

# LIGHTING+*Sound* International



Light Show of the Year? - Genesis on Tour (see page 5).

PLASA

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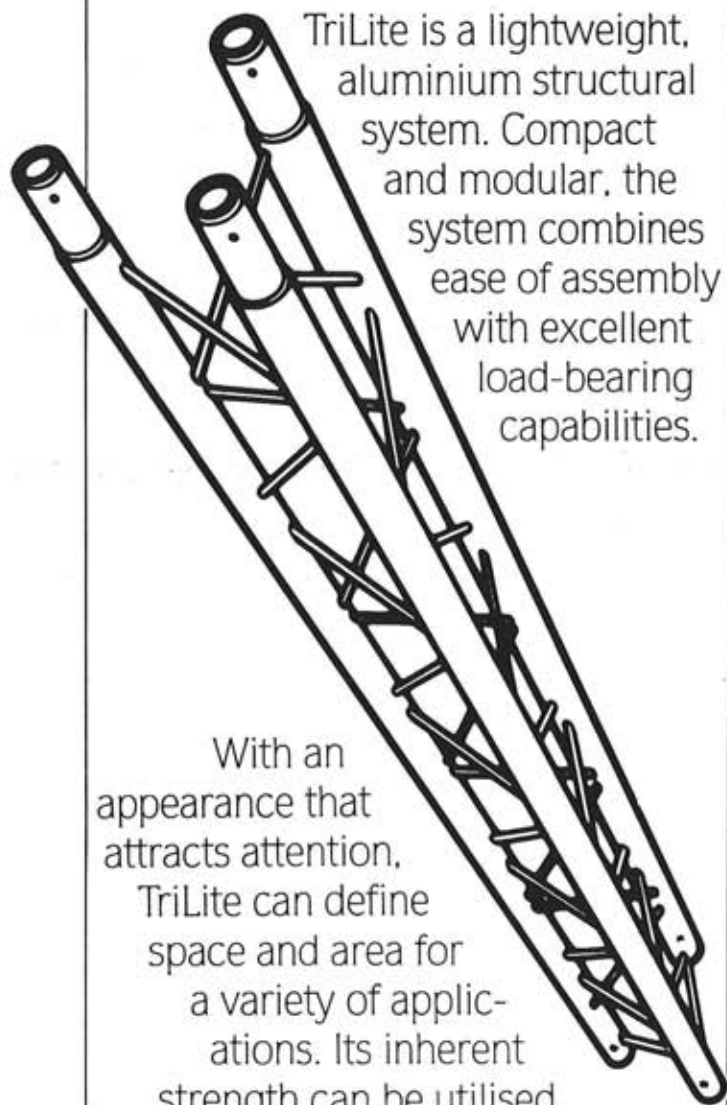
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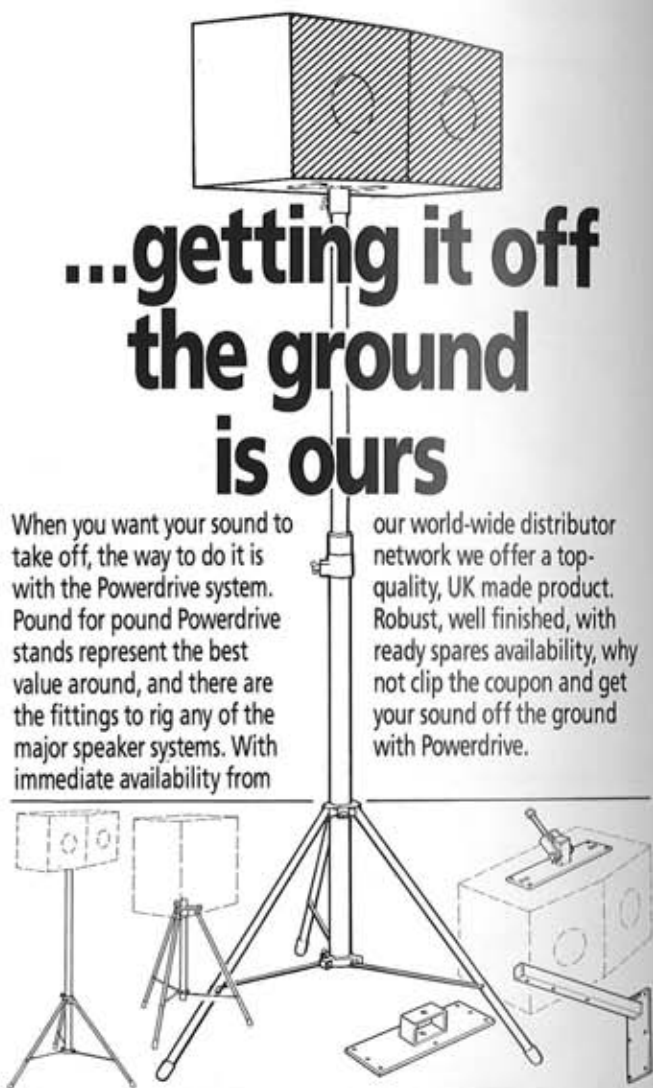
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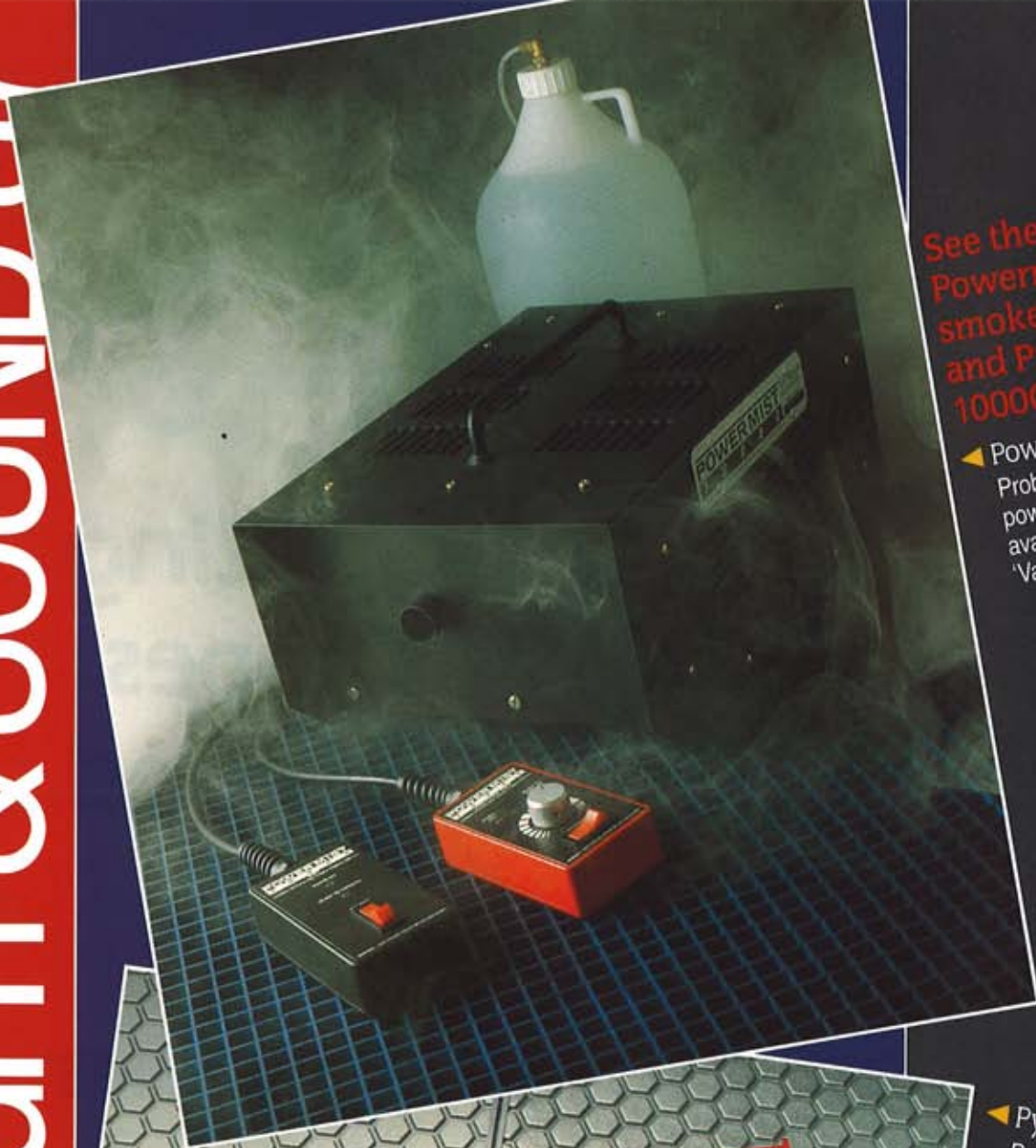
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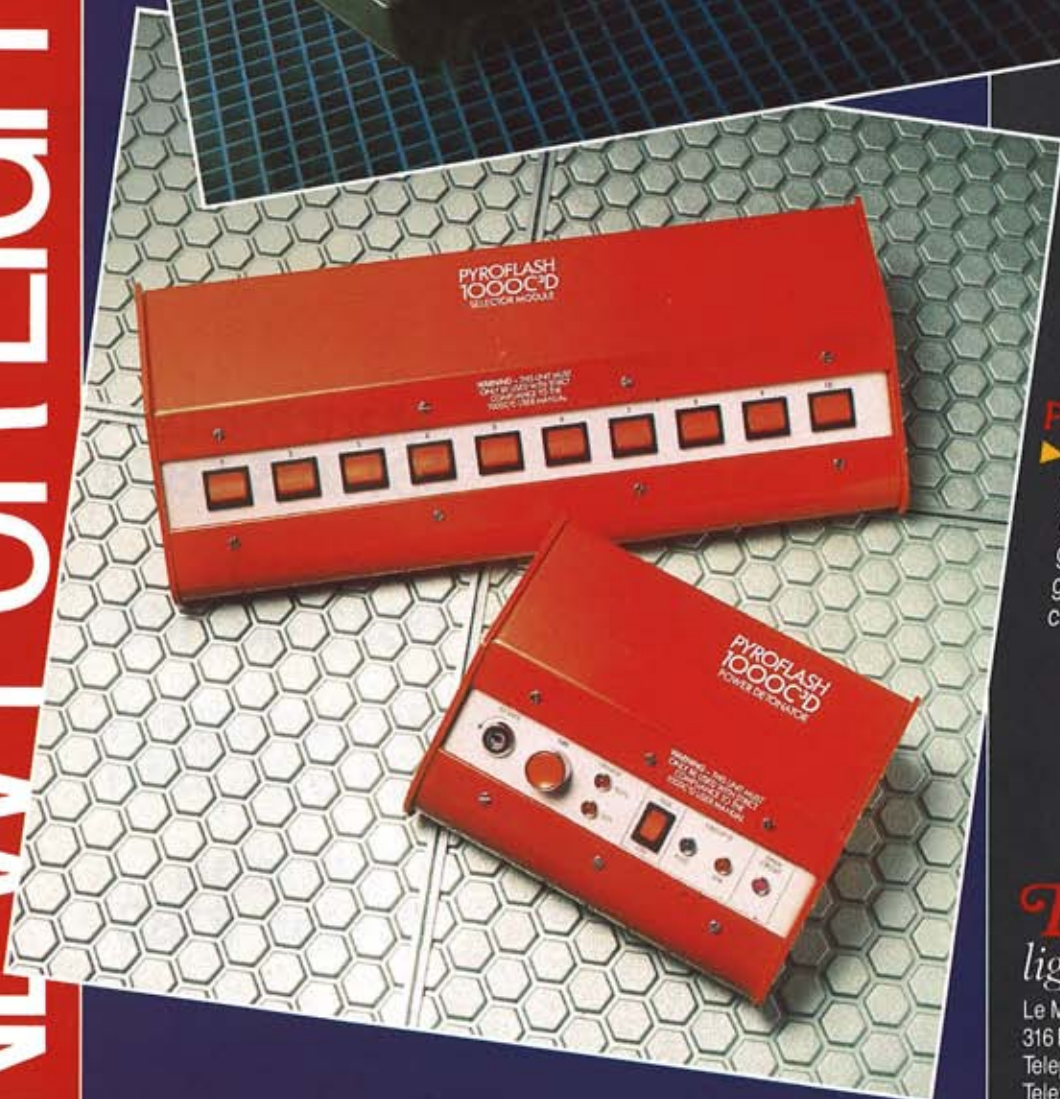
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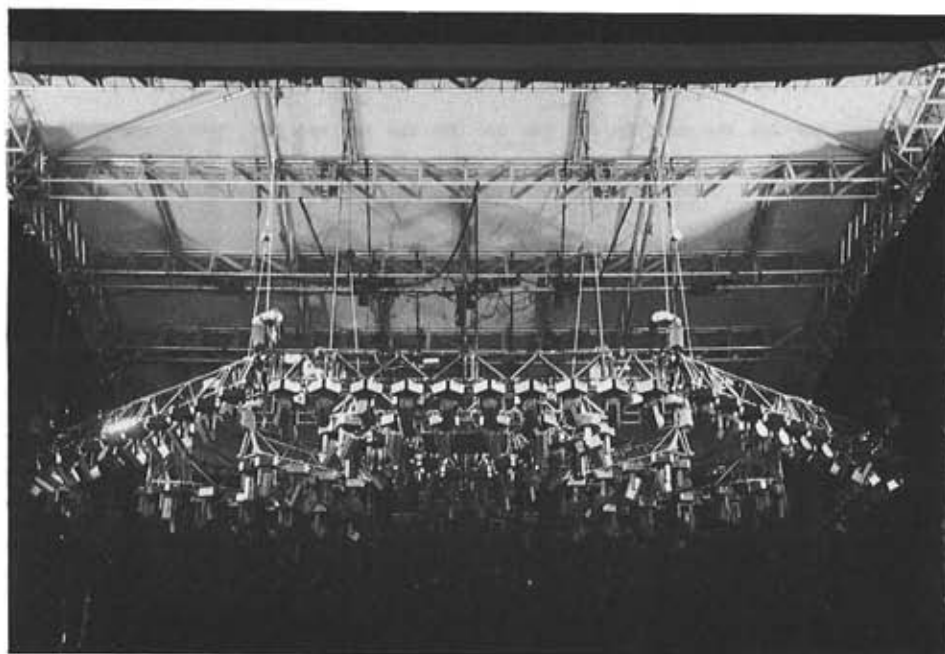
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# LIGHTING+SOUND *International*

## SEPTEMBER 1987

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### Light Show of the Year?

Our front cover this month shows two scenes from 'Genesis' at Wembley Stadium, where 70,000 people filled the venue on four consecutive nights. Pictured above, the rig, built by Edwin Shirley, supported the largest Vari-lite cluster ever assembled with 300 Mark 2 and 3's combining to give a dazzling display.

Photography Ray Robinson

## LIGHTING+SOUND *International*

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Your catalogue for the Show is included with this issue of L+SI (UK only). Easy to follow Exhibition Plans are on pages 20 and 21 with an index to Exhibitors on page 19. Check it out before you go!

## Bright New Par 36

Soundlight Industries are introducing a revolutionary new Par 36 lamp - the 6 volt 20 watt 2000HR has a halogen lamp guaranteed for 2000 hours. The glass-fronted semi-sealed unit fits all standard Par 36 units, and replacement lamps can be changed in seconds from the front. They are one-third the cost of the complete unit, say Soundlight.

You can see the 2000HR Par 36 on the Anytronics stand at the PLASA Light and Sound Show or by contacting Soundlight Industries on 01-947 2171.

## Rumours Discounted

We have been informed by Astralloy International that over recent weeks a number of people have brought to their attention that another company within the industry has been awarded the UK distributorship of Colibri systems from Abstract Electronics AB of Sweden.

"We would place on record, and ask you to announce in your next issue that any such rumours are totally unfounded," director Adrian Brooks told L+SI.

"Astralloy International Limited, trading as 'Lightning', will be exhibiting the Colibri range of motorised light effects on an exclusive basis, and a number of new products which will be shown on stands 96 and 97 at the PLASA Light and Sound Show," Brooks stated.

A call from L+SI to Martin Spiegel, sales director of Abstract Electronics AB in Sweden confirmed

that Astralloy are current sole distributors of their systems in the UK.

## Disco North Build-Up

Exhibitors booked for **Disco North** as we go to press include:

- Disco Mix Club
- Stanton/Wilmex
- Icelectrics
- Le Maitre
- Light and Sound Distribution
- Leamington Sight and Sound
- State of the Art
- Tannoy
- Phonographic Performance
- Scott Sound Systems
- Hazel Grove Music
- Kinetix
- Leicester Sound Lighting Centre
- Formula Sound
- Infinity International
- Level Acoustics
- Opus Amplification
- Starlight Design
- Traxs

Still awaiting confirmation are Fantasia, Laserpoint, Jocks Magazine, Big Screen and Satellite TV and Venuesound.

The show takes place at Quaffers, Bredbury, Stockport on Sunday and Monday 18th and 19th October.

Organiser contact numbers are 061-330 1730 (Geoff Heath) and (0942) 833389 (Tony Paul).

# THE PARTY OF '87

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**THE TIME**  
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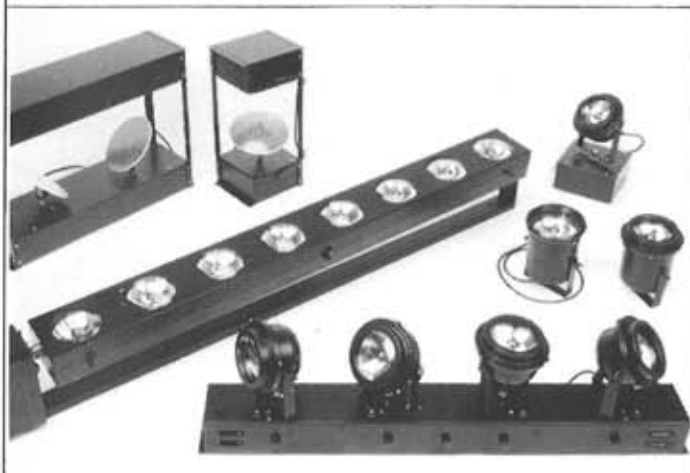
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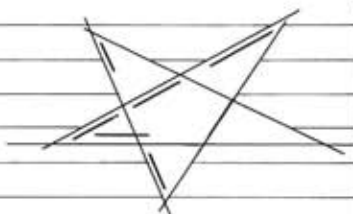


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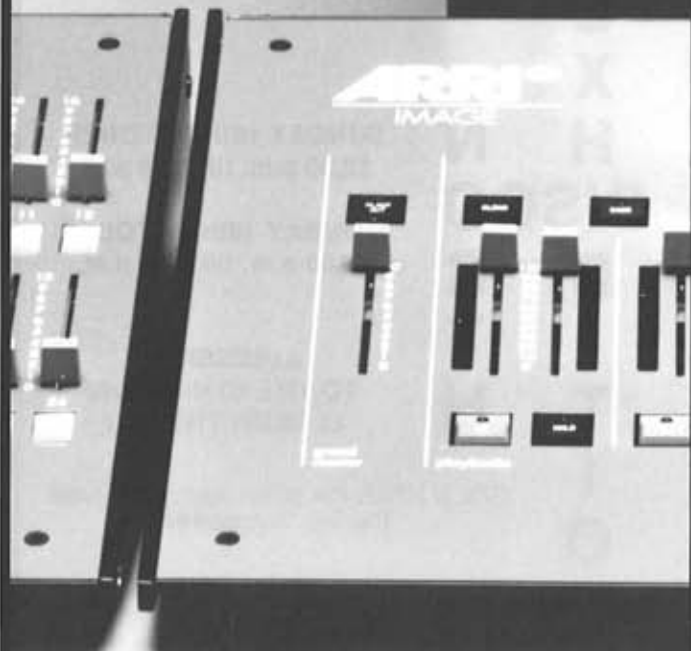
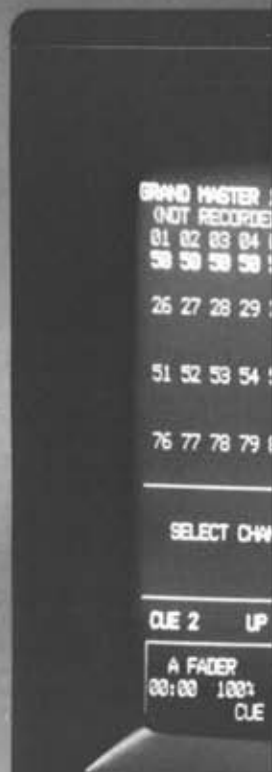
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## Turbosound's Award

Turbosound were officially presented with the Queen's Award for Export Achievement by the Lord Lieutenant of Surrey at a recent ceremony at the company's manufacturing base at Capel near Dorking. Also in attendance were representatives of the local council and Kenneth Baker, the Secretary of State for Education and Science who had presided at the factory opening exactly a year previously.

Every member of staff from Turbosound's factory, sales office and research and development unit turned out to celebrate the event in style.

In the picture above at the presentation are (left to right) directors John Newsham, Tony Andrews and Alan Wick and The Lord Lieutenant Richard E. Thornton OBE JP.

## Lamp Posts in Glossop

August saw the closing of the ninth Buxton Festival, and just as they have for the previous eight, Philip L. Edwards (Theatre Lighting) supplied the lighting rig. Two of the three operas this year were lit by Chris Perry, while the third was lit by Philip himself, who as usual acted as chief electrician for the Festival season.

Interestingly, newly appointed chief electrician at the Buxton Opera House, Nick Ware, has also worked for Philip Edwards both at the RNCM Opera Theatre in Manchester and at his hire business in Glossop.

1987 has seen some changes at the Glossop base. The trading estate on which the Philip L. Edwards' hire store is situated has benefitted from an injection of EEC cash - which has meant a complete refurbishment of the buildings and even the provision of lamp posts! "As yet these do not actually work, but when they do it will make collections and returns at the dead of night much easier," Philip Edwards told L+S.

The company's hire stock has recently been reconditioned, and many new items have been added, including rigging equipment. Contact number is (04574) 62811.

## Night Flight Rangers

Night Flight, the Glasgow-based sound and lighting installation firm, is currently planning the installation of Bose loudspeaker systems worth £200,000 in Ibrox Stadium, home of Glasgow Rangers, the current Scottish champions. The installation is being masterminded by Bill Smith, senior partner of Night Flight, with Bose consultant Tony Cowell advising on technical and safety matters.

The stadium, which has a capacity of 45,000, has up till now been equipped with ancient horn speakers, described by Bill Smith as: "Pre-war, but which war I wouldn't like to say!". These are being replaced stand by stand by Bose loudspeakers, beginning with the installation in the main stand of 20 pairs of Bose 802s. This phase of the stadium

installation will be completed by November, after which time 802s will be fitted in the other three stands.

## Record Matchless Sales

Total Audio Concepts has announced that 1987 has seen an all-time record set for the sales of their 'Matchless' audio mixing consoles. First launched in 1984, the Matchless has been a steady success for Nottingham-based TAC, but the current order book reflects the booming worldwide popularity of this versatile mixer.

In the US, New York's leading audio dealer, Sam Ash, has just ordered four consoles for permanent demonstration in their stores, since local demand is so high. Other recent US sales include a console to song writer Gary Wright, who has ordered a Matchless for his home studio.

## AC Lighting Go Strong

AC Lighting of High Wycombe have announced that they have been appointed as distributors of the Strong follow spot range which includes the world famous 'Super Trouper'. Full details from (0494) 39076 or 446000.



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Kevan Cambridge - on the road for Avitec.

## New Names at Avitec

Avitec UK have appointed **Kevan Cambridge** to the position of sales executive. Kevan comes from a sales background with Cadbury's, and was for some time involved in technical engineering. Since joining Avitec he has spent the past six months learning all aspects of the business. He will be responsible for visiting customers on a regular basis to ensure a close personal and professional service, and will be available to anyone seeking particular help or advice on any aspect of the company's range of products or services.

On the European front **Lorraine Ludman** has left Lasergrafix to join Avitec+Sondock in Germany, to handle overseas export sales and to endeavour to expand the current European sales market. Also departed from Lasergrafix to join Avitec in Germany is former technical director **Gerry Leitch** and laser technician **Andrew Wheeler**. Gerry is primarily in charge of laser installations and R & D of laser associated systems, whilst Andy is assisting with software design for new lighting products.



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## Multi Contracts for Eurolight

Eurolight Limited have announced that they have won a £450,000 contract to technically equip the new Sola Kulturhus in Sola, Norway. This project involves Eurolight in supplying and installing all the technical facilities for a 600 seat theatre/concert/conference venue, a broadcast standard television studio/community auditorium, and a small concert hall.

The whole project is due for completion by November 20th, 1987 and will involve CCT Theatre Lighting, who will be supplying all the luminaires and AS Green & Co, who will be supplying and installing all of the motorised rigging. Eurolight have been assisting with consultancy work on this project for the past 18 months. This will be the second project undertaken by Eurolight in Norway in the last two years as in 1986, in conjunction with Mike Sweetland Lighting, they supplied and installed all the technical equipment for the Kongeparken 3500 seat amphitheatre.

Eurolight is also currently involved in a number of other projects due for completion in August and September: namely a new control system for the Mill Theatre at Sonning, a new control system, dimmers and patching system for the Scottish Ballet in Glasgow, a television studio for Westminster College, a television studio for Encyclopaedia Britannica, a television studio for the North London Polytechnic, new control and dimming for University school in Hampstead, new rigging for Gipsy Hill College in Kingston in addition to various projects to supply Microlite 2 and Micron control desks to theatres around the UK.

The company has also recently been awarded the contract to supply all dimming equipment for the new Towngate Theatre in Basildon which is due for completion in 1988. This will involve delivery of a Microlite 2 for the studio theatre control and a new Midilite 200 system for the main auditorium. All systems will utilise the very latest DMX standard for multiplexing recently adopted



## Double Event for TAC

Total Audio Concepts was presented with their Queen's Award for Export Achievement 1987 by the Lord Lieutenant of Nottinghamshire, Sir Gordon Hobday, on August 7th, who was also called upon to officially open TAC's new factory extension.

The extra 6000 square feet will provide space for more offices and workshops, in addition to a new drawing office and staff social club. In the picture above Sir Gordon Hobday presents the award to John Penn, sales director of TAC while Nick Franks, managing director, looks on.

in the USA as the sole digital multiplexing standard.

Nick Mobsby, Eurolight's managing director told L+S: "Our sales this year will top the £1 million mark for the first time in the company's history, and approximately half of this will be for export sales in what is a very competitive market-place. Eurolight has succeeded in 1987 by designing and

manufacturing a lot of our own products which have received wide acclaim. We have been further supported by our strong relationships with other manufacturers such as CCT, Green Ginger and A.S.Green who have enabled us to attack large scale projects abroad which previously would have been awarded to non UK based suppliers."

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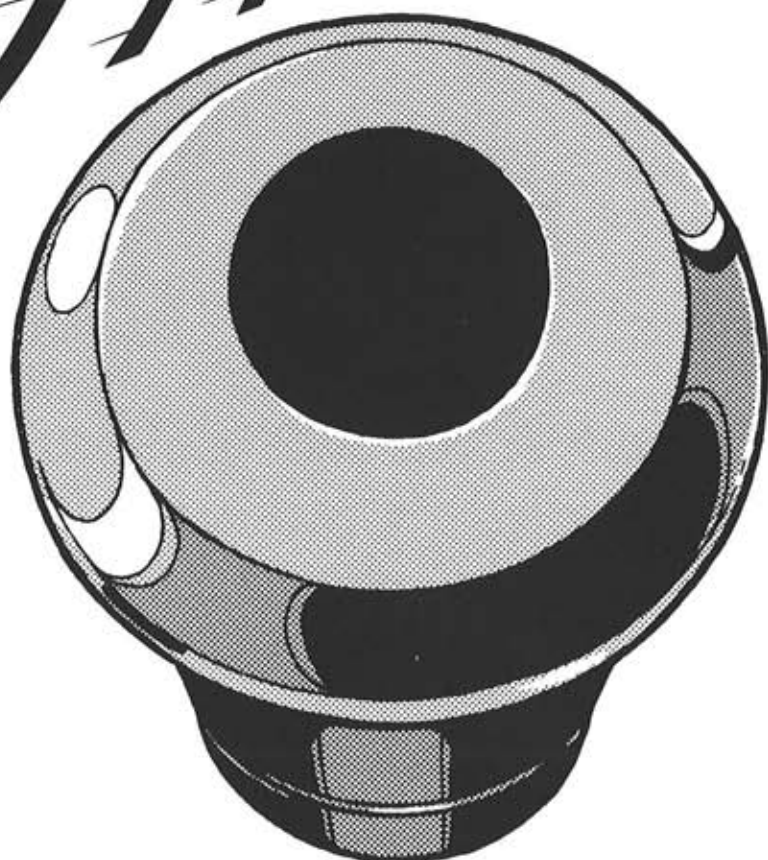
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11 mins



14 mins



17 mins



20 mins

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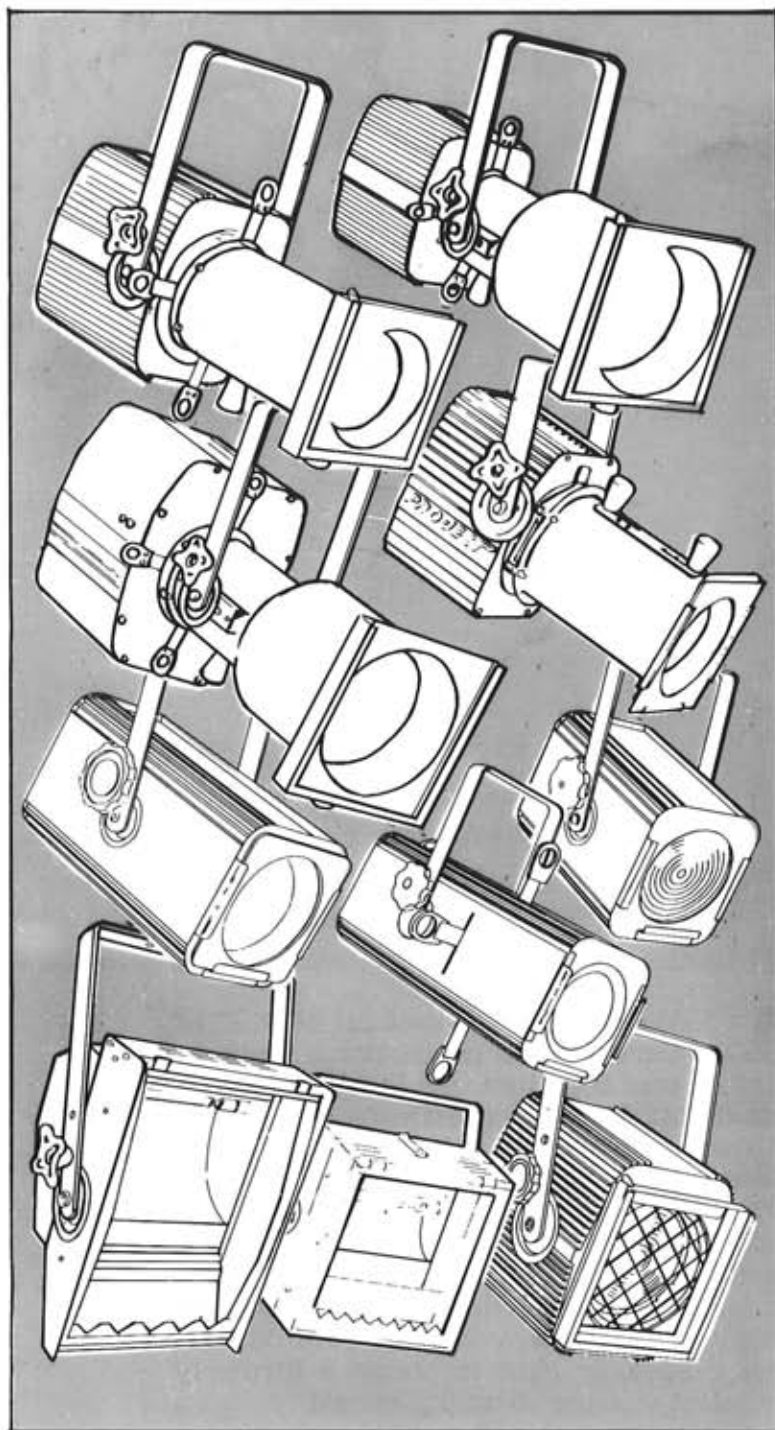
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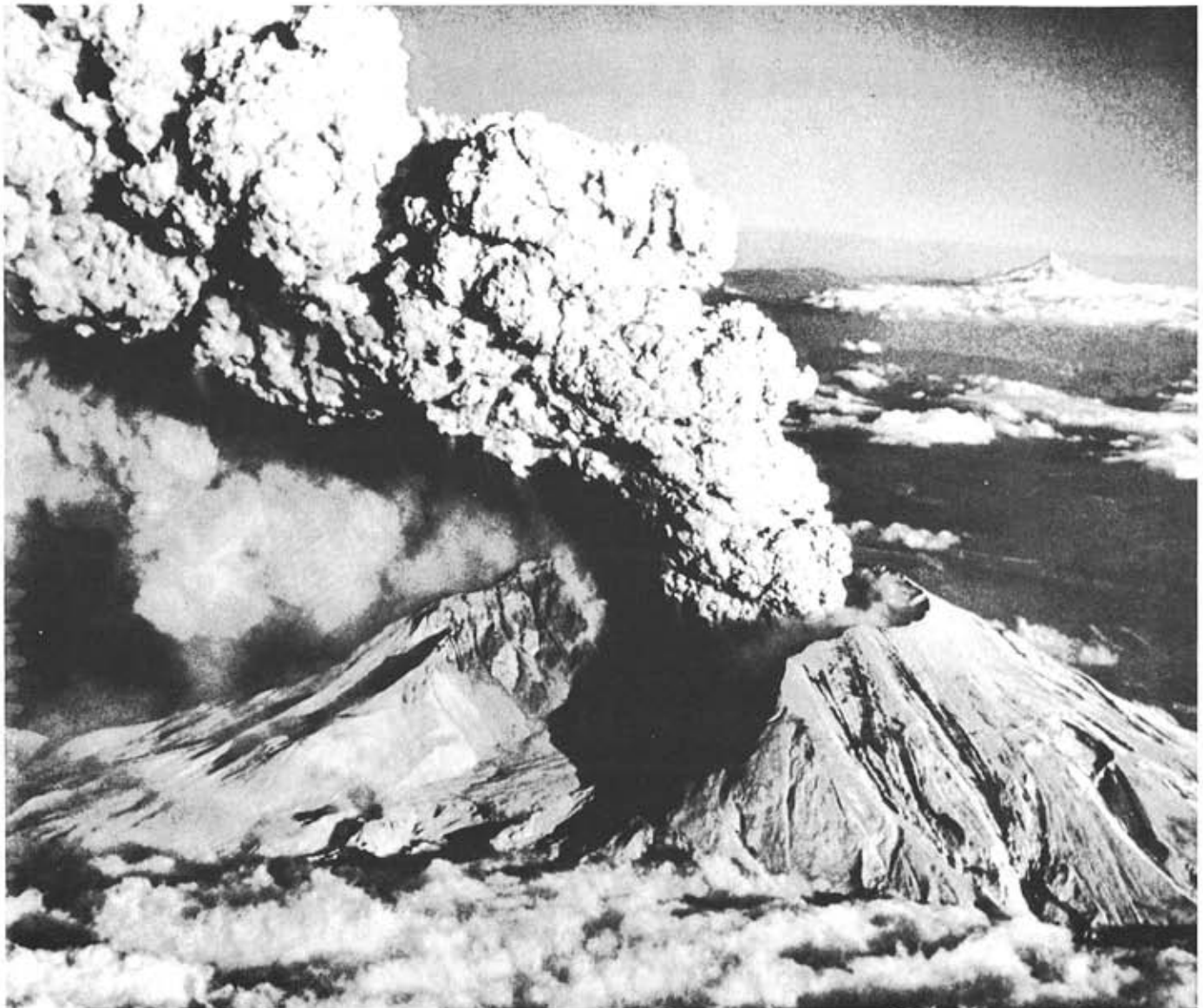
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# MT. ST. HELENS: MAY 18, 1980



UPI/BETTMANN ARCHIVE

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# Phantom Man

**Andrew Bridge's dramatic career as a lighting designer has grown and developed alongside the huge broadening of technology and techniques that has been thrown into the entertainment industry's technical and artistic melting pot since the late sixties when shows like 'Hair' shocked the world of established theatre, and new dimensions for presentation began to be explored.**

**John Offord talked to him in the offices of 'Imagination' in London's Covent Garden.**

According to his official biography, lighting designer Andrew Bridge, now 35, trained in London on a technical drama course at LAMDA, and then worked as a technician for the Welsh National Opera and for Glyndebourne Festival Opera. From 1973 to 1978 he was a lighting designer with Theatre Projects in London.

Like all good stories, there's more too it than that, and his 'training' wasn't quite so straightforward. Being the son of theatre producer Peter Bridge helped, of course, and he was impressed with theatre from an early age.

"I went to a lot of theatre, and I definitely wanted to do something artistic in the field. In those days things were pretty crude, and the newest thing I saw was lighting. Because it was so crude, when you saw something that was well lit it shone out amazingly.

"I was about 15 and I began to see a new medium that was just great. I instantly said: 'I want to be a lighting designer' - which I suppose is quite unique. And there is one thing you have to be if you want to be a lighting designer. You have to be motivated, definitely motivated.

"I was bred into the situation. Instead of looking at the stage I started with the auditorium, looking around to see how these lighting things were working. From then on I became a stage hand in the West End. I did props, I did flyman, I did stage pushing this and pushing that, and I worked on follow spots and the whole bit. It was the only practical way of really seeing how everything worked. On one occasion I was working on a pantomime at the London Palladium where lots of water shot around the place, and I had Wellington boots and had to open the valves and things like that. It was great fun!

"Still knowing I wanted to do lighting, I was generally getting used to the 'flavour' of theatre, because back-stage, if you're not involved in theatre, it can be quite an intimidating place."

After leaving school Andrew joined LAMDA where he had to put his leotard on, and do warm-ups with the drama students coupled with voice training and singing lessons. "We had some hysterical times - stage fights, and general management stuff - but I still really didn't want to do it. We obviously had some lighting and it was quite a good course. Some of the lecturers who came in really enthused us; Richard Pilbrow in particular. He was the first man to do lighting properly, in my opinion.

"LAMDA taught me the nuts and bolts, but in some ways it is wrong when you get too much technical knowledge which is irrelevant, such as how many self-tapping screws are in a lamp. But the design element had really got hold of me, and I then went to work at Theatre Projects, initially in the stores. That was my first actual job."

Andrew Bridge's initial taste of production experience came soon after when he went on the road as a production electrician, split-

ting his time between rock and roll and opera. "Rock and roll was very brash and flash in those days, and I also learned a lot from spells at both Glyndebourne and under Robert Bryan at the Welsh National Opera. It was good discipline and good fun.

"Eventually I went back to Theatre Projects as an assistant lighting designer, as part of their team." About 20 at the time, Andrew joined the celebrated group which included Richard Pilbrow, John Read, Robert Ormbo and David Hersey to name but a few. "I became assistant to various designers, and I think it's about the only way in this country I could learn properly," he told me.

"Eventually, of course, these busy gents got double booked, with their names on the bill, and you come in and suddenly you are known to be able to do the job. They will say, 'well Andy Bridge can do the job', and the answer comes back that 'we'll try him rather than a total stranger'. So I was very lucky. Richard Pilbrow was a busy gentleman, so I actually filled quite a lot of holes, and bit by bit I became established in my own right. The only other way to have learned would have been to go into the repertory system and learn it as a production electrician.

"At this time the infamous trade show came on the scene - and it was quite interesting because lighting designers had to be much more fluid and innovative. The trade show world sucked everybody from the theatre; it was like a summer holiday! Everyone thought, 'Oh, money, we can earn money!' whilst doing something different.

But it was a bad word. It was more of a giggle: you were doing a show for 'Bodymist' deodorant or something similar. People would say, 'Oh I work for the National Theatre, but in my spare time I make money working on trade shows. Eventually things settled down, and we had to be a lot more technically advanced and much more efficient than in theatre.

"It was at this point that I decided to split from Theatre Projects, and deliberately made a move into going freelance. I made a fifty-fifty split between industrials, as they are now called, and theatre and I've been on my own now for 10 years.

"I have the ability to jump into lots of different mediums, whereas many people make their mark in one medium and occasionally jump and find it very difficult. I can actually light a major exhibition static, a big trade show, or I can light a concert or a shop window. I also work on theatre and musicals, and I'm not worried by it. I find it very difficult to jump from one to another immediately, but it's possible, and I find it very interesting provided I've planned for it."

In many of our readers' minds, Andrew Bridge's name will be closely linked with the design group 'Imagination'. I asked him how this fitted in with his operation as a freelance.

"I'm a totally freelance lighting designer, and because I didn't want to get sucked into one medium either way, I made the decision to have an annual contract with Imagination, a group which grew extremely fast with the industrial theatre boom, and became a very, very reliable production company.



Andrew Bridge

"The industry has changed so much now that clients will treat us like an advertising agency. They don't change every day, and Imagination gets a permanent contract for a period and that's it. I have a contract with Imagination to do all their lighting exclusive in the world to them, and I work as long as I need to on that. Also, I have freedom to do any theatre production I wish to do. So I have total freedom to do what I like in any other area except in the industrial world where I work exclusively for Imagination.

"It keeps me fresh, because you don't get stuck in one medium and you can actually grab ideas from both sides of the fence and make them work. That's the basic working relationship."

Turning the conversation to theatre, and particularly musicals, I asked Andrew to tell me about the landmarks in his stage lighting career.

"I decided in a theatre show to use Parcans and saturated colour, and the brightness and potential was enormous. Nobody had ever seen beamlights and Parcans in theatre. Richard Pilbrow had used beamlights and lots of nice colour in 'Blitz' and similar shows, but suddenly to do a rock type musical, and not use theatre equipment was quite unusual. That was many years ago, but most of the time I was just doing good jobs, good steady lighting jobs, when I suddenly did a few rash things, and they worked. Well, luckily **most** of them worked!"

"I did some odd shows out of Theatre Projects, and one was a very bizarre thing called 'Carte Blanche' which was a sequel to 'Oh! Calcutta'. It was a raunchy show, and artistically very odd. It called on every sort of psychedelic media with projections and body lighting, and there were lots of specials and colour changes. We had to design a rig that could cope with 40 or 50 different scenes and different styles and there were four choreographers and three directors on the show, if my memory serves me correctly. It was like a rep company in the West End, and you sat there at the lighting desk waiting for the next director to come and give you a hard time. It was certainly different, and although I got good critics, the show was panned, which was quite embarrassing.

"Theatre lighting is extremely difficult. I think it may look easy, but it's extremely hard to do a really good fixed piece of lighting. A lot of the shows I get involved with are technically very difficult, although, artistically they might not be. Musicals always are. You've got multi-unit sets and there are a lot of problems that go with that.

"Before 'Time' and 'Phantom' there were all manner of beasts. Torville and Dean was a new media for me and we treated that totally differently. Basically, we used ice as a projection screen, and also introduced Vari-lites

into theatrical use rather than as specials, with a disco-type look. It was fun, and really exciting. My heart went back to the old days when I first saw colour on stage. Vari-lites are a new medium and I think they're used far too much as specials, in flash pop stuff. I'm sure that in a few year's time they'll be standard in every national theatre around the world as good flexible users."

Many more shows of all sorts came Andrew Bridge's way including the Rocky Horror Show (Europe), John Paul George Ringo and Bert... (UK tour) and in the West End Kennedy's Children, The Canterbury Tales, Tomfoolery, Billy Bishop Goes to War, and Oliver!

I asked him about the lighting designer's role and how he came to land the lighting design jobs for 'Time' and 'Phantom of the Opera'.

"Nowadays lighting designers seem to be associated with set designers and scenic designers and you go as a pair. Obviously that's the whole visual of theatre; the sets are no good without lights and vice-versa.

"I think it's important to get a rapport with the set designers. In the early days it was more linked to directors. There are some lighting designers who are linked to directors, and sometimes you get a triumvirate. The most famous of these is Trevor Nunn, John Napier and David Hersey, and they know how each other thinks and it helps. This is how I work with Imagination. I know exactly how Gary Withers, the managing director and chief designer of this company works, and we can just shout at each other or I will say 'we'll do one of those blue things' and he knows exactly what I mean. And that's very important in theatre.

"When it came to the lighting for 'Time', it was designer John Napier who realised that the show was very rock and roll in flavour and it had to be fresh and highly spectacular. I think the people he'd worked with before weren't as brash in that area as I could be! It was a nightmare technically, scheduling to put it on, but the end result was quite stunning.

"With 'Phantom of the Opera' I was lucky, being in the right place at the right time. Richard Pilbrow was originally going to do the lighting, but fortunately for me and unfortunately for him he got double booked on to another project, and the dates changed on the show itself. Having worked with producer Cameron Mackintosh many times before, and also knowing Richard I was the next in line, a sort of natural successor. So I went into Richard's shoes about halfway through the initial stage of production, and met with Maria Bjornson, the set designer. I stole a little bit of hanging space back from her to put a few lights in, and it developed from there. I was a little 'second-hand' into it initially, but then I took over fully, and was

accepted as the lighting designer."

Andrew Bridge had flown in from New York the day before I talked to him. He's been flying over regularly to work on Phantom for its New York opening early next year. Would it be different on Broadway?

"The feel of the show is identical. It's a very good show in London, so I don't think you should have to change it. There is often the feeling that when a show goes from London to New York, that it should be bigger and better, for some reason. Personally I think it's nice to leave something that's good alone.

"We were going to photocopy the show into New York, but unfortunately the Majestic doesn't have the same depth as Her Majesty's - we've lost 12 feet of stage. We've been pushing and squeezing and you shouldn't notice any difference in the production at all, but obviously, with a second bite at the apple, you do tend to refine it.

"I've cut a couple of spot bars and loaded up a few more, and ideally it's going to be an identical show but with a few refinements."

Working on the international scene is nothing new to Andrew Bridge. He looked after Shirley Bassey's live concert work for seven years, and has lit shows at numerous venues in the States including New York's Carnegie Hall, noted for being a tough union house. He took 'Oliver' into New York and then on to Canada and Australia for producer Cameron Mackintosh.

Were there problems involved when using different equipment overseas?

"When you look at most rigs nowadays it's pretty international up there. Designers get hooked to certain lights that they feel safe and happy with, and in England the Altman Leko is a fairly standard sort of unit. It's up there with the Silhouettes and Harmonys, and Parcans are universal now as well. You can go to America and they're all much the same, and the technicians are extremely good as well."

As equipment becomes much more international, so techniques have been crossing over from area to area, and it's given the designer a whole range of choice.

"Theatre and industrial theatre have grown up together, and as rock and roll became important the industrial world picked off the rock and roll flash effects, and theatre picked up off the industrials for rigging purposes. I think it's all mixing quite well, but I'm amazed at how quickly it's all moving. When I started, there were still water dimmers around and grand masters and all that - and that's not long ago! Now, there are computers that will fly you to the moon and back in your lunchbreak - wonderful.

"But I think there is a danger, as I said before, that when students learn, they suck in all the technical information but they may forget the artistic end result. Even myself, I would never profess to know how to operate all the control desks. I know what some of them can **do**, but I would never know how to switch them on and get into first gear. And I simply don't want to know, because I feel that nowadays as technology is moving so quickly, it's good to distance yourself a bit.

"I like working with teams on the big projects. I rely on people like Howard Eaton and Mike Odam, and Jerry Avis and Mick Jones, and Durham Marengi was a brilliant technician before he went freelance on design himself. It was great. You relied on them to say if you were a silly sod. You've got to have a little knowledge to make sure they don't pull the wool over your eyes, but I rely on quality technicians to work parallel with



A new medium - Torville and Dean in performance.



me to get to the end product.

"After all, a blue light on a stage is a blue light, and whether it's coming from a computer, a laser, or a resistor dimmer, it doesn't make two hoots of a difference. It's your end picture on stage that counts, and I think a lot of people can get sucked into too much technology.

"I think there is a new kind of liaison between lighting designers and their technicians and it would be great if in another five years or so there could be the two of you on a show working as a partnership. Because I don't think a set designer, for example, needs to know how the paint is mixed, or how they actually make the nails."

What about equipment? Did he make a point of trying to use British equipment, and where does it sit in his estimation?

"I don't even stop to consider whether equipment is British. I don't think about where it comes from: I think of what it does. I think each manufacturer has certain items that they know are hot sellers and are useful to certain areas, but it would be awful to say you have to use all Strand, or CCT, or whatever. It's just not possible, and I think we have to have a flexible market so that the designer can pick out items that will work for his shows.

"On Broadway it hits a very tender spot when they know the British are coming. Last week I told my technicians in New York that I didn't consider myself British or American. I see it as just one big team putting another show on and it's an international team, and I think of equipment as international in the same way. They have just as much Strand and CCT equipment over there as we have American equipment. There's a great cross-breeding going on, and I can't say any one manufacturer is any better than any other."

For the future, or at least as far as he can see, Andrew Bridge will keep juggling his diary to ensure that he gets the half and half mix of theatre and industrial presentation work that he likes. "The concert world is a very exciting medium, but it needs a lot of time and really the designers still have to be on the road to make it ultra special. I find that a bit imposing.

"The future is always quite exciting in the sense that you're not quite sure what's coming round the corner. Obviously 'Phantom' and 'Time' and the bigger musicals have productions in other countries, so that will probably keep me going. Also, Torville and Dean are planning to do something big again, and I'll be looking forward to that. There are other big possibilities, but I'm not talking about them in case some of my rivals get sniffers!

"There are plenty of rivals, and it frightens me when they do something, and I think 'How the hell did they do that?' All lighting designers are a potential threat, but also excellent company to be with at the same time!"

Andrew Bridge re-emphasised that he is trying to go back more to design and wants to move away from some of the technical aspects of a production. "Sometimes I get sucked into technical things, and you think it looks great - the rig really looks great! But what actually happens on stage is not as nice as you would hope, even though the rig's been put in very neatly. And then at other times, you can strap an extra lamp on to the end of a pipe and it actually does just what you want; it can be a wonderful effect at the last minute.

"The right mix of design and technical is the important thing - plus having a good agent!"



Ford Transit launch in Strasburg - an Andrew Bridge lighting design for Imagination.

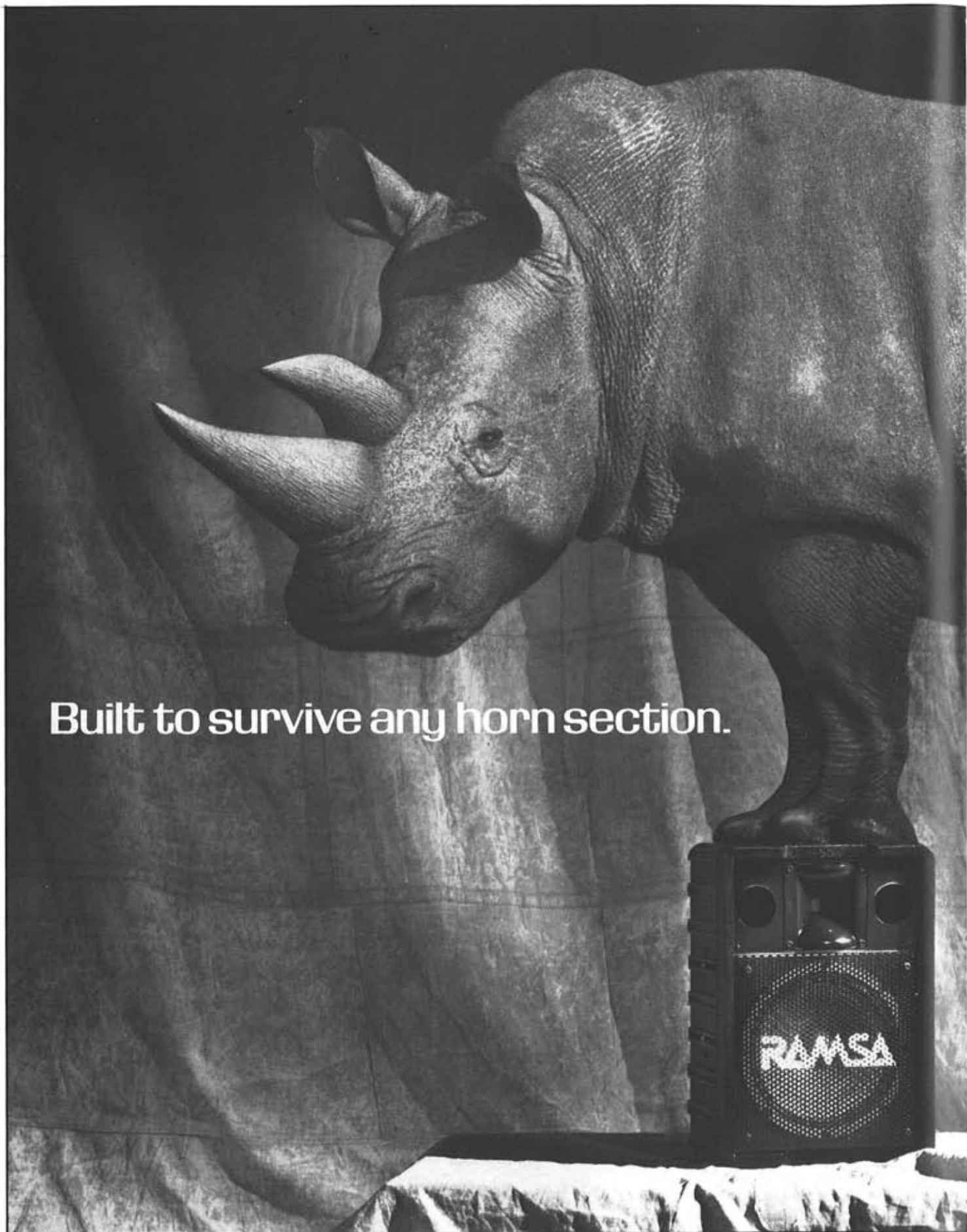


A scene from 'Phantom of the Opera'.

photo: Clive Barda



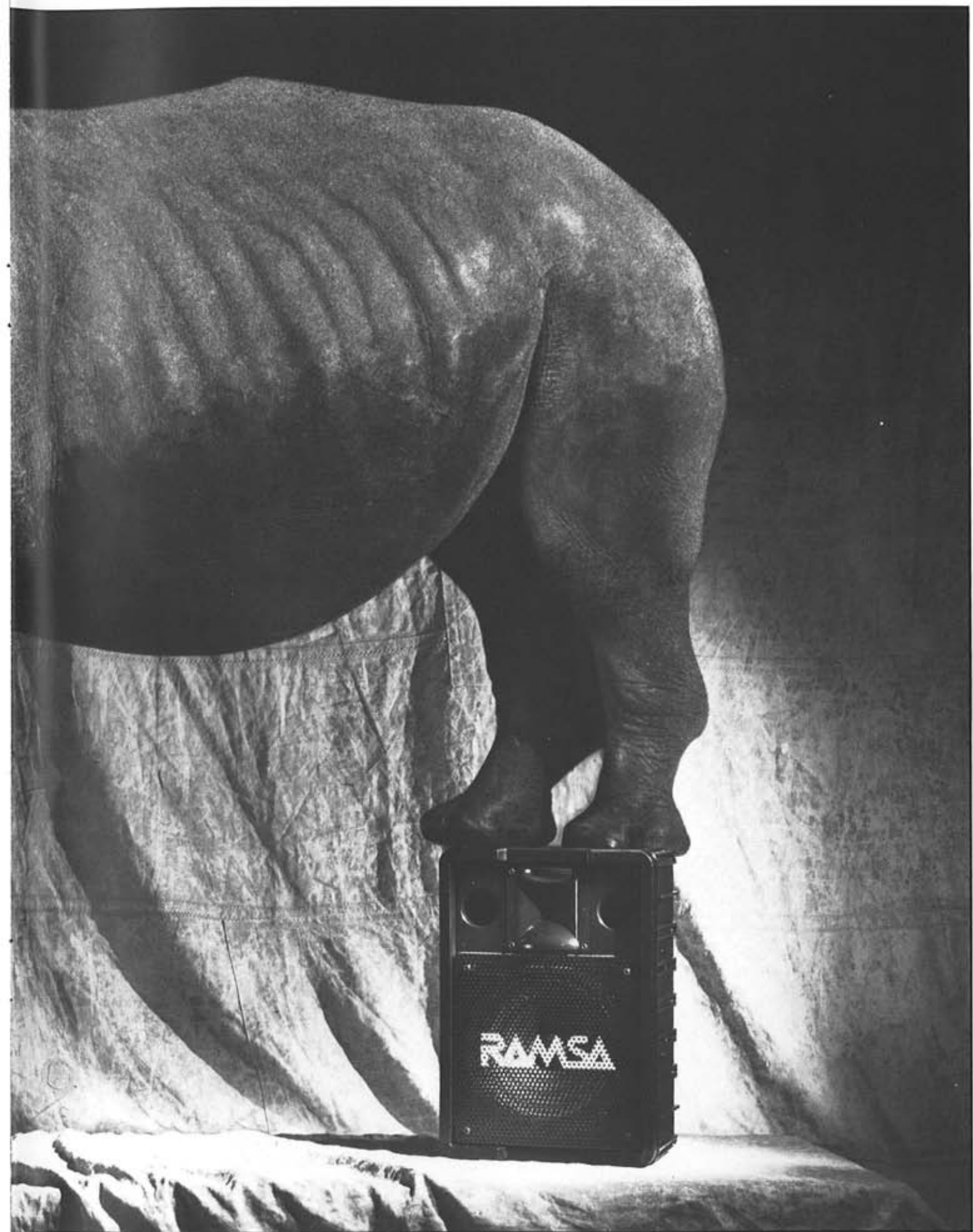
A scene from 'Time' at London's Dominion Theatre.



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# To Train or Not To Train

Graham Walne on a Catch-22 for the Entertainment Profession

The last time I counted the total number of venues listed in the 'British Theatre Directory' I arrived at a figure of 1400. Granted this list ranges from the National Theatre to the 'Councillor Smith' Memorial Hall, but they can all house an audience, have reasonable equipment and a stage, and in the context of this article, they all require some measure of technical staffing.

If you add to this list the number of major discotheques in the UK the total number of venues must be well over 2000, and each requires at least one technician. With the number of technicians employed at the National Theatre running well into double figures as against a small civic hall which might have just one, by making an educated guess we can reasonably ascertain that there are at least 5000 technicians working in our entertainment industry.

Theatre probably offers more technical training than any other branch of the industry, but we are still not talking of vast numbers. Most drama schools offer specialist courses which are run in tandem with their stage management courses and produce, in each case, only a handful of electricians, carpenters, painters or props people each year. Courses for sound operating and flying are almost unknown, and until recently were available through the Association of British Theatre Technicians, which also offered electrical training.

But even the ABTT's output added to the output of the drama schools would barely produce enough people to re-staff the National each year! And by using simple arithmetic it is obvious that the vast majority of technicians working in theatre have had no formal training relying instead on learning their craft as they go. There is an echo here with the disco field, where there appears to be absolutely no training at all.

I find this interesting when one considers the equipment content in today's discos, especially the kind that feature regularly in L+SI, where the range and complexity of hardware surpasses that possessed by most theatres. For example, most theatres do not possess lasers, motorised effects, or sophisticated sound systems.

So does this therefore suggest that disco

technicians need a wider experience than their theatre counterparts? And if so, where do they get it from?

Francis Reid, until recently the head of design at the central School of Art and Design, says that in any case education is more important than training. "Training is the easier option. It's easy to build a course round certain tasks, but we don't want technicians who respond like Pavlov's dogs. I'd like to educate people to have creative minds. I want technicians who are imaginative, and this is more likely to come out of a process of education than of training. I do think that the general level of intelligence is getting better, so the raw material is obviously there."

Francis Reid's thoughts are echoed by Peter Brooks, PLASA's chairman and managing director of Zero 88 Lighting Limited. "In terms of discos, the important thing is to attract people to the venue, and this needs operators who are more artistic than technical. As a manufacturer Zero 88 is bound by the requirements of the Engineering Industry's Training Board who set standards for the training of our staff, but I would like to see better training for the people who install equipment. It's important to know when **not** to change a fuse, and in general not enough is being done in this area," he said.

What scant training that does exist appears to have little or no co-ordination. This is the view of Ken Walker, chief executive of the Association of Sound and Communications Engineers. Calling for a dialogue to establish a centralised source of information, he also expresses concern about "the lack of any standard educational requirement or qualification by the industry itself of those who work or seek to work within it. The industry creates or provides job opportunities and should therefore have some determination towards what is required of its employees," he says.

Since there is no entry requirement, does this permit the existence of sub-standard training establishments? As Ken Walker says of the private tuition courses: "They are not necessarily vetted, receive no recognition from the industry, and consequently are difficult, if not impossible to recommend."

Irrespective of whether Ken Walker's clarion call falls on deaf ears, whilst willingness is the first requirement of action, resources are needed too, and these are scarce. The most likely body to co-ordinate training in this country is the Association of British Theatre Technicians (ABTT), but owing to a withdrawal of their Arts Council grant, they are unable to provide regular training.

Chairman Richard York's view is that "training has been slightly down on our list of priorities, but it is moving up. We have recently changed the 'ABTT News', 'Sightline' is about to go quarterly, and administration is our next priority.

"Meanwhile we have mounted a successful course in Glasgow on 'Management for Technicians' and this will be repeated in London. It is true that whilst the Arts Council are not interested in continuous funding they are willing to let us have project money. So I

hope that we will gradually return to training. There is certainly a great need for it."

The picture that emerges is that products are being manufactured by trained staff for untrained operators. Furthermore, these operators do not need qualifications in order to obtain jobs, but also appear to obtain sufficiently good results from their equipment! Managements have therefore not felt the need for any change.

All this prompts me to ask the inevitable question. If in the majority of our venues, the curtain still goes up, the lights still come on, and the music still plays, with only a fraction of the operators having had any training - is training really necessary?

The central Catch-22 to theatre working is that, however tight the time-scale, however restricted the budget, and however poor the crew or their facilities, once the curtain rises any managements to improve matters is devalued. And this is why few managements offer any financial inducement to technicians to improve their skills. They just don't need to.

But could training sufficiently improve results to that any related costs can be covered? For this to happen, the improvements would have to show a clear benefit. Peter Brooks stated that the criterion must be to attract the audience, and perhaps it is easier for the technology in discos to do this than in theatre. But is it the DJ or his equipment that is the attraction? Francis Reid has said the theatre of engineering is dying because it upstages the actors. So in theatre, improvements to training are more likely to be reflected in reduced maintenance and production costs. In theory this should also benefit the audience.

Both Francis Reid and Peter Brooks have also indicated that creativity is more important than pure technical knowledge. Are they foreseeing the dangers of too much logic in entertainment? Should we beware the computer drum-kit, the auto-fader, the motorised hoist, the digital mix-down?

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# Which Way The Discotheque

Paul Dodd has recently joined Avitec UK as a full-time designer. An expert in lighting and its control, he has been with the company for 2½ years, most recently working with top designer Peter Danne at Avitec's sister company in Germany, Avitec+Soundock GmbH. Together this team were responsible for the system installed at 'Le Palais' in Hammersmith, London.

As head of design at Avitec, Paul is responsible for assisting both trade and retail customers with everything from advice on a simple lighting system to a full blown design. He will also be using computer-aided design, with Avitec UK ultimately investing in a similar CAD system to that already in operation in Germany.

L+SI invited Paul Dodd to comment on the state-of-the-art of discotheques today.

Slaving over a hot drawing board one afternoon, the telephone rings and brings with it the smiling voice of L+SI's editor. It transpires that he would like a few lines answering the question posed by the title of this piece.

Easy enough to say, but not so simple to answer. Designing for the future is a complex job, further complicated by the pressures of many clients working to timescales that need a design by yesterday for installation next week. This may well indicate a bouyant industry, although it can have a cramping effect on creative thought. However, overcoming these challenges is what makes life exciting.

So 'Where do we go from here', as Chicago sang in the seventies. To give us a clue as to whether the discotheque, let us look at what has been happening so far.

In the beginning things were simpler; much more basic. Lighting, if used, might have been a mirror ball with perhaps a few coloured spots, and the music supplied via anything from a Dansette or two, to a couple of Garrards and some valves! Simple? Well, not for everyone.

In Norway, for example, the impresario who started the country's first 'discotheque' to help subsidise his not so profitable jazz club, found that he had to employ people to dance to the records in order to show the public that such a concept was possible and acceptable, and that there was no need to wait until the band came back for their next set to have a dance. For many years most Europeans have regarded dance bands as the only source of music to dance to, and looked on the D.J. as someone who played music in the intervals.

These dance bands had limited repertoires and would only add a handful of new songs each month. Music radio, being virtually non-existent, meant that hits would stay in the charts for months, a fact that D.J.'s have bemoaned in Germany and Scandinavia until relatively recently, and which had a retardative effect on discotheques and their development for a considerable time, although this has since been well made up for.

In the UK we were luckier, with Luxembourg and the 'pirates' bringing us a constant flow of new music and encouraging us to expect change. Our discotheques started to grow. The Americans got in on the act, and with their penchant for glossy packaging, started doing things to discotheques that we still see clearly in all that we have today. Oh to have been a fly on the wall when the G.E. rep. explained to his superior that he had a customer who wanted to do something as perverse as to put tractor lamps in this discotheque thing he had.

There it is - an idea that was different. There's the nub. Ideas that are different, and the best of them so elegantly simple. Turn an Optikinetics projector round. Don't point it at the wall: point it at the people. The concept is excellent, and the idea simplicity itself.

There have been many such ideas that have brought us to where we are today; some founded in inspiration, some by necessity, and some by accident. Many years ago I remember ordering some American 'Tivoli' style tube lighting (it's a significant step when a brand name becomes the generic term). Unfortunately this tubing required major re-soldering before it could be installed, and to do this the looms of lamps had to be removed from the tubes.

Easy, but not so the tedious job of re-inserting them once repaired. The tubes were intended for installation on a large and quite high-domed ceiling. Enter the idea that had my partner ringing the manufacturers, and having his suspicions about my sanity confirmed when he was told by them that any such attempt was not only ridiculous but in their eyes very ill advised.

The idea, which we made a reality, was to forget the tubes and spread the looms of lamps out across the by now deep blue painted dome to make a night sky. The end result of thousands of these lamps spread across some 150 square metres of ceiling was a stunning matrixed constellation, coupled with an intimate personal knowledge of how Michelangelo felt after he'd finished the Sistine Chapel.

I cite this as an example to illustrate a point that follows shortly, regarding design and its roll today.

Firstly, though, I must ask what is design and how has it affected discotheques and is it a new thing?

Designer discotheques to match our designer clothing, designer gadgets, designer swimwear and designer everything in the fashionable designer world we are told we now live in?



Paul Dodd - "Many new ideas and concepts are killed at the 'committee' stage because they are taking a step into the unknown; a step from the comfortable security of taking something from the shelf."

The answer is simple: no. Design has been here with the discotheque industry as long as we have, although few have taken advantage of or placed any real importance in it until recently. Udo Fischer and Tony Gottleier were among the few who started to show the rare operators with the nerve to put their money on the line, how rewarding it could be to do something different, using a designer to create a lighting concept for their venues.

Others were happy to rely on the latest new effect to substitute for design, or simply relied on the safety of 'catalogue design', where only well worn combinations of lights were permuted ad infinitum (ad nauseum). But Udo Fischer, together with Avitec, showed, for example, with Mecca's Birmingham Powerhouse, that something special could be created.

Tony Gottleier went a different but equally important route with Camden Palace, blending and exploiting the theatre aspect with discotheque. And this brings us to what I see as a significant point.

More and more we are now seeing a crossover in lighting effects and technique between stage (be it music or theatre) and discotheque - a trend that I for one gladly welcome. It is encouraging to see the use of powerful lighting like floods and par cans

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with their solid colours making an appearance in our clubs, as it is to see movement of lights on stages.

Tony Gottelier made a statement back in 1983 to the effect that innovation in this country was a luxury, and, to a certain extent, it still is. Many new ideas and concepts, whether they be for lighting or interior design, are often killed at the 'committee' stage because they mean taking a step into the unknown; a step from the comfortable security of taking something off the shelf. Something as simple yet unorthodox as taking the lamps out of the tubes mentioned earlier can have people racing for their equivalent of Schultz's security blanket. Strong words? Perhaps, but none the less an irrefutable, witnessable occurrence within our industry today.

I would not suggest you throw away your pinspots, relinquish your helicopters, burn your scanners or forsake any of the tremendous range of lighting and effects that we have available to us now; only to look at how they are used and how these same items might be used more effectively.

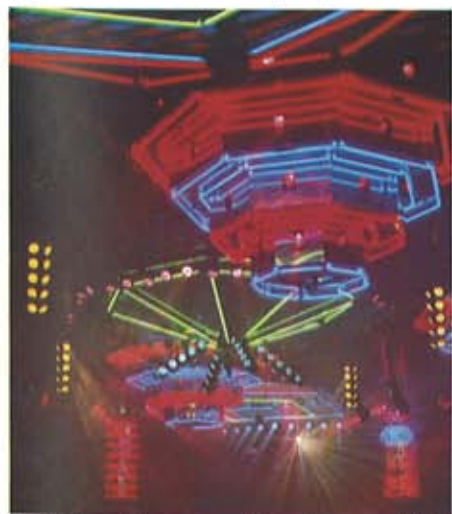
As you walk around the coming PLASA Light and Sound Show and look at the plethora of lighting equipment on display, remember that it is wrong to automatically assume that any light can only be used as it is displayed. One of the basic tenets of good design is not to do only what you know you can do, but to conceive an idea or concept and then work out how it can be done.

At Avitec we feel very strongly about design and its necessity for the future, which is why we have set up a department, dedicated full time, to do just that. Headed in Germany by Peter Danne, and in the UK by myself, the design department is available wherever required, whether that be to give support to dealers and through them their clients, or tasks like the 'atmosphere creation' at Mecca's 'Le Palais'.

At a time when so many seem to be crying about the dearth of new lighting and effects, we feel time is more productively spent taking a closer look at how we use what we have (and that's plenty) and how, with good design, we can use it to move forward creatively. In addition, some manufacturers are now realising the importance of working closely with designers to create new ideas in effects lighting and control.

The technology is there, and so are the design facilities. Almost anything is possible today.

As for the future, and which way 'discotheques?' - well that's rather up to you, isn't it?



The Avitec design team of Peter Danne and Paul Dodd introduced new ideas to the UK at Mecca's 'Le Palais' in Hammersmith, London.



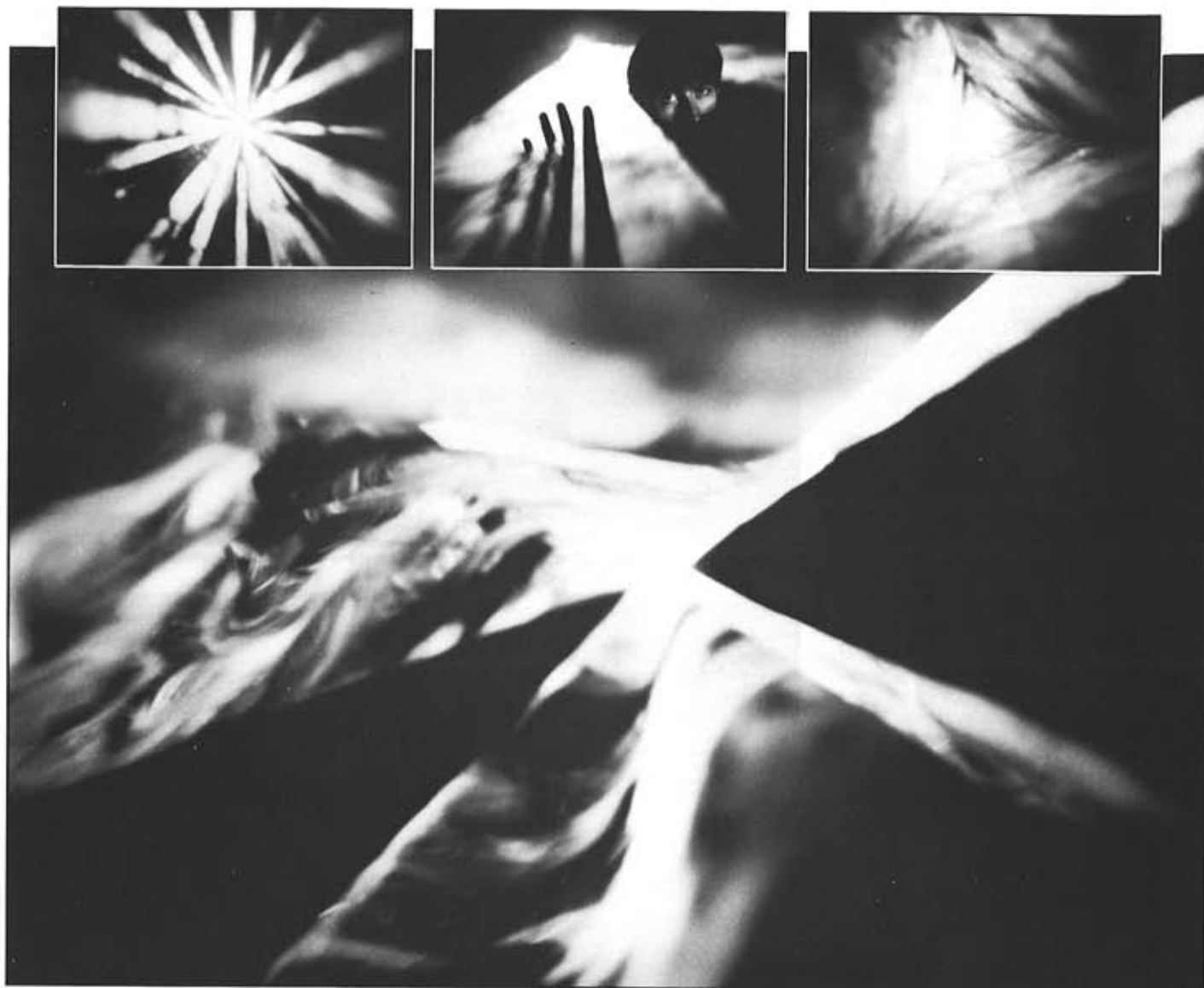
Good design brings innovation: Avitec's Peter Danne takes the industry forward in Wolfsburg, West Germany.



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# R. G. Jones at Fifty

Had L + SI existed 50 years ago, very few names in the 1937 editions would still be recognisable. One of those that would is R.G. Jones of Wimbledon.

L + SI talked to hire manager Bob Caple about two recent and typical projects: the Classical Concerts at Leeds Castle and P&O's anniversary celebrations at Greenwich.

R. G. Jones established its reputation in providing sound equipment for outdoor events, and although today its work also encompasses the use of a 24 track recording studio and the provision of indoor sound equipment (notably to the Guildhall and the Royal Albert Hall), it retains its outdoor heritage with major installation projects such as the Wimbledon Tennis Championships.

"We are reasonably well experienced at providing amplification for outdoor events, and for the last eight years we have been providing equipment at Leeds Castle in Kent for their classical music concerts," explained Bob Caple.

"The event is very popular, and even though the authorities limited the capacity to 28,000, we have to cover a very large area. Essentially we are providing PA. We are trying to reproduce as accurately as possible what the orchestra are doing, and we aren't there to remix the sound. The purists think it's sacrilege.

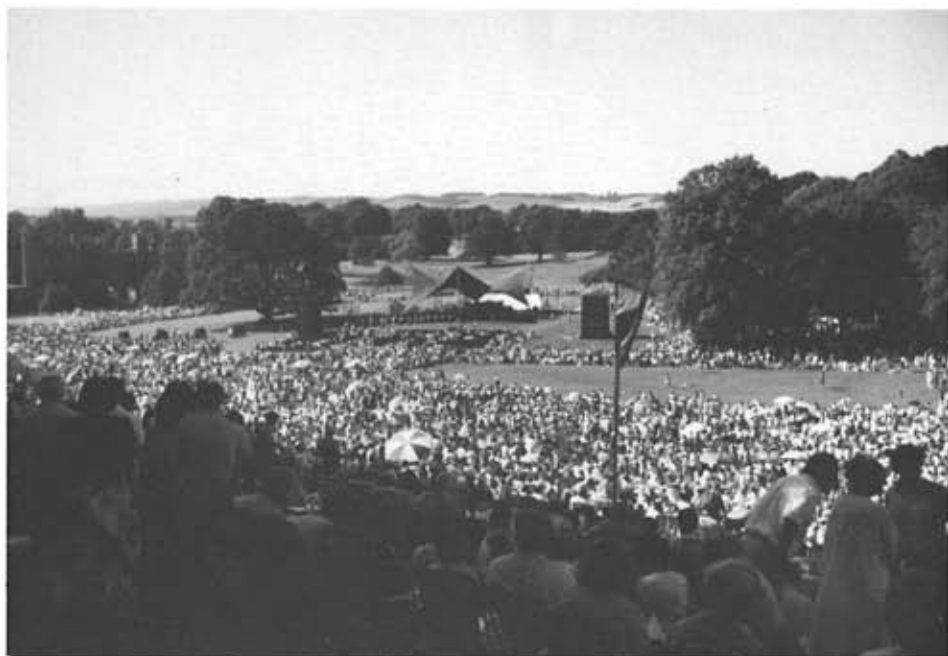
"At first, some of the orchestra said that they didn't want our equipment - they never needed it at Abbey Road! However, if we turn the system off at rehearsal, nothing except for the tamps and brass gets beyond the front few rows. The rest simply disappears into thin air.

"Well before the event we get copies of the music and listen through, identifying solos and the like, but our operators are enthusiasts rather than musicians and the orchestra usually has someone at the mixing position to guide us. This is more useful than just reading the score, especially since we are keeping the sound under control rather than actively mixing it. We generally use about 50 mics, concentrating on the strings and woodwind - these need the most help - and we do mic up the vocals even though the trained singers can produce phenomenal sound levels at close range.

"The site is peculiar in that whilst there is an area in front of the orchestra, it also goes round a hill on to the golf course, so we use two main towers with a delayed tower for the hill. We also add some fills for the people closer to the stage otherwise they would be listening to the backs of the towers.

"If we're not careful we can get some feedback, especially from the C451's. It's inevitable with having 50 mics live at once, even though the towers are 40' either side of the stage. Humidity is a bigger problem, however, because when the air is moist we lose bottom and some clarity and this has to be restored at the desk. It's essential that we have people in the crowd with walkie-talkies because since the site is so large there may be some variations from what can be heard at the mixing position."

R.G. Jones' next project posed more communications problems since it involved linking an even larger site bounded by the River Thames. The occasion was the celebration of P&O's 150th anniversary, marked by Her Majesty the Queen's presence on board the 'Pacific Princess'. The ship was to moor at Greenwich for a spectacular son-et-lumiere



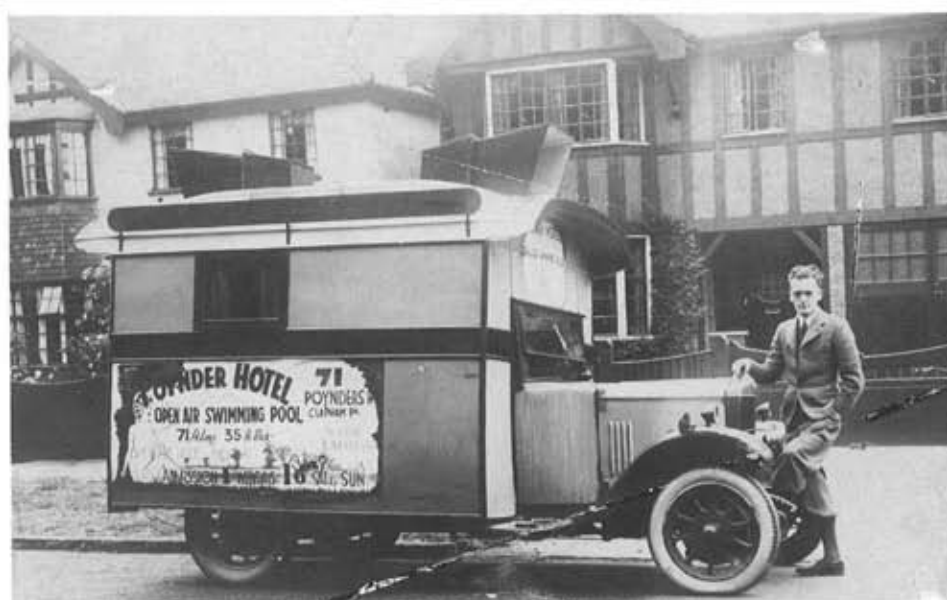
The Leeds Castle open air concert on July 4th this year.

in the grounds of the Royal Naval College.

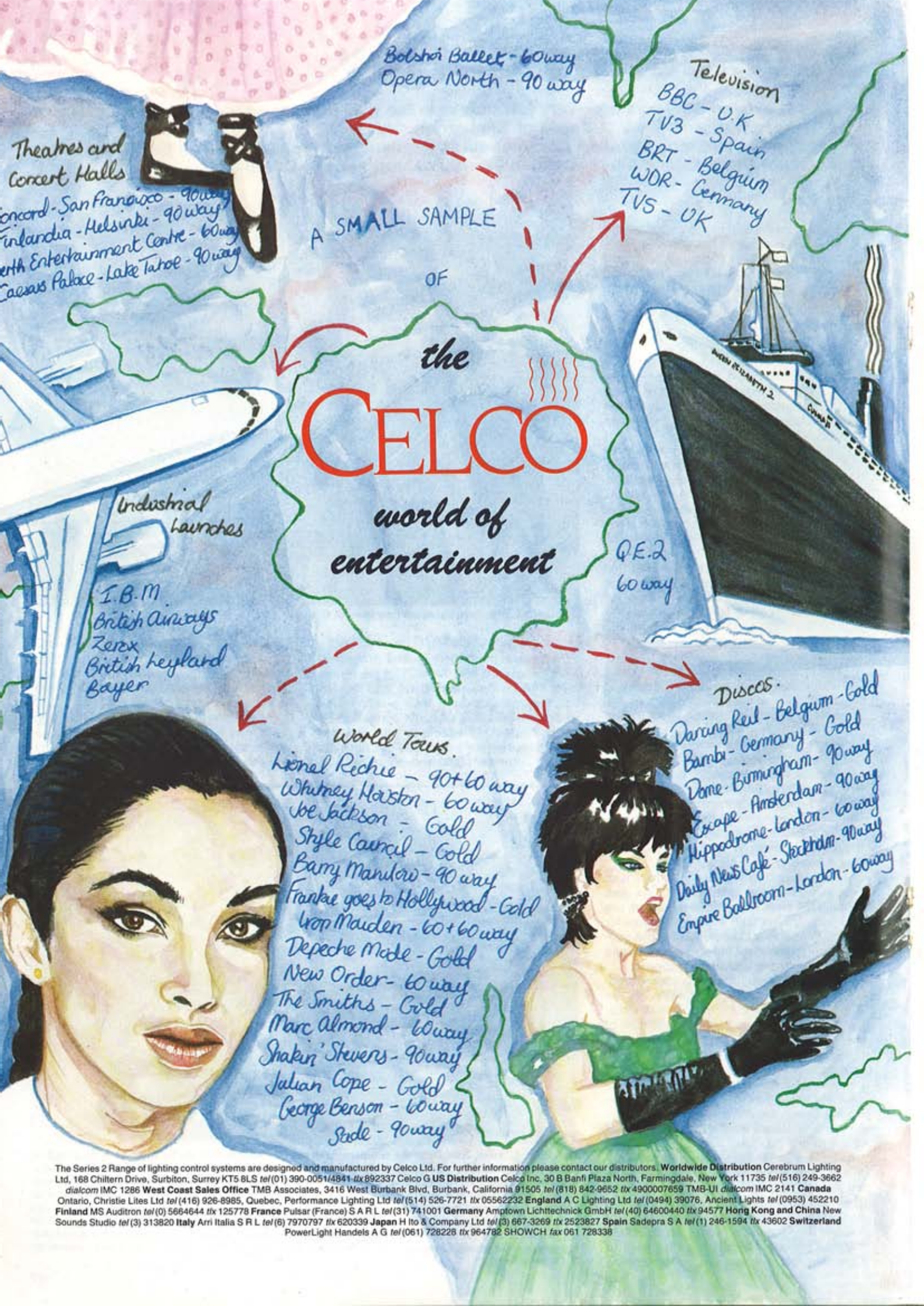
"In essence the project looked straightforward," explained Bob Caple. "Our job was to relay effects, the Guards band, and Richard Baker as narrator from their position in a mocked-up old P & O barge across to the Pacific Princess. This came straight after the Leeds event so we had to get out of Leeds on the Saturday night and go straight to

Greenwich to catch the morning tide! In fact we could only rehearse at high tide, but at least we didn't have to wait for a work-boat to take us to and from our equipment as the Le Maitre fireworks people did!

"I wanted to put the speakers on the bank, but it was felt that they would be too obtrusive so we put them on the barge which was moored on the south bank. Imagine us



The late R. G. Jones, founder of the company, with the first loudspeaker van he completely hand-built in 1926. The organisation now employs 20 people and covers a very diverse field in the audio industry. Recent installations include the design, manufacture and installation of sound systems for both St. Paul's Cathedral in London and Winchester Cathedral, conference rooms with automated mixed sound reinforcement and recording systems for BP International, numerous function rooms for the Savoy Hotel and Cafe Royal, background music and satellite TV systems for Garfunkels units, a tele-conference system for the money market for Bankers Trust and linking together major financial centres around the world plus numerous other projects ranging from the National Sports Centre at Crystal Palace to sound systems for P&O cruise liners.



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Shyle Council - Gold  
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Frankie goes to Hollywood - Gold  
Iron Maiden - 60+60 way  
Depeche Mode - Gold  
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The Smiths - Gold  
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Shakin' Stevens - 90 way  
Julian Cope - Gold  
George Benson - 60 way  
Sade - 90 way

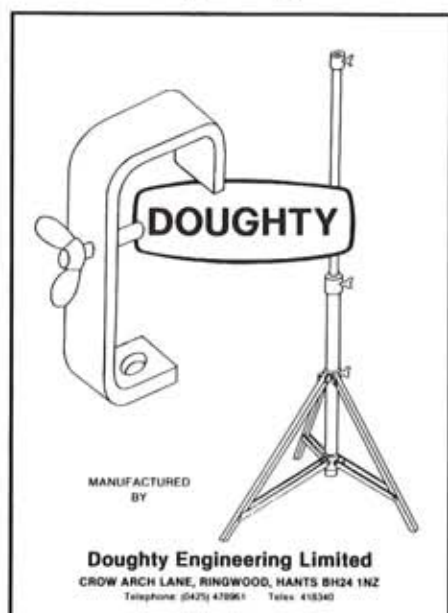
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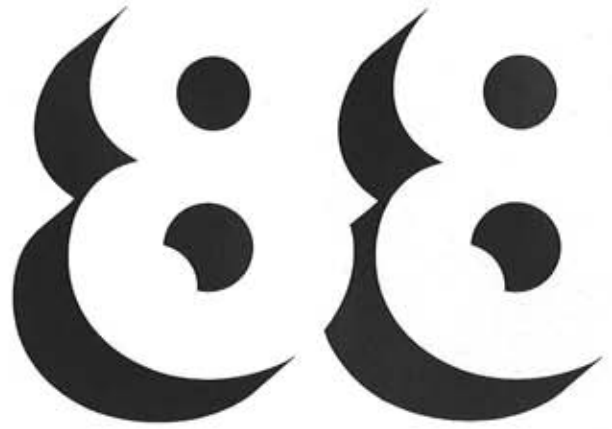
The William Fawcett barge was built by theThe Unusual Rigging Company.

almost at the water line aiming up at the Queen 90' higher on top of a steel wall! We used a revised Leeds system with a generator and a spare supply 'just in case'. We felt that it was wiser to pre-record everything and so in the end we used an eight-track with cue tracks for the fireworks and lasers and a time code on the eighth track.

"For safety I wanted two eight-track machines to be locked together from a remote source, but apparently this is more difficult than straight slaving. We also had a



Part of the spectacular firework display by Wilf Scott of Le Maitre. Also involved in the P&O celebrations were Theatre Projects and Laser Creations.



# Light & Sound Show

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cassette in case all else failed. In addition to all this we had to relay the sound to 800 people seated by the College itself, and we used two small towers with an input both from the main system and via a radio link as well just to be double sure.

"At the last minute the client asked us to cater for the public which it was realised would gather behind the College in the park, and which offered a grandstand view. Here we suspended a cluster from a crane and drove it from a 1/4" copy of the master tape. We knew it would only drift by 2 seconds and we thought that would not be critical at that distance, and with so much to see.

"The whole show was mixed from the barge but cued from the Pacific Princess - difficult because the opening music 'Zarathustra' comes out of nowhere. Despite one of the guardsmen unplugging some of the speakers it went well, and the client was pleased."

## Equipment Lists

### Leeds Castle 1987

#### Microphones:

- 19 x AKG C451E - Violins, Violas, Cellos, Harps & W'wind
- 4 x AKG C414E - Timps
- 3 x Neumann U87 - Bases
- 2 x Neumann KM84 - Bassoons
- 1 x Neumann U89 - Tuba
- 7 x Shure SM85 - Horns, Trumpets, Trombones
- 4 x Shure SM58 - Royal Artillery Band
- 6 x Shure SM57 - Percussion, Announcements
- 2 x Amcron PZM - Piano
- 6 x Scephs BLM - Choir

#### Mixers:

- 1 x Midas 32.8.2 cw PRO4A Modules
- 1 x Midas 24.6.2 cw PRO4A Modules

#### Outboard:

- 4 x Yamaha 2031 Graphic Equalisers
- 2 x Shure FP16 DA
- 2 x Yamaha SPX 90 II
- 1 x AMS DMX 15.80 Delay



R. G. Jones working on sound effects for the theatre. The company was the first to be involved with providing recorded sound effects for London theatre and the old Lyric Theatre at Hammersmith the first to have relayed sound - installed by R. G. Jones.



R. G. Jones busy at work before the advent of tape recording as it is today. The picture was taken just prior to the Second World War when everything went straight to disc.

- 1 x Klark Teknik DN 70 Delay
- 1 x Klark Teknik DN 60 RTA
- 1 x Technics CD
- 1 x Technics Cassette

#### Multicores:

- 150m 32 Pair
- 150m 27 Pair
- 25m 9 Way Snake
- 50m 32 Pair Snake

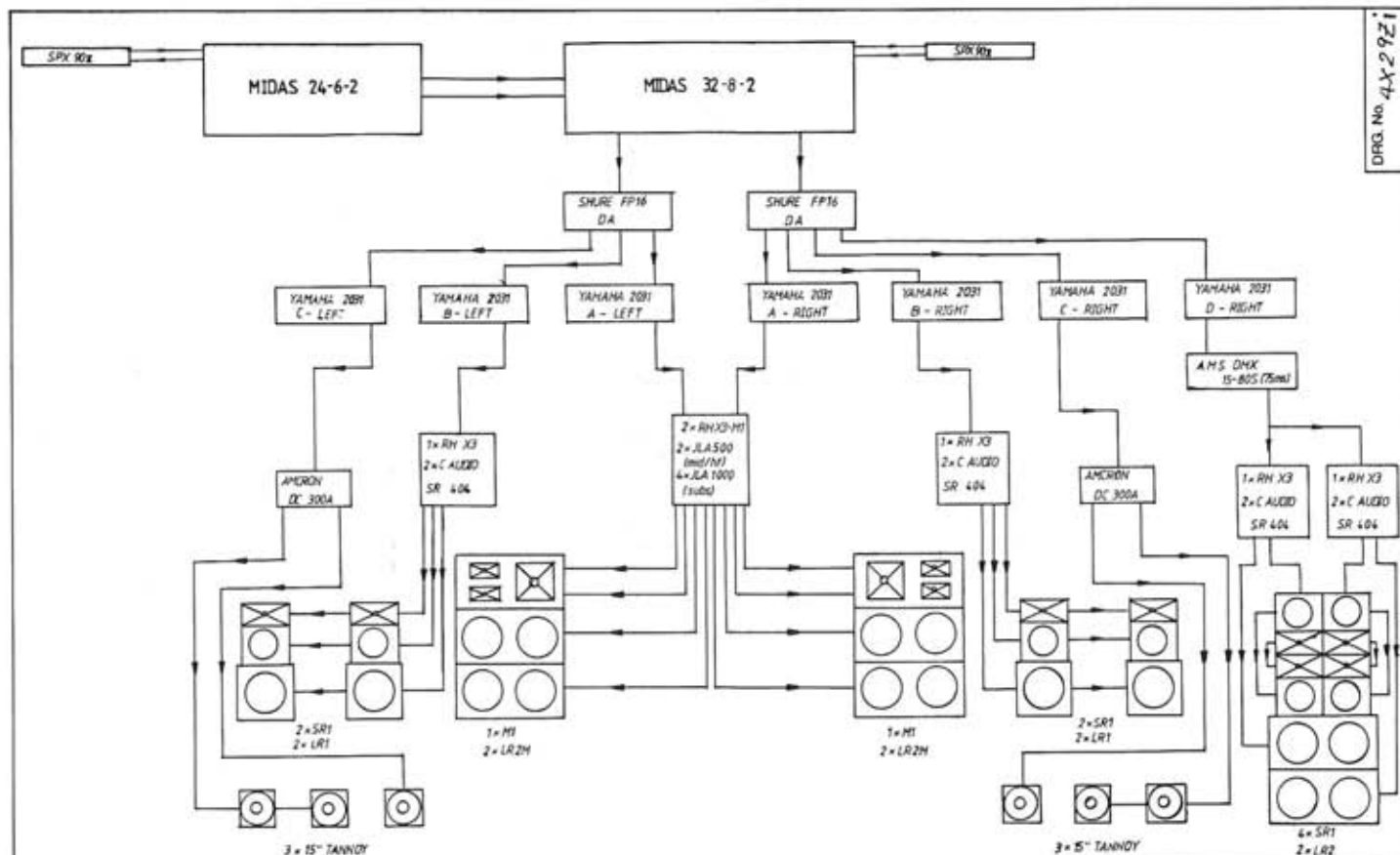
#### Amplifiers:

- Rack 1 - 2 x Renkus Heinz X3 - MI Processors
- Arena System - 2 x JLA Crest Audio 500 . Stereo . MID/HF;
- 4 x JLA Crest Audio 1000 . Bridged . Subs

- Rack 2 - 2 x Renkus Heinz X3 Processors
- Smart System - 1 x C Audio SR 404 . Stereo . MID/HF;
- 1 x C Audio SR 404 . Bridged . Subs;
- 2 x Amcron DC 300A

#### Loudspeakers:

- Renkus Heinz
- Arena System - 2 x M1 MID/HF Enclosure
- 4 x LR2M Subwoofer Enclosure
- Renkus Heinz
- Smart System - 8 x SR1 MID/HF Enclosure
- 4 x LR1 Subwoofer Enclosure
- 2 x LR2 Subwoofer Enclosure
- 6 x 15" Tannoy Monitor Gold



ISSUE	REVISION	DATE	TITLE	DRG. No.
			LEEDS CASTLE 1987	4X29Z1
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DRG. No. 4X29Z1

# ROLACUE SERIES MEMORY CONSOLES

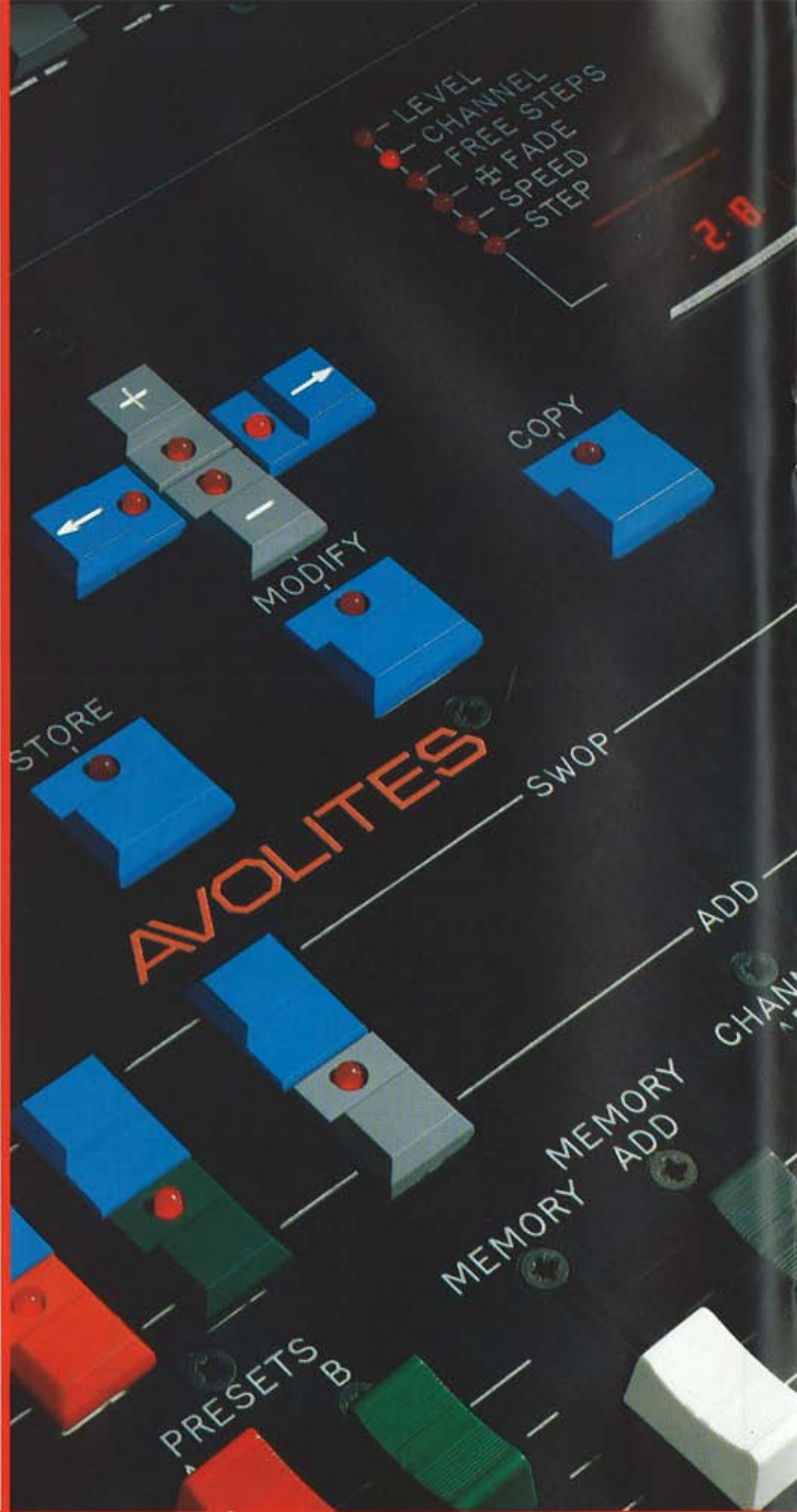
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## P&O 150

### William Fawcett Barge

#### Control:

Trimix 18.8.2  
2 x Soundcraft 8 Track  
1 x Revox B77  
3 x Yamaha 2031 Graphic  
2 x Yamaha SPX90 II  
2 x Tannoy Monitor Gold  
1 x Amcron DC300A  
Q LOC Tap Synchronization  
Micron CNS TX  
Technics CD  
Technics Cassette

#### Amplifiers:

Rack 1 - 2 x Renkus Heinz X3 - M1 Processors  
Arena System - 2 x JLA Crest Audio 500 . Stereo .  
MID/HF; 4 x JLA Crest Audio 1000 . Bridge . Subs  
Rack 2 - 2 x Renkus Heinz X3 Processors  
Smart System - 1 x C Audio SR 404 . Stereo .  
MID/HF; 1 x C Audio SR 404 . Bridge . Subs

#### Loudspeakers:

All Renkus Heinz  
Arena System - 2 x MR1 MID/HF, 4 x LR2M Sub  
Smart System - 8 x SR1 MID/HF, 4 x LR1 Sub  
2 x LR2 Sub

### Royal Naval College

#### Control:

Soundcraft 200B 16.4.2  
Yamaha 2031 Graphic  
AMS DMX 15.80 Delay  
Revox B77  
Technics Cassette  
Micron CNS Receiver and Diversity

#### Amplifiers:

Dedicated Renkus Heinz Rack consisting of:  
2 x Renkus Heinz X3 Processors  
2 x JLA Crest Audio 500 . Stereo . MID/HF  
2 x JLA Crest Audio 1000 . Bridge . Subs

#### Loudspeakers:

Renkus Heinz Smart System consisting of:  
4 x SR1 MID/HF Cabinets  
2 x LR2 Sub Bass Cabinets

### Greenwich Park

#### Control:

Soundcraft 200  
Meyer CP10 Parametric Equaliser  
Revox B77



The present recording studio - the Eastlake-designed control room houses a solid state logic computer controlled mixing console. All functions of the console are monitored by the computer which allows total recall of the control settings.

#### Amplifiers:

5 Dedicated Meyer Racks consisting of:  
3 x Meyer M3 Controllers  
2 x Meyer B2 Controllers  
10 x Crest Audio 4000

#### Loudspeakers:

12 x Meyer MSL3 flown  
8 x Meyer 650 R.2 Sub Bass

The system was configured with 12 MSL3's flown from a 12-way flying plate in long throw mode on a 50' crane, the 650 R.2's being arrayed on the floor directly below.

Colour photographs used with this feature courtesy The Unusual Rigging Co. Ltd. and copyright.



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# Sound Thinking: The Shuttlesound Story

**Hot on the heels of their fifth anniversary, Ben Duncan talked to managing director Tony Oates about the company which has been a leader in bringing standards of sound-reinforcement technology and engineering integrity into venues around the UK.**

## What was the status of Electrovoice in the UK at that time?

Before we became involved, the distribution of EV speakers and microphones had been controlled by people who evidently didn't fully understand the requirements of professional sound. It soon became apparent to us how dire EV's situation had become. For the first year, we worked day and night sorting out countless products which had gone wrong, because they'd been specified and installed incorrectly.

Bass drive-units had been fitted into the wrong cabinets and hundreds of T.35 tweeter diaphragms had to be changed! To be fair, in the past somebody at Brighton had done a good job marketing EV's 'Eliminator' cabinet - a compact 3-way speaker system. At the time, this was EV's best known product in the UK - the bench mark by which EV were judged - and yet it was obsolete. As for EV microphones, there was only **one** model on everybody's lips - the RE20, though broadcast people knew about the 635A and RE50, which are widely used. And yet nobody seemed to know that Electrovoice are one of the world's longest established manufacturers of mics - since 1927 - with a positively **huge** range of models.

## What happened next?

In 1983, we embarked on a campaign to develop awareness of EV's range of speakers and mics, and their correct application. At the time, EV had begun to weed out the weaker and more odd-ball products, and it was time to take stock of the situation and cast around for a direction. The hi-fi boom was over and for some time product engineering had been focussed at the M.I. and pro-sound contracting markets. We decided we didn't want to leap too hastily into M.I. but have since developed awareness of our position at the forefront of group PA and back-line equipment. The studio/broadcast side of pro-audio was definitely well serviced from a dealer point of view, so we got our teeth into fixed PA installations, i.e. high power sound systems for venues and clubs, and quality speech reinforcement systems. It was an area where both Mark Burgin and I had a great deal of expertise, and EV's product-line was by now superbly suited to it.

**Shuttlesound was founded by Tony Oates and Mark Burgin in the summer of 1982, and I began by asking Tony about their background:**

Back in the early seventies I was living overseas and working as a Blues guitarist. Inevitably I got involved in repairing things, progressed into building cabinets, and then set up with two other guys, manufacturing and distributing pro-audio products.

## So where did the idea of forming Shuttlesound come from?

In 1982, I returned to the UK and was all set to take up a job with a leading concert-sound rental company when I had a call out of the blue from Electrovoice (EV) in Europe. They had wind of my prior success overseas,

and wanted to set up distribution in the UK. I said 'yes' after Mark and I had discussed it, and we put a company together for this purpose. We had just 48 hours to set up an agency and get the 'phones installed, working out of a small office in the bottom-most reaches of the New King's Road.



Mark Burgin (left) and Tony Oates on the steps leading from Shuttlesound's entrance hall at the London SW18 base. "As front men this seemed a good place to pose," came the comment.

### What did you find, when you started to specify installations?

In 1983 a lot of venues were still being treated with obsolete or unsuitable technology, such as column speakers. Columns have their place, but there are just as many places where they shouldn't be allowed! UK installers were still largely oblivious to major innovations, such as the constant directivity horn, which EV had invented eight years beforehand.

So there was still a lot of educating to do! We organised our first 'Pro-sound' seminar in 1983, in conjunction with EV. It's become an annual event - an opportunity for people to get to learn about the latest sound reinforcement components, and about the techniques involved on how to deploy the components as intended. Amongst others, at this year's seminar, we've invited Don Davis as a guest lecturer. He's the founder of SYN-AUD-CON, author of the book 'Sound System Engineering' and of numerous articles and papers. He's been the driving force behind the process of systematic PA design in the US for more than a quarter of a century!

The result of these seminars has been very positive. Many of Shuttlesound's customers - and some of the competition - now have successful installations, using state-of-the-art techniques. Above all, we wanted to end the waste of money. If an installation job is done well, it adds credibility to the whole business - and everyone benefits. But if it's done badly, by an incompetent contractor using inadequate resources, the problems and repercussions drag on for ages, not least because a 'capital refit' has to last a number of years.

### How do you evaluate what's good and bad?

There are a set of objective results which should be present in a good sound-system, and today we can make positive measurements of most criteria. If anything, accurate speech reinforcement demands even more finesse in designing and configuring the equipment than installing a music reinforcement system. Four years back, we introduced serious acoustic design aids to our customers, with a pragmatic flavour.

Today, some of the top electro-acoustic consultants we work with are using heavy-duty computer aids, like 'Techron'. They're taking a very positive, **active** role, not only in specifying the system, but also defining its



Product overview - Shuttlesound's stand at the 1987 APRS Show.



Installation at the Barbican Concert Hall, City of London. The system has since been hand-painted to match existing wood panelling.

performance **and** taking the onus for the results. Nevertheless, we set out to prove that skilful and accurate design could preclude exotic equipment; if the acoustics are reasonable, you can get there with a hand-held sound level meter and sharp pencil! The trade-off is mostly one of timescale.

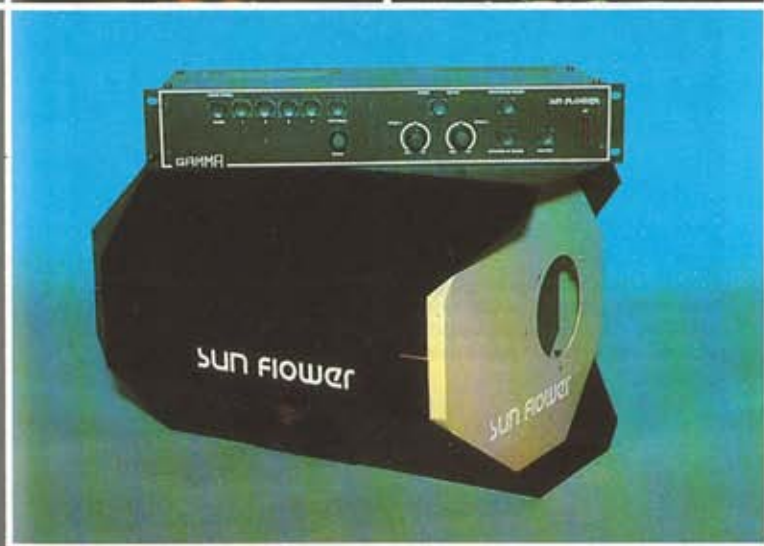
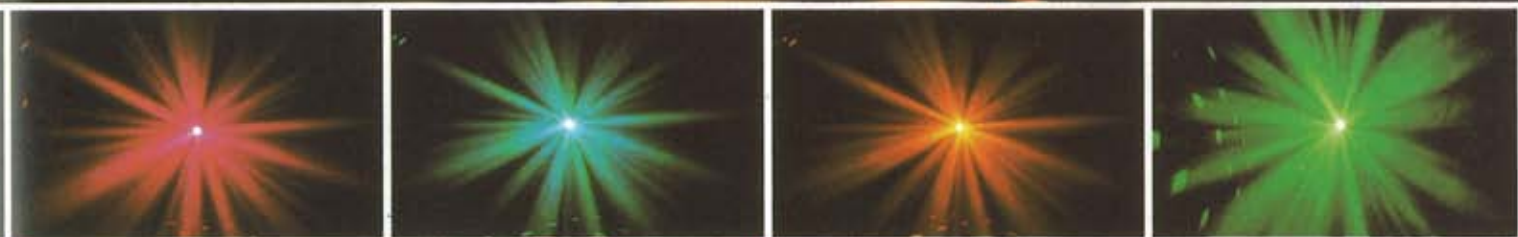
### So systems-design is part of your programme?

In order to achieve our goal on the pro-sound installation side, we saw the need to develop our own engineering skills. This wasn't to compete with our customers, but to back them up. The outcome is that we're



The Limelight, London. An in-house paint job now provides 'technicolour' sound.

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THE ATMOSPHERE CREATORS

## "SYNCHRO SUN FLOWER"

The Synchro Sun Flower is an exciting high power projection system from Avitec Productions Germany, under the Gamma brand name. The effect produced is similar to one of the effects seen from moving high power spots often seen on TV or live band acts, with a similar instant colour change – on the Sun Flower, this has five colour changes and an automatic variable colour crossfade is selectable. The effect can be rotated in either direction with speed control or sound activation, and, for even more excitement, a sound activated vibrating effect can be programmed! Up to 4 Sun Flowers can be driven from one controller – all effects can be individually selected or operated in complete synchronisation, giving many stunning possibilities!

**AVITEC Electronics (UK) Limited,**  
80/81 Walsworth Road, Hitchin, Herts SG4 9SX.  
Tel: Hitchin (0462) 58961. Tlx: 825682 AVITEC G.

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able to offer C.A.D. facilities, for instance, to our contracting customers, for predicting the performance of high power speaker systems in the real environment. With the design aids available, they can be sure that they are using the right drive-unit and cabinet, commensurate with getting the right results in the space available.

We're certainly not just interested in selling high-priced components; we want to see them tailored to fit and perform exactly as required.

#### What about Shuttlesound's future direction?

Primarily we're a distributor of professional sound-reinforcement products. So having got EV happening, we needed support hardware. For instance, we needed an amplifier range. We tried numerous models from manufacturers in the UK, Germany and the USA, and of these, we had most success with Amcron. When we were offered the Amcron agency at the end of last year it suited our requirements perfectly.

Building on this approach we've selected many of the best products around for the pro-sound market-place, and now provide a 'one stop' service, from a connector through to a digital delay or a complete equipment rack. Recently for example, we've begun distributing Micro-Audio EQ and analysers, Barcus-Berry and Audio-Digital processors, and Samson wireless products. We're fortunate in that the companies we represent aren't of the 'also ran' variety. On the whole, they push the frontiers of technology forwards all the time - which is our style!



The PS 400 - one of the contractor series of amps from Amcron. These units now provide a very flexible and cost effective package for fixed installations.



The Amcron Power Base 1. The new PB-2 will be available in late September along with the Macrotech 2400. A 'classic' amplifier manufacturing company, Amcron has been handled by Shuttlesound since January this year.



Gary Ashton in the electronics service area, viewing the performance of a 'rogue' crossover on Audio Digital test equipment - part of the extensive arsenal Shuttlesound employ to ensure only the best gets used. Amcron and other electronics products are serviced 'in-house', with Peter Jones running the transducer service operation.



Brian Marsh pictured in the woodshop. He produces prototypes, custom cabinetry, cabs to fit in awkward spaces, special colour finishes, flying conversions and even the odd exhibition stand.



Sharon Oates helps to keep it in the family. Tony, Mark Burgin and Sharon ran the whole operation back in Kings Road days prior to Steve Smith joining. Recently Sharon has joined the team again to 'help out'.



Contracts liaison man Hugo Roche studies the results of a low frequency tuning procedure. Computer aided design facilities provide predictable response and displacement curves. This service is available to all EV users. Computerised cluster viewpoint maps are also part of the routine. Wherever possible Shuttlesound try to take the guesswork and mythology out of professional sound reinforcement.



The low end of the manifold (MT 4) system - a legend in its own time.

Later this year, EV are due to release some highly innovative transducer designs. Last year, we saw the 'Manifold System' for the first time. Until then, EV hadn't really been in the concert sound reinforcement business. People have used individual EV components

successfully in the past. But we're acknowledging that for the very first time, EV had devised a speaker system that's principally designed for this kind of work.

In addition Amcron have pushed the limits of 2U amplifier packages into hyper-space, with their 'Macrotech 2400', while the use of DBX (noise reduction) in Samson wireless diversity systems has just given a whole new meaning to wireless mics.

One of the developments we see as being necessary, as systems become more complex, is the ability to create a transparent environment, in which the operator sits. This is distinctly **not** a cage! The last couple of years have seen a lot of time spent with Greystone Industries, helping them to develop just such a product range.

#### How do you summarise your success?

Our relationship with suppliers and customers has worked because our philosophies have run parallel: good sound systems, competent design and a professional installation produce a truly satisfied customer - and one that remains so.



The new Electro-Voice N/D Series from Shuttlesound includes the N/D457 (ideal for concert use), the N/D357 (for recording and sound reinforcement needs), the N/D257 (tailored to deliver highly intelligible lead/background vocals), and the N/D408 and N/D308 (for sound reinforcement of live instruments). Full details were given in L+S Equipment News July issue.



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# Sound Electronics and the Leisure Box

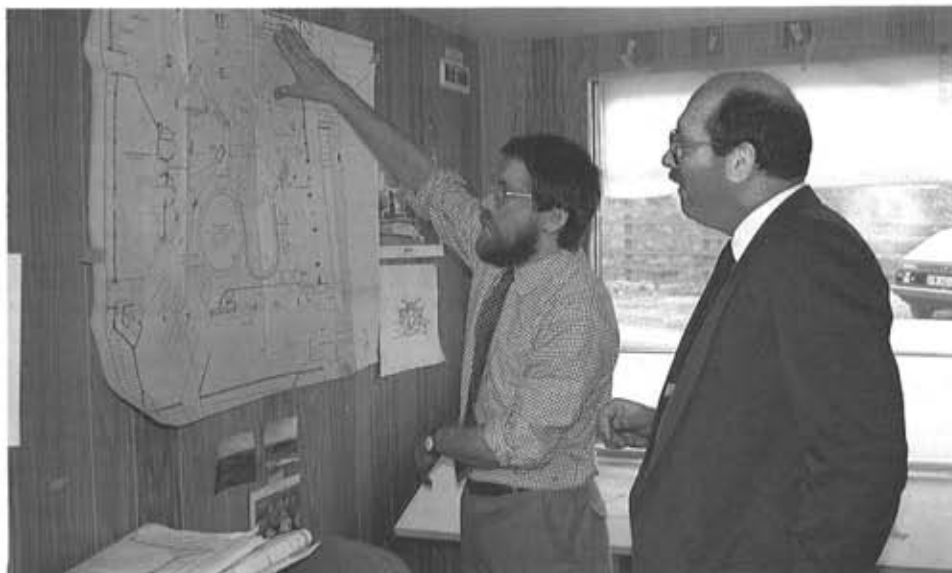
Roger St. Pierre talked to Sound Electronics' Ray Scott about the development of the company and its involvement with major projects in the North East including the 'Leisure Box' at Gateshead.

As Britain becomes more of a leisure-orientated society, so exciting new horizons open out for the lighting and sound industry.

Newcastle used to be a hot-bed of club life, as anyone who went to clubs like the 'Club A Go Go' in the hey-day of the 'Animals' will readily testify, but things have quietened down a lot on that front.

If Geordieland's nightlife has not suffered to quite the same degree as its heavy industry, it is nevertheless true that the golden age of discotheques and live venues has long since passed. However, there are other uses for loud music and flashing lights - as 201-205 Jesmond Road based Sound Electronics will happily tell you.

At present the company, which proudly boasts of holding "The largest stock of sound and light in the UK" (between £150,000 and £200,000 worth at any one time), is immersed in a truly grandiose project out in the suburbs at Gateshead, where a huge indoor theme park, original working title 'Fantasyland', now known as 'Leisure Box' (but that too, could well be changed before the planned October opening) is being built adjacent to the remarkable Metro Centre shop-

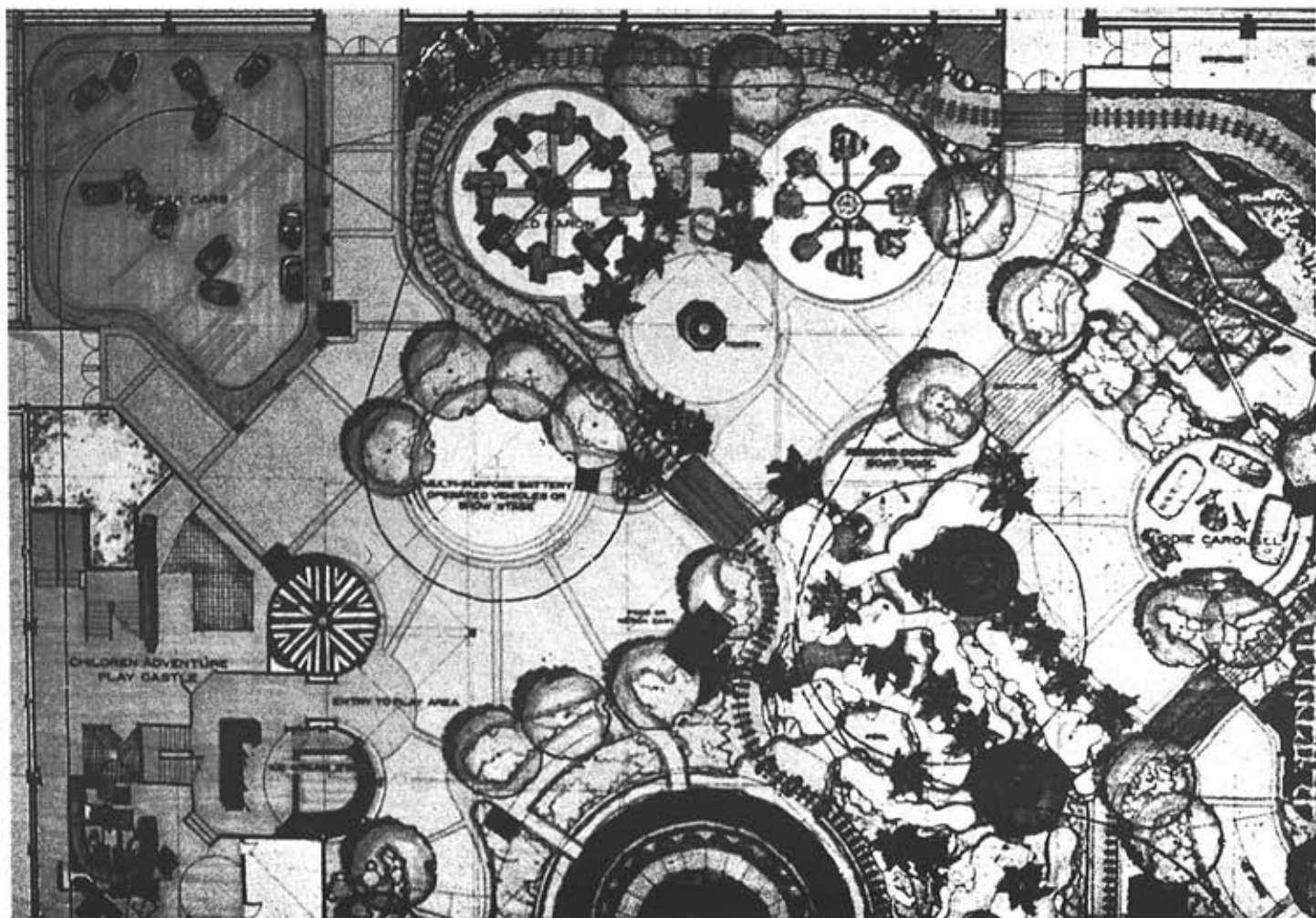


Francis Conway of Crown House (left) discusses the massive Leisure Box project with Sound Electronics' Ray Scott.

ping complex.

Rush & Tomkins Developments are the

main contractors while Sound Electronics are working with Crown House Engineering who



A plan of Leisure Box showing location of rides.

are responsible for all the electrical works. The design of the lighting is, however, being handled by Theo Condu Associates of America whilst the concept and operation are in the hands of a Canadian-based company called Forrec International. Amazingly, the end clients for a project which will feature a ferris wheel, bumper cars, carousels, a fantasy castle, a dramatic high level railway, artificial mountains, simulated clouds and a gallery of video games are the Church Commissioners, the whole thing costing a colossal £8 million.

A special railway station is even being built, giving direct access to passengers on the North Tyne line, while there are also vast car parks to hand - the idea being that parents can leave their children in the leisure complex while they go shopping in the Metro Centre, that is if the whole family isn't tempted to have a day of fun!

Entering new dimensions in lighting for such a venue, Leisure Box will feature constant light changes throughout the day and that is what Sound Electronics have been brought in to provide. Sales director Ray Scott and his design team have come up with a scheme which is being supplied to the installers at a grand total of £100,000 and is all computer controlled via a CL600 controller, developed by Oxtronics with power packs built by Mode.

Another outside-the-norm project recently carried out by Sound Electronics was at South Shields for the South Tyneside All American Mardi Gras, sponsored by Newcastle Breweries which runs throughout August and features a proliferation of live entertainment running the gamut from marching bands and jazz to a Civil War re-enactment and a hot-air balloon display.

Said Ray Scott: "We supplied a special lighting rig for the main amphitheatre. It's a goal-post type construction of trussing made by Thomas Engineering of Worcester which carries a solid bank of Par64 lanterns and Strand theatre lights controlled through a Zero 88 Eclipse lighting desk and a Pulsar portapack. It might sound a strange combination, but it came about because of the unique requirements of this project."

Now employing some 15 people, Sound Electronics grew under managing director John Reid from a service-orientated family business started in the early seventies to carry out hi-fi and television repairs and supply electronic components. "I joined around 1975 and soon after that we began retailing sound and lighting merchandise - it was at the start of the disco boom," explained Ray.

"We were based at first in a converted terraced house in a residential area but we later opened a second outlet in the city centre which concentrated almost exclusively on mobile disco equipment. After three or four years we felt the need to bring everything under one roof. By that time mobile discos were on the decline and realising that there was no further premium on being in the city centre we looked for a suburban building where we could both expand on the installation front and bring everyone back together.

"Jesmond Road proved ideal and gave us 25,000 square feet which was more than we actually needed so, 18 months ago, John decided to turn the basement area into a lavishly appointed health and fitness centre, called Pinetree, which has proved an enormous success for us. Having our own car park has helped attract members and the two businesses seem to sit happily together."

Sound Electronics has another spin-off



John Reid and Ray Scott pictured in the Bose Soundshop area of their Jesmond Road showroom.

business in the form of Sunset Hire. "We were doing quite a bit of hire trade but felt we could do better if it was run under a separate and more self-explanatory name, and that's the way it has proved," commented Ray. Recent additions include a 6 watt water-cooled laser and a 100mw air-cooled laser, both by Laser Systems of Wales. Straight sales remain the mainstay however, aided by a most impressive showroom which Sound Electronics feel works better than any catalogue. "People can come in and see the gear operating - and that includes the laser effects, which have proved very successful for us," said Ray.

"Having started off a long time ago at the dawn of the disco boom, we were appointed as distributors for all the leading UK manufacturers - people like Pulsar, Zero 88, Optikinetics, Le Maitre, Citronic, Mode, Strand Lighting and Bose. In fact, these relationships have been the source of many valuable referrals over the years for both supply and installation contracts."

One of their showrooms also provides a stunning display of framed prints, and artificial plants which have provided very valuable additional turnover for the com-

pany. Recent contracts include a large chain of building society offices and even a major hospital where the lack of daylight in certain areas precludes the use of living plants. "We still do quite a lot of business with mobile D.J.'s though nothing like 10 years or so ago when there were something like 1,500 of them operating in the coastal strip between Middlesbrough and Berwick, and we would regularly sell three or four complete lighting and sound systems each week."

Today, club installations continue to provide the solid bedrock on which the company is based. The biggest they ever carried out was at Zanzi Bar in Glasgow, several years ago, when the lighting and sound spend on converting the old Locarno Ballroom in Sauchiehall Street into a state-of-the-art discotheque was a dizzying £250,000.

"We carry out work throughout the country, even going as far as the Channel Islands but with the hardcore being in Scotland and the North East, and virtually all of it comes by word of mouth recommendation," said Ray.

"We have our own joinery division making consoles and with such huge stocks we can offer highly flexible designs with very quick service."



Part of Sound Electronics' showroom area, with a selection of prints.

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# EQUIPMENT *News*

## New Controls from ADB

Just launched by ADB in Belgium are the S25 and S28 Mark II lighting control systems. The S25 is a new control which handles 256 channels and 512 dimmers, while the S28 in its Mk II form will cater for up to 999 channels and 1998 dimmers.

It goes without saying that ADB have upgraded the technology and enhanced performance, and all communication protocol is in accordance with the USITT DMX512 standard. The S25 has two digital crossfade wheels controlling multiple simultaneous or sequential crossfades whilst the S28 has up to four. The S25 has 24 registers accessible through four digital wheels and the S28 has 33 through 12.

Both systems have proportional patching, full control on time (up, down, wait before and after), individual curve per dimmer, a pile on capacity, soft keys, a 3.5" floppy disc, and more than 150 pages of 'Help' programme on request. A colour VDU comes with the S25, whilst the S28 boasts multiple colour.

Options available on both models include IR remote control, stage manager's desk, manual system, full back up and an alpha numeric keyboard. A mimic panel is an extra option for the S28.

For full details contact the sole UK distributors: Crown House Furze, Theatre Products, Wilford Road, Nottingham NG2 1EB telephone (0602) 863471.

## New RAMSA Mics

August saw the introduction of a new range of RAMSA microphones, three unidirectional dynamic and two unidirectional condenser. The WM-D55E, WM-D65E and WM-D70E dynamic mics will be retailing at around £69.99, £99.99 and £149.99 respectively and the condenser mics, WM-P40 and WM-P50, at £106.00 and £149.99 respectively.

The dynamic mics all provide excellent recording results and the on/off locking switch on the WM-D55E and the WM-D65E is perfect for live work as they eliminate the possibility of accidentally switching the microphones off. The WM-D70E is reported to be one of the best dynamic mics around and will compete with those in far higher price brackets.



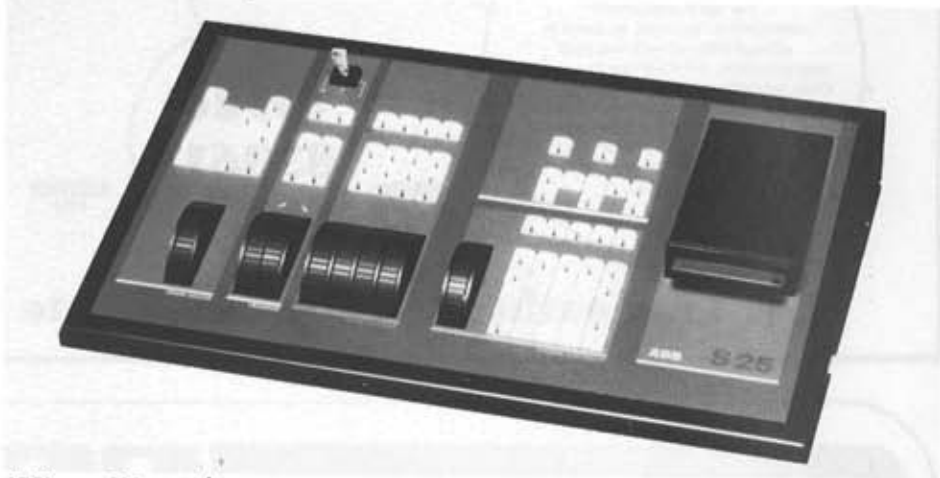
The WM-P50E unidirectional condenser mic from RAMSA.

The condenser mics provide a very smooth sound, and are ideal for voice-overs and for adding that slightly smoother, more pleasant sound to harsher instruments. All models come with a microphone holder, screw adaptor and a protective carrying case. The condenser mics additionally offer the facility of either phantom or battery power and a music/vocal selector with the WM-P40E and a high lift and low cut switch on the WM-P50E.

For further information contact the product manager, RAMSA, Panasonic UK Ltd., 300-318 Bath Road, Slough, Berkshire SL1 6JB telephone (0753) 34522, or Avitec Electronics (UK) Ltd., on (0462) 58961.



The Mark II version of ADB's S28 memory lighting control.



ADB's new S25 control.

## DOD PDS 8000 Digital Delay/Sampler

A massive eight seconds of sampling is the latest treat to emerge on these shores from DOD of Salt Lake City with the arrival of the PDS 8000 digital delay/sampler. This new DOD effect is offered in an extremely compact pedal package whilst the price is under £250.00.

The PDS 8000 delivers clean, bright digital delay in three ranges encompassing 0-500 ms, 0.5-2 secs and 2-8 secs, and slap back, echo, delay and sound on sound layering are but a few of the creative possibilities available to the owner of the unit. It can be battery or mains powered and carries DOD Electronic's three year warranty.



For further information contact Rhino Distribution, Springhead Enterprise Park, Northfleet, Kent DA11 8BN telephone (0474) 323202.

## System 12 from Electrosonic

Electrosonic have recently introduced System 12, a compact and economical lighting control package that brings the benefits of scene setting to the smaller retail and leisure installation.

The brand new System 12 incorporates 128 scene memory control and fade processing of 12 hard-firing thyristor dimmers, together with power distribution and miniature circuit breaker protection, all within a compact, wall-mounting cabinet.

Every System 12 is complete with dimmers, and all are rated up to 10A of incandescent 220 or 240V lamps, or 7A of transformer-fed tungsten.



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Built-in selection allows up to six specific dimmers to alternatively control fluorescent lamps with electronic dimming ballasts. Three of these also have an additional relay-switched output to allow the use of 3-wire dimming ballasts for 38mm diameter tubes.

The 12 available dimmer channels are not restricted to the lighting of a single area. They can be allocated to two or more areas, each locally and independently controlled. This flexibility, and much more, is achieved by allocating dimmer channels, in or out of numerical sequence, to different blocks of 4 or 8 scenes out of the 128 scenes available. This allocation, together with the intensity levels, fade times, and any link-scene sequences required, can be determined on site by a hand-held scenemaker, which simply plugs into any sceneselector control panel. Day to day operation is simplified by pressing a single push button for the scene or sequence required. Control wiring is simple too - the same 3-wire data highway simply interconnects System 12 to all control panels.

If the pattern of lighting requirements is predictable, all changes required can be initiated by a Scene Manager - a 7-day 256-event programmable time switch.

As befits equipment controlling lighting for public or trading areas, System 12 has sensible provisions against massive failure. In these unlikely circumstances all, or at worst two-thirds of the dimmers will automatically change to 50% output. Full-on or zero alternative can be selected individually if preferred.

For further information contact Electrosonic Limited, 815 Woolwich Road, London SE7 8LT telephone 01-855 1101.

## New Subwoofer System From RAMSA

RAMSA have introduced a new subwoofer system to their expanding range, namely the WS-A240 subwoofer and WS-SP2 subwoofer crossover/processor. A bass-reflex type loudspeaker, the WS-A240 incorporates a 30cm driver unit and is designed as a modular subwoofer component to be used in conjunction with the WS-SP2 subwoofer processor.

These compact speakers (395mm x 557mm x 272.5mm) offer the capacity to accept a continuous program input of 400 Watts and an impressive output capability for their size. When combined, they facilitate optimum mutual coupling effects, ideal for high output applications, whilst remaining inconspicuous in virtually any environment.

The WS-SP2 provides high-pass protection from infrasonic frequencies, very low frequency (VLF)



RAMSA's WS-A200E and WS-A240 sub-woofer.



WS-SP2 sub-woofer crossover/processor from RAMSA.

signal processing, and a choice of three different signal processing functions. Not only is the WS-A240 and WS-SP2 compatible with RAMSA's WS-A240 and WS-A10, A80, A200, but can also be used with other systems, such as; 12"/15", 10"/8" and under 8" compact speaker systems. This system also offers the flanged sides associated with RAMSA, for secure stacking, both horizontally and vertically and is finished in the RAMSA resin moulded black and black, steel, punched grill.

For further information, please contact the product manager, RAMSA, Panasonic UK Ltd., 300-318 Bath Road, Slough, Berkshire SL1 6JB telephone (0753) 34522, or Avitec Electronics (UK) Ltd., on (0462) 58961.

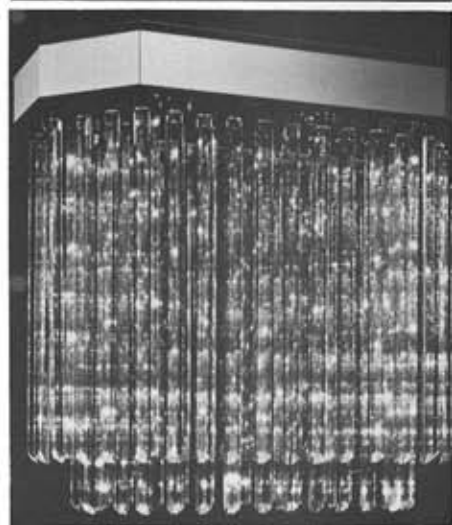
## Lucent Chandeliers

Starfire Lighting Inc. of Jersey City, New Jersey, USA has announced a new series of low voltage chandeliers based upon their successful Startube low voltage tubing.

The new '66000' series all feature Lucent six-sided crystals made from crystal-clear acrylic. These crystals are mounted adjacent to the Startube elements and cause a multitude of internal reflections of the tiny low voltage lights inside them. The effect is a successful update of the traditional (and more costly) glass crystal chandeliers.

Starfire offers over 200 standard sizes and types of low voltage chandeliers, with custom sizes available by a unique computerised Fastquote service.

For further information contact Starfire at 317 St. Paul's Avenue, Jersey City, New Jersey 07306, USA telephone (201) 6567888.



Two of Starfire's 'Lucent' chandeliers.

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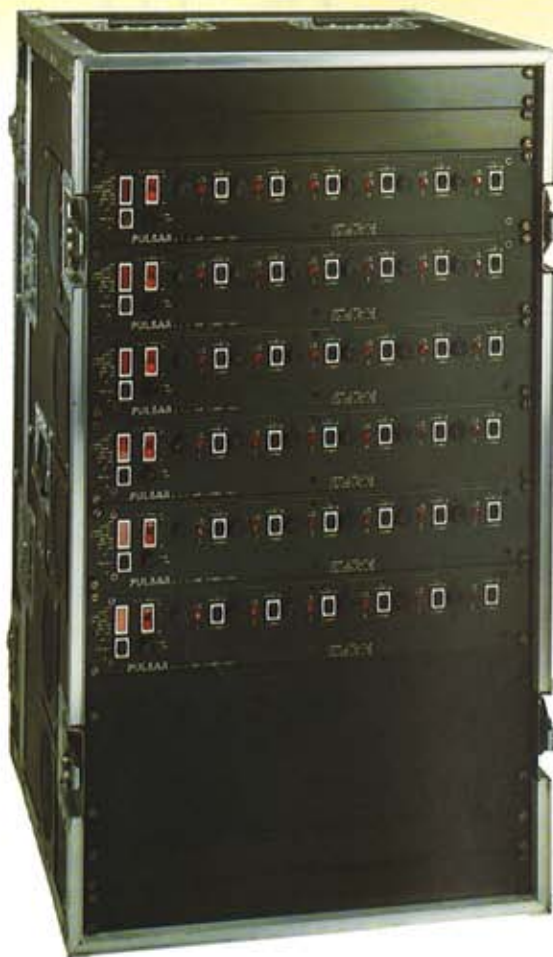
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