

LIGHTING+*Sound* International



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July 1986

Volume 1 No.8



Auditorium of Grieghallen in Bergen, Norway, during preparations for the 1986 Eurovision Song Contest—see feature this issue.

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OPTIKINETICS

SIB NEW PRODUCT RELEASES



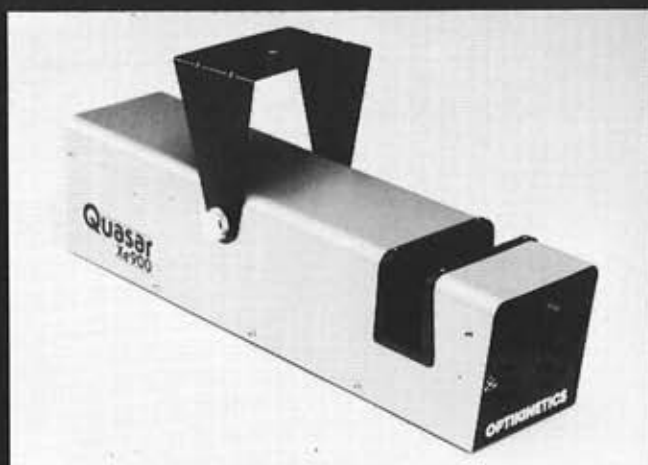
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25 April 1986

Dear Sirs,

Pulsar Digital Interface

Having just finished the School production of Max Frisch's "The Fire-raisers", I must tell you how pleased we have been with your digital interface for complete computer control of stage lighting.

Our installation is a 36 channel rack with a two preset manual desk. As rehearsals progressed, it became evident that a greater flexibility and speed of response than could be provided by the manual control was needed to do justice to the producer's demands (what's new!), so your digital interface was purchased and installed 10 days before the first performance. Two fourth year boys were completely self-taught by the Tutor program in the package you provide and became fully proficient in operation of the system within 24 hours. They operated the system faultlessly and to great effect for the performances - all 72 cues!

Your software provided the much looked for speed of response to producer's demands during technical rehearsals and completely eliminated the time consuming business of writing out cue sheets. The variety of cross-fades possible was fully exploited during the production with a smoothness which was fully professional.

Many congratulations and thanks for producing such an effective package at such a moderate cost.

Yours faithfully,

Ian H. Rowse

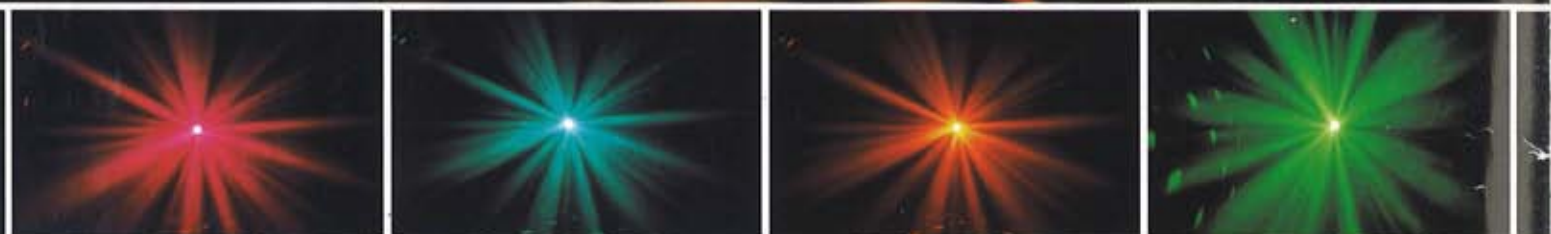
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LIGHTING+SOUND *International*

JULY 1986

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Set construction in progress in preparation for the 1986 Eurovision Song Contest at Grieghallen in Bergen - see feature pages 19-23 this issue.

LIGHTING+SOUND
International

PLASA

published in association with the
Professional Lighting and Sound Association

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Telephone: (0323) 642639

Editor and Publisher John Offord

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Burnham is Back

ARRI (GB) Limited have announced the formation of a new subsidiary company, Imagination Technology Limited, which will carry on the activities of the TBA Technology division of Tim Burnham Associates Limited.

The new company, which is based at ARRI's UK headquarters in Heston, near London's Heathrow Airport, will be run by ex-TBA managing director Tim Burnham, and a small core of senior engineering staff from TBA has also been taken on board.

Imagination Technology will be re-launching the TBA range of lighting control systems at Photokina in September, and shortly after plan to re-introduce the 65 Series of 500/650 watt theatre luminaires.

When asked to comment by L+SI Tim Burnham said: "This is a tremendous opportunity to carry forward the work which began with so much promise at TBA. We are all absolutely delighted to have joined the ARRI family, and excellent progress has already been made to get our products back into the market."

Bose Appointments

Bose UK have announced the appointment of Alan Kilford as general manager, and he will be responsible for sales, marketing, and the day-to-day management of the company. Philip Carpenter continues as financial controller, and European general manager Nic Marks becomes acting managing director, taking over from Walter Mirauer who left Bose in early May.

Screening Chess

A series of three Philips Vidiwalls provides a giant multi-screen display for the musical 'Chess', now playing at the Prince Edward Theatre in London. One of the main features of the show is a large 64-screen version (pictured right) depicting a chessboard, which flies in on steel cables during the performance. It weighs 3.8 tons, and the screen shows the moves of chess pieces from famous matches as part of the story and all the TV



The 'Chess' Vidiwall—the largest of its type ever constructed in the UK.

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monitors can combine their images to show one enormous picture of the actors on stage and videos providing background to the events prepared on stage.

On either side of the stage there are two 32 screen versions of the wall, which show additional close-ups and videos. Supplied and installed by Philips distributors Mediatech, the 64-screen centre-piece is the largest of its type ever constructed in the UK.

The full 128 screens are supplied with picture information from a bank of six Philips LaserVision players, two video tape recorders, and six TV cameras at stationary positions around the stage. The information from any of these sources is fed through a Philips Matrix Switcher to any of 16 digital image converters, and controlled by a computer designed by Mediatech, and then transferred to any of the TV screens which are arranged in

4 x 2 monitor blocks. The whole event is semi-automatically synched to the directions of the musical conductor, with cue pushes to on-stage action and music scores.

Audix and Saudi Sports

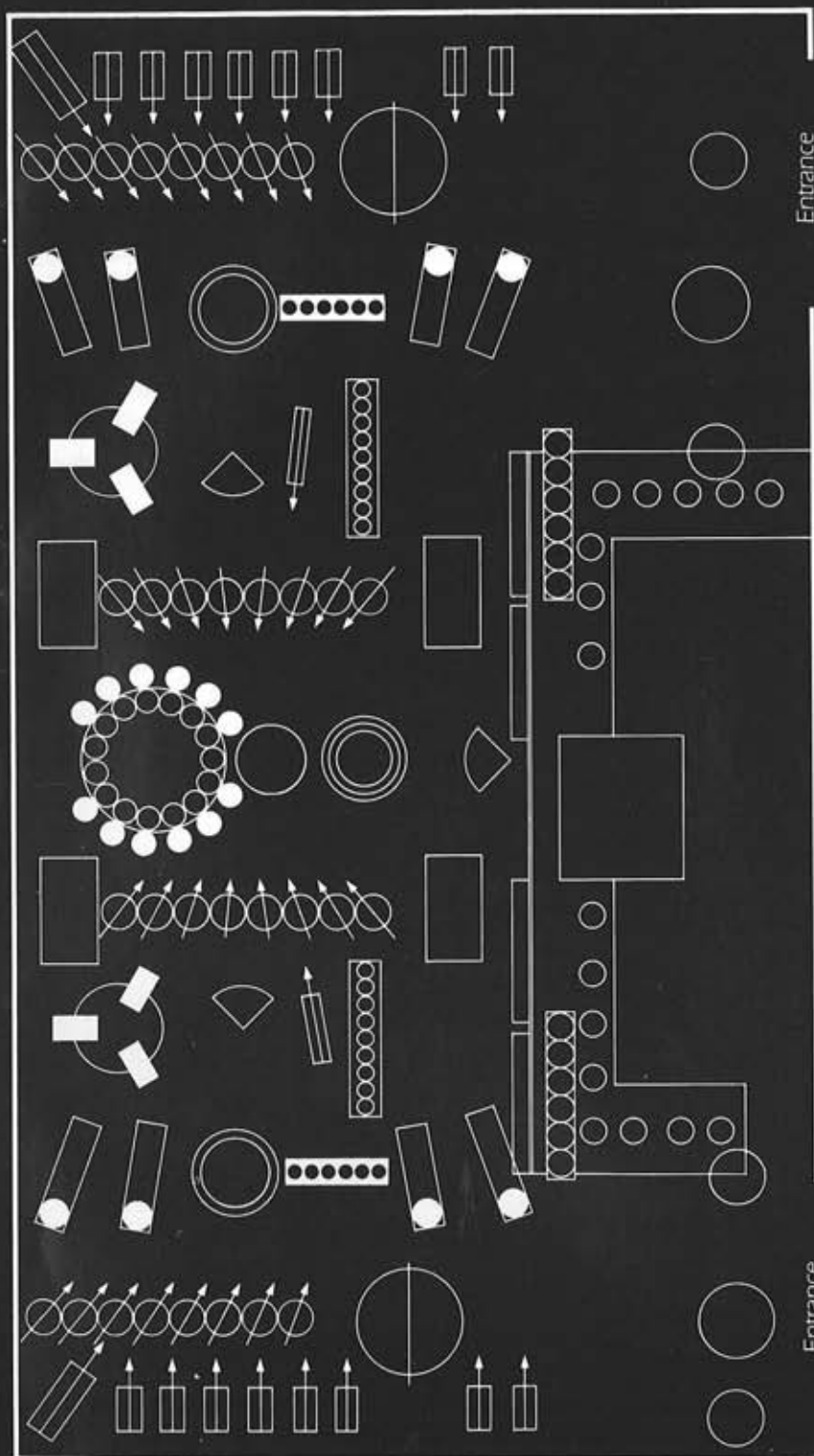
The Saudi Ministry of Youth and Welfare have completed the building of a number of sports clubs throughout the country, and Audix Group Promotions, manufacturers and suppliers of low voltage communications systems, have installed complete sound systems for 10 of these newly opened complexes.


"The Ministry spared no expense in the range of facilities it has provided and these include stadiums, tennis and squash courts, olympic-size swimming pools, lecture halls, gymnasiums and restaurants," said an Audix spokesman.

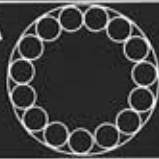

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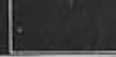
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Expanding Down Under

Peter Kemp of Getlit in Melbourne, Australia, has informed L+SI that he has now successfully extended his company and announced that they are also known as 'Wired For Sound Pty Limited'. "This enables us to be involved in the importation and national distribution of a wide range of audio equipment," he said.

"Wired for Sound, in conjunction with Getlit gives us the opportunity to service a larger scope within the entertainment industry throughout Australia, thus catering for both the lighting and audio side."

Elliott's at the Opera

Elliott Bros. of Oxford have won a major contract to equip the new Opera Theatre at the Royal College of Music in London.

The installation includes microphone circuits, CCTV, a Cue Light system, paging and ring intercom plus all the associated panels and wiring. Much of the equipment will be custom built at Elliott's new extensive premises.

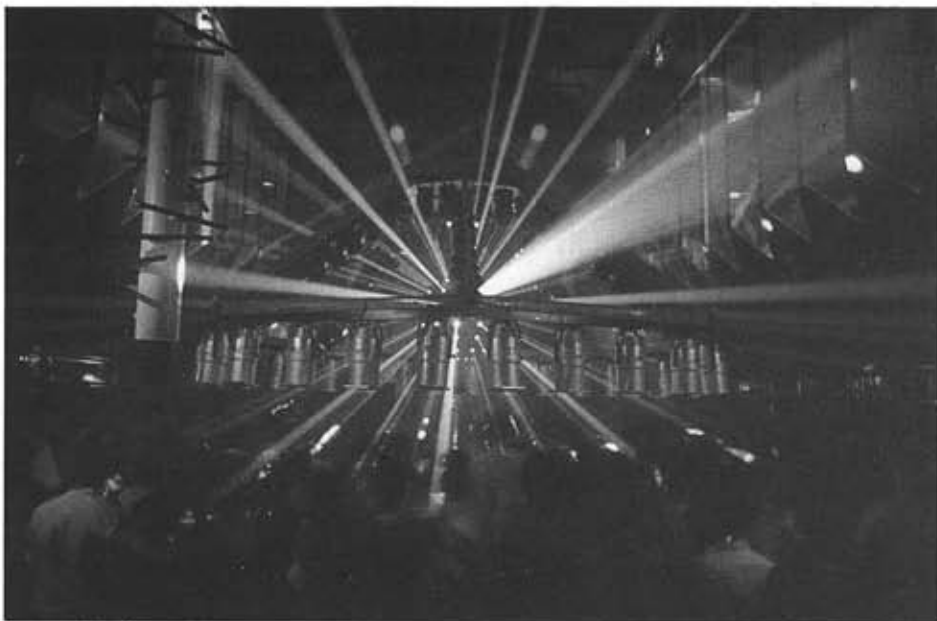
Four More for PLASA

Admitted to membership of the Professional Lighting and Sound Association at its July committee meeting were General Electric USA, Laserpoint Limited, Celco, and Sound Creations.



Speakers to the Nation

The massive PA rig used during the 100th birthday celebrations of the Statue of Liberty in New York harbour was provided by Bose (UK) Limited. Bird Brothers Communications of Oldham in Lancashire who were appointed by the Chrysler Corporation to mastermind the communications operation at one of the most spectacular banquets ever, shipped the Bose system, including 80 speakers, to America aboard the QE2.



ACR's original SuperNova.

Optikinetics to look after ACR in UK

Optikinetics Limited have been appointed UK distributors for ACR of Zurich, the major Swiss manufacturer of lighting equipment and effects. The company's lines include dichroic colour filters for anything from a pinspot to a Par 64 can with special colours and sizes to order, the original SuperNova, the Mac Spot intelligent moving light system, and the recently introduced Mac Argus.

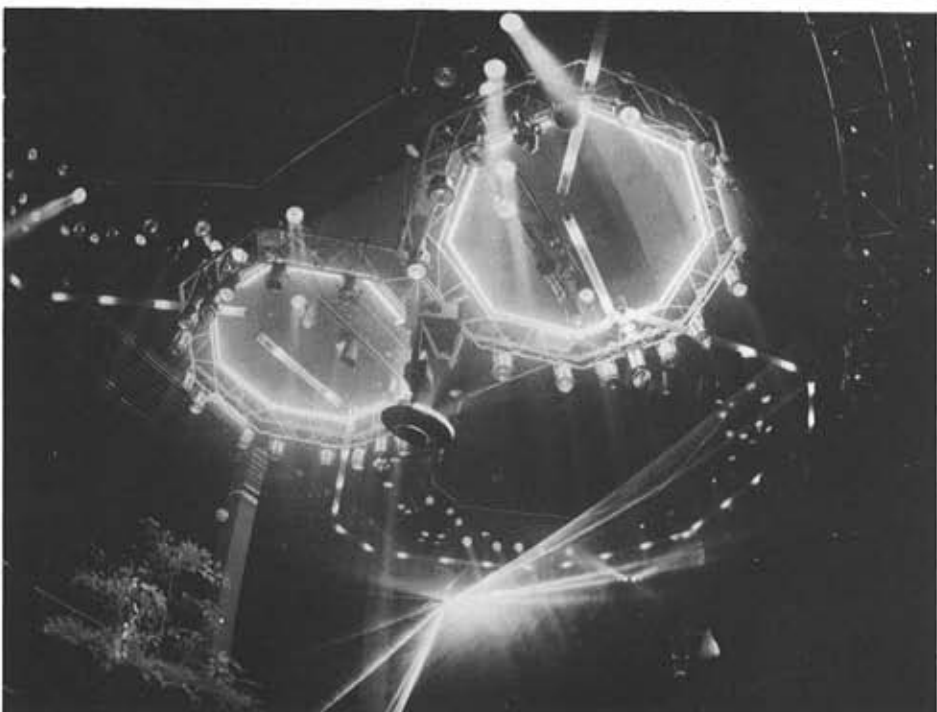
Similar to Opti's own Fanlite, the Mac Argus utilises 9 Par 36 aircraft landing lamps mounted radially to produce the now obligatory rock and roll spray of beams but which can be remotely panned and tilted from the same control as the Mac Spot.

An off-the-shelf laser system as well as the much rumoured 'Spectrum' electronic colour change system will also be introduced during the forthcoming autumn/winter season. ACR's equipment is displayed at Optikinetics' recently revamped Luton showroom, and will be shown at the PLASA Light and Sound Show from August 31 to September 3.

Commenting on the developments, Optikinetics' chairman and export sales director, Neil Rice, told L+SI: "We have known ACR for many years. Their product range is utilised world-wide along with our own but ACR have not had a strong presence in the UK and we intend to rectify this.

"ACR's product range is ideally suited to both the discotheque/night club industry and the touring rock and roll business. And we have recently begun to address the latter with our Trilite structural system. ACR's range makes an ideal addition to our own.

"There is a strong respect for each other's companies, and we are sure this will lead to co-operative new product ventures in the future."



Squire's in Scotland

With assistance from local designers with whom they work closely, and an experienced installation team, George Thompson and Kevin Mitchell of Squire's Glasgow office are making big inroads into the Scottish market. Recent installations include Mr. D's in Glasgow, and the Hollywood Studios, a two-level discotheque complex in Brown Street. Pictured above is the lighting rig at Hollywood Studios, with a space-frame system incorporating Mode Arcline, Pinspots, and a Krypton effect. Also in picture is the laser, designed by Squire's, which includes a special panel for creating additional three dimensional patterns.



THANKS TO PULSAR, EVERYONE CAN NOW AFFORD A PROFESSIONAL LIGHTING SYSTEM.

If you'd like to turn your performance into a more effective production, turn to the Intelligent Interface and software from Pulsar.

With this most advanced, yet suprisingly low-priced system, you can link your stage lighting to a micro-computer and program all your cues long before the curtain goes up.

The Intelligent Interface, which is fast becoming the first choice amongst schools and colleges, can handle up to 36 channels of dimmers at once.

Better still, it comes complete with a cue controller and essential software for the BBC Micro, to provide you with a lighting board that has the performance of a memory system many times its price.

Even Scrooge wouldn't argue with that.



PULSAR

Lighting for Effect.

Cerebrum and the Gold Rush

Cerebrum Lighting of Surbiton, who market the Celco Series of lighting controls, have announced a regular rush of installations and orders throughout Europe. The first Series 2 Gold for a discotheque installation was sold at the beginning of June to the 'Reil' disco in Tongeren, one of the largest in Belgium, and it will be interfaced via a multiplex system to over 600 channels of dimmers.

Colin Whittaker, sales director of Cerebrum, told L+S-I that with the introduction of the Celco 'Connexions' system, it is no longer necessary for the control board to have anywhere near the same number of channels as the dimmers. The system allows any number of dimmer channels to be digitally patched to any desk channel and changed instantaneously during the show.

Another major discotheque installation is due at the Rembrandt Theatre in Amsterdam, which is undergoing a transformation into one of the largest such venues in the country, with an opening scheduled for August. Here, a Series 2 90 will be supplied by Flashlight of Utrecht.

Two more Series 2 Gold's have been snapped up by Amptown Lichttechnik of Hamburg, Celco's exclusive distributor in West Germany. One will go for hire use, and the other into a discotheque situation.

M.S. Audiotron, Finland's largest lighting and sound company, recently won an order for a 90 channel Series 2 board from a venue which has originally requested a dedicated theatre control. After seeing the Series 2, the Finlandia Hall in Helsinki ordered the Celco board with the proviso that it should have output levels displayed in percentage terms on a VDU, together with disc storage. A wireless remote rigger control was also specified for focussing purposes. The system was built to order as a result, and delivered to the venue in June.

In the UK Peter Gatiens' new Limelight Club has installed a complete Series 2 60 channel lighting control system which was specified by Mike Cuppage of London Lightman Limited. The 60 channels of dimmers were supplied with signal and mains patch, all fitted into a purpose-designed installation rack.

Not satisfied with all this activity, Cerebrum have just announced that they have appointed Sadepra S.A. of Madrid as exclusive distributors for Celco products in Spain in an effort to boost sales in the sunny south of Europe.

Rhenkus Heinz from Elliott Bros.

Elliott Bros. have been appointed UK distributors to theatres and broadcasters for the Rhenkus Heinz Smart loudspeaker systems.

The system is a processor controlled loudspeaker comprising: loudness control, intelligent active crossovers, and almost total feedback rejection. Since their innovation, Rhenkus Heinz proudly boast that no system has, as yet, blown a cone through overload.

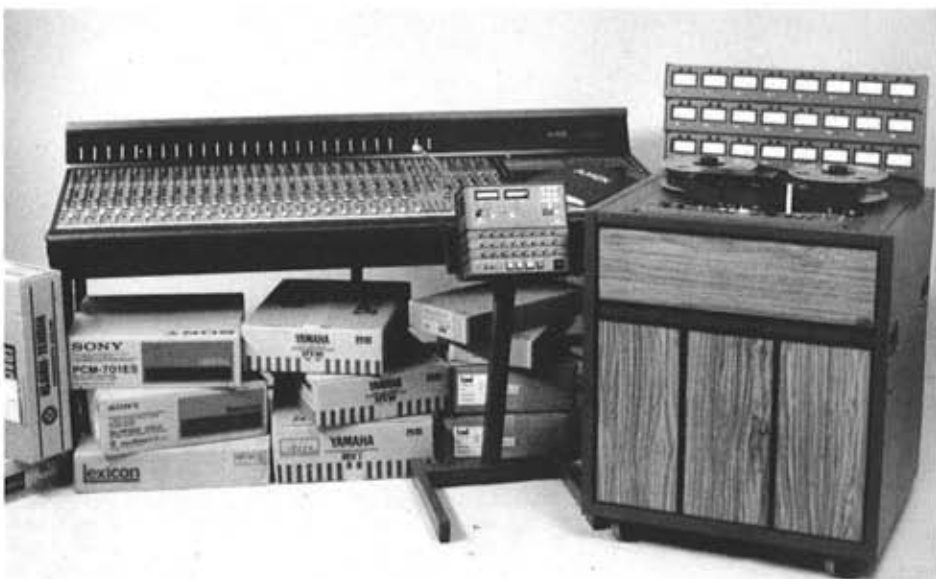
In addition to the overload protection, the Smart Loudspeaker Processor also ensures greater output levels than one would generally expect from equipment of similar physical dimensions, making it ideal for live gigs in TV studios and outside broadcasts where space can be at a premium.

AMS go HHB

HHB Hire and Sales, the London-based professional audio suppliers, is to be a major distributor for one of the most prestigious names in modern studio recording: AMS Industries. The announcement, at the 1986 APRS Show at Olympia, comes only six months after the formation of a unique relationship with Sony Broadcast, one of the world leaders in studio and broadcast technology, whereby HHB became its first pro-audio dealer in the UK.

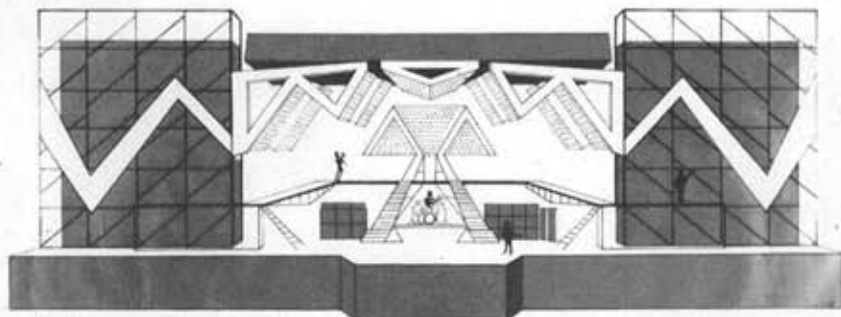


Members of the staff of Sadepra, Madrid, get the 'feel' for Celco.



Studio Package from HHB

HHB recently put together and installed a neat studio package for top record producer Steve Lillywhite. Pictured at HHB's premises prior to installation, the equipment includes the following: an Amek Angela 28 into 24 console, a Sony/MCI JH2424 twenty-four track recorder (complete with auto-locator), a Sony PCM701ES, a Sony SL-HF950 Betamax machine for digital use, two Yamaha SPX90 digital multi-effects units, one Yamaha REV7 digital reverb, two Drawmer DS201 noise gates, two Bel BD240 digital delay lines, one Klark Teknik DM3322 graphic equaliser and a Lexicon PCM70 digital reverb.



Queen on Tour

A sketch of Kimpton Walker Limited's stage construction for the current 'Queen' European tour. The set is four stories high and measures 40ft x 60ft, incorporating a host of innovative lighting—yet it will travel throughout Europe as the band performs 28 shows over a two month period in a total 15 venues.

Electric Inc. and the Fairlight CVI

Electric Inc is a new video graphic hire and consultancy company, initially exploring the potential of the Fairlight C.V.I. (computer video instrument), and offering its hire with specifically trained operators. They also offer for hire Sony Video 8 equipment allowing simple editing and also top quality digital sound recording.

With the CVI's unique keying and painting and video image manipulation facilities, Electric Inc say they can offer instant special video effects in both post production and especially live video presentation with both effects and titling.

The company has the advantage of offering fast low budget special effects and video graphics, relying on the CVI's broad spectrum of inherent facilities from video painting with a variety of brushes etc. to many different totally new keying facilities based on its unique 'stencil options'. With its portability the CVI offers versatility and flexibility to be used in an extremely wide variety of environments from off and on-line editing to live performance and presentation.

For further information contact Electric Inc. at 54a Macfarlane Road, London W12 7JZ telephone 01-740 0317.



On Tour

'On Tour' himself, Keith Dale (right) pictured with Wolfgang Massow and Rolf Garnies of Amptown Licht-technic GmbH in Hamburg during the fit-up for a Joe Jackson concert. The board, naturally enough, is a Celco Series 2 Gold, and no doubt Keith will be telling us about the tour in his column next issue.

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For full details of membership contact
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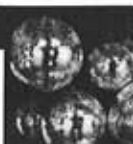


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Ask for Jon, Mark or Roy
Tel: 061-831 7676

GLASGOW

1 Queen Margaret Road Kelvinside
G20 (off Queen Margaret Drive -
Nr Botanical Gardens)
Ask for George, Kevin or Colin
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64 PAGE CATALOGUE ON REQUEST: OPEN MON-FRI 10AM-6PM: SATS 10AM-2PM

TSL Open Drury Lane Shop

Theatre Sound and Lighting, based at London's Queens Theatre and in Kennington, have opened a third arm of their operation at 67 Drury Lane, in a building that backs on to the Theatre Royal.

TSL have had the premises in their control for some time, but according to sales director Matthew Griffiths, "we were waiting for something to come up, and keeping our options open". The something that did come up, and trigger developments, was when they were chosen to take over the UK distributorship of Clear-Com intercom systems, previously looked after by TBA before the group went into receivership.

Alongside Clear-Com TSL have lined up three other main specialisms. You can now buy CCT theatre lanterns, Action Lighting's lamps and accessories, and video lighting and kits. Sound equipment will eventually complete a neat handful of varied equipment, all approached from the direction of a market leader in each field, with quality the emphasis in each case. "We will only handle market leaders, and have no intention of becoming a supermarket," Matthew Griffiths told L+SI.

The operation is known as TSL Sales, and is run locally by Zounie Sallil, who had previously looked after the Clear-Com side of the business at TBA. Matthew Griffiths obviously keeps a close eye on operations, and also in the building is Maciuk, TSL's director in charge of sound, which is operated from the premises.



Theatre Sound and Lighting sales director Matthew Griffiths pictured with a Clear-Com intercom system.

Lighting hire, the conference and optics departments, and day-to-day running of Theatre Sound and Lighting originates from Kennington, and there are a total of 30 staff across the group. Apart from the hire of equipment to many West End shows, TSL operates nationally, most particularly on conference presentation work that embraces many major national accounts.

Established in the late sixties by the 'gang of five' - Cyril Griffiths, Arthur Watson, Joe Davis, Ian Dow and Dick Lock - the company was purely West End and purely theatre orientated. In the mid-seventies Eddie Biddle came in to look after effects, and Gerry Quinn to develop the conference side of the business. The current team of directors is a mix of the young with the venerable. Cyril

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Zounie Sallil will provide the welcome at TSL's new shop at 67 Drury Lane.

Griffiths is managing director and Arthur Watson is chairman, although semi-retired. Gerry Quinn is deputy managing director, and Lenny Tucker the director in charge of lighting. Peter Maciuk we've already mentioned, and Matthew Griffiths, son of the founder, is company secretary in addition to



Action Lighting LTD

wish

Theatre Sound and Lighting
every success
with their new venture

his tasks on the sales side.

The new 'gang of six' is evidently working well as a mix, and the business will continue to broaden its approach to the entertainment business. "The products we handle will be suited to the customer, and not necessarily the hire company," explained Matthew Griffiths. "There will be a new approach and new ideas, and we intend to be friendly, efficient and straight-forward."

He is particularly keen on the development strides that the company can make with Clear-Com. "Our aim is to convert Great Britain to use Clear-Com as the standard, as it is in the States. Apart from television outside broadcast work, TSL has exclusive UK dealership for all Clear-Com products and our market is huge - in fact, anywhere there is a high noise environment, in addition to all other regular uses."

And he is full of confidence. "It's not been rushed. Every move has been worked out," he told L+S.



Director Peter Maciuk in TSL's sound store room.

New US Trade Shows

Night Club and Bar, the US magazine for nightclub and bar management published out of Oxford in Mississippi has just announced the establishment of two international trade shows and conferences to serve the industry. The shows will be launched under the title **Nightclub & Bar EXPO** and will be held at Las Vegas (January 5-7, 1987), and Atlanta (April 13-15, 1987).

Each show will include a national conference and programme of seminars "designed specifically for the disco and night club owner and manager" and will bring together "the best in Europe and the USA", say the organisers.

At first sight these events should give many UK companies a long needed chance to attack the huge US markets from centralised points and the ability to mix and meet with the vital elements in the entertainment business structure across the Atlantic.

For full details contact Night Club & Bar Magazine, 305 W. Jackson Avenue, Oxford, Mississippi 38655, USA telephone (601) 236 5510.

PLASA Show Catalogue

Lighting + Sound International will be producing the Official Catalogue for the big PLASA event, and this will be in A4 format and mailed with the August issue of the magazine. In addition, a copy will be given free to every registered visitor to the Show at Novotel. A brochure requesting editorial

information from exhibitors and listing advertising rates has been mailed to all exhibitors and other leading manufacturing companies, dealers and servicing operations.

For further information give John Offord a call on (0323) 642639. Final copy date for the exhibitor profiles is July 20, and for advertising copy July 31.

Tall Story

A discotheque was opened in June on the top of the world's tallest free-standing building - the C.N. Tower in Toronto, Canada, on the occasion of its 10th anniversary.

The lighting is controlled by the world's 'top' lighting controller, Zero 88's Eclipse.

New at Starlight

Starlight Design of Bourn in Cambridgeshire have announced that Dave White has joined them as senior installation engineer. Along with designer Graham Smith, he will handle the installation aspect of the design service that the company offers to club owners and trade customers alike.

Letters

Contradiction in Terms

Dear Editor,
I refer to the item in your last issue of Lighting+Sound International headed 'DDA Installations'.

All the desks listed have not been supplied through M.A.C. but are part of the M.A.C. sound hire stock. English National Opera used a 24/8/2 and a 28/8/2 with no standard connections, all inputs and outputs being wired by M.A.C. via Edac connectors to a 480 way jackfield.

H.M.S. Pinafore had a 56 input desk with a complete system and la Cage Aux Folles has a 60 input desk again with a complete system on hire from M.A.C.

La Cage Aux Folles also has a main speaker system supplied by Renkus Heinz, and to the best of our knowledge this is the first time such a system has been used on a major musical in this country.

Finally, we are definitely Audio, not Visual!

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For TP read 'Technical Projects'

John Offord has a two-way communication with Sam Wise on the Isle of Wight

Sam Wise of Technical Projects, the Cowes Isle of Wight-based communications and test equipment designers and manufacturers, is a man who moves deliberately, but quickly. A graduate in electronics engineering, he was born in San Francisco, raised in Texas, and grew up in Maryland. "When I decided to stay in Britain, no one believed that an electronics engineer from America would stay in Britain, and I found it very difficult to get a job," he explained.

"My first job was with a major photographic company servicing pocket radios, and six months later I was running their audio services division. Just 18 months later I left. They wanted to promote me to head office but I couldn't agree with their policy regarding quality and customer support.

"Being a musician, I wanted to find something that would combine my skills, and tried to get into recording studio work. Eventually I went to work for Sony for 6 months before I joined Theatre Projects in 1973 in London. When I joined them, I was the only electronics person in the group, and I started as maintenance engineer for the recording studios.

"What happened at TP was that aside from maintaining the studios, I also became involved with constructing small bits of



Sam Wise - marketing Technical Projects.

specialist equipment for the hire companies. These bits of equipment worked and continued to work, and were taken out on tour and still continued to work after that, and so

a reputation began to develop that there was someone in the company who could build things 'that worked and continued to work'.

"Now I wasn't a brilliant circuit designer, and I am not today, but I was quite good at understanding people's needs, and of dreaming up ways of putting things together. Out of this grew, initially, the consultants in the company pushing jobs in our direction.

"Then we started undertaking installation work, and along with that we produced our first sound console because we couldn't find anything to purchase which was at the right standard and designed for live sound use. We were very proud of our first ones at the time. In those days Electrosonic were building sound installations for the theatre, and virtually no one else. Soundcraft were just starting, and a lot of the companies which are now in pro audio were just beginning to sprout up and we were one of them.

"Anyway, we continued to make this equipment and then I hired David Higton who is my engineering director here now, and he became our circuit designer as I took on more system engineering, and actually seeing things built. It grew from there.

"Eventually, an agreement was reached with Rank and they formed Strand Sound, and took over our designs and some of our production staff, and there was an agreement for us to continue developing products for them. The agreement continued for about 2 years until the end of 1979, and Strand Sound ran for a couple more years after that, but when our agreement finished we were left high and dry.

"We then started doing other things; we undertook some major installations in the London area, and received a contract from Pinewood Film Studios for a film post-production mixing console in 1980. A year later it was delivered, and we were told that it had paid for itself within 14 months. All of the new James Bond, Pink Floyd, new Pink Panther, and Superman films - in fact all major film productions at Pinewood were produced on our console, and it's still operated there quite happily. In my view, that was a major achievement.

"It then became apparent to us that we wanted to be an independent manufacturing company, so we began to push for backing for this. Along the way our existing major product was our intercom system, and there was an agreement with Rank that if we re-packaged them we could go and market them ourselves.

"The intercom became our bread and butter product, and we determined that, as we couldn't conceive a new mixer that was going to be earth-shattering, we decided to go for the products we **ought** to make. What



The 60 channel 32 group film post production console built for Pinewood Studios and commissioned in September 1981. In its day it was the largest automated console in the world.

we also decided that we were having a hell of a job testing mixers we used to build, and a good way to move would be to go into testing management in the audio field.

"So we put together a business plan based on compact systems, intercom systems and testing management."

Technical Projects Limited was funded away from the Theatre Projects Group in August 1983, and commenced operations on the Isle of Wight in October the same year. It has grown from 5 people to 40 in the space of three years. In addition to Sam Wise, three key people moved across the water to the Island from TP to keep him company in the new set up: engineering director David Higton, Tony King who looks after quality control, and Tony Crockett who is sales engineer. Joining the top five team is production manager Len Bennett.

All early research and development went towards perfecting the test equipment, but earlier this year Technical Projects moved back towards developing their intercom range. "Our new products that were first shown at APRS, are aimed at getting towards the more up-market end of theatre communications and into broadcasting. Our business at the moment is about 55 per cent export, and a third of sales is related to intercom systems, two-thirds to test," explained Sam Wise.

"One of the unfortunate things about intercoms is that it is never the most important thing that someone is buying. If they are putting together a lighting system they think about the luminaires and control desk and dimmers, and then at the end they think about the intercom. If they are putting together a sound system they think of the mixing consoles, the power supplies and the speakers, and then they think of the intercom. So, often the money comes out of what's left over.

"Secondly, it is not often as well planned as it should be, and it's not given enough consideration. This is also something we have to bear in mind with dealers as well, because to the dealer our product doesn't make up the bulk of his turnover. It limits the kind of muscle you can have over your dealer, and consequently it is very difficult to know how much you are selling anywhere, and to whom, and so much also goes into a hire situation. But we have certainly got a very significant market share, with about 75 per cent of our sales going into the theatre, hire, and live entertainment area.

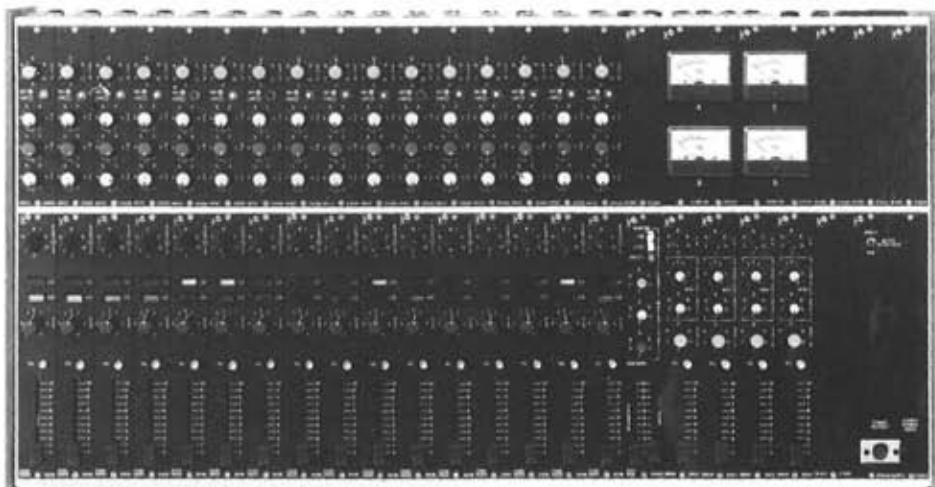
"Our growth area is in the larger complexes where we haven't previously had the products. We have good out-stations, but we haven't had the central switching necessary for larger theatres. And that's where our new products are very important. They will also move us into the medium-sized broadcast and video production areas.

"In the future test equipment will probably remain 60 to 70 per cent of our business because the test area has grown very rapidly whereas intercom business will grow more slowly because the entertainments industry market is limited. The industrial market is an education job, so, in ten years time we may see that the intercom end has equalled our sales on the test side. But in the meantime, we have to teach people what 'team communications' can do . . .

"I enjoy the entertainment business, and it's rather unfortunate that theatre itself has such



The basic intercom product range which was introduced at the end of 1982.



The Series 1000 theatre mixer designed in 1978 for Strand Sound. "We still get orders for them on pure reputation - they were built to be fool-proof". And to prove the point, one is being delivered to a customer in France next month.



David Collison, pictured at the National Theatre whilst managing director of Theatre Projects Sound Limited. Sam Wise learned his "theatre exposure" from him.



David Higton is Technical Projects' engineering director and was with Sam Wise at Theatre Projects during the formative years.



Testing the testers in Technical Projects' Cowes Isle of Wight workshops.

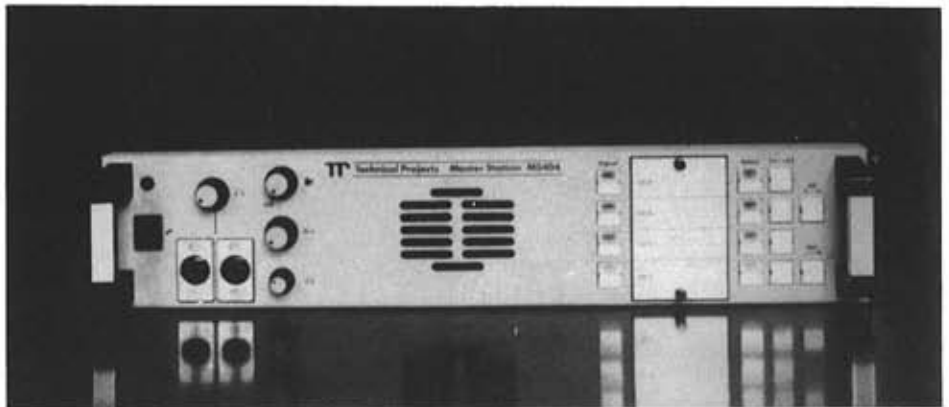
limited financial resources, because what we have found in the past is being a quality orientated company, it was very difficult to be in the theatre as an equipment supplier. Often, to do the job right it costs more than the client is able or prepared to pay. When we were doing installations we found that users were often unwilling to pay for what was really the right job, and I think that consultants have found this also. They now realise that the lowest bid is often not the right one.

"Because of under-pricing or inadequate quality, we have often been called in to support an installation that wasn't good enough, and it's rather disappointing for us as we actually enjoy designing theatre sound installations and implementing them. We find it very discouraging to design these installations and put up proposals, and then find that someone down the road has been given all our drawings and asked to do the job. The installation would be stripped to get it down to the price, and then work unsatisfactorily. However, there is no more money to replace it, and that is the main reason why we have moved a little away from the live entertainments industry. It is different in the broadcasting field where quality and reliability are so costly if they are not right, that the customer is willing to pay for the standard that a company like ours works to.

"One unfortunate circumstance of our policy in signing up overseas distributors has been to choose companies that have high technical standards and high customer support standards in favour of companies that have a strong selling effort, and this has meant we are selling very little to companies which are theatre orientated. The theatre-related company may give its customer back-up in terms of rushing out and putting a cable in, but wouldn't be capable of repairing our test sets, and couldn't give good

technical advice on intercoms. Therefore, we have gone for companies which are more related to the broadcasting industry, and that means that overseas we haven't been as close to the theatre as we would have liked. Theatre companies often have a reputation for being uncoordinated outfits. They may be professional in terms of the service they offer in designing and installation and getting the show on the road, but technically and organisationally they are often very lacking, and run completely on enthusiasm.

"Things like our test set require planning and careful work. On the export market we haven't been involved so much in theatre, certainly not directly. But fortunately, here in the UK we have still to get involved in solving people's problems in communication in the theatre, and one of the things which we have added to our range has been our radio adaptors. They are like walkie-talkies which are plugged into the system and used and operated from the system, and then unplugged to be used for rigging afterwards - which has been a nice benefit for everybody."



Latest product from the stable of Technical Projects, the new range of micro-processor 4 and 8 channel intercom stations was launched at the recent APRS Show. It is designed to combine all theatrical communications into one box.



The recently-launched dual channel belt pack.



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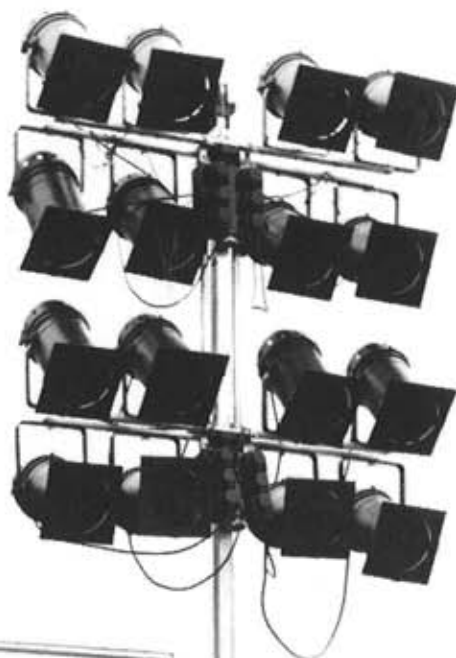
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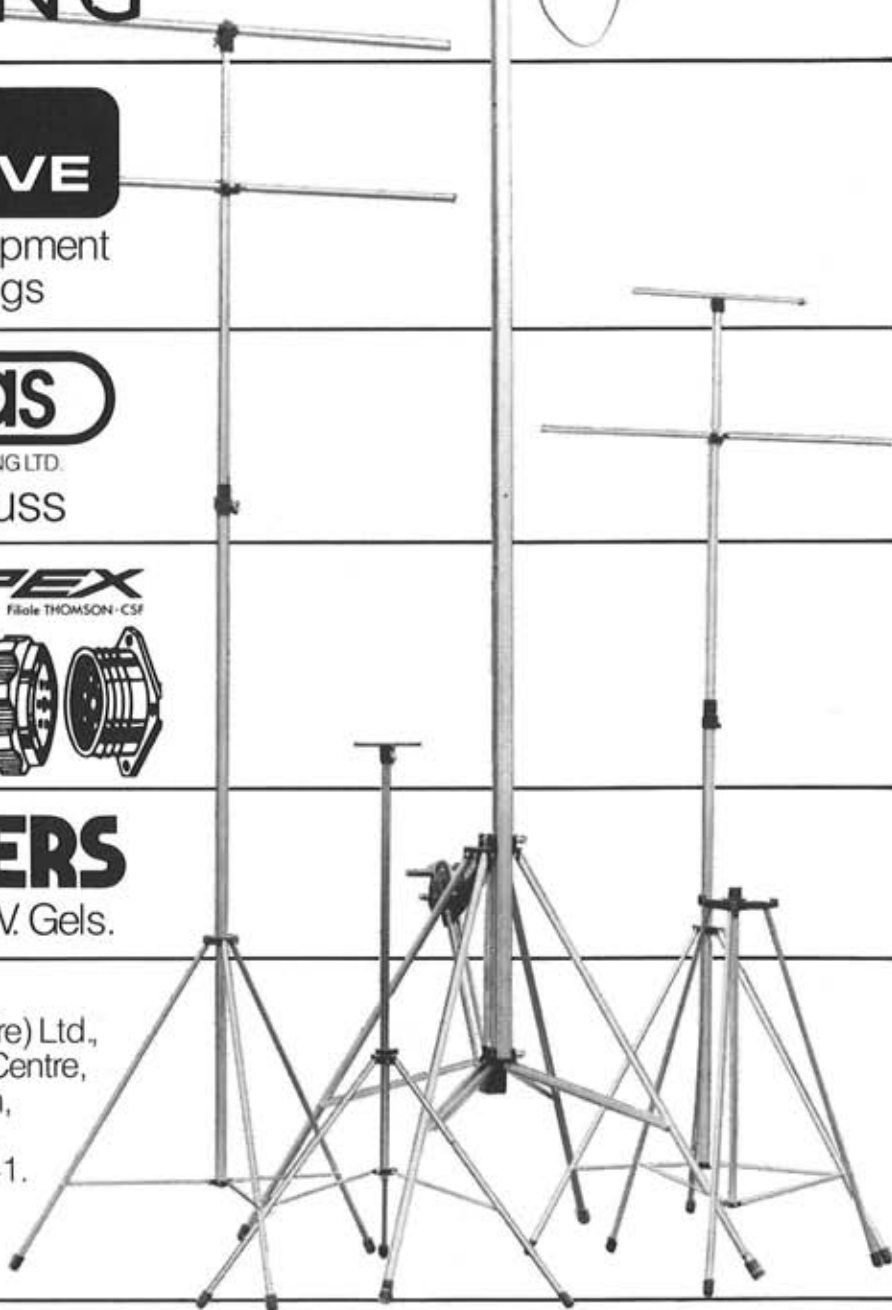
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Grieghallen in Bergen: A Song for Norway

Hemmed in by mountains, Bergen, the second city of Norway, is not the most accessible of cities to include on a schedule of concert tours, but the venue's management has worked hard over the past few years to make sure the entertainment world is fully aware of the excellent facilities available at Grieghallen, in the struggle to attract top quality product.

The hall is one of the most technically advanced in Europe, and the city itself both welcoming and beautiful. After winning the competition with other Norwegian centres it hosted the Eurovision Song Contest in May this year, and welcomed with open arms the chance to show its capabilities to the full.

John Offord spoke to manager of Grieghallen, Rolf Skogstrand.

It took a long and highly-chequered history of a philharmonic society to eventually bring about the building of one of Europe's leading multi-purpose venues. The history of Grieghallen is interwoven with that of "Musikkselskabet Harmonien", founded in 1765, and one of the world's oldest symphony orchestras.

The orchestra had been homeless for more than 50 years when the composer Edvard Grieg took the initiative in 1898 to establish a permanent concert hall. He met with a lot of opposition, however, partly by people who didn't like him and would oppose whatever he suggested.

Grieg had been conductor of the society's orchestra and choir some years earlier, and he brought both up to a standard never reached before. The 50 members of the orchestra and the 100 members of the choir, were nearly all amateurs. It was the "in" thing to play and sing and an honour to be con-

ducted by Grieg. As Grieg picked his "team" without consideration for birth, fame or fortune, quite a few members of the society felt offended. And when without consulting the board of directors he dismissed nine young ladies from the choir because they had gone to a ball instead of coming to a rehearsal, the number of people disliking Grieg rose sharply.

Episodes like these may well be the reason why his plans were never realised, but after his death in 1907, other members of the society took up his idea. On the site Grieg had chosen, a new theatre had been erected. It took nearly 30 years before agreement was reached on a suitable new site, and another 10 before the City Council decided to grant it for the purpose.

A shipowner, Haakon Wallem, donated one million Norwegian kroner in 1947, and the planning finally started. Again a disagreement arose between the interested parties:



The Grieghallen complex in Bergen - Norway's second city - and venue for the 1986 Eurovision Song Contest.



Looking across the stage during preparations for the Eurovision Song Contest, May 1986.



This view from one side of the auditorium shows the set being assembled together with stage-front neons and the scoreboard awaiting positioning, front of stage.



The auditorium ready for the Contest to begin with the specially-built bank of commentary boxes at the rear.



The startling effect of Grieghallen at dusk.

should it be a hall for concerts only, or a multi-purpose hall? The last alternative was finally chosen, and an inter-Nordic architect's competition was arranged. Of the 70 entries, the jury picked out the Danish architect Knud Munk as winner. At the time he was 28 and had a full-time job in a firm in Copenhagen, and had drawn the winning plans in his spare time on his dining room table at home.

To raise money proved to be the most difficult part of the whole project, but a combination of grants and loans from the state, city, the county and liberal private donations, made it possible to open the hall in 1978.

Working on the presumption that "everything in show business can be improvised—except space", Grieghallen boasts a huge stage—a total of 800 square metres. The orchestra pit is 100 square metres in area and the floor can be elevated when the pit is not in use, making the available stage area even larger—large enough for major ice shows, in fact. The height from the stage floor to grid is 26 metres.

When used for concerts the stage is surrounded by an acoustic shell, which can be folded and driven backstage in a matter of minutes. The shell forms a natural continuation of the auditorium onto the stage. In theatre style, it has a traditional, variable proscenium, with fly system and tower.

The auditorium is fan-shaped and divided into two halves by a gangway parallel to the line of the proscenium. With the pit in use Grieghallen seats 1406 people, but when the hydraulic lift is in the middle position, 98 extra seats can be added, raising the total capacity to over 1500.

The hall works especially well for natural sound or music, but has the latest Meyer sound system for both PA and recording—the hall is used frequently for recording and studio work. The house lighting control is a 180 channel Strand Gemini board with a colour VDU, special effects unit, floppy disc storage, back-up unit and a designer's remote control. The board controls 216 dimmers by means of a soft patch device. The



Set building and light rigging in progress - a view from the auditorium of Grieghallen.



Looking from the side of the stage through to the auditorium, this photograph illustrates the huge performance area available at Grieghallen.



Lighting director Asbjorn Hagen supervises rigging of lanterns.

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Nearing completion - television cameras on stage, and Soundcraft desks positioned on the auditorium's central gangway.



One of the specially-built commentary booths, and the view to stage.

dimmers are by Alex Grosman of Denmark, and consist of 72 at 3.5k, 138 at 5.5k and 6 at 10k. There are 88 FOH circuits and 128 stage circuits. For incoming tours there are several 3 phase plus earth feeds in the stage area, varying from 16 amps to 125 amps.

Grieghallen's readiness to supply the needs of major incoming international artistes and shows has already placed it on the show business map, but hosting an event of the magnitude of the Eurovision Song Contest would frighten off many venues of much larger size.

The city and venue went out of their way to make the 1986 event one to be remembered—particularly after the surprise of Bobbysocks winning the 1985 contest, and the brickbats received year after year with repeatedly poor showings when the points were counted up.

Within a couple of months after the conclusion of the 1985 event, Bergen knew they'd

got their prize, and meetings started in earnest. Rolf Skogstrand takes up the story:

"NRK, Norway's national broadcasting organisation, had full responsibility for the planning and direction of all technical arrangements for the event, and there was close co-operation between Grieghallen's lighting staff and the lighting technicians of NRK. The rigging went on parallel with the building of the set, and took about 14 days within normal working hours. At the most hectic point up to ten people were working on rigging the lights. Nine lighting technicians actually worked on the Eurovision show itself: 3 on controls, 4 on follow spots, and there were two floor technicians.

"The rig consisted mainly of manual and motorised bars, using the hall's own equipment. At both sides of the stage there were additional lighting bars installed for general overall lighting of the stage area. Also, over the proscenium, three specially installed

trusses were brought in on motorised hoists. At the rear of the auditorium two towers were constructed, with a follow spot on each, and two further follow spots were located on the stage gallery.

"The basic rig was fitted with 2k and 5k fresnels, and 1k Par 64's, plus a few 2k profiles that were used for key lighting and other lanterns for colour washing. Cyc lighting was employed to illuminate the stage structures and back wall.

"Within the set elements 10 Pancan units were employed, mounted on 1k Par 64 cans. Over 4 kilometres of cable were employed on the suspended part of the rig alone. In addition, neons were employed on stair case edgings and vertically on the stage fronts.

"FOH follow spots consisted of two Strong Supertroopers, and from behind there was one Berkey Colorsport 2 and a Neithammer MVU108. The other Berkey Colorsport was housed in the control room as a reserve. The rig over the stage/auditorium had a total of 350 spotlights amounting to a total load of 750k. About 120k of power was used to light the audience.

"Rehearsal time allowed fully individual settings for all performers, and altogether over 100 different cues were employed for the whole performance.

"There were three different control systems, each operated from the hall's own control room. A control was a Strand Tempus 24 which looked after the backstage areas only. The B system was a Strand Gemini which controlled the 10 Pancans, plus specialities within the sets, and all the neons. C system was the Strand Gemini house system - 180 ways plus soft patch - which controlled 216 dimmers, most on 5.5k, and this controlled all the rest of the stage and auditorium lighting. The B system also acted as a back-up for C system in case of emergency, and was programmed for the effects required, including chase, flicker and it was also audio-linked.

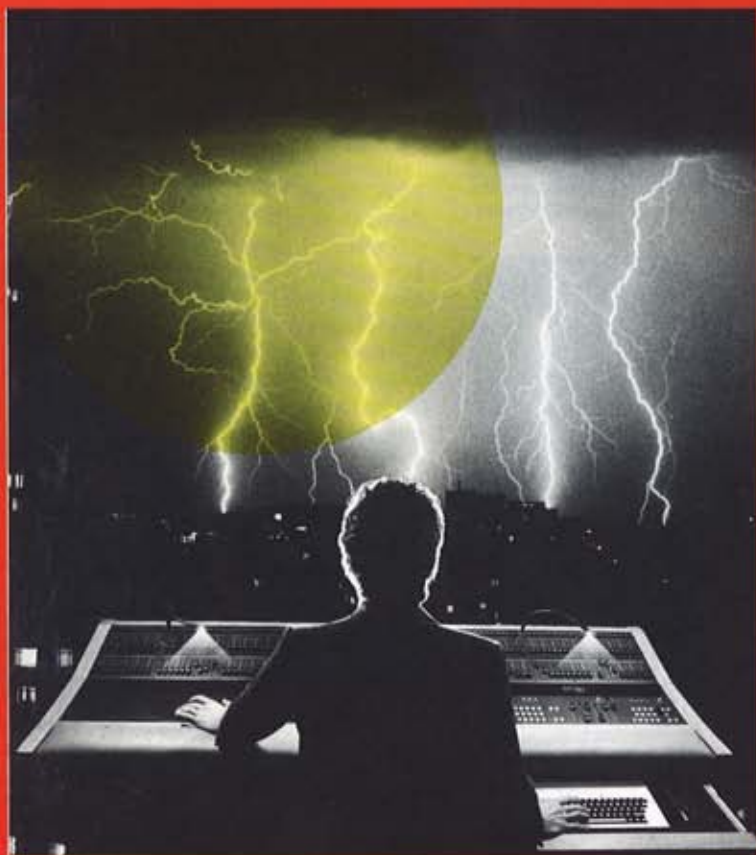
"As far as the main power supply was concerned, we could cope with an emergency in two ways. An independent extra supply was made available from the city power services that could effect a switchover within seconds if the house system failed. As an additional back-up two mobile generators were available.

"For sound the house system was used, and in addition 3 Soundcraft 800B desks were also brought in together with various other equipment including a Quantec room simulator, 4 Klark Teknik DN360 equalisers, 2 Klark Teknik DM700 reverb units, and 5 DBX160x compressor/limiters. Four UPA1 speakers were also added front of house. Altogether 130 mics were employed, all lines being fed into the control of NRK. For house PA 54 of the most essential lines were used with the addition of pre-mixed groups. This provided the house mix for live performance.

"Two of the Soundcraft desks were used for monitoring and other equipment included 8 Klark Teknik DN360 equalisers, C Audio amps and Crest amps. The C Audio amps were used to drive 14 Tannoy Super Reds, and the Crests fed the four Meyer UM1's for performers up front."

Needless to say, the 1986 Eurovision Song Contest at Grieghallen went exactly to plan.

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The Bradford Brush-Up

Alhambra gets £8.25m Refurbishment

The "Curtains!!!" Committee, which operated under the auspices of SAVE Britain's Heritage, recently researched all Britain's surviving pre-1914 theatres and music halls. They listed Bradford's Alhambra as a 'three-star' example - "a very fine theatre or music hall of the highest theatrical quality" - the best possible rating.

In fact, the theatre opened as a music hall, and isn't pre-1914 at all, having opened its

doors at Easter 1914 with a variety show. But one would agree whole-heartedly with the Curtains Committee that it should have been included in their research, because it was one of the very last theatres to be built in the Victorian/Edwardian grand theatre style. And to the present day it has retained its intimacy, despite having a large auditorium with 1500 seats in stalls, circle and upper circle.

The first controlling company's agreement was terminated after two years, and in 1916 owner Francis Laidler went into an agreement with Moss Empires to run the theatre which lasted for 42 years. Laidler died in 1955 and eventually in 1959 the building was offered for sale and subsequently purchased by the then Bradford Corporation. It was leased back to the manager of the day, Rowland Hill, who ran it in partnership with



A 'fish-eye' lens view of the Alhambra, Bradford, taken from directly under the proscenium arch, showing stage area (above) and the auditorium.

Herbett Shutt. Since 1974 the theatre has been directly administered by the Bradford Metropolitan Authority and used as the district's major venue for stage productions of all kinds including tours and one-night concerts.

The popularity of the venue helped persuade the local authority that as part of its huge spending on leisure facilities, the Alhambra should not be left out of the small grid of number one touring theatres in the UK capable of attracting the top shows.

A huge redevelopment programme was commenced in 1984, and completed in May this year. It has cost £8.25m, and has involved the creation of new front of house facilities including bars, the creation of a new large stage and fly tower, new dressing rooms and company accommodation, and the creation of an additional performance/rehearsal space.

The theatre is now able to accommodate every type of performing art, and is also able to cater for conferences and small exhibitions, as well as providing general public access to the front of house facilities. Audience facilities include large new bars and foyer areas, and the entrance to the theatre has been enlarged to provide easier access to the fully computerised box office.

The auditorium itself has been completely refurbished to enhance its fine Edwardian design and a new orchestra pit provided to accommodate up to 65 musicians. Considerable work has been done to improve the stage and backstage facilities. The stage itself has been completely rebuilt with a semi-sprung maple strip floor and the rake has been eliminated. The effective stage area has been almost doubled and now has



Sparkling new exterior of the Bradford Alhambra.

a depth of approximately 18 metres.

The fly tower has been enlarged and now has over 50 counterweight lines, greatly increasing the flexibility of production. The new scene dock and hydraulic lift enable flats and the bulkiest props to be taken directly from the scene dock to the stage.

New dressing rooms, with a mixture of sizes from individual stars to chorus areas, will now accommodate over 100 artistes. Overflow facilities can be made available in the new rehearsal area adjacent to the stage. Touring company offices have been included in the new dressing room area together with a new green room and bar, band room, war-

drobe, props store, workshops and staff accommodation.

Behind the stage the new rehearsal space is equal in size to the Alhambra's acting area. When this is not being used for rehearsals, it will be available for small-scale theatre productions, theatre workshops and exhibitions.

Technical manager at the Alhambra is 35 year old Roger Bushby-Sansom who was formerly technical manager with Northern Ballet Theatre for seven years, having toured with them worldwide and throughout the UK. "It took all the prestige of opening a new theatre with all its challenges to entice me away from the touring and the ballet I love,"



The refurbished theatre was re-opened on 27th May, 1986.

he told L+SI. "I am over the moon at the backstage facilities, and we should now be capable of taking anything people care to throw at us."

Appropriately, the re-opening production in late May was by Ballet Rambert and it included a world premiere in the programme. It was lit and staged by Bushby-Sansom. "According to the critics, it's the best dance stage anywhere in the country," he said.

Further praise for the venue came from Tommy Steele, whose new one-man show was premiered at the Alhambra in early July for a short season.

Lighting equipment was installed by Northern Light and control is by a Strand Gemini 150 way board. Sound was installed by Audix Limited and performance sound is based on a Soundcraft 400B desk patchable into 72 microphone lines, 8 full range proscenium loudspeakers and 46 relay loudspeakers. The communication system provides show relay and paging to five areas from a custom stage manager's desk and also paging from stage door and box office positions. The portable stage manager's desk also contains a ring intercom system, cue lights, show relay controls, effects controls and a telephone intercom.

The whole concept has been based on providing the highest level of facilities throughout the venue, and from chandeliers and wall fittings based on the original designs to enhance the character of the auditorium, through to special cornice fittings in the foyers and feature lighting to bars, nothing has been forgotten in a grand attempt to put Bradford's Alhambra firmly in the top flight of Britain's touring theatres.

Architects Renton Howard Wood Levin Partnership in consultation with Terence Whitwell, Bradford Metropolitan Council.
Consulting Engineers Ove Arup and Partners.
Quantity Surveyors Cleeds.
Management Contractors Higgs and Hill Building Limited.
Theatre Consultants Theatre Projects Limited.

Equipment:

Stage Lighting Equipment:

Lighting Board Strand Gemini 150 ways with infra-red designer's remote for use in stalls or on stage.
 FOH Lighting Circuits 38.
 Stage Lighting Circuits 112.
 5 Internally wired Bars, 4 x 18 way, 1 x 12 way.
 Lanterns: FOH total 40 Silhouette 15 1 kw.

Loose Equipment:

7 Silhouette 15 profiles
 6 Harmony 15.28 profiles
 20 Harmony 22.40 profiles
 48 Harmony F fresnels 1kw
 Cadenza fresnels 2kw
 26 Iris 1 floods 1 kw
 4 Circuit Groundrow
 3 Follow Spots, Strand Solo

Ancillary Power: 200 TPN located on stage level, down stage right. 12 x 6 way, 20m multicore.

Sound Equipment:

Desk and Stage:
 Soundcraft 400B desk with 20 into 2.
 70 mic inputs around stage area including a 19 way stage box - all appearing on jack field in Control Room.
 70 tie line sockets around stage area - all appearing on jack field in Control Room.
 2 x B77 Revox reel-to-reel tape machines.
 1 x Technics cassette machine.
 1 x Technics disk player.

Amps:

Altec Lansing 1650B pre-set minus equalisers powered through Audix Mos-Fet MPA pre-amps.
 Yamaha PZ2002 main amps drive pros left (2) - right (2) -



Control room showing Gemini lighting control board.



Sound control is based on a Soundcraft 400B desk.

cluster (2) - sub-bass L & R (1) plus 2 floating for foldback. All operating with Meyer limiters.

Speaker System:
 All Meyer UPA1 (Pros L & R) (centre top cluster) with back-up reinforcement on digital delay under circle balcony.

Foldback: 2 x Yamaha Wedge S2115HZ; 2 x Yamaha S3115H (general work); 2 x E V Eliminator 10.

Microphones:
 6 x Audio Technica ATM10R omni capacitor
 4 x Audio Technica ATM41 cardioid moving coil
 4 x Beyer MZ60N moving coil (1 u/s) cardioid
 2 x RS 249/946 moving coil switched cardioid
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 8 x AKG C451EB cardioid capacitor
 1 x AKG C451E cardioid capacitor
 8 x AKG CK15 heads for above
 2 x AKG CKS rifle mics
 4 x Audio Technica AT 815 rifle mics (battery only)
 4 x Electrovoice RE18 cardioid moving coil

4 x Shure SM58LC cardioid moving coil
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 2 x AR 116/117 D I Boxes
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New Rover Walks on Water

The Rover 800 Series, a product of the new high tech and robot infested manufacturing lines at Cowley near Oxford, was revealed in sparkling fashion when introduced to dealers as part of its pre-launch publicity. The "show" began on the Continent in Montreux in mid-May before moving to the NEC in Birmingham and finally Harrogate Conference Centre.

Described by BL chief Harold Musgrove in distinctly glowing terms the new flagship carries more than a few hopes and dreams, and it could well prove to be the car that keeps the company afloat. Appropriately, the launch was something special, with a brief to reveal the car through water, without getting it wet.

L+SI talked to lighting designer Andrew Gardner, who described how the revelation was achieved.



Andrew Gardner.

the casement ceiling, and downlighting for the tiered seating was in an orange/amber mix. Walking in to take one's seat, the effect was of clean blue banner strips against black, leading into the warm amber seating area.

"Inside the auditorium, the stage itself was one giant square pool, positioned to put one apex downstage centre. Built into it, a track running upstage carried the revolve and car, and rolling tracks carried the many fountain jets of the water sculpture.

"The pre-reveal sequence was a choreography display of water sculpture performed to the sounds of Handel. Side lighting created a very delicate image, while backlight and toplight filled the water fountains with a multitude of changing colours and effects. Projectors and gobos were used upstage to backlight the fountain arches, and when break-up gobos were used in the horizontal, the water was shredded into thousands of straws of light and dark.



Looking from upstage centre to downstage centre, showing tracking revolve in the tank.

"Vertical mirror blinds acted as front tabs, closing in from either side seconds before the reveal, and the fifty per cent transparent quality enabled the closing patterns of water and light to be seen through it. The reveal followed on immediately, once enough dry-ice and smoke had been pumped into the pool behind the tabs. As the mirror curtains opened, changing patterns of water and low key lighting were employed to mask and 'tease-reveal' the car as it travelled from its hidden upstage position to downstage centre.

"To complement this sequence, a fine waterscreen was pumped into the air downstage and the Rover logo was back-projected onto this. The effect of the water rising and falling created the logo image, dropping down at the last moment to reveal the car itself. As the car revolved, lit in congo blue, certain patterns of water fountain tracked back upstage on either side to form a cyclorama of water, and a projected rainbow image on this completed the framing of the car as it turned and finally came to rest in bright white light and full colour-lit water surround.

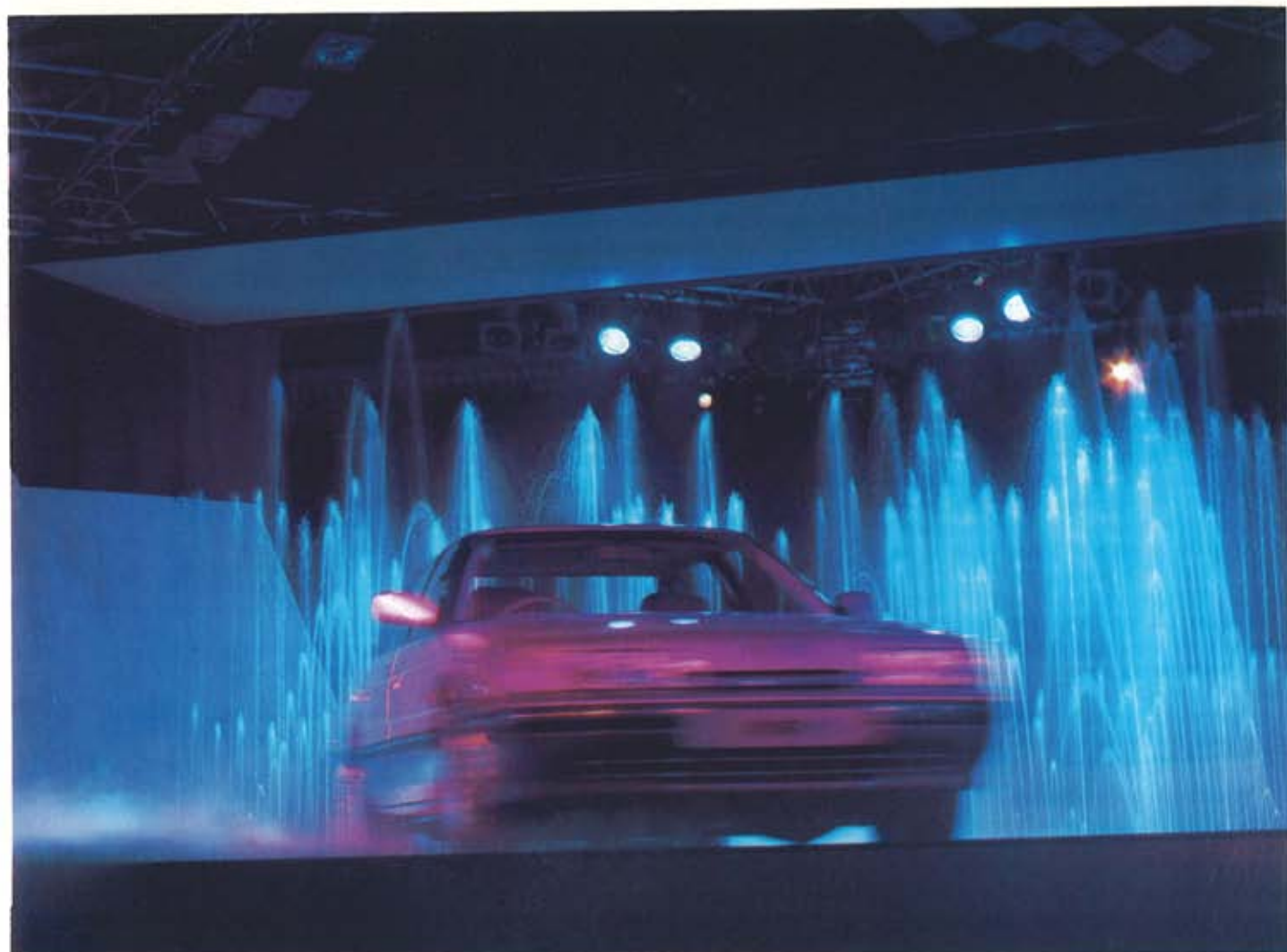
"The entire sequence of pre-reveal and reveal took many hours of careful plotting with a stopwatch until finally, in the early hours of the morning, we managed to get the water right, the lighting right, the set right, and most important of all, the car in the right position! The many facets of the reveal which needed such careful co-ordination were only achieved through great patience, especially on the part of one of the finest and certainly the most patient of crews that I have worked with."

The fit-up had started on May 1st, and

The concept for the presentation involved the transformation of an underground car park in Montreux into a high tech quality environment, with reception areas, exhibition areas, and theatre presentation auditorium. "It was decided to use water fountains to create differing sculptured patterns which could be lit with various effects," he explained. "The lighting design brief also covered the specific areas of reception and auditorium.

"Vertical mirror blinds formed the reception walls and the entire roof area was covered by a suspended ceiling of casement. Three 18 foot diameter revolves mounted on plinths had shallow rubber-lined water tanks incorporated into them, and a car was mounted on each. Mirror blinds on circular tracks concealed the cars and tanks while delegates arrived and passed into the auditorium, and purpose-made curved aluminium barrels supported 24 short nose black Par 64/5s around the outside of the ponds. These were focussed alternately on to car and floor area around the plinths. The mirror blinds were lit with 16 short nose Par 64/5 floorcans per revolve—all concealed in a moat surround at the base of each pond. Blue and white worked well, reflecting off the mirror blinds and showing radiating beams on the black carpet flooring. The result was a reception area of clean line, which was also pleasing to the eye.

"Two tunnels led from the reception area into the auditorium, and they were created by using pale grey casement banners stretched on angle to form Toblerone-shaped entrance ways, each banner uplit in moonlight blue from a short nosed Par 64/5 floorcan concealed in a continuous groundrow panel. More moonlight blue uplighting was used on



The new Rover 800 is revealed.



suspension points were the first priority, closely followed by all the overhead stage truss and lighting, so that the water tank could be assembled, and installation of the fountains begun. Once the lighting multicores (about 4,000 metres of them) had been run in to the various lighting positions, the 2,000 square metres of casement ceiling could be installed. The set and seating area followed, and finally a control room was built to house the Kliegl lighting board.

"By May 9th we had something to light," explained Andrew Gardner, "and focussing started in earnest, or rather Wellington boots. As the majority of the rig was over the water tank stage, and we obviously needed the water fountains to be working to be able to light them, I found myself wading through water, calling instructions to the crew crawling along the trussing to focus, or using a Zarges ladder with 'welly boots' on in the pond itself. Noisy and wet it certainly was, but after the first few lamps had been set, I was totally in love with water as a surface to light. It takes colours beautifully, and gobos and moving effects can be projected onto it. In one sequence we used four high power strobes and the droplets of water hung in mid-air, sparkling like crystal.

"Technical rehearsals followed the focussing, and were long and fairly nerve racking. I did begin to wonder whether we would ever get the car to its correct position in time with everything else, and can't recall the number

of times we ended with the boot facing downstage instead of up, as the music reached its crescendo.

"However, by May 14th, dress rehearsal day, it was definitely getting better. All the different elements were slotting together, and thank God for stopwatches and a good showcaller. The same day saw the first show, and we were rewarded with thunderous applause even before the pre-reveal sequence had finished. The audience loved the reveal, and more importantly, loved the car, too!"

It may be all high tech in the car industry these days, but a bit of "theatrical" magic can still cause wonderment from deal-toughened car men, as Andrew Gardner explained.

"It was in Harrogate that the producer told me he had just heard one delegate saying to another: 'I wonder how they stop the different coloured waters from mixing together as they change shape?'"

"If only he knew!"

Credits

Production company: Hamilton Perry Ltd.
Lighting Designer: Andrew A. Gardner.
Set Designer: Bill Harkin Associates.
Producer: John McDermott.
Production Managers: Chris Venn, Mick Wicks.
Water: Byll Elliot of Water Sculptures of Lancaster.
Account Director: Richard Griffiths.
Stage Manager (Showcaller): Ruth Sallis.
Set Construction: Jonathan Bicknell.
Metalwork: Blackfriars.

Production Electrician: Mike Odam.
Electricians: Gerry Amies, Mark Stitfall, Brian Hunt, Ian Paterson.

Rigging: The Unusual Rigging Company.
Sound: John Neal.
Staging Chief: Christoph Bilinis.
A.V.: Alex Gabriel, John Stilwell.
Cine: Ian Hull.
In total a crew of forty.

Equipment

(by Theatre Projects)

- 16 Par 36 ACL
- 60 Par 64/1
- 62 Par 64/2
- 50 Par 64/5
- 198 Par 64/5 Short Nose Floor Cans
- 24 Par 64/2 Long Nose Floor Cans
- 26 Minnette Profile 650w Zoom
- 8 ADB 1kw Fresnels
- 8 Silhouette 30 1kw
- 6 Patt. 252 Effects Projectors
- 36 Par 46 Rubberlites

Effects:

- 2 Londoner Dry Ice Machines
- 4 Superhilit Strokes
- 1 Strobe Controller
- 1 Rosco Smoke Gun plus 100ft remote
- 2 Slide Carriers with Rainbow slides
- 2 Fleecy Clouds
- 2 Moving Colour Discs

Control:

- 1 96-way Kliegl Performer 2
- 1 96-way Multiplexer
- 1 72-way Avo Racks
- 1 24-way Green Ginger Racks



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Frequency Response (-3dB)	15Hz - 50KHz	15Hz - 50KHz	15Hz - 100KHz	15Hz - 100KHz
Signal to Noise Ratio (DIN AUDIO)	100dB	100dB	100dB	100dB
Input Sensitivity	500mV rms	500mV rms	500mV rms	500mV rms
Input Impedance	100KΩ	100KΩ	100KΩ	100KΩ
Weight in grammes	410	520	420	850
Size in mm	120 x 78 x 40	120 x 78 x 50	120 x 78 x 40	120 x 78 x 100
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Weight	2.5 Kilo	3.3 Kilo	2.5 Kilo	3.7 Kilo
Size	7cm = H, 12cm = W, 29.5cm = L	8cm = H, 12cm = W, 29.5cm = L	7cm = H, 12cm = W, 29.5cm = L	11cm = H, 12cm = W, 29.5cm = L

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Sweetings: the one-man Mecca

Chris Sweeting's compact and exclusive night club complex, newly opened in Bedford on May 29, is the result of one man's effort to make his own mark in the industry, and to push his dreams through to reality.

And he will be the first to admit that it took a lot of willing effort, support and expertise from a top level team, and most particularly from builder Graham Brockbank, to ensure everything came right on the night. But in turn, we can safely say that without the drive and imagination of the man himself, and the ability to enthuse others with his ideas, very little, if anything would have happened. And most certainly Bedford town centre wouldn't have the asset of a 1.2 million pound night spot making its mark on the map.

Chris Sweeting has been in the business for 18 years (his mother still asks him when he is going to get a "proper" job!) and his first real taste came in the form of an assistant managership with Mecca Leisure, having previously dabbled in the industry as a DJ.

He considers the experience of working for a major company a huge bonus. "I've trod the road of targets to reach and budgets to watch, and it was a tremendous foundation," he told me. "There is so much to learn from a major corporate structure, having worked

in seven or eight major cities and gained enormous experience."

Now 36, Chris "played the observer's role on myself", and set his goals and targets. "I decided I'd got to go ahead and get my own outfit. The dream is always there to have your own premises. I'm one of the lucky few who's managed to put it all together."

In fact, he found the Bedford venue by

mistake. Whilst working for Mecca at the Leicester Studio last year he'd popped down to visit a friend in the area and when a shortage of late-night victualling places became obvious, Chris's wife made the obvious suggestion that Bedford might be the place they were looking for to start in business on their own. His search began with a visit to a premises in a nearby block, and the old



Chris Sweeting (right) pictured outside Sweetings 2 entrance with general manager Mark Harrison.



Sweetings 2 showing lighting rig and dance floor with bar in the background and DJ box in right foreground.



The spectacle of Sweetings 1 with the Krypton centre-piece at the furthest point on the neon-lit monorail coming towards camera, centre top.

church hall in St. Peter's Street that was to become Sweetings wasn't actually on the market. Having noticed the building and realising its potential he made an approach to the owner.

That was in the autumn of 1985. The property was eventually signed up in January this year, and literally some ten weeks or so after the builders moved in it was open for business, and a project that Chris Sweeting thought would cost £150,000 to achieve ended up costing well over a million—all financed with assistance from within his family and in conjunction with partner Terry Ramsden.

The club can accommodate up to 600, and has almost 8000 square feet of floor space. It has two main floors: Sweetings 1 on the ground floor is an up-to-the-minute discotheque offering the latest in lighting and laser equipment, and Sweetings 2 above provides a more sophisticated atmosphere for the

over 25's, coupled with high class dining facilities. The interior was completely gutted and refurbished under the guidance of Chelmsford designer Norman Gray, and makes highly effective use of mirrors—largely bevel-edged—that cost upwards of £37,000.

Although a showman, Chris Sweeting is also in business for business' sake. £19,000 has been spent on computers alone, for various aspects of the club's operations. "It's a business, and has to be a professional operation," he said. "It's about spending money wisely, but at the same time creating the 'boy meets girl' excitement stuff."

Creating the atmosphere was a hand-in-hand operation with Mark Harrison, general manager of Sweetings, who was with Chris at Leicester Studio as promotions manager. Together they coerced and cajoled people like Avitec's Tony Kingsley, who supplied and arranged the installation of lighting and sound equipment, to stretch themselves to

the limit to produce that extra slice of imagination engineering that would get everything possible, and more, from any given piece of equipment.

With an eye to quality and excitement, Chris Sweeting admitted to me that most ideas are offshoots. "I must know 200 night clubs up and down the country. I've picked up ideas from Southend to York. What is new is what a particular blend of effects can create.

"There are two kinds of effect: static or moving. If an effect is to move, a significant change has to occur to make it worth having, and apart from things coming out of the floors, we've used everything. It's a mix-and-match in all directions. There are also two views on the equipment itself, as to whether it should be shown or not. I like to show off the equipment in some cases—some of them are raunchy."

The sort of thing he's got in mind is his

Krypton centrepiece. "The only chromed Krypton on a monorail," he emphasises. "We had to stretch the equipment people to the limits, and to insist on what we wanted to achieve." A fact that Tony Kingsley, who had to construct the 30 foot monorail will bear testimony.

Another piece of ingeneering came in the form of using one laser to service both Sweetings 1 and Sweetings 2. By using a 2 inch square 'periscope' the system is beamed up from Sweetings 1 into a single scan remote effects head with a separate controller in Sweetings 2. This was installed by Laserpoint of Cambridge.

Both clubs have video systems on which can be screened laser and computer graphics videos, programmes picked up by the satellite dish on the roof of the building, and live camera shots of customers dancing.

The cost of the equipment came to a staggering £250,000, and Chris Sweeting considers this is one of the club's greatest assets provided it is used in the correct manner. "Correst use of the equipment is vitally important," he said. "It is important, in my view, that a show builds up gradually. It shouldn't be a cabaret show. It's a place for entertainment and an important part of the entertainment is the people themselves."

He calls this style of presentation an 'atmospheric flow' - "otherwise people only come at 10 o'clock for the 10.30 'show'. We want at least three or even four 'peaks' during the evening. Paul Green (entertainments



Sweetings 1 complete lighting rig, with DJ box in background right, and video screen in centre.

manager) is a keyboard player, and he has the 'feel' of how things should be played."

It's now all down to show business, and whether the punters will pay for what Chris Sweeting has on offer. By the book, he seems to have done it right, using every ounce of his experience and energy to create the formula for a successful run.

Final word came from the industry's own

'atmosphere creator', Tony Kingsley of Avitec. "We are very impressed with the club, and by the fact that Chris didn't pull any punches financially to achieve what he wanted in all areas. He consulted various experts in many areas, and was prepared to hand over the reins to them where necessary. We wish him every success."

John Offord

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Equipment:

Lighting (Sweetings 1)

Rigs: 8m monorail system (22mm Meroform) complete for Krypton, chrome finish.

Two static rigs, 22mm Meroform, chrome finish.

Large moving rig, 30mm Meroform, chrome finish.

Four lantern rigs, 30mm Meroform, chrome finish plus 4 crane hoists with controls.

Lighting for 'monorail' rig:

32 Nisel Nistar

48 60mm Zipstrips

(4 channel lighting)

Switched Effects:

1 Kremesa Krypton with controller, chrome finish.

8 x 1.8m Mode Arc-Line

4 Kremesa CR360 Super Fast Scanners with Par 56 lamps

4 Kremesa CR90 Super Slow Scanners with Par 56 lamps

Lighting for static rigs:

32 Kremesa CR1AL pinspots with Par 36 lamps

16 Par 64 lanterns with Raylight reflectors and 650 watt DFR lamps

Switched Effects:

2 Clay Paky Astron 3s

2 Kremesa CR10/10 Contra-rotating helicopters

2 Clay Paky Sputniks with fast spin motors

4 Nisel Rotax 2 Contra-scanners

4 Kremesa CR90 Super Slow Scanners with Par 56 lamps

24 Mini Scatter Strobes

2 Sear Duo-wave units with Halostar 24v 150w lamps

24 lengths 400mm Neon (electric blue)

2 Satel Antorcher high power Strobes with controller

Lighting for moving rig:

32 Nisel Nistar

Switched effects:

2 Kremesa CR20P Jotas

2 Clay Paky Galactic 2s

1 Optikinetics Par 36 Sound Scanner

6 Kremesa CR4V/W Wavers

2 Unicopter 8 lamp

4 Optikinetics Super Slave Strobes

4 Kremesa CR1000P Ribaltas

Lighting for lantern rigs:

27.20m electric blue Neon

27.20m red Neon

16 Kremesa CR56/100 Searchlight pinspots

Switched effects:

4 Kremesa CR20L vertical Jota Harvesters with Par 36 lamps

Side lighting:

8 Nisel Bar 1 10 lamp

2 Sear Duo-wave with Halostar 24v 150w lamps

Stage lighting:

6 Fal Par 56 lanterns with Par 56 lamps

Control equipment:

2 Zero 88 Mercury master controller

2 Zero 88 Mercury 'D' splitter

2 Zero 88 12 channel touch panels

9 Zero 88 Delta dimming packs

3 Zero 88 12 channel touch panels (switch effects)

8 Zero 88 Sigma switch packs

1 ICE Keyflash switch panel

1 ICE 12 way power pack

1 Mode Arc-Line Controller AL200

1 Mode SC4 4 channel Strobe Controller

2 Pulsar 20 unit rack cabinets

1 Pulsar 6 channel stage desk + master dimmer and flash buttons

1 Pulsar 6 x 5 amp dimmer pack

1 Light Processor 414 4 channel Controller

1 Light Processor MP1 power pack

Extras:

Optikinetics Quatrafog smoke machine

Lighting for moving rig:

32 Nisel Nistar

Switched effects:

2 Kremesa CR20P Jotas

2 Clay Paky Galactic 2s

1 Optikinetics Par 36 Sound Scanner

6 Kremesa CR4V/W Wavers

2 Unicopter 8 lamp

4 Optikinetics Super Slave Strobes

4 Kremesa CR1000P Ribaltas

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1 Pulsar 6 channel stage desk + master dimmer and flash buttons

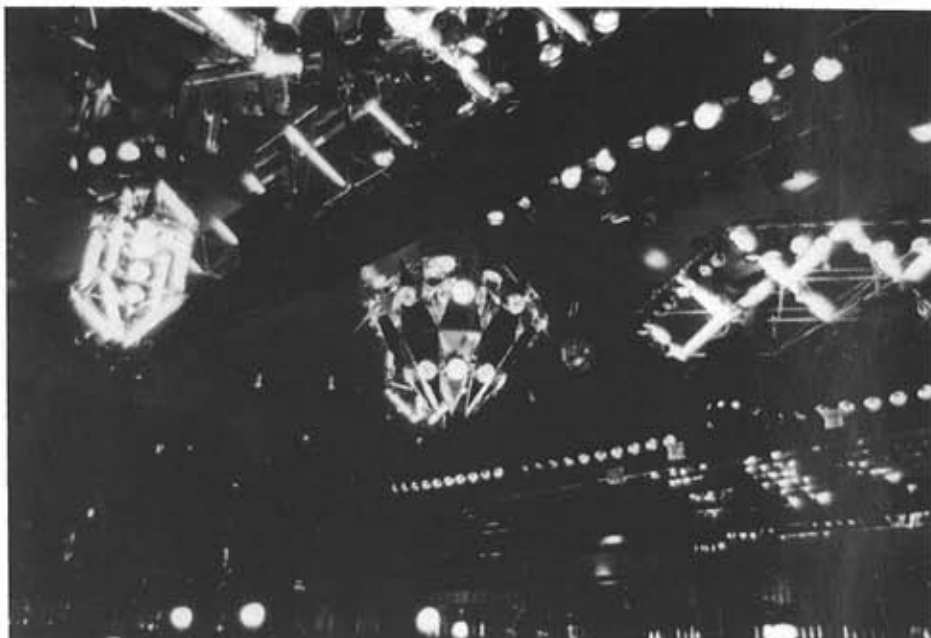
1 Pulsar 6 x 5 amp dimmer pack

1 Light Processor 414 4 channel Controller

1 Light Processor MP1 power pack

Extras:

Optikinetics Quatrafog smoke machine



A general view of lighting in Sweetings 1 with the Krypton in a position half-way along its specially-built monorail.

18 x 0.9 lengths Mode Arc-Line

3 Kremesa B45 45cm Mirror Ball

6 Kremesa CR1AL pinspots with Par 36 lamps (mirror ball spots)

Stage Lighting:

6 FAL Par 56 lanterns

Control Equipment:

1 Zero 88 Mercury Controller

1 Zero 88 'D' Splitter

1 Zero 88 12 channel Touch Panel

4 Zero 88 Delta dimming packs

1 Zero 88 12 channel Touch Panel

4 Zero 88 Sigma switch packs

1 Mode Arc-Line AL200 Controller

1 Pulsar 6 Channel Stage desk

1 Pulsar 6 x 5 amp dimmer pack

Extras:

J.E.M. ZR41C smoke machine.

Laser Equipment:

4 watt Coherent 70-4 controlled by a Laserpoint Aries

two scan controller beam periscoped into a single scan

remote effects head controlled by a Laserpoint 1000D, enabling three-colour output.

Video Equipment:

1 Bell & Howell 250A Hi Beam overhead

projector

1 8' x 6' electric screen with control system

2 Akai AVUB switching/monitor

1 Pioneer computer text/graphics unit

1 JVC GXN70 colour camera ultra lowlight

1 Pan and Tilt + remote unit for Camera

2 JVC HRD 56 SEK VHS HiFi Video recorder/player

4 Barco 2640 PAL colour monitors

1 Satellite fixed system 1.6 music box decoder with 1.6m satellite dish

Sound System (Sweetings 1):

Fill system:

1 Beta 500 amplifier c/w limiter

2 pairs Mission 770 Freedom speakers

Talkback system:

1 Technical Projects 711 mains P.S.U.

2 Technical Projects H 5121 control station

2 Technical Projects SMH 210 single earpiece headset with microphone

DJ Monitor system:

2 Dynacord CL108 speakers

1 Beta 220 amplifier

1 DOD 2 x 15 band graphic equaliser

Stage sound:

1 RSD 6/2/1 6 channel stage mixer

3 LAD GAJ 942SP turntables

3 Stanton D680EL cartridges



Entertainments manager Paul Green (left) at the lighting control in Sweetings 1 with Chris Sweeting.

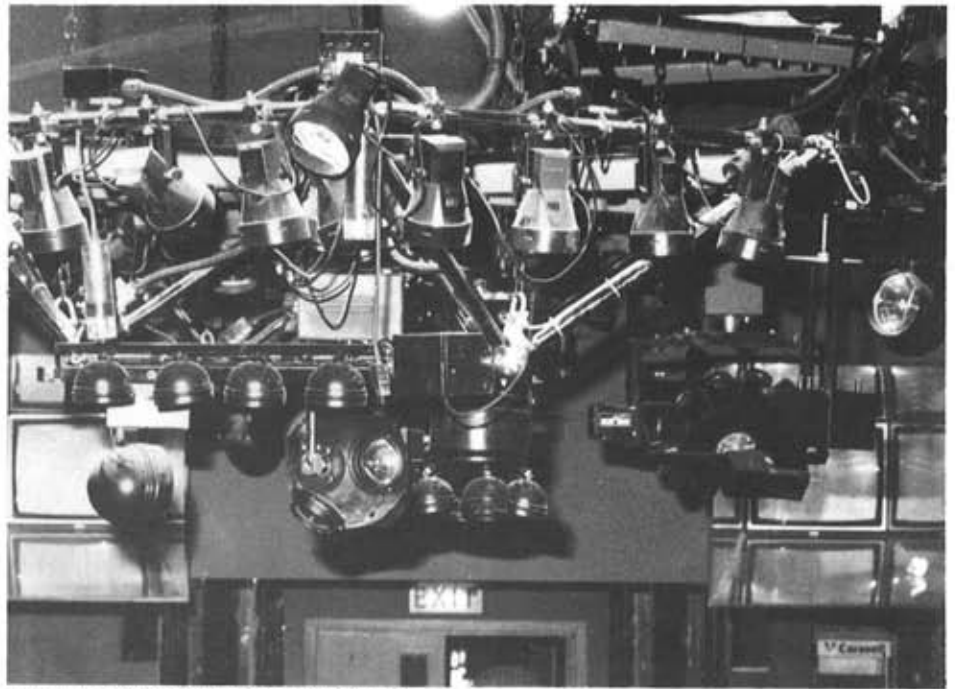
- 1 Dynacord SM8030 mixer
- 1 Shure PE86 microphone
- 1 Angle Poise mic stand
- 1 DOD 2 x 15 band graphic equaliser
- 1 Dynacord PEX 223 Crossover
- 1 AIWA F660 cassette player
- 2 Beta 800 amplifier
- 2 Beta 500 amplifier
- 1 Beta 220 amplifier
- 2 Cerwin Vega L36JE bass cabinets
- 2 Cerwin Vega SW18 sub-bass cabinets
- 2 PRO 400 mid/high cabinets with JBL 2404 bi-radial tweeters

Sweetings 2

- 2 LAD GAJ 828P turntables
- 1 AIWA F660 cassette player
- 1 Shure PE86 microphone
- 1 Angle Poise mic stand
- 1 Soundout Clubmaster mixer
- 1 Beta two way crossover
- 1 DOD 2 x 15 band graphic equaliser
- 1 Beta 500 amplifier
- 1 Beta 800 amplifier



The cocktail bar, Sweetings 1 showing just a small part of the extensive mirror-work in the Club.



A close-up of the lighting rig in Sweetings 2.

- 2 Dynacord CL108 mid/high cabinets
- 1 Dynacord CI808 bass cabinets
- 1 Pulsar 20 unit rack cabinet

Fill system:

- 1 pair Mission 770 Freedom Speakers
- 1 Beta 500 amplifier

Stage sound:

- 1 RSD 6/2/1 6 channel stage mixer

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- Bypass switch
- Master output level -70dB with EQ flat

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Plain Tales from Southern India

Francis Reid

India is a vast and complex country: it would be foolhardy to try to draw any meaningful conclusions about theatres, their lighting and sound, from a three week tour of the southern states. Indeed priority for the eyes and ears of a first time visitor is inevitably the vibrant images of Indian life rather than any mere theatre which might reflect that life. However, since my journey was a specifically theatre one undertaken on behalf of the British Council to share my experience of design and technology with theatres and university drama departments, I suspect that I saw as wide a range of stages as is feasible in the time available.

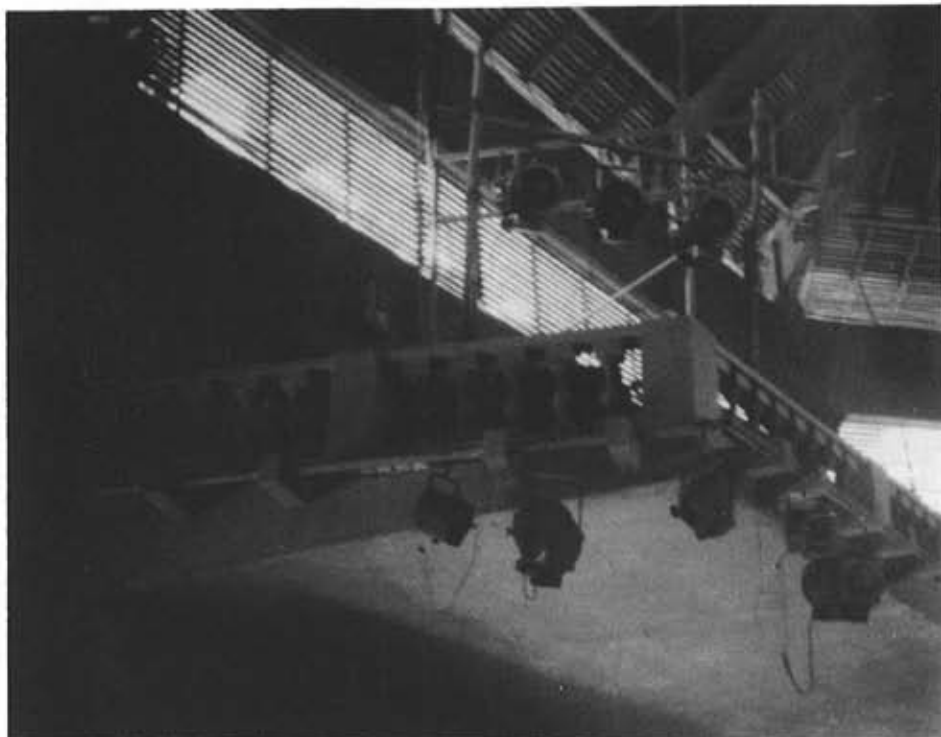
Indian theatre tradition is more deeply rooted and continuous than that of the West. The prominence of the Greeks in our received notion of stage history is a result of the prominence of playwriting in their literature, and the durability of their theatre architecture. Indian theatre has not many monuments of the period prior to the arrival of the British with their proscenium arch. The creation of performance space was part of the total performance ritual and many of the traditional ritual dramas of the state of Kerala have recently been researched and documented by the School of Drama at the University of Calicut. The importance of their extensive videos is not just the performances where the actors become the characters with a truth often sought after but never achieved in the West. (Anyone who doubts this statement should consider which Western actor can become so godlike as to eat a live chicken.) To those interested in the visual aspects of theatre, the particular excitement of this video archive is the detailed accounts of the preparations to make and decorate the performance space, props and costumes. And then to destroy everything in a 'get-out' that is instant and total.

Today's Indian theatre is re-examining its roots and prominent among a generation of dramatists drawing inspiration from this deep cultural heritage is Sankara Pillai, director of the Kerala traditional drama research project. His CULT (Calicut University Little Theatre) plays the new drama (as well as international classics such as 'Waiting for Godot') in the malayalam language, using some formal theatres but, I suspect, happiest in the delightful open air playing spaces with which India abounds. A banyan tree, a rock outcrop, a few stones, some bamboo, a fragment of soft brick wall are just some of the found objects which can make a cleared space into a theatre. A few simple focus spots lashed to a tree branch or hung from a bamboo tower produce effects that must call into the question the vast lighting rigs of the West.

But there has also been a lot of big theatre building, particularly during the last decade.

Madras, Hyderabad and Bangalore each house several new theatres, mostly in the 1000-1500 seat range. They have big stages and good lighting positions but the lights are a small number of mostly single focus spots

which require careful lining up of reflector since the lamps rarely have prefocus bases. Filament striation and chromatic aberration are fairly endemic. Fresnels tend to have excessive scatter and barndoors are few. There



Sparse and simple— Kalakshetra Dance Theatre, Madras.



Variac dimmers, Madras—"and I have to say they did marvellous lighting cues of this".



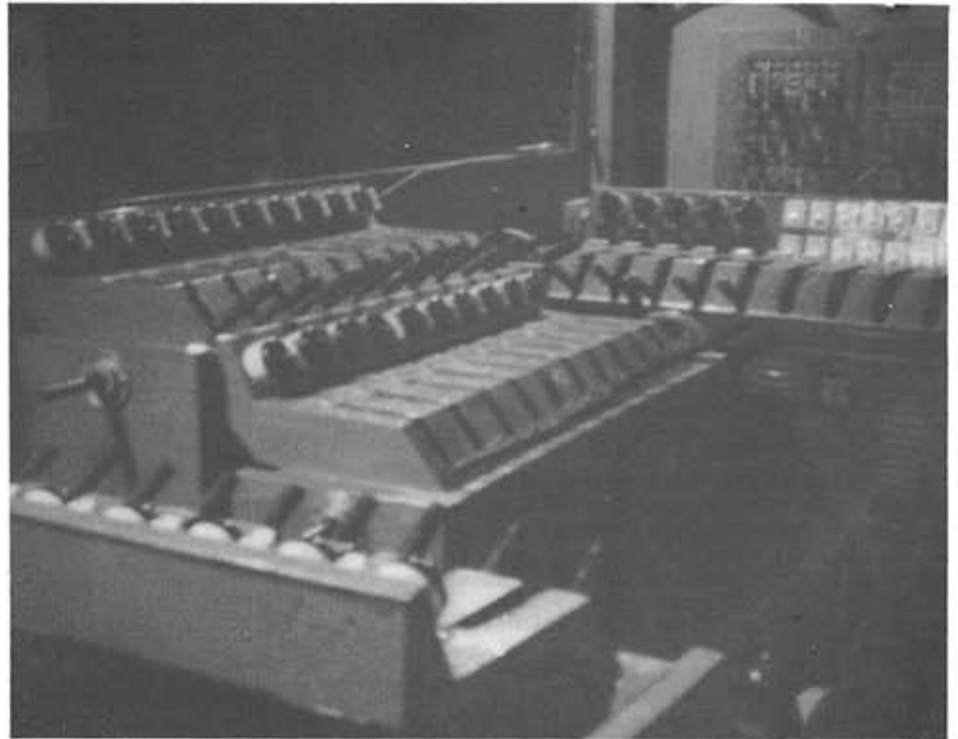
Francis Reid.

are some halogen profiles appearing but the quality of the lens, reflector and shutters makes them difficult to adjust quickly. However quick, focussing is not of prime importance in a small rig when there is little of our Western pressure to reduce man-hours as a prime consideration.

All the control desks that I saw were autotransformer—either rotary variacs or 6 to 10 channel directly-operated interlocking portables. These are installed even in the big control suites located in ideal positions at the rear of the auditoria of the new theatres. They rarely have more than about 30 or 40 dimmer channels and there is no remote control—the juice is fed at mains voltage from the back of a 1500 seater all the way to the stage.

India represents a huge potential market for entertainment lighting and sound. But the tariff barriers are such that there is very little scope for direct import. India has a fast growth electronics industry and microprocessor control of electronic dimmers will come soon and fast. It could make both moral and economic sense for a leading Western manufacturer to get involved in local manufacture. And my hunch is that the British are the ones that would be most welcome.

I lectured in three universities, working in some depth in one for a week and was very highly impressed by the imaginative use of the most primitive equipment. I would just love to see the poetic results that I know would be possible with just a handful of new technology.



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Roger St. Pierre talks to

Theo Loyla

It's a somewhat odd feature of our industry that most of the people who design and manufacture lighting and sound equipment have very little contact with the ultimate end-user, ie the kids who actually pay to get into discotheques and bop the night away.

Thus, it's particularly interesting to hear the views of Theo Loyla, a man who, as one of the country's leading disco record promotion men, spends his life very much at the sharp end of the business.

Theo's days are occupied by an endless round of meetings with his clients—the record companies—and with running a busy office supervising the activities of his famed Hit Squad team of promotion men while, by night, you will usually find him at some club or other—supervising a promotion, plugging his latest hit hopes or, still, actually deejaying.

Born and bred in Norwich, Theo was running mobile discos at 16 and had burning ambition even in those days: "I've always wanted to be rich and famous," he laughed.

After a business studies course at college, he became a full-time professional deejay in 1968 with a summer season at a pub on the Great Yarmouth seafront: "I worked seven nights and seven lunchtimes a week, and provided my own sound system," he recalled. "I had a home-made deck with SP 25's and a Dynacord four-way spot bank with auto-change mechanism—all highly sophisticated in those days!"

Then, with October and the end of the holiday season, the dream suddenly came to an end: "I had to go out and find a proper job! I worked as a barman, as a timber company sales clerk, odds-and-sods like that, before moving to Kent, where my first wife came from, in 1969 and getting a job as a booker with a local entertainments agency in Tunbridge Wells."

Soon Theo was able to set up his own recording studio in the Royal Borough—RTW Sound: "It was a simple four-track affair. I produced quite a few records and got into band management before the company giving me most of the work, and my financial backing, switched allegiance and I was forced to close the studio down.

"I then went into accountancy, working for a printing company, then a hotel chain and finally a corn merchant, before the level of my work as mobile deejay built up to the point where I had to make the inevitable choice of becoming a full-time deejay again.

"That was in 1974 and within three years I had built a fleet of five mobiles under the Banana Power Discotheques banner, the name being inspired by an Electronic Prunes' record, 'The Great Banana Hoax.'"

It was in the mid 70s that Theo started getting involved with deejay associations first as an elected official of the ill-fated National Association of DJs (NADJ).

With John Guest, from Tunbridge Wells, and Kenny Lyman, who ended up running a club in Brighton, Theo was instrumental in setting up the South Eastern Discotheque Association, now the oldest such organisation in the world.

"That was in 1974 and SEDA is still going strong with a membership of around 100. I'm now their honorary president," he told me.

Following the demise of NADJ, an organisation not known for its democratic mode of operation, Theo was a prime mover in the setting up of the DJ Federation, which was devised to give a real voice to deejays. Theo was secretary and chairman for most of that organisation's life.



Theo Loyla: "Lighting has made a huge difference to the disco world. It gives a deejay the means with which to create the right atmosphere in which to set his music."

"Come 1978 and I was running my fleet of mobiles, had the VAT man, the income tax man and my staff to worry about and I thought to myself: 'What am I doing all this for'—it was time for a change.

"I'd been doing some independent promotion work so I decided to get into record promotion full time. I applied for three jobs and was offered them all, plumping for Polydor because they seemed to offer more scope than either Motown or Larry Page's Rampage label.

"I'd only been at Polydor for three weeks when Martin Nelson offered me a job but I was happy where I was. They ended up persuading Greg Lynn to join them from RCA which was ironic because he had been Polydor's first choice but had turned them down!"

"My predecessor at Polydor had lost his driving licence, and that's a pre-requisite of the job with many miles to cover round the country and I was soon putting in some 50,000 miles a year on the road—I was the bane of the company motor department!

"My first big success came with 'Saturday Night Fever' and then came 'Grease' for which I organised the world's biggest ever club promotion campaign with more than 500 separate promotion nights in a three-month period. Of course, the records were enormously successful. It was a brilliant time, marvellous. I had hits with stars like James Brown, Roxy Music, The Who, The Jam and Sham '69 but, after three-and-a-half years, I suddenly found myself redundant—I just didn't get on with the new boss.

"1981 wasn't a good time in the record industry and I couldn't find a staff job so I ended up going freelance. My first record was 'Red Skies' by the Fixx, for MCA, and that went Top 50. Then came 'The Crunch' and work for labels like Virgin and Maestro. Of course, it takes a while to establish yourself and you need a big hit to turn the trick. My chance came with 'Flashdance' which was a runaway hit in 1983 and from then on I've never looked back."

It was in 1983 that Theo joined forces with erstwhile Radio Luxembourg mainman Tony Prince: "I'd been writing for Tony's Disco Mix magazine since it started. He offered me a job and I ended up becoming a director instead, and bringing my Hit Squad operation under the Disco Mix Club umbrella.

"Tony's role is marketing and sales, and then it's my task to make sure that the records we work get the proper attention.

"We handle a maximum of four records in any one week—it's usually three—and we stay on the case for five to six weeks on average, though it's quite common to work on a record for a dozen weeks or more and we were plugging Hazel Dean's 'Searching' for more than a year!"

Theo has a long and proud tally of successes. Suffice to cite Whitney Houston's chart-topping 'Saving All My Love For You', Gary Glitter's 'Rock 'n' Roll Christmas, all the Cool Notes' hits and 'Ghostbusters' as prime examples.

The Hit Squad now comprises 12 area controllers with Theo, his wife Joy and a secretary running the Herne Bay office while Tony Prince and his wife Christine also have a major input.

"We have a total current list of some 2,500 deejays but most mailings are of around 500 carefully targeted records."

After a near legendary seven-year residency at the Bridge Country Club near Canterbury, and work for Top Rank and Mecca, Theo now has less time for deejaying, though he still tries to work at least once or twice a week, helping him stay tuned to the latest trends.

"In 20 years working in discotheques I've seen incredible changes. Everything has improved beyond recognition and equipment is increasingly sophisticated though you still find too many clubs skimping on their sound system.

"You also still find a lot of club operators spending a fortune on sound and light and then using a cheap deejay. They still haven't cottoned on that if you don't get the musical format right then you've no chance of succeeding.

"Great music on poor equipment will always work better than poor music on great equipment. The aim, of course, should be to get truly up-front in both departments."

Theo has some harsh words to say about some British manufacturers: "How Garrard and RSR lost their absolute domination of the disco-turntable market is an absolute indictment of British industrial inefficiency. Now it's Technics who have the market sewn up. London Acoustical Development decks are absolutely brilliant but they have a really uphill struggle because Technics have established themselves so solidly as the market leaders.

"I was interested to see that Citronic have now introduced their own decks—that's another good move from an on-the-ball company."

Theo bought his first projector back in 1970. Since then he's seen the arrival of strobes, pin spots, lasers and many other developments.

"Lighting has made a huge difference to the disco world. It gives a deejay the means with which to create the right atmosphere in which to set his music."

"I find some of the current light shows to be quite breathtaking. When the Hippodrome system is in full flow it's sensational and Sherry's in Brighton used to be amazing."

"The other big change in recent years has been in decor, with 'themes' being the big growth area. I compliment First Leisure on their superb interior decor jobs—they are really fantastic creations."

There are also things Theo hasn't yet seen, but would like to: "Nobody has yet brought out a smoke machine emitting heavier-than-air smoke to do the job dry-ice machines do. That's still one of the most beautiful effects, like walking on clouds, but dry-ice storage is a problem."

CD is happening big, however, and it's something Theo predicted some time back: "In 1980 I addressed a meeting of the Thames Valley DJ Association and said that by the end of the decade the majority of deejays would be using CD. They laughed at me then but we are rapidly getting into CD now, so I stand by what I said. Besides clubs, a lot of mobiles are now using CD and it's a rapidly growing trend."

"Videos have also been an enormous growth area. Quality and the lack of availability of suitable software were the only things holding them back. Now AB See and the video pool are well established, and we have better sound, deejays have all the material they need."

Lasers, however, are a different story: "In my view, lasers have always been greatly overpriced. You've got to spend thousands to get anything worthwhile. The money is much better spent on an Optikinetics' projector which will give a very similar effect at a mere fraction of the cost."

"It's true that lasers can be amazing but effects give a diminishing rate of return. In truth, music will always be the real key to any club's success."

"Punters quickly take lighting effects and decor for granted and it's only a changing and exciting musical format, plus things like special promotion nights, which can add that essential ingredient of surprise and innovation to a club."

Theo has seen vast changes in other areas of discotheque life too: "The lack of violence inside clubs, when compared to 10 or 15 years ago, is quite remarkable. Door control is so much more professional these days that the rowdy elements have been kept out of most clubs. Mind you, this has created a problem in another way—the number of unpleasant front-of-house staff you have to get by to do a promo is amazing."

Theo is firmly convinced that the decline of disco from the heady days of the mid 70s has now bottomed out and that we are in for an upsurge: "South Wales and the North East are still very tough but things are improving in most other areas. Where, in the 70s, clubs were operating five or six nights a week, most only pull a crowd on two or three nights a week these days, but business is slowly picking up."

"Of course, the drink/driving laws had a dramatic effect and out-of-town clubs took a real hammering."

"In order to keep the new momentum building, club operators have to work very hard. The general public's expectations have increased dramatically—they are far more demanding than they once were."

"Musically, there is currently a very strong swing back to black music in general, though it has always been a good thing about the British disco scene—as opposed to that in some countries—that a wide range of musical tastes can be catered for and it's this variety of choice which will ensure the future good health of our industry."

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EQUIPMENT *News*

Optikinetics' New Quartet

Four new products were unveiled to international buyers at the recent SIB Fair in Rimini. These were the Soundscanner Mk3 System, the ultra-powerful Terrastrobe, the Quatrafog smoke system, and the Quasar Xe900 strobe projector. With the exception of the Quasar, which will be available from September, the other new products and their variants are now available from Optikinetics.

The **Soundscanner Mk3 System** is a totally new re-think of Optikinetics' original Soundscanner. The system now comprises a console mounted Master Controller which will drive up to 50 Mk3 Soundscanner Slaves, with Par 36 and Par 56 lamp types available. This new system overcomes pro-



The Soundscanner Master Controller.

blems encountered by installers when previously trying to install many heads or to remote control the earlier versions. This is achieved by having a low voltage signal generated at the Controller to operate triac motor switches now fitted to all Mk3 Slave heads. Functions provided by the Controller are 'Continuous', 'Park', or 'Sound Animation'.

Individual Slave Soundscanners may still be used without a Master Controller for continuous 360° operation which is provided automatically when they are connected to a mains supply.

The **Terrastrobe** is a new 'top of the range' strobe from Optikinetics. Nearly three times brighter than their famous "White Lightning" Strobe, the Terrastrobe delivers a true 400W of flash power.



The new Terrastrobe.

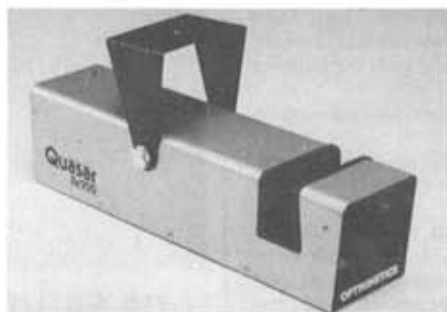
A capacitor discharge circuit eliminates the peak mains current requirement of other units presently on the market and their non-conformity to B.S. standards for mains interference. The Terrastrobe has been designed for use with any of Optikinetics' range of Strobe Controllers. The Single, Four Channel and the recently introduced Eight Channel versions can all be used to startling effect, say Opti.

The new **Quatrafog** professional smoke system is multi-directional for overhead mounting, and gives wide downward dispersal. It has 4 output levels, advanced thermocouple heating control, and thermal fail-safe. The low voltage controller can be used manually or fully automatic with a



Quatrafog.

dual timer for "on" 1-15 seconds and "off" 1-30 minutes. It has low fluid, heating and "ready" indicators, and output level selector, and is built for 19" rack mounting. The service module allows for remote siting up to 100m from control, 50m from head, and 10m below head. There is low fluid safety cut-out and easy fluid replacement.



The new **Quasar Xe900** strobe projector, which will be available from September, is, say Opti "a totally new concept in light entertainment, with thousands of stunning beam and screen effects with motorised attachments". It can be used with Optikinetics 8, 4 or single channel controllers, and has a long life xenon flash tube with high colour temperature.

For full details of all products contact Optikinetics Limited at 38 Cromwell Road, Luton LU3 1DN telephone (0582) 411413.

Dimming and Switching Power Packs from Anytronics

Anytronics' Power Pack PP410DAP has been designed with two basic principles in mind—quick and easy installation and trouble-free operation, providing switching and dimming of electrical equipment from a wide range of AC supplies. The steel enclosure is opened by loosening just three screws—giving full access for both fixing and connection. Eight 20mm cable entry ports allow use with standard 20mm conduit, but are supplied with grommets for cable protection in free wired installations.

- Dimming inputs are via a 7 pin DIN socket or screw terminal strip, both of which include a +10v reference output, and standard 10v inhibit line in-

put. Dimming inputs may be individually selected or deselected with a PCB mounted switch. If an external input is deselected the dimming level on that channel is set by a PCB mounted preset. If the external input is selected the maximum level may be set using the same preset. The standard dimming control range is 0-10v, but adjustment of this preset control will vary the range from 1-5v to over 0-25v. Preheat level is set by a further on-board preset control.

Switching inputs via a 5 pin DIN socket provide standard logic level (10v) inputs for use with switch panels and lighting controllers to control individual dimmed channels. This input facility can be overridden by a PCB mounted switch with LED status indication such that all channels are permanently on (for use of the unit as a standard dimming pack). As an option these inputs may be supplied opto-isolated from the analogue circuitry if required. Enabling and disabling of the power pack via a quarter inch jack socket is compatible with standard power pack zoning arrangements. A screw terminal strip is also fitted to provide low voltage DC outputs and standard 10v inhibit line input.

Generously rated triacs and heat sinking ensure trouble-free operation, with individual channel fusing to protect the circuitry under faulty load conditions. Careful design means that there are no minimum load requirements and an internal power up sequencer prevents premature switching on of any channels during power-up—with the attendant risks to triac circuitry.

An LED indicator shows when power is con-

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nected. An LED is also fitted to each channel to enable the operation of the power pack to be checked during installation, before loads are connected. By removing just two links on the circuit board the supply to the electronics can be separated from the triac supply. The triacs can then switch and dim tube lighting, for example, if fed with 24v AC from a suitable transformer.



Anytronics Power Pack PP410DAP.

Launched at SIB in Rimini in May, Anytronics Power Packs PP 405 AP and PP 605 AP have been designed with two basic principles in mind—quick and easy installation and trouble-free operation, providing interference-free switching of electrical equipment from a wide range of A.C. supplies. Their steel enclosures are opened by loosening just three screws—giving full access for both fixing and connection. Eight 20mm cable entry ports allow use with standard 20mm conduit, but are supplied with grommets for cable protection in free wired installations.

Two 7pin DIN sockets connected in parallel, together with a screw terminal connector strip and fully isolated input circuitry allow easy inter-connection between power packs which are to be operated simultaneously. Individual enabling and disabling via ¼ inch jack sockets fitted to both power packs are compatible with standard zoning arrangements. In addition a 3-way red terminal strip is fitted to provide low voltage D.C. output and standard 10v inhibit line input.

Generously rated triacs and heat sinking ensure trouble-free operation, with individual channel fusing to protect the circuitry under faulty load conditions. Careful design means that there are no minimum load requirements and an internal power up sequencer prevents premature switching on of any channels during power up—with the attendant risks to triac circuitry.

A LED indicator shows when power is connected. A LED is also fitted to each channel to enable the operation of the power packs to be checked during installation, before loads are connected. By removing just two links on the circuit board the supply to the electronics can be separated from the triac supply. The triacs can then switch tube lighting, for example, if fed with 24v A.C. from a suitable transformer.

For full details contact Anytronics Limited, 6 Hillside Ind. Estate, London Road, Hordean, Hampshire PO8 0BL telephone Hordean (0705) 599410.

New Soundtracs Rack Mixer

Designed for fixed installation or to be fitted into a flightcase for secure transportation, the 19" Soundtracs FM Mixer is available with various permutations of input and output modules. Within the extruded aluminium and steel mainframe there is a space for fourteen modules, and the versions of module available are as follows: mono input (1), mono input with remote start (1), stereo input with remote start (1), monitor input (1), group output—4 track monitoring (4), group output—8 track monitoring (1), monitor output (1), PA/Rec master (2), and monitor master (2).

A number of alternative configurations may therefore be assembled according to the application: 8-10 monitor mixer, 12-2 PA mixer (mono and/or stereo input), 8-4-8-2 recording/PA mixer (mono and stereo inputs), and 12-2 broadcast mixer (mono and/or stereo inputs).



The new Soundtracs FM Rack Mixer.

Soundtracs consider the system has obvious application possibilities in fixed installations such as churches and halls, and in discotheques and night clubs, for keyboard mixing, stage monitoring, 4 and 8 track recording, video post production, and "on air" broadcasting.

The company expects to start deliveries to dealers in July. For full details contact Soundtracs Laboratories Limited, 91 Ewell Road, Surbiton, Surrey KT6 6AH telephone 01-399 3392.

Phoebus Ultra Arc Followspots

The Ultra Arc Series 2 is the latest generation of high intensity followspots from Phoebus Manufacturing in San Francisco, and includes many new advancements in performance characteristics.

The new Series features a new light source, the bright and efficient Osram Halomet HTI. The HTI is comprised of a compact source metal halides arc tube, computer positioned for maximum output and field flatness in a high quality, specially designed dichroic reflector. When you change the lamp, you change the reflector, giving continuous maximum output. The HTI has a rated life of 250 hours and a constant color temperature of 5600° Kelvin. The lamp will never fail during use, and light output remains stable throughout the life of the lamp. Lamp changing is safe, easy and takes only three minutes.

The new Series 2 lens system is the result of extensive research by Phoebus optical engineers, using computer optical programs to identify the most efficient lenses possible to optimise lamp output. The combination of coated optics and a

precision relay lens system makes the Series 2 a competitor with other followspots using 1000W-2000W discharge lamps.

The Series 2 Short Throw is designed for throws from 25 feet to 150 feet. The Series 2 Long Throw is designed for throws from 100 feet to 300 feet. Drawing less than 8 amps, the Series 2 features a solid-state electronic ballast, and operates on standard 120 volt 50/60Hz AC power. It is also available for 220/240Hz volt operation. The quiet double fan cooling system provides maximum life for both lamp and color media. A new feature of the Series 2 is the sturdy four-point collapsible base.

An option available is the Auto Zoom feature which provides an automatic focussing capability. By automatically synchronizing lens movement, Series 2 maintains a focussed image even as the magnification (beam angle) is varied. In situations where the throw distance changes, such as in ice



Ultra Arc Series 2 Long Throw follow spot.

shows, arenas, and TV studios, this feature makes operation simple. In addition, by reducing the need to iris down, Series 2 maintains maximum brightness regardless of throw distance or image size.

Phoebus Products are handled in the UK by the AJS London Theatre Centre at 49 Cannon Drive, Cannon Workshops, West India Docks, London E14 9SU telephone 01-538 1961.

Heavy-Duty "Megamist"

Jivelight have announced the launch of their new Megamist heavy duty smoke machine. With a fast "start-up" time—typically, less than ten minutes—the unit has a long life heater plus service replacement facility, and features electronic temperature control and additional safety cut-out.

The all-steel constructed unit has large juice capacity, and will house 1½ or 5 litre containers, using a specially formulated non-toxic mix for extended heater life. This juice can be supplied by Jivelight, or the unit can be run on other makes as desired. It has switched 240v output for fan, with the facility for ducting. Megamist can be hand, foot, or remote controlled, with remote facility included as standard.

For full details contact Jivelight Limited, Greyhound House, 16/18 Greyhound Road, London W6 8NX telephone 01-381 0868.



Ultra Arc Series 2 Short Throw.



Jivelight's new 'heavy duty' Megamist.

SHOW PAGE

Francis Reid at the Geilo NoTT

NoTT is the co-ordinating body for the technical theatre associations of the nordic countries. Under this umbrella the Danish, Finnish, Icelandic, Norwegian and Swedish stage technicians, designers and architects plan to confer on a triennial basis. There was NoTT 83 in Stockholm and a NoTT 89 is planned for Finland. The Norwegians hosted NoTT 86 in the mountain resort of Geilo where the spectacular natural scenery included, even during the last weekend of May, a blizzard that any lighting designer could be proud of.

Most of the six hundred or so delegates travelled from Oslo in a special train whose four hour journey around mountains and fiords ensured that its passengers arrived in Geilo already united in spirit—just like a good audience for any show. The group took over the resort's hotels, including most of the bedrooms and all of the bars. The advantage of conferring in such a small town is that there are no distractions—the only entertainments, apart from affairs of the stomach, being the conference rooms and the trade exhibition.

Lighting exhibitors included the Danish firm of Grossmann and the Swedish AVAB who are carving themselves a not inconsiderable slice of the international market with their Viking controls. Many of the European specialists were represented through their local agent but the potential size of the cake ensured the supportive attendance of such leading UK marketing men as Mike Wooderson of CCT and Michael Goldberg of Rosco, plus an extensive posse of top Strand men who have traditionally enjoyed a profitable slice of the Scandinavian market ever since the great Woody (J. T. Wood) first landed hopefully on Viking soil over thirty years ago with a couple of Pattern 23s in his boot.

To an eye (or should it be an ear) of one with but a peripheral concern for sound, the only discernible trend on the stands of the half dozen sound manufacturers was a continuing growth in the number of knobs. The word from the sound seminars was that much of their time was spent in



The NoTT exhibition at Geilo, Norway.

agonising over which functions should best be memorised to simplify hands-on operation during performance.

On lighting desks the increase is not so much in the number of knobs but in the number of different functions that can be addressed through each control surface. At Geilo, practically every possible means of interface between operator and microprocessor seemed to be on show. In addition to the traditional theatre methods of fader, numerical keyboard and digital wheel, there were systems talking a more directly computer language. Grossmann offer an alpha-numeric keyboard that appeals to the generation who have been computerised since infant school, while ADB's new mouse-operated cursor is attractive to those who welcome the painterly freedom of computer graphics methodology.

Such matters were not debated in the lighting sessions by the 120 lighting people present in Geilo. Lighting controls are no longer a problem: there were more important matters to discuss such as the crossover in techniques between rock and industrial show lighting with those of the more traditional straight theatre. With touring as a conference theme, this was an important area and a lot of wisdom was spoken, and demonstrated on video, by Richard Dale. I was the other guest lighting speaker from the UK, with a brief to discuss the relationship of the lighting designer with the other members of the production team.

Light and sound seem to be thriving areas of the Scandinavian entertainment scene: both the exhibition and the seminars aroused lively interest. Most delegates claimed to have been stimulated, and most exhibitors claimed healthy order books.

Exhibition Diary

PLASA Light and Sound Show

August 31 - September 3, 1986.
Novotel, London.

Enquiries: (exhibition bookings) David Street.
Telephone: 01-994 6477.

Enquiries: (general) PLASA secretariat, c/o Roger Saunders, 1 West Ruislip Station, Ruislip, Middlesex.
Telephone: (0895) 630718.

Sonimag 86

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Barcelona, Spain.

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Telephone: (93) 223 31 01.

Photokina

September 3-9, 1986.

Cologne, West Germany.

UK Representative: Tony Pittman.
12/13 Suffolk Street, London SW1Y 4HG.
Telephone: 01-930 7251.

All UK BPEG and PLASA enquiries to:

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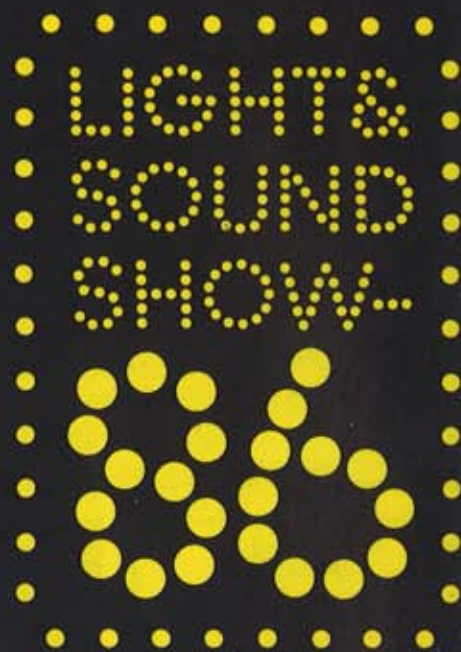
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