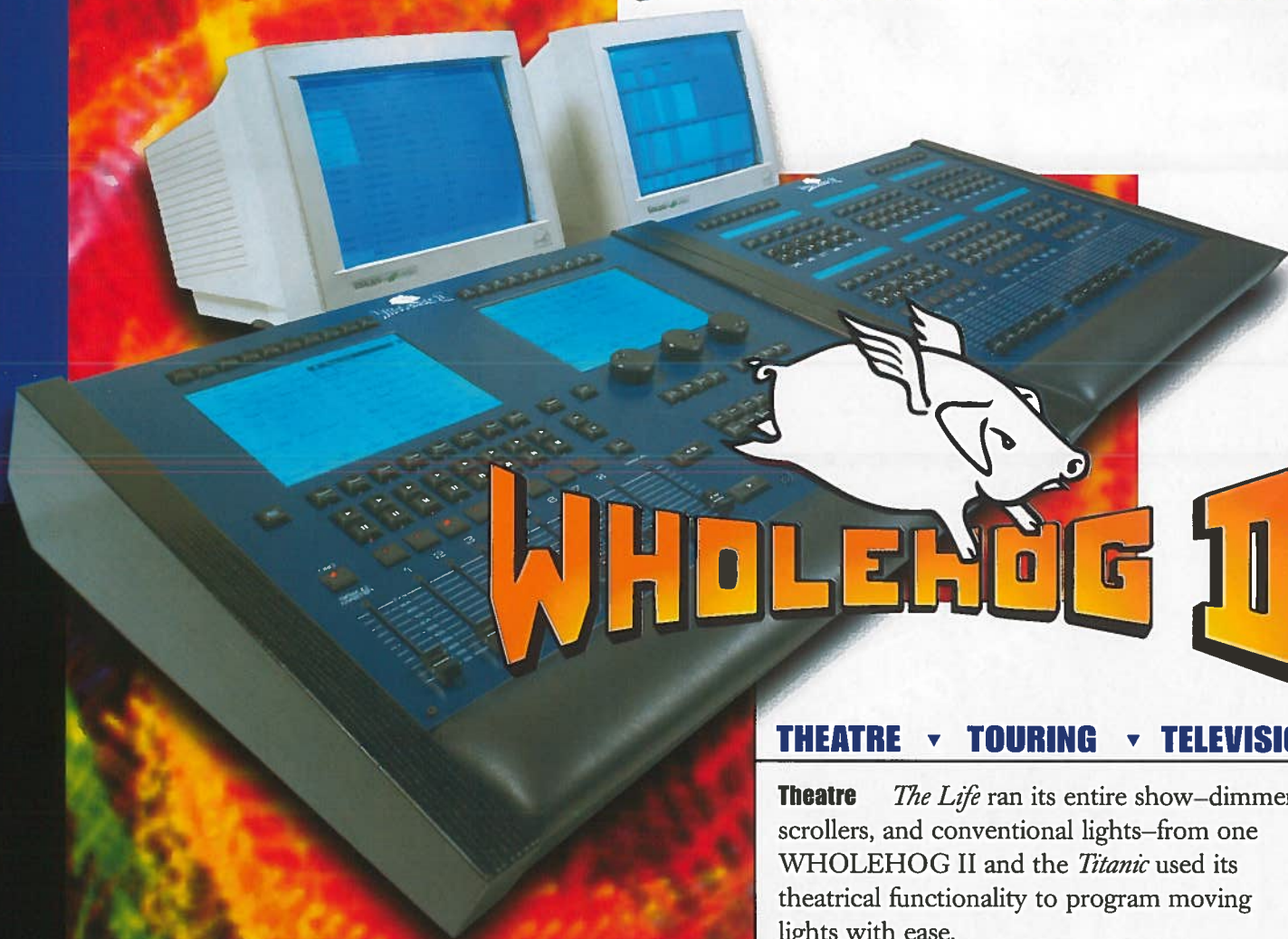
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HEY MR PRODUCER!

The stars turned out in force at the Lyceum Theatre recently to celebrate Cameron Mackintosh's first 30 years as a theatre producer. Rob Halliday was on the crew



In praise of Mr Producer: above, musical numbers from *Five Guys Named Moe* (left) and *Oliver!*.

In this increasingly entertainment-led world, the terms 'star-studded' and 'showbusiness spectacular' are used with ever-greater regularity, but - applied to everything from product launches to shop openings - are increasingly losing their meaning. On the evenings of Sunday 7th and Monday 8th June, those terms could truly have been applied to the proceedings at the Lyceum Theatre in London - witness the fact that on those two days, one dressing room contained the combined talents of Millicent Martin, Julia McKenzie, Maria Friedman, Elaine Paige, Bernadette Peters, Judi Dench and Julie Andrews. The event that drew these and many, many other leading figures from the world of musical theatre together - and achieved the possibly unique triumph of getting Stephen Sondheim and Andrew Lloyd Webber on stage at the same time? *Hey Mr Producer!*, a charity concert celebrating Cameron Mackintosh's first 30 years as a theatre producer. Given that those 30 years have seen him involved in the creation of many of the biggest hits in musical theatre history, the show's content was always going to match its stellar cast.

The title for the concert, performed to Her Majesty the Queen and HRH The Duke of Edinburgh and raising money for the Royal National Institute for the Blind and the Combined Theatrical Charities, came from a songs-from-the-shows album released some years ago. The concert expanded on this format: some shows would just be represented by a single song or a single dance number, but for the biggest - *My Fair Lady*, *Side by Side by Sondheim*, *Cats*, *Phantom of the Opera*, *Miss Saigon* and *Les Miserables*, the brief was to create miniature versions of those shows on the Lyceum's stage.

To house the concert, Tim Goodchild designed a deep blue circular thrust stage with the orchestra placed upstage centre. Above them was a large, curved projection screen,

whilst further projection screens and gauzes were flown midstage and downstage. Tracks downstage allowed two grand pianos to truck on and off; these were flown in the wings when not required. The final touch was a tracking gold proscenium arch complete with red drapes downstage: at the start and end of the show this was closed right in to a tiny stage containing the magic piano from *Salad Days* - the show that sparked Mackintosh's interest in musicals. On cue, it magically opened up to reveal the real stage beyond - the magic in this case brought about by precise cueing and timing of the crew members controlling the manually-operated tracks and flying!

Faced with a tight schedule and the need to satisfy the demands of the 18 or so directors and choreographers responsible for the production's various segments, production manager Nic Harris called upon some regular allies to get the show built and fitted up. Scenery company Scena constructed the basic set, which was supplemented by two towers supporting a flown bridge built by Delstar and actually borrowed from the forthcoming *Oliver!* tour. The set was installed by a carpentry crew led by Glyn Cook and Micky Murray and an Unusual Rigging team run by Simon Stone - at times, the fit-up team looked as much like a reunion of musical crews as the cast would later look like a reunion of musical performers! The fit-up made full use of the Lyceum's stage, revealed - free from the clutter and on-stage seating of *Jesus Christ Superstar* - to be spacious, clear of obstructions and with lots of storage space. Ideal, in fact, for the large-scale musicals that seem likely to be this venue's main tenant.

The set presented a fairly neutral playing area, able to cope with the wide range of shows that would be played out upon it. Defining the look of these shows more precisely fell to a wide range of props and flown elements either based on those in, or

actually borrowed from, the real shows, and the lighting. For this, Mackintosh turned to David Hersey - perhaps an unsurprising choice given his involvement with the 'real' versions of many of the productions featured in the show. Thanks to the good graces of White Light and The Moving Light Company, Hersey was able to specify a large rig that combined three elements. A base rig of traditional lighting equipment (Source Four profiles, Par cans, 1K and HMI fresnels, Rainbow scrollers, four-cell groundrows, Cadenza effects projectors with VSMX cloud disks), all run from the Lyceum's Strand LD90 dimmers, provided the basic lighting and some of the standard effects associated with the shows. Six followspots - four Robert Juliat Korrigans front-of-house and two Panis on the on-stage towers (these rigged on tracks, since they needed to be moved out of the way every time the bridge flew past) provided celebrity illumination.

The automated lighting rig then filled in the gaps and allowed Hersey and associate Jenny Kagan to react quickly to every demand the show threw at them. This rig featured 18 High End Studio Colors, two Martin MAC 600 washlights, four Amptown Washlights, 12 DHA Digital Light Curtains (six of them the pitching version), five Cyberlights and six Trackspots from High End Systems, and five PAL 1200s and 20 MAC 500s, also from Martin. The Trackspots were mounted in the front of the stage, taking on the appearance of old-fashioned footlights while being much more versatile. Eight of the MAC 500s were rigged on a flown ring (also containing four DataFlash strobes, while a further 12 were rigged front-of-house) that was used to evoke both the flying pinspot ring from *Cats* and the falling chandelier from *Phantom*. The rig was completed by two prototype DHA Mk II Digital Beamlights on front-of-house booms, which performed well. The installation was handled by production electricians Alistair Grant, Claire

Jeffrey and Jeremy Lloyd along with the Lyceum's crew; it was controlled from two Strand 550 consoles, the conventional desk run by Ben Davies and the moving light desk by yours truly.

Hersey was also handed responsibility for filling the various projection screens, using show logos, representative images from the shows and, in some cases, full-scale projections of a show's scenery - the trees and gobos of *Martin Guerre*, the workhouse wall of *Oliver!*, the *Carousel* schoolhouse and the colourful painted backcloth of *Five Guys Named Moe*. Hersey enlisted help from a number of sources. The four large-format Pani projectors - a 6K HMI back-projecting to the mid-stage gauze, two 4K HMIs, each filling half of the curved rear screen, and a 2K on the circle-front filling the front gauze, all with AMD slide changers - were supplied by Production Arts Europe; projection technician Andy Murrell controlled them with Production Arts' own control software. To produce the slides for these projectors - a complex task given the careful alignment and multi-plane distortion required, especially for the pairs of slides forming the images on the curved screen - Wyatt Enever was drafted in from DHA, carrying out the work with his usual skill and to tight deadlines. Smaller show logos were projected from pairs of boosted Carousels supplied by Labyrinth.

The result, as the projection and lighting were tied together over the two week fit-up and rehearsal period and the lighting was then tweaked to look its best both to the live audience and the cameras filming the event for future video release, was judged by Hersey to be a successful balance of 'concert' style spectacle and recreations of the real shows. The set-ups, which combined the large-scale projected set images with the real lighting, were particular achievements.

Though the sheer number of numbers, constantly rehearsed out of order, made keeping track of the lighting during the rehearsal period somewhat difficult, it made the lives of the stage management team (led by the unflappable Sam Hunter and Mark Shayle) hard and the sound team completely unenviable. They had to deal with more than 120 radio microphones, each dedicated to a particular performer but moving between 54 transmitters on a cast including a chorus of 60,

around 80 children, 24 featured artists, 49 principals - and a pipe band. That the principal artists came in from all over the world and were all available for different amounts of rehearsal still added to the chaos.

The team bravely making order from this chaos was led by sound designer Andrew Bruce of Autograph Sound Recording, who supplied the complete sound rig, and included sound-co-ordinator Nick Lidster, production sound engineer John Owens, operators Borneo Brown and Paul Stannering, and - the front-line to the stars! - the radio mic team of Brian Beasley, Alison Dale, Yvonne Gilbert, Scott George and Orna Coran. The concert was also something of an anniversary event for Autograph, who are celebrating their 25th birthday this year, but it stretched the already-busy company to the full. They therefore persuaded Sennheiser to help out by lending extra radio mic systems to the show.

The rig was based around two Cadac desks: a 66 channel A-type substage producing an eight-channel band mix that was fed up to the main 72-channel E-type front-of-house. The sound was fed out using a combination of Meyer MSL-2s, UPA-2s and UPMs, with the whole system set-up using the Meyer SIM system; this combined with the Lyceum's natural acoustic to give a sound that Bruce described himself as quite proud of. A five-receiver Garwood in-ear monitoring system was also available for artists who required it. Effects were fed in from an Akai DR8, with vocals arriving from the 54 ways of Sennheiser

SK50 radio transmitters and receivers. Attached to the radio transmitters were - according to both Andrew Bruce and Nick Lidster - just about every single microphone that could be found lying around Autograph's stores, including Sennheiser and Sanken head-mics, and both Autograph-produced booms fitted with Sennheiser mics, and one B&K boom mic.

Bruce and his team also had to deal with sending feeds to the Manor Mobile, parked at the rear of the theatre: 140 ways of BSS active splitters took care of the electrical connection, but the sound team also had to make sure that the recording team were kept informed of who was wearing which transmitter and when, adding to their paperwork nightmare! That everyone got on stage with the right mic and transmitter at the right time was one achievement, but that they could all be clearly heard (and accurately recorded) on a minimum of rehearsal, with no glitches or mic faults, showed that Autograph are truly masters of their craft - 25 years of practice have certainly paid off!

Though the pressure continued to build on all departments throughout the rehearsal period, especially (as always!) when time started running out at the end, the event was unquestionably a hit. The technical side went without too many hitches, forming a calm base for the superb array of performers (including the on-stage singing debut of one C Mackintosh himself!) to work from; all gave superb, unforgettable performances spurred on, no-doubt, by the friendly competition of their peers. The biggest problem, in fact, became getting that many people onto the stage at one time for the curtain call!

A final nice touch to this event came tucked away in the show's programme: a big thankyou from Cameron to Messrs Barnett, Beech, Bullimore, Eaton, Everett, Farrah, Howard, Jacobi, Jetten, Kemp, Lucking, Murphy, Sadler, Simpson, Walker and Victor Mara Ltd for "their invaluable technical expertise in creating his productions over the years". Perhaps not surprising from a man who is not only the world's most successful producer but a former stage manager into the bargain. But a touching comment on his respect for those who generally remain hidden behind the scenes nonetheless.



Familiar imagery from an old favourite - *Les Misérables*.



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GARDEN PARTY

The Garden in Gothenburg features the first ever club installation of BSS Audio's revolutionary new Soundweb system. Lee Baldock went to see it in action

Trädgården - or 'The Garden' - in Sweden's second city, Gothenburg, has long been known to the city's inhabitants as the site of a famous restaurant. Unfortunately, the last one burned down some years ago, but it has now been succeeded by an odd-looking timber construction (nicknamed, 'the lumber yard' owing to a Swedish pun on 'Trädgården') which not only replaces the famous restaurant, but also brings a new nightclub to the site. The exterior looks odd at present because of its timber-slatted design: it is only when you notice the tiny new climbing plants dotted around its base that it makes sense - in the years to come, this temporary-looking climbing frame will look more like the Hanging Gardens of Babylon. The interior, which alongside the disco includes the re-born restaurant, two bars and a conference room, is in that spare, stylish mode of Scandinavian design: clean wood surfaces, stone-paved flooring, glass walls and metallic accents, with everywhere those eye-catching design details that make normally honest members of society want to pinch the ashtrays. Outside, to the rear of the building, is a large, open beer garden.

Apart from the structure itself, the venue is notable for several reasons. For example, the spend on lighting is roughly double the norm for Sweden, and the discotheque features the first permanent Tarm laser installation in the country. But the most notable aspect of the venue is that it is the first nightclub anywhere in the world to employ some revolutionary new audio technology from BSS Audio.

SOUNDWEB

Based in Hertfordshire, England, BSS are well known for their pro audio products: the Varicurve, for example, has become a common feature of processing racks the world over. But Soundweb, given its first introduction to the industry at the PLASA show last year, is a new concept which essentially takes the place of extensive amounts of processing hardware and cabling. It is a flexible, fully-programmable DSP tool which centres around the 1U high 9088 DSP box and the Soundweb Designer software, which runs on Windows 95 and NT. The system represents a powerful set of audio processing units which can be configured and cabled on the computer screen. By simply opening up a diagrammatic representation of a 9088 box, and dragging and dropping elements from an extensive palette of DSP modules, the user can program the signal paths and create a block diagram of the required system configuration. Once a system is designed, it can be named and saved on a menu: then, if need be, a different configuration for a second application can also



Above, the timber-slatted exterior of The Garden and, below, sound designer for the venue, Anders Hansson (left) with Rik Kirby of BSS Audio in the amp room backstage.



be designed and saved, while a customised control panel can switch between settings in just a few seconds. Soundweb units can contain mic pre-amplifiers, so virtually any system can be configured, right through from mic to power amp. Processing elements are shown on-screen as boxes with input and output connection points, which are simply connected up by clicking with the mouse.

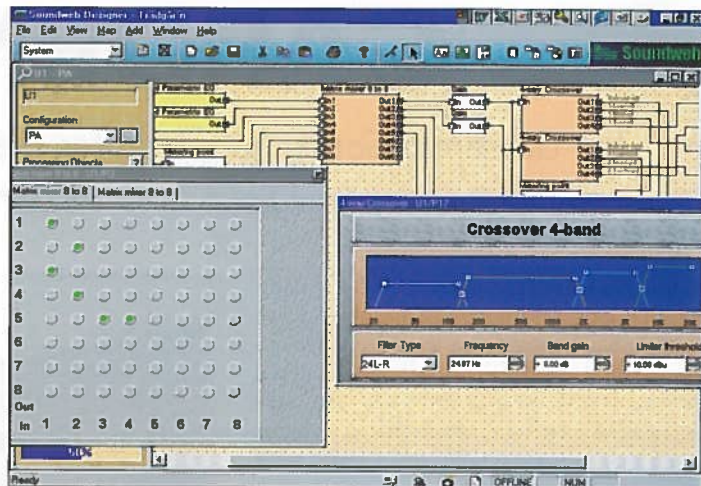
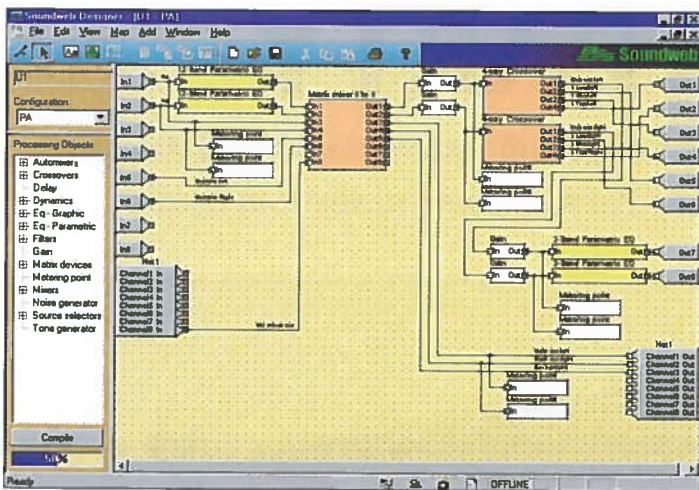
The capacity of a single 9088 unit will vary according to the complexity of the circuitry, but a medium-sized room system can be configured, using anything up to 100% of the total processing capacity of the unit. The percentage of processing power being utilised by a system design is shown on-screen as the system is drawn. What can 100% processing power provide? According to BSS, a single unit can cope with (give or take) a 4-way stereo crossover with limiters, delays and 12 bands of parametric EQ on each output and a stereo

compressor on the output. What's more, up to 12 such system configurations can be stored per unit, and systems can be selected and controlled via user-defined custom interface panels on the computer screen, AMX touch-screen, or connected hardware.

Each unit has eight analogue inputs and eight analogue outputs (with 24-bit A/D and 20-bit D/A converters), along with a control port for preferred hardware options, and the digital networking port, which is the real strength of the system, and the biggest single challenge for BSS in the Soundweb's development process. The networking facility makes it possible for

multiple units to be combined to cope with larger and larger systems. This is facilitated by a proprietary BSS-designed chip which allows the transmission of eight channels of bi-directional 48kHz digital audio. Units are networked via Category 5 cable, the common or garden computer cable, which is a cheap, easily-installed alternative to long runs of multicore. Runs of up to 300m (1000ft) are possible between units, and because transmission is digital, there is no signal degradation.

It is this networking capability that makes the Soundweb such an exciting tool for virtually any kind of audio installation. The almost limitless flexibility of the system means it can be applied to virtually any type or size of venue, with any amount of zones, facilities or flexible, multi-purpose spaces. Each configuration can be implemented quickly and easily, and in-built security features allow



Top, two screen-shots from Soundweb, showing examples of Anders Hansson's configurations for The Garden. The crossover settings and matrix mixer windows are opened by double-clicking on the relevant block diagram.

settings and control interfaces to be password-protected. Another interesting aspect from the consultant's point of view is that upgrading or troubleshooting of an installed system can be conducted on-line via modem.

Anders Hansson of Gothenburg-based Diroco was responsible for the audio installation at The Garden. He explained the brief: "The area we had to cover was about 1000sq.m inside and almost the same area outside. The client wanted the system to contain four separate main functions: a PA for live performance, a disco, a conference and a zoned background system with four different CD music sources."

Which made a total of seven different programmes. Hansson settled on a complete Turbosound loud-speaker system, including six Floodlight 760H skeletal cabs and four 718i sub-woofers for the live and disco system, with a Turbo' Highlight/Impact combination for the background and conference systems, including 20 Impact 50 cabinets mounted across the back of the building, covering the outside seating area. Stage monitoring is provided by eight Turbosound TFM-300 cabinets and amplification is all from C Audio's RA and SRX series units - 23 units in total. Incidentally, all of the sound equipment for the project was supplied by pro audio distribution company Allba, who distribute (among others) BSS, C Audio and Turbosound in Sweden.

Of the main system, Hansson explained: "While we use the same speakers for PA and disco, the settings for crossovers and equalisers are completely different. We were not satisfied with the sub system for live performance, so we added another two subwoofers under the stage to enhance the lower bass up to 70Hz. The other two subs are either side of these, and take the upper bass from 70Hz to 160Hz. This gave us a much tighter, more detailed bass. For the disco mode, we just kept the normal settings, which are pre-stored in the Soundweb system and are activated by the function selector on the main control. Without the Soundweb system, that could have been a problem. Now, to switch between configurations takes about one second."

When I visited, the Garden had been open for only two weeks, and the system was still being fine-tuned. The nice thing about Hansson's job here is that he can make a list of the users' problems or preferences, things that

need tweaking, or would would make the system more flexible. Then, he can pop in one morning, open up his password-protected configurations, and update them. He doesn't have to specify more processing equipment, or install more cables. In fact, as I've already mentioned, if he has access to the main computer via modem, he doesn't even have to go there in the first place.

The customised main programme selector is at the mix position, with switches for each function: background, PA, disco and conference. Push-buttons select each of the four pre-set music programmes, and the choice is confirmed by an LED. Whatever the choice, the system will automatically set sound level, programme and delay times for the zone. From here, the background music can be fed into the main PA, with level set from a volume control, also on the main panel. For live music or disco, the background system is configured to act as a delay system for the main PA. The five different zones within the building are each provided with their own programme and volume control. These are on simple, brass wall panels behind the bars and serving areas, with volume control and multipole switch for source selection, making it easy for the staff to control their particular zone.

LIGHTING

The discotheque space is basically a tapered oblong, narrowing towards the stage area, with a bar on the left hand side. Along the right hand side, a suspended gantry slopes down from the upstairs bar, which is situated above and behind the control position at the rear of the room. The DJ booth is set back to the right of the stage. When it came to the lighting, the brief required a similarly flexible rig, to provide the dual main functions of live performance and discotheque lighting, while also being designed with car promotions, fashion shows, conferences and a range of other events in mind. The designer for the project was Jörgen Ström, another partner in Diroco. The lighting rig consists of a bar along the front of stage, and two concentric truss circles out over the dance floor. In addition to this, positioned on the ceiling away from the circular truss are the five Martin PAL 1200s, which are used for both stage work and for projection effects on the sidewalls of the venue. The front bar holds the MAC 600s, primarily for stage washes, along

with a number of RoboScans and some generic Strand fixtures and the inevitable Par cans.

The inner truss (5m diameter) carries 12 Martin 518 scanners and 12 Robocolor Pro 400s, while the outer truss (7m diameter) carries three Dataflash strobes and six MAC 500s, as well as Punisher and Destroyer effects and Robocolor Pro 400s. The dynamic lighting elements on the truss can also be used for extra on-stage effects. The inner circle of truss is flown from three chain hoists, allowing it to be lowered and tilted for the lighting party-piece. Altogether, the lighting rig includes 39 Martin scanners of various persuasions and 12 Martin moving heads, all of which were supplied by Martin Professional Sweden.

Atmospheric effects are provided by two Magnum Pro 2000 smoke machines from Martin Professional, and two Jem Hydrosonic 2000s. The Magnums are situated above the ceiling, and powerful fans blow the smoke down through ventilation pipes, rapidly filling the venue. To clear the smoke, and partly as a fire-safety measure, a powerful extractor fan system can literally suck the air out of the venue in a matter of seconds. The need for this very rapid input and removal of atmospheric effects comes in part from the requirements of the Tarm laser system, which naturally needs a clear atmosphere for the laser animation sequences and a smokey atmosphere to optimise the effect of the beamsequences.

The £140,000 (or thereabouts) Tarm optical bench sits on a large, protruding shelf, high on the rear wall of the stage, with additional optical heads positioned further out along the wall. It was an unfortunate glitch in the venue's design process that the optical bench wasn't recessed into the wall, as the current wooden bench with its solid struts sticks out like a sore thumb among the clean surfaces around the rest of the venue. And it obviously hasn't gone unnoticed. When we were told we would see the laser bench later in the evening, some wit muttered 'You can't miss it,' raising laughs all round. This point aside, the 6.5W system certainly seemed to impress the crowd.

The Tarm system was installed by the company's Scandinavian distributor Technisound, a supplier and installer of a wide range of lighting and sound equipment, based in Malmö. The Vario II laser system from Tarm utilises a new Purelight Star III white-light lasertube made by Coherent, and uses a crystal



The Martin Professional-based lighting rig in action inside the Garden discotheque.

modulator which Technisound claim can control 16.7 billion colours per second (a case of overkill, perhaps). The graphic projections are supplied by a Cambridge scanner unit. For the laser projection effects, a new type of fine gauze screen is lowered from the ceiling above the stage, providing a sharp, clear medium for the rear-projected laser animations. There are eight pre-programmed shows from Tarm's library running at the Garden at present, one of which, aptly named 'The Garden', has won a first prize at the ILDA Awards.

All in all, this is a venue with a lot going for it, and it promises to be very successful. It once again features its famous restaurant, as well as various other amenities, and boasts a technical installation to knock its rivals into a cocked hat. The lighting and laser systems are bigger and bolder than anything else in the area, but the most notable part of the installation will, to its credit, never even be noticed by the punters. What's more, the place benefits from a long history of being known as a cool place to go: how many brand new venues can say that?

Soundweb in the UK

Soundweb has made its first UK appearance at Luminar Leisure's new Chicago Rock Café in Windsor. The system is divided into three zones - restaurant peripheral background, bar with close proximity cabinets and a stereo bi-amped dance floor system with short-medium throw enclosures.

The system is pre-set to automatically switch on in the morning, and then has further presets via the control port, which switch throughout the trading period: one for daytime, one for evening and a third which reconfigures the whole system, allowing direct injection for live acts. While the Soundweb can be set with the PC and left, the use of the Soundweb 9010 Remote Controller gives the added advantage of real-time control capabilities for the user.

Nick Searle of Lynx Lighting specified and installed the system along with Jerry Denning of Mach Systems. The dancefloor system features four flown Mach 128 mid-high enclosures with two Lynx 12" bass units. The lower bar has eight Mach M68 and six Mach M62 nearfield monitors, with a Lynx 12" bass unit, while the restaurant features another eight M62 units. Soundweb will now be specified as standard in all Chicago Rock Cafés...



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Second Take . . . *John Watt's view from beside the camera*

So, it's Wimbledon again and I seem to have been forgiven for last year's comments enough to be invited back, which shows a generosity of spirit unshared by some I've mentioned in the past. Actually, even if I was in full flow on some hobby-horse or other, it would be unlikely to phase such a gloriously old-fashioned 'establishment' establishment. Perfection isn't part of my vocabulary, but it does all run rather like clockwork: if only they could stop it from raining.

As it is, I get quite a kick out of being part of such a high-profile event, and although even my best friends wouldn't describe me as an avid sports fan, tennis has its compensations. You see, it's played by both men and women who, strangely, seem to benefit from all that running about. It's exhausting to watch - nearly as tiring as lighting the interviews - I get all the exercise I need running up hospital steps visiting friends who have had coronaries from too much jogging.

The women especially are well worth watching: poetry in motion, they usually manage to distract me enough to make me forget about fiddling about yet again with the set-up in our little studio. If there are any nuggets of lighting lore to be found in this piece it is that there comes a time when you should stop fiddling, or it will never get better, as Mum used to say. Come to think of it, the sort of shows I do are pretty equally divided between those where the boredom factor is so high you fiddle too much, and those where the terror factor is so high, you don't get time to fiddle at all.

To return to a subject already aired, thanks to the STLD (Society of Television Lighting Directors), I visited the set of *The Big Ticket* a couple of weeks back. Thankfully, I had only made one derogatory comment about it when I mentioned it a month or so ago, and therefore I didn't have to be smuggled in under a blanket on this particular occasion. Lighting director Martin Kisner showed us around a very impressive set up (see L+SI April 98) and I felt, not for the first time, pangs of jealousy. Unfortunately, not too many of my fellow lighting designers turned up to look and learn, and this week's meeting at Wimbledon was even more poorly attended.

The STLD is known for running interesting and informative meetings, laced with a little good food and wine, so why don't more people turn up to them like they used to? I know that it's got something to do with the fragmentation and 'freelanceisation' of the industry, but I'm not sure what. Now that we are not part of 'in-house' teams, there must be more need to share in the knowledge and camaraderie of our colleagues, not less. Surely it cannot be put down entirely to guarding one's secrets and techniques? It's not rocket science - in fact it's not much science at all. The

'special factor' lies in each of our personalities and the way we interpret the problems and these remain pretty individual - if any of you want to know how to be insufferable and rub people up the wrong way, I'll fill you in anytime.

It may be money of course: I know 90% of the jobs are done by 10% of the lighting directors (figures supplied by WORMS - Watty's Official Research Measurement Statistics. Note: these worms can be turned in any direction), but both meetings were in London. Anyhow, it's time you all turned up wherever we thinkers meet - divided we fall you know, and there are a lot of philistines out there when it comes to lighting.

Have you stayed in a half-decent Hotel lately? Maybe L+SI could keep a register - a quarter page should do it, providing they don't use a small typeface. I did a job in Birmingham a while back and it seemed a sensible idea to ask the Beeb for recommendations. Old ham that I am, I was pleased I had done so, as it provided me with an excuse to use one of those lines usually reserved for second-rate comedy sketches. I was given the key to my room but was soon back at reception: "I have a complaint about my room," I said. "What's up?" said the unemployed fish gutter masquerading as a receptionist. "It's the window," I said. "What's up with your window?" - "I haven't got one," I replied. It only had a skylight, in fact, and although I wasn't likely to see the room in daylight, there are limits. It was also damp: it didn't have mice, just trout (Les Dawson, 1975).

Beware the Wembley Hilton (a contradiction in terms), during the Horse of the Year Show week (some hire companies' receptionists compete) as young bloods up from the country, high on equine embrocation, trigger the fire alarms at four in the morning. It takes half an hour to file down those concrete stairs and two hours to get back in your room if you didn't remember to pick up your key card. What's worse, the Fountain canteen round the corner

doesn't open till eight. Also beware the hotel that the local broadcaster uses for their morning talk-show guests.

These shows like to be controversial, and whilst it's all right in professional mode to pass the time of day with these types (you can always escape to the control room), dinner with a cross-dresser can be unnerving, especially if you only discover it after you've decided you're in with a chance and have moved way above the house red. Just as bad are the sad cases who haven't had a proper job since the Coronation and have severe back problems (can't get up in the mornings). I know the feeling!

Wherever you book you are increasingly likely to get one of those modern answering systems where the company have saved a telephonist's wages by expecting you, the customer, to do all the work. What's worse, it's spreading to hire companies too. You know the sort of thing, where you press 'one' for this 'two' for that and so on. I've been wondering if I could devise a system tailored to the lighting designer's needs.

'Hello, you've reached John Watt Lighting. This is an automatic answering system and you are being held in a very long queue: to stop you thinking about the fact that it's costing 60 pence a minute, we will play you *Greensleeves* on a very cheap Stylophone. As all our lighting consultants are busy (there's only me and the cat) we will assess your needs by our high-tech system. Please listen carefully to the menu. If you would like lighting for a big, spectacular show with lots of moving lights, press *one* - this will connect you directly to Brian Pearce's car. If you want me to light a ballet, press *two-two*. If you want me to light a game show for a hundred quid a day, press *free* - however, this won't work, as *free* doesn't get you anywhere. If you want the stock talking heads job, press *four* - this starts the car and types the invoice at the same time. Press *star* if you are really unreasonable and want to talk to a real human being, You'll get me, but then you can't win them all.'

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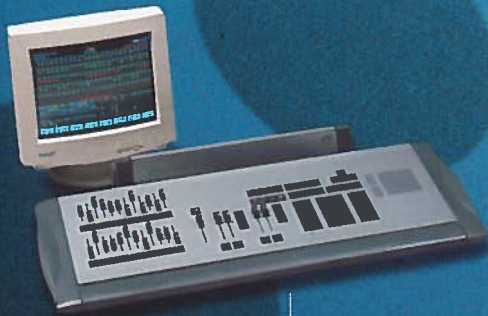
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ISLA MAGICA

The Isla Mágica project has given an old Expo '92 site a complete face lift and a great part of that new look is achieved through the artistry of lighting design - L+SI visits Spain's latest theme park

Built on the site of Expo '92, the Isla Mágica complex in Seville now claims to be the world's only theme park situated in an urban environment. Close to the heart of the city, the park takes its inspiration from sixteenth-century Spain. The park's different zones play on themes of the Spanish Golden Age: piracy, the Aztec Empire and colonial culture. At Isla Mágica, visitors travel back in time to explore a century full of adventure, from the port of Seville to the New World to the ultimate explorer's paradise - El Dorado.

No expense has been spared at Isla Mágica. El Jaguar, one of the park's many 'death defying' rides, cost 928m Pesetas (£3.5million). Part of the funding for the park has come from private backers, grants and subsidies, as well as sponsorship from Coca Cola, Nestlé, Renault, Iberia and Kodak, amongst others.

In typical theme park tradition, Isla Mágica boasts a wealth of street entertainment, white-knuckle rides, themed restaurants, souvenir shops, landscaped gardens and other attractions. A signature difference, however, of this park is its attention to professional theatre. Three theatres grace the complex, each equipped with state-of-the-art entertainment technology more normally associated with mainstream theatre than with theme park performance venues.

Stonex, a Spanish manufacturer and supplier of professional show equipment, has been heavily involved with the transformation of the Expo/Isla Mágica complex and the refurbishment of the theatres. Founded in 1980, Stonex is now the exclusive distributor of Electronic Theatre Controls (ETC), Rainbow, Pani, Clay Paky, Pulsar, Selecon and Teatro across Spain, with offices in Barcelona, Seville, La Coruña and Valencia. Its Stage Engineering division has installed equipment in more than 60% of theatres built in Spain over the last 10 years. Current projects include the supply and installation of 400 channels of ETC Smartrack dimming, over 200 ETC Source Fours and an ETC Insight 3 console for the Calderón Theatre - a major venue in the Castilla region. In addition, Stonex has recently completed the entire mechanical installation for the Luis de Camoes Theatre, the main theatre built for Lisbon's Expo '98. In July, Stonex will carry out its first installation of ETC Sensor dimming racks plus an Obsession console, at the prestigious Campoamor Theatre in Oviedo.

In addition to Stage Engineering, Stonex also has Disco and Theme Park divisions and the company has recently installed stage machinery, sound and lighting equipment at another one of Spain's major theme parks, Port Aventura in the Costa Dorada resort of Salou.



Stonex's Domingo Latorre describes the Isla Mágica lighting installation: "At Isla Mágica we sought to conserve and reutilise as many of the old Expo '92 luminaires as possible. We repaired and reinstalled many Spazio PCs and Acuttos from Teatro, as well as some Niethammer followspots and Enizooms. With the exception of the Niethammers, these units were then used for general ambience. The Niethammers, together with a lot of new equipment, were installed in the three theatres."

In total, Stonex has supplied Pta 110m (£420,000) worth of equipment to Isla Mágica. There are three main theatre venues: El Corral de Comedias (The Comedy Playhouse), El Circo (The Circus Theatre) and Los Piratas (The Pirates' Theatre). Over 200 ETC Source Fours, Source Four Pars and three Express 125 consoles now grace these very different performance areas, along with a significant number of Selecon Compact pc luminaires, Par cans (Par 64/56), Teatro fresnels and PCs. The Source Fours in particular were chosen for their low energy consumption, high output and low maintenance costs - ideal for keeping down overheads in such a large theme park.

El Corral is a classic Comedy Playhouse and has been designed in the traditional Andalusian-style fashionable in the Golden Age. The audience sits in the open air and the action takes place on a rectangular box stage inside a courtyard. Front-of-house lighting is achieved using incandescent lanterns reminiscent of the candle lamps of the period, complementing the rustic look. All stage



lighting is controlled by an ETC Express 125 console with two DMX outputs and 36 2.5kW and 18 5kW of ETC Europe's Smartrack dimming.

El Circo, as its name suggests, emulates a Roman Circus. The central stage is surrounded by rows of seats laid out in a semi-circle and the audience is able to see the entire stage. The lighting rig is suspended from a track and, like El Corral, consists of Source Fours controlled by an ETC Express 125 console with ETC Smartrack dimming.

In the centre of the complex is another open-air venue, Los Piratas, a pirate ship with

swashbuckling buccaneers who plunder a Spanish galleon. Spotlights attached to the masts illuminate the action. As in the Corral and Circo theatres, these comprise ETC Source Four and Source Four Pars, as well as luminaires from Selecon and Teatro. Los Piratas is home to an ETC Express 125 console, and dimming is controlled by ETC Smartracks - chosen for their reliability, compact size and ease of installation.

The Isla Mágica project has given the old Expo '92 site a complete face-lift and a re-launch. And a great part of that new look is achieved through the artistry of lighting design. The overall challenge for designer Eric Teunis was to install lighting that would suggest a realistic sixteenth-century feel throughout the 'island.' Now one of the most well known designers in Spain, Teunis has been based in Seville for the past seven years.

The park and its three open-air theatres come to life as night falls and the power of the lighting is revealed. Night-time illumination is achieved with low-power incandescents for highlighting detail, whilst powerful halogen lanterns in a bluish light are used for general cover to create an enchanted atmosphere. LD Teunis consciously left many areas in shadow to recreate the intriguing and magical atmosphere of an age without electric street lighting.

Isla Mágica blends the mystique of history with modern-day technology. A theme park by day, Isla Mágica becomes a majestic Spanish sixteenth century world by night, showcasing the grand illusions of carefully designed light.

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ON TOUR

by STEVE MOLES

AND PRODUCTION NEWS



Two different looks from Roy Bennett's lighting design for JJ - 'a lavish exposition of the Hollywood performance genre'.

Janet Jackson

Sheffield Arena

LD: Roy Bennett

SD: Cubby Colby

What it lacks in substance the Janet Jackson show attempts to compensate for with style. The 'Velvet Rope' tour is a lavish exposition of the Hollywood performance genre. Every single song is underpinned by production values that wouldn't go amiss in a Busby Berkley film - frankly, it owes more to Walt Disney than it does to rock and roll. And therein lays a dilemma: what has all that to do with the thunderous drum and bass, the rhythm heart of Ms Jackson's music, deeply rooted as it is, in the mainstream American 'dance idiom'?

It reminds me of the 'Python sketch about chocolates - 'a quintuple smooth, triple thick milk chocolate lovingly garnished with Lark's vomit'. The contradiction is acute, the wrapping and presentation looks fantastic, but the content isn't quite what the palette has been prepared for. It would be too strong to say it makes you sick, but it is sickly. I suppose the bitter truth is that Janet Jackson appears to successfully pull off something no dance act has been able to. She provides a concert-style entertainment for a musical form that is not meant to be watched, but to move to. The show's visual references are touchstones to US family entertainment, a fairy-tale book, cotton candy colours, costumes straight out of Jiminy Cricket. And by Jiminy we like them, so who cares about the music?

SOUND

Cubby Colby graced these pages just a few short months ago mixing for Phil Collins, a more stark contrast in musical content you could hardly imagine, though, of course, both stars reside in the same lofty pop firmament. "Yes, it's a dance mix so it is difficult," he agreed. "Her voice is really powerful and 95% of it comes through really easily, but finding the lower registers is hard in the

general ambience of the music, and the noise coming from the audience and the room."

There are other elements that Colby has to fight against, his instincts especially push him in the opposite direction to that which the artist desires. "It's hard for me to interpret the percussion loops with a live band like this. I really favour what's coming from the drum kit because it's tight with the rhythm. With the loops there's almost too much information - as one hi-hat closes another is opening. In the beginning I was led to believe there would be less loop, more band, but that's changed."

The difficulty for Colby is the live tape, and his own integrity in producing one for the artist each night. "For example, I like to have the drums tightly gated to get the pressure out into a big room. In the room, the natural reverberance fills it out, on tape it sounds short, bap, bap, bap. But I won't make aux mix tapes, I live by the honest mix."

He does get some respite: Janet and her musical director Rex do come out into the halls sometimes and listen to what he's building, but they've yet to apprehend the relationship between hall and tape. "The band are running really smoothly, they play the same every night, but the rooms change. Roofs get lower, walls harder, because I make it sound the same in every venue the measures I take to achieve that show up on the tapes. They do vary." Despite, which Colby is in good humour: "It's been a learning experience, but it's fun," and he is helped by his engineering roots working with Prince. "That mixture of dance, R&B, and funk. He did so much of that."

Musically, the whole show is dictated by SMPTE, Colby taking full advantage, using the time-code to trigger his beloved Amek Recall, mutes on/off, effects on/off, everything. "It's great, when you've got something like a segue where the music might switch from nine players full on, suddenly dropping to three, sotto voce, you can be so accurate."

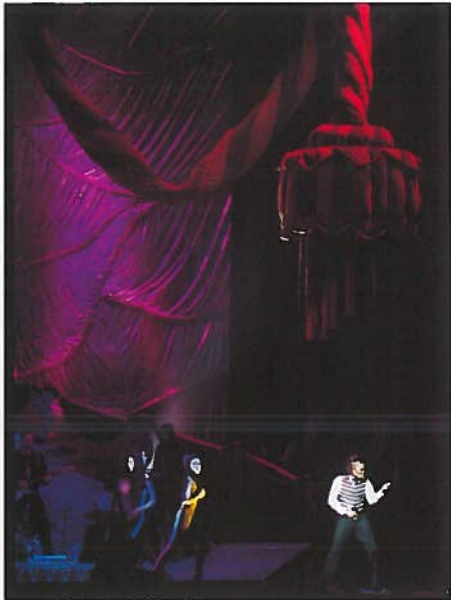
Running a Prism PA system from Showco, Colby confines most of what he does to the on-board facilities, and with so much easily automated, why not? "The only off-board stuff I've got is four Neve

9098s and four Tube compressors - two each for Janet and two each for the backing vocalists. I use no desk pre-amp or filter for voice, running these back into the inserts on the desk." And this he does for access more than anything, it's the one area of the mix where he resists automation, preferring the easy grab to the slightly more cumbersome plough through the computer. The doubling of the Tubes and Neves is forced by two mic types; Janet splits between a Shure UHF Beta 87 hand-held, and a Crown 311 in a headset. "These are the things I'll putz with during the show." As the man himself said: "It's 105 minutes full-on, there's lots of musical cues, plus loads of fun effects, like cars crashing, so you'd better pay attention."

The sound he produces is well compressed - a bit like the famous Jackson bosom: "I cram the Prism in the room," he said metaphorically, "it sounds loud but doesn't hurt you. And it gets over all the reverb and stuff that's floating around." It's a tried and tested route, for most of the time it sounded excellent, only towards the finale of the show did the taut, high pressure sound submerge the fragile sibilant quality of her voice, and that's really a manifestation of Colby overcoming his own personal reservations and letting the perc' loops take over - just a bit too much information, but hey, it's what the artist wants.

LIGHTING & VIDEO

The show opening is a stunner, and sets the tone for the whole evening. The lush, tasselled velvet curtains draw back (real ones, not like the painted jobbies on the Spice Girls) and reveal a huge closed book resting upon a wooden stand. A solitary costumed mime walks on and gently opens the book (really performed by a tracking system, tucked into the lighting rig above, built by Tait Towers, who supplied all the stage set). The book interior is the latest LED screen from Screenco, highlighting immediately the advantage of this technology: it's thin and light enough to be 'folded' and moved easily. For several minutes we are treated to a voyage through space, passing coloured vortices and jewel-like Planets spinning into infinity. "The opening started as quite a small



idea," said video director George Elizondo, "but it grew into a whole big thing. Mary Beth from Cutters in Santa Monica was the Flame artist (Flame graphics computer), I went back and forth with her 'til we got it how I wanted."

As the sequence draws

to a close, the screen splits down the book spine and Janet is revealed. It's a facility of the screen that's exploited several times throughout the show. It variously tracks upstage, downstage, splits, raises and lowers, presenting a variety of opportunities for Elizondo to exploit: "Depending on where the screen is, it can give a whole different look to the stage," he said, and then added, "and there's still more to find."

That's the big difference that both lighting and video have over sound, much more of what they do is directly interpretative of the live show. "Oh sure, there's a couple of pieces that are foundations to the show," said Elizondo, referring to fixed camera and VT cues, "but there's so many intangibles and variables." Lighting director Guy Forrester agrees: "It's a busy show, you could run maybe 50% of it to SMPTE, but I prefer to do it all live." Roy Bennett, the show's lighting designer, has certain very specific functions to fulfil. The rig is trimmed high, 33 feet, and there's no low light to speak of. "The whole point is to present an open stage with as little restriction to audience view as possible," explained Forrester.

That's quite a departure for Bennett: all his usual elements are there - an LSD system filled with Icons, High End Systems' Studio Colors, four- and eight-lamp Molemags and 20 VL4s at the back around the cyc. But the lamp positions are mainly restricted to up in the rig, with a modest deployment around the floor, not his usual multi-layered look with lamps at every level. Nonetheless, the spread of instruments across a deep grid is enough to present a wide variety of beam origins and give scale. But it has its costs: "The rig was a beast to start with," said crew chief Clay Brakeley. "It's all effectively one piece with a lamp here and lamp there. There's not a single piece where you can roll it in, plug it up, and away you go. We even have to take the wheels off some bits of truss."

It's a complete grid, the closest thing to a theatre fly floor I've seen on tour for a while.

Between the tracking system for the screen and Bennett's lights, there are few spaces. And there are other toys up there too. This is a Mark Fisher set design at its most festive: huge velvet tassels and, of course, thick velvet ropes, are woven around the screen track and they themselves track and lower. Two chandeliers covered by thousands of Pea lights lower in and out for those 'more intimate' moments and there are several rear cloth treatments giving a variety of cycs. With so many tracks and tab tracks up there, it's amazing Brakeley and his crew could find anywhere to put the lamps.

But the screen is an ever-present factor: "It is a big eye pull," agreed Forrester. "It's difficult to light the show theatrically when something that gives off so much light is up there." And Elizondo agrees that it is bright. "But we've got it trimmed as low as it can go." Without putting a meter on it that's a factor that's hard to quantify; from a purely subjective point of view I found it less obtrusive than Forrester might have us believe,

which comes partly out of Elizondo's well-crafted choice of image, the variation between two screen halves used portrait and the single whole used landscape. Elizondo - sat at his Grass Valley 200 with Jerry McReynolds, his ever-present AD and TD at his

side - is constantly looking for action from his four camera feeds (all PPU and cameras come from Screenco's US sister company BCC) to mix with the graphics, effects and music video footage on laser disk. Forrester, meanwhile, is driving an Icon board MIDI-linked to the VL Artisan, riding the horns of a dilemma: "I have to keep the spots on her and all the dancers (10 Lycians on a T-bridge, plus two more tucked into the rear of the grid), the battle is lighting for the live audience and for the cameras."

The relief in the image comes from what I assume is a by-product of the orientation change; when the screen is split and running two portrait, the altered aspect ratio doesn't quite fill the two screens, leaving a black border around them that changes their visual character to something more akin to animated framed paintings rather than big video screens. It's a subliminal thing, the absence of edge to edge image being the key, but it makes all the difference. As for screen brightness versus lighting, the photographic evidence seems to point to an even score, the lights dominant in the big numbers, losing a little for the ballads.

This is ultimately family entertainment, as Forrester so aptly put it: "You're not coming to see Janet and her band, this is a show. It's value for money, you're held from beginning to end. There's not many arena tours out there with this size of production (witness 10 Edwin Shirley trucks parked outside, something I've not seen since U2 early last summer). There's something special in every single number." Absolutely, but did you leave the arena wanting to dash out and buy the record? No more so than buying a video of the Lion King. You know that after three or four viewings it will just sit and gather dust with all the other cartoons.

Finally, a debt of thanks to Chris Lamb and Dave Russell (a real heavyweight TM and PM combination if ever there was one) for making coverage of this show possible.

Shirley Bassey

Sheffield Arena

LD: Dave Cox

SD: Jeff Hooper



How can such a small frame, with a complete absence of any visible sign of strain or effort, produce such incredible power? Well, it's just astonishing. Add to that her age, and you have to stand back and be impressed. The Propellerheads were. And on a live rendering of their song *History Repeating* (like the irony guys) I have to say there's nothing incongruous or unseemly about a star, old enough to be their grandmother, colluding with a group of young Turks. Her collaboration with Chris Rea might be less contentious: he's not quite her age, yet he could certainly have fathered the Prop's, but both contemporary songs confirm a performer of considerable confidence. She's unafraid of the new, or for that matter of making a fool of herself. The truth is her delivery is so unique that she could pull off anything.

One other point to bear in mind with a star of this calibre. It was Phil Boudry of promoters BCC who drew my attention to it: "She's sold 8,000+ here, we've advanced 12 (thousand) in Manchester, and Wembley's all gone." A generally sold-out Arena tour by a solo female artist, but there's just three Edwin Shirley artists sitting outside. "It's not like Janet Jackson or Tina Turner," said Johnny Harper, dimmer man extraordinaire. So. A cheap production then? You judge.

LIGHTING

Dave Cox is Ms Bassey's LD. He started as third man on the crew in '89, rose to moving light programmer by '95, "and a little under two years ago I was asked to go with the tour to Australia as LD." It was winter in the UK - what was a chap to do? It's a job he's sustained ever since.

Now Cox is the kind of physical presence you wouldn't want to encounter in a dark alley late at night: not tall, but heavy-set, muscular and shaven-headed. But this is no misanthrope. His design for the 'Diamond Tour' is soft, sensitive, and above all, feminine. His rig has three domains: front and rear truss, and a pair of square

trusses, rigged point-on to audience like diamonds on playing cards, hung at a slight angle over centre stage. "She has to enter in the middle," said Cox, "but other than that the only thing she insists on is being able to see the front five rows. Oh. And she doesn't like smoke."

Despite which, Cox has managed to sneak a DF50 onto the tour for a little haze. Audience lighting is a moot point: "It's the first artist where I spend more time on the audience lighting than the band," he said. But if you witness the show, this is very much a live transaction between one woman and her fans, the communication between the two is mutual. Cox's presentation is completed by drapes, a mix of black and white satins, striped, loosely-hung bands across the two diamonds; casually hung full length gathers in two pairs off the back and sides. The drapes are from Acre Jean. "About my biggest spend," said a rueful Cox. "I shall probably have to use them for the next five years to justify it."

The main contractor is LSD with moving lights supplied by Vari*Lite - 18 VL5s and 12 VL6s. The conventional rig comprises Pars, Source Four profiles, four-cell Moles, and a pair of 2kW fresnels and Cox runs the whole system off an Avolites Sapphire.

He lights the audience softly, but continuously: three bars of Pars across the front truss and the pair of fresnels are never off, but levels vary. He lifts the audience in time with the swells in the melodies. The Vari*Lite's spend their time putting colour and pattern onto the white drapes. He uses contrasting colours veering towards pastel mainly - lavenders matched with light green, mauves with pinks. It's all very pleasing and deftly avoids sickly candy cotton kitsch.

SOUND

I wouldn't say Jeff Hooper's been mixing front-of-house for Shirley as long as she's been performing, but his career at the helm has been a long and fruitful one. When she tours abroad just a core of four travel with her, and Hooper is one of them. That doesn't mean it's an easy gig, but it is comfortable - it's as familiar as any live engineer is likely to get with any instrument. As he said in that inimitable Welsh logic of his: "It's difficult, sort of. But not really." And then qualified that by defining the Bassey weapon: "She can go on the flick of a word to compression."

As such, Hooper has a BSS Varicurve and Summit TLA100 inserted on her voice - there is, in fact, little else out front alongside his PM4000, and that's despite a 20-piece orchestra. "I've just got a Lexicon 224, and three SPX990s," (room effects and a bit of reverb), he does also have dbx160Xs for the band, and a BSS Opal DPR 422 for the keys.

But as with the audience lighting, it's the atmosphere of the room that's important: "She wants to hear the room," said Hooper. "All the dynamic in her voice is exactly what she wants to hear," added monitor man Chris Wibberley, "the monitors just give her the power." And it's the combination of PA and monitors that give her the comfort zone she needs to perform.

Concert Sound are the PA contractors, a not unexpected hang of KF850s with two rows of the longer throw 853s (highs and lows) across the top. What is a surprise is the apparent absence of wedges (though God forbid she should replace the diamante earrings with in-ears), the stage is clean across the front, but there are a pair of KF850s



each side. "And the side-fills are loud," said Wibberley. "The only thing in them is her voice." Hooper was more descriptive: "Yes, they'll part your hair," he said. She's not deaf, she just likes the feel. Wibberley carries an SPX1000 beside his XL3: "Just for a bit of reverb if it's a dead stage - just to liven up her voice." The orchestra get by on Hot Spots, there are a couple of the new JH15 wedges from EAW parked back centre, also for her voice. Wibberley was not too keen on them at first, "but the more I use them the more I like them," and the tour was barely a week old at this point.

Out front, the musical accompaniment is almost superfluous - but not quite indispensable - which gives Hooper a fine line as to where to keep them: "But there are certain phrases she always likes to hear, the excitement of the timpani, or some of the bass runs," which points up the comfort zone again. Hooper is mixing for two audiences, and both pay his wages, figuratively speaking.

Watching her sing is almost as astonishing as hearing her, something helped by the arrival of

Creative Technology to the tour. They have added a large centre screen above the trussing illuminated by a Barco 9200 out front, fed from two rostrum cameras, one FOH, one in the pit. What you could see on screen was just how little it mattered where her mic' was, a Beta 58, you almost felt she could leave it on the stand when she paraded off to one side of stage. She's still a sexy looking grandma' too, even in close-up. As Dave Catlin of Concert Sound said: "She's worth every penny."

PRODUCTION

Under pain of death I have to mention there's a new face in the production firmament on this tour, Simon Franklin. Thanks for making access for L+SI easy and pleasant Simon. Like many in the Bassey entourage (Cox for example) he's come up through the ranks. A part time Stage Miracle, he's previously worked as SM for both Bassey and Michael Ball. The crew report (and this is very much a family crew) that Franklin has the measure of his new production manager role.

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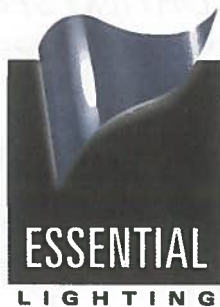
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EQUIPMENT NEWS

QSC's Next Generation



Barry Ferrell of QSC at the company's Costa Mesa HQ, with the power supply and power amp boards for the new PowerLight 9.0 PFC.

L+SI Exclusive: During a recent visit to QSC's headquarters in Costa Mesa, California, L+SI learnt of the company's plans for expansion and saw the first production run of the new PowerLight 9.0 PFC professional amplifiers. The company, started by Pat Quilter, is celebrating its thirtieth anniversary this year and is shortly to expand into a new 80,000sq.ft building adjacent to its present MacArthur Boulevard premises. This will allow the company to extend its manufacturing and technical services and increase its production output dramatically.

The high-tech facility at Costa Mesa is testament to the company's stated aim of fast-track growth and the manufacturing processes incorporate several unique techniques where every measure possible has been taken to simplify the production process, including stock control like you've never seen it, multiple amplifier moulds built on one chassis, custom-designed heatsinks, a unique clamp system to deal with thermal expansion and contraction and custom fault-finding software. The pay-off has come in the form of some impressive new amplifier technology.

The PowerLight 9.0 delivers 1800W per channel at 8 ohms 3200W at 4 ohms and 4,500W per channel at 2 ohms. The company has incorporated Power Factor Correction (PFC) technology that eliminates the poor power factor and low efficiency of traditional mega-power amplifiers. Typically, these factors cause sagging of the AC voltage which, due to unregulated power supplies, reduces output capability. PFC resolves this problem by lowering peak AC current requirements by as much as 40%. The amplifier's output circuit is equally innovative: high speed components and large-die N-channel Mosfets are combined with four-tiered DC supply to yield efficiency comparable to Class D designs while operating in the linear mode for lowest distortion and noise.

The company have also launched their newest generation of amplifier technology, the PLX series. Incorporating the company's exclusive PowerWave switching power supply, the PLX series combines the audio performance of the award-winning Powerlight series with the value of the popular MX series.

The four initial models in the range will be the PLX1202 (600W per channel at 2 ohms), PLX1602 (800W per channel at 2 ohms), PLX2402 (1200W per channel at 2 ohms) and PLX3002 (1500W per channel at 2 ohms).

The performance includes virtually inaudible hum and noise (-110dB 20Hz-20kHz), and very low distortion. Proportional-response clip limiters optimise limiting based on program material to preserve program dynamics, and user-selectable low-frequency filters increase usable power and protect loudspeakers.

USA: QSC, tel +1 800 845 4079

UK: HW International, tel 0181-808 2222

EAW Three-Way

New from EAW is the KF400a, a powered active three-way loudspeaker, the first powered full-range loudspeaker available from the company. The lightweight, compact trapezoidal cabinet incorporates EAW's Close Coupled Electronic Processing technology.

USA: EAW, tel +1 508 234 6158

UK: Sound Dept, tel (01235) 555622

Adastra Takes A75

Adastra have introduced the A75 PA Centre, a versatile entertainment system aimed at a wide range of installations. Featuring a six station AM/FM tuner, auto-reverse cassette deck and inputs for two microphones plus CD/auxiliary and telephone, the A75 PA Centre delivers 75W (RMS) with both low impedance and 100v line outputs.

The unit incorporates priority override for microphone 1 and telephone inputs and provides both built-in switchable speaker and headphone monitoring. Optimum sound balance is provided by separate bass and treble controls and in addition to mains operation, the A75 can be powered by 12v car batteries for remote or mobile applications. A facility to link booster amplifiers (for very large or multi-building premises) is also provided.

The unit is supplied with ears for 19" rack-mounting and grab-handles for easy positioning. Available now from usual stockists, the A75 may be complemented by a range of Adastra microphone, speakers, racks and cables.

Adastra: telephone (01923) 248888

LED JumboTron

Sony JumboTron is launching a new lightweight screen system utilising LED (light emitting diode) technology. The JTS-L15 system will be available in two versions, for indoor or outdoor usage, and is aimed at applications such as electronic poster sites, airport displays, and shopping malls while organisers of touring rock shows.

Sony UK: telephone (01256) 483674

D.A.S. Audio Launch DS-15A at Planet Ice

D.A.S. Audio, of Valencia in Spain, introduced two new speaker ranges to the UK, via Sennheiser (UK), during a special launch at Planet Ice in Birmingham. The company introduced the DS-15A active-powered injection-moulded enclosure shown earlier this year in Frankfurt and Rimini, and the new Reference Series.

The DS-15A is aimed at musicians, event organisers, mobile DJs and any user requiring quality sound from a lightweight, compact, rugged, active-powered enclosure. Featuring the same bass response of its passive cousin, the DS-15, the DS-15A is bi-amplified via an on-board 150W bass amplifier stage and a 50W HF module.

The Reference Series is aimed at clubs and larger theme bar installations, and consists of a number of models including the R218 sub-bass and the R212, which incorporates two 12" 400W RMS bass drivers and a 150W 1.4" Neodymium compression driver with a CD horn, which can be rotated to provide correct dispersion in either plane. The Reference Series comes with multiple flying points and accessories.

D.A.S, Valencia, tel +34 96 134 0206

UK: Sennheiser UK, tel (01494) 551551



Product Briefings

Link has introduced the LKS range of 19-pole connectors. These feature a neoprene rubber insert with 19 gold-plated copper alloy contacts, and a screw-locking system which makes it compatible with the Socapex SL-419 series.

Italy: Link, tel +39 622 7251

Crown have introduced the new CP660 six-channel power amplifier. With six independent channels, the CP660 can take the place of three two-channel amplifiers in just a 2U space. The 75W average power output per channel makes it suitable for a variety of surround-sound uses, as well as paging, zoning and background music applications.

UK: Fuzion, tel (01932) 882222

Dublin-based Zandar Technologies have introduced the OmniVMX MultiViewer - a dynamic, 2U high, stand-alone system based on their MVGI6 PCI card technology. The MultiViewer is capable of displaying up to 16 real-time video sources simultaneously to VGA or video.

Zandar (Dublin): tel +353 1 2808 956

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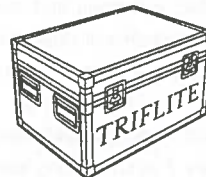
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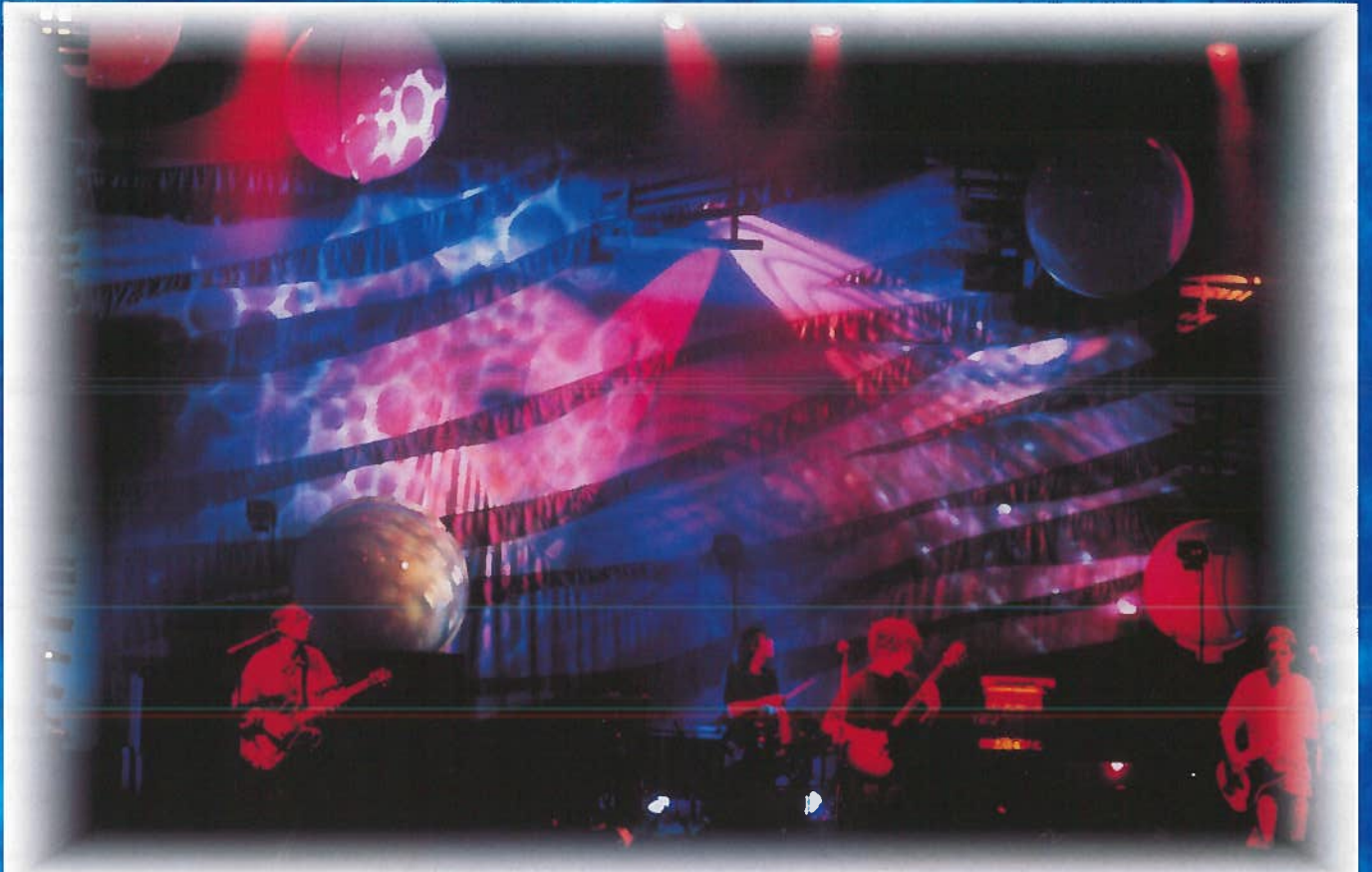


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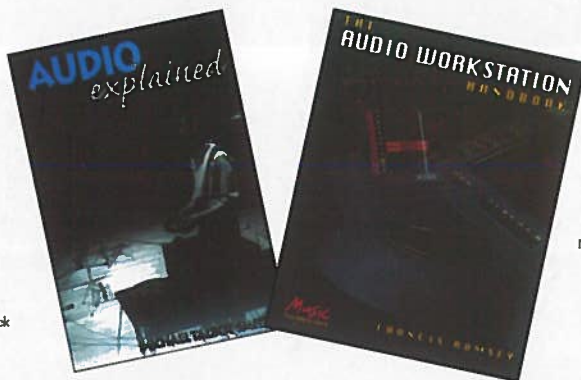
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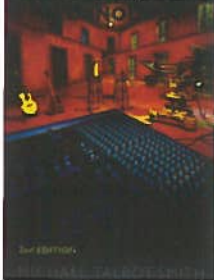
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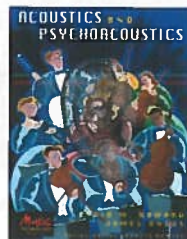
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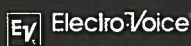

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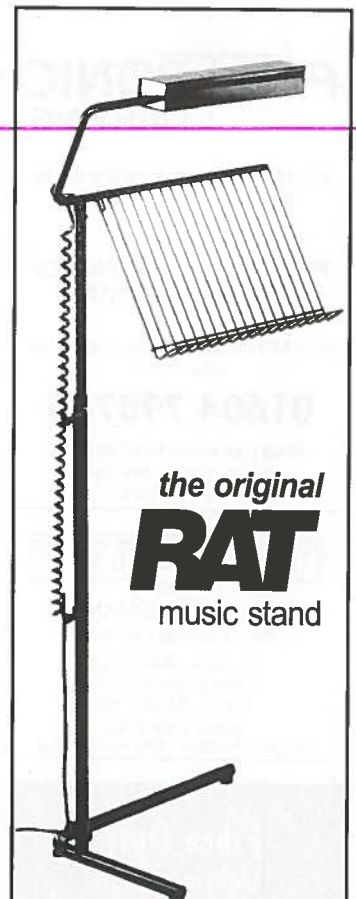
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