Number 7. Summer 88

# STRANDLIGHT

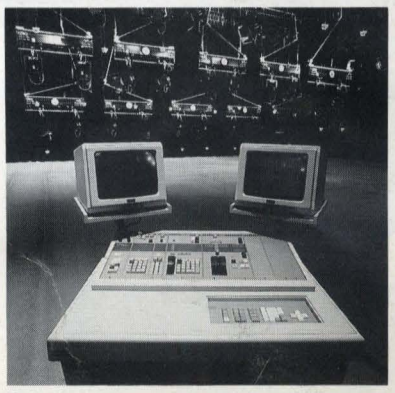
· THE · INTERNATIONAL · JOURNAL · OF · STRAND · LIGHTING ·

# Hannover's Fully Automatic Studio Lighting System

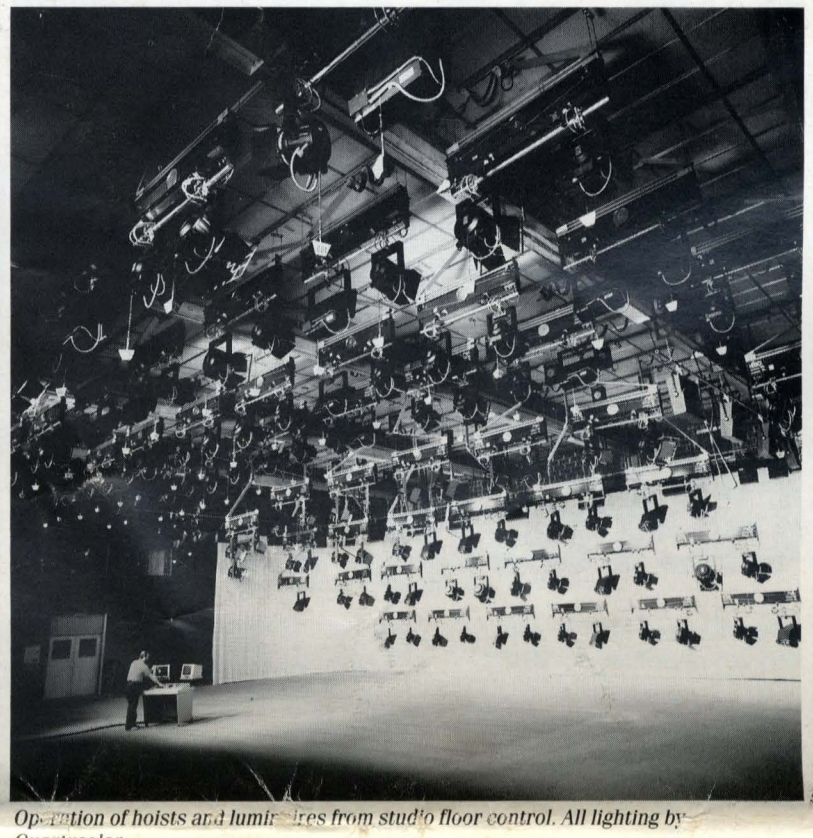
**Our Authors Heinz Fritz and Derek Gilbert are Managing Directors of Strand Lighting GmbH Germany and Glantre Engineering Ltd, UK respectively**

*The frontiers of studio lighting technology were extended by Strand's recent fully automated installation in Hannover, West Germany. A major package contract implemented over a tight six month programme included the world's first major studio installation of Strand's Precision Automated Lighting System. In addition the DM 2.7 million (£900,000) contract placed with Strand Lighting GmbH Germany by the German production company VTO 'Verleg Teresa Orlowski', covered design, supply, installation and commissioning of studio lighting control and dimmers, self-climbing hoists, structural steelwork, electrical distribution, cyclorama and drapes, tracks, retractable seating tiers and studio accessories.*

*Galaxy II lighting console with memory back up left and PALS control right*



*Galaxy studio remote control with integrated PALS control*



*Operation of hoists and luminaires from studio floor control. All lighting by Quartzcolor.*

Strand responded fast to VTO's request for a fully automatic studio lighting package and from the beginning involved as their partner for design, project engineering and co-ordination, Glantre Engineering of Reading. A comprehensive design proposal with presentation drawings was submitted immediately after the initial site survey and a contract placed shortly afterwards.

The building for VTO's Medienzentrum studio complex had originally been designed as factory and office space. During construction, a lease was acquired by VTO and the design amended to incorporate two TV studios Nos 1 and 2 of 680 and 260 square metres respectively, together with ancilliary office and production areas. A totally separate freestanding steel structure was introduced to carry the studio lighting and scenery loads. Further design constraints were caused by the restricted working height of 7.6 metres between the studio floor and underside of the existing concrete roof beams. It was therefore decided to install the supporting structure for the hoists between the roof beams thereby gaining an additional 90cm.

The studio lighting installation was to be based on extensive use of motorised PALS remote controlled luminaires in a basic fixed rig configuration along with a semi-saturated layout of motorised self-climbing hoists. This would permit VTO's entire studio lighting installation to be handled on straightforward productions by a single person who would be lighting director, console operator and electrician all in one. For the fullscale light entertainment productions that are envisaged, the lighting complement will need to be increased to provide follow spot operators and other personnel.

The basic PALS lighting rig for Studio 1 consists of 36 5kW Pollux fresnel spotlights, 64 2kW Castor fresnel spotlights and 36 2.5/5kW Arturo softlights. The fresnel spotlights are fitted with motorised pan, tilt and focus while softlights have controllable pan, tilt and 2.5/5kW switching. Motorisation of barndoor shutter movement and rotation was considered desirable but not essential; barndoor adjustment by pole operation was chosen as a compromise.

The remote control installation includes a controller in the main lighting control room and a portable studio floor unit which, in practice, is being most heavily used. The PALS studio floor panel is installed in an integrated lightweight mobile trolley together with hoist and main lighting control remote units. A trailing cable system was selected in preference to infra-red or radio remote control and a number of alternative socket outlet boxes are provided.

The PALS controller is based on an IBM Personal Computer with dedicated keyboard and serial line driver board. All the electronics are installed in a rack mounted version in the main lighting control room. Command and cue information are displayed on a high resolution colour monitor. Control software has been customised to suit the Medienzentrum installation with screen layout specially developed to mimic the studio plan, making the complete system very simple to operate.

While the main usage of the PALS system will be for rapid setting and focusing of studio luminaires, the controller permits cues to be stored and replayed to enable luminaire resetting or special effects sequences to be carried out during a production. A further benefit is that for productions that repeat on a regular basis, the usual luminaire settings can be instantly recalled.

The absolute position of each function of each luminaire is recorded for every cue which is then recorded directly onto hard disc. Groups of cues may be copied onto floppy discette for backup and library storage. A single 20 megabyte hard disc stores over 5000 cues, a quantity well in excess of any conceivable user requirement!

The dedicated keyboard has cursor keys for positioning the lights, numeric keys for selecting addresses and groups and a range of command keys to record, edit and control the playback of cues. Consecutive cues may be linked for automatic follow-on, or chased in a cycle.

The PALS sets fitted to the Quartzcolor luminaires each comprise a rectangular section steel yoke with heat shield, housing the motor drive assemblies and processor board with drive electronics. Movement of pan, tilt and other functions is provided by a DC servo motor coupled to a precision reduction gearbox. The output shaft incorporates an adjustable clutch to protect the luminaire from damage. The absolute position of the output shaft is measured by a potentiometer. Each head contains a powerful 16-bit micro-controller which decodes its own addresses, stores cue data, and controls the motors. The potentiometers are continuously monitored and the speed is adjusted with changes in load and distance. The luminaires stop with a resolution of 1 part in 1000.

In addition to the PALS luminaires, in Studio 1 conventional Iris 4 main cyclorama lighting is provided with a quantity of Iris 2 units for the corners. Additional luminaires of various types for flexible application are provided including 60 Punchlites and 2 CID follow spots.

The 150 Kg capacity self-climbing hoists for Studio 1 are four wire type to comply with German safety regulations and incorporate 'flip-flop' folding cable trays. A three way PALS controller is fitted to each hoist. Also incorporated within each hoist are dimmed feeds for three luminaires together with hoist power and control cabling. A separate data cable handles the PALS control signals. While British studio practice has generally been to incorporate the motor control and contactors within the hoist, for Medienzentrum it was decided that these should be mounted in a separate hoist power rack installed in the dimmer room.

The hoist remote control for 72 lighting and 24 scenery hoists is a wall panel at studio floor level. This incorporates a mimic layout of the studio and all controls including a keypad for hoist selection and command. Facilities are available for group operation of hoists and for the memorisation of groups. A second control keypad is fitted to the studio mobile remote control trolley.

Lighting control for Studio 1 employs a 240 channel Galaxy II console with memory backup, two playbacks, preset masters, programmable effects and geographic mimic. The console is installed in the studio vision control room along with the integrated PALS control and electronics. A Galaxy studio remote control unit is mounted in the mobile studio trolley. The racks for the thyristor dimmers are of Strand Lighting Germany's own manufacture and in accordance with German electrical regulations. In total 12 racks have been installed, each housing 24 5kW plug-in thyristor dimmers; 240 dimmers supply Studio 1 with 48 for Studio 2. The dimmers used are PIP CS closed loop square law type with broadcast specification filtering.

Clearly, the next exciting development for automated studios will be the Strand Galaxy III generation of control systems with the capability to control and memorise all PALS functions as well as dimmer selections and levels. While it is technically feasible to incorporate hoist control as well, this would be undesirable from an operational and safety point of view.

The complete Medienzentrum studio electrical installation was designed by Glantre Engineering in co-operation with Strand Lighting's project management and carried out by a local sub-contractor. A main studio distribution switchboard is fed by a 1,000 amp 220/380V TPN supply from the studio substation and supplies dimmer racks, hoist power racks and all other ancilliary services for both Studio 1 and Studio 2. Power distribution incorporates multicore cables laid on cable tray in accordance with usual continental practice. Studio primary steelwork and galleries were purpose designed to accommodate the extensive network of cable tray – an example of the hidden benefits that can arise from a package contract.

The smaller Studio 2 has only been partially equipped at present. A 48 channel Strand M24 memory system and dimmers are installed together with complete steelwork and power wiring infrastructure. A total of 15 self-climbing hoists and 30 or more PALS luminaires will be supplied at a future date.

For the main installation programme during March 1988, the site team was made up of more than 20 personnel of Strand Lighting GmbH and their specialist sub-contractors including four staff from Glantre.

This important installation in Hannover is already generating widespread interest within the broadcasting industry and could be a pointer to the future for clients who wish to adapt capital intensive rather than labour intensive studio lighting installations in order to achieve significant medium and long term cost savings. ■

# Beam Me Up, Strand!

*Strand's new 1 KW Beamlite.*

*We introduce a completely new product to Strand Lighting – a low voltage Beamlite giving over a million Candelas.*

Not every reader will be familiar with beamlights although Strand's pre-war Pagent and the Beamlight which was in our catalogue a few years ago were designed for the same purpose. But both these units used mains voltage lamps. A 1kw GES tungsten for the first and a 1kw TH bi-post cap down for the second.

The new unit uses a 1kw 24-volt internally crown silvered lamp – the Philips example is their number 7064 K/02. This lamp is the key to the very high output of the new Beamlight – no less than 1,130,000 peak Candelas.

Other manufacturers utilize separate transformers, or transformers mounted beside their units. Our rather elegant solution is an integrated design using a toroidal transformer behind the lamp but within the same housing.

Another design feature we are rather proud of is the arrangement for re-lamping. First, because of the very high amperage involved in a thousand watts at twenty four volts, lamps of this type do not

*Continued overleaf ▶*

# From the Editorial Chair

*From time to time your Editor takes it upon himself to speak, as it were, ex-cathedra. So I thought it time for readers to see the actual Tabs/Strandlight Editorial Chair itself, in this picture occupied by the present incumbent.*

*Previously the chair has, of course, been graced by Fred Bentham, Francis Reid and Phil Rose.*

*Incidentally, it is most uncomfortable, and is used on ceremonial occasions only.*

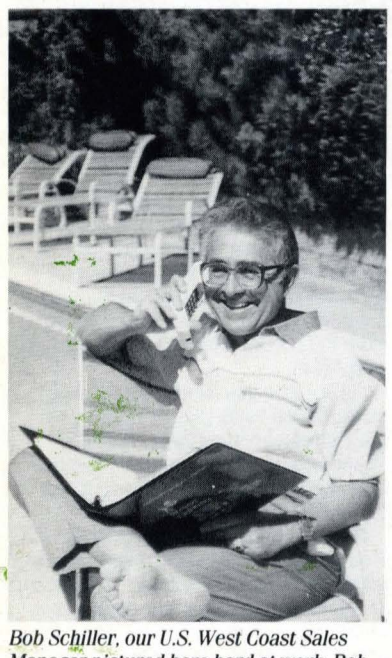
## Salute to "Lighting and Sound International".

This is, of course, the lively monthly run by the spry and enquiring Mr. John Offord. It was the excellent article published by him on the Hannover 'motorised lighting' studio which made me realise that as it was an all Strand job I had been remiss in not covering it, so the omission is recovered in this issue of 'Strandlight'. As I must not be too praising of this magazine, I must warn readers that I do from time to time grace its pages myself. In fact I once appeared in one of their cartoons and have hardly dared face a mirror since.

## See You at Photokina

Once again this Autumn we shall be at the greatest of European studio equipment shows. But let me warn people considering overnight visits – accommodation is notoriously difficult. I remember once our Quartzcolor team had to stay with 'The World's Favourite Innkeeper' about 60 miles from Cologne and on another never to be forgotten occasion we all signed on for a river boat which was moored near by. Small and dark metal compartments were our lodgings and had we been entirely sober we would have suffered seriously – but, fortunately.....

## Bob Schiller now even more accessible.



*Bob Schiller, our U.S. West Coast Sales Manager pictured here hard at work. Bob is now accessible on Fax. It may be tested by sending him orders on (818) 789 6957.*

*Continued from previous page*

## Beam Me Up, Strand!

use a normal bi-post cap but have two flying leads which emerge from the end of the cap. These leads are part of the lamp and 'come with it'.

To put a lamp in, a small button on top of the rear housing is depressed and the whole top of the housing can be slid back. This reveals the clamp which holds the lamp in position. There are two terminals with washers and large wing nuts, all in brass, for ensuring a perfect contact for the lamp leads.

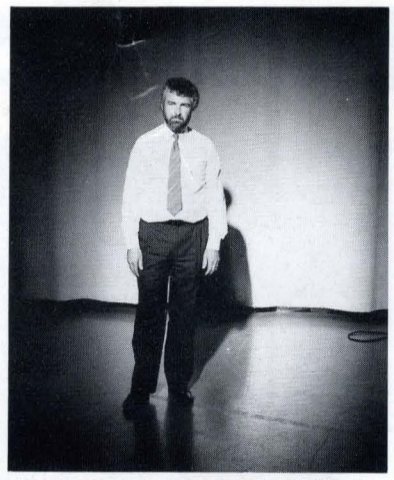
There is a 330mm parabolic reflector, while three spill rings control beam scatter very effectively.

The lantern comes on a fork with 'Cantata' type clamping arrangements and the balance point can be adjusted. There are colour runners for a 365 mm colour frame.

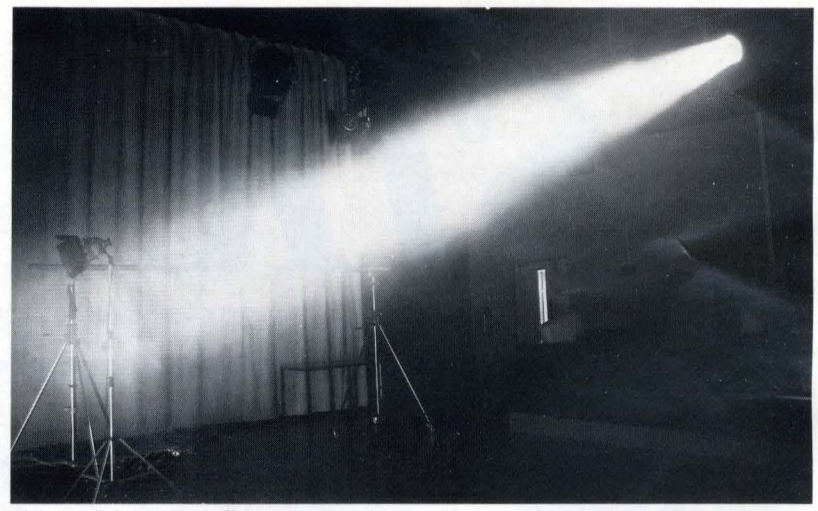
The transformer has tappings for 240, 220 and a 110 volt version will also be available. For electrical safety access to the transformer housing with it's main voltage requires a screwdriver whereas the low voltage area for re-lamping is readily accessible through the sliding cover. Remember that transformers absorb some current, so the beamlite will actually draw more than 1kW.

Like all the latest Strand products, the beamlight is intended for the world market. Whilst its main appeal will be for the long throws of the Northern European Opera Houses, beamlights are being used more and more in the West End and we expect the new Strand Lighting integrated Beamlight to be specified widely. ■

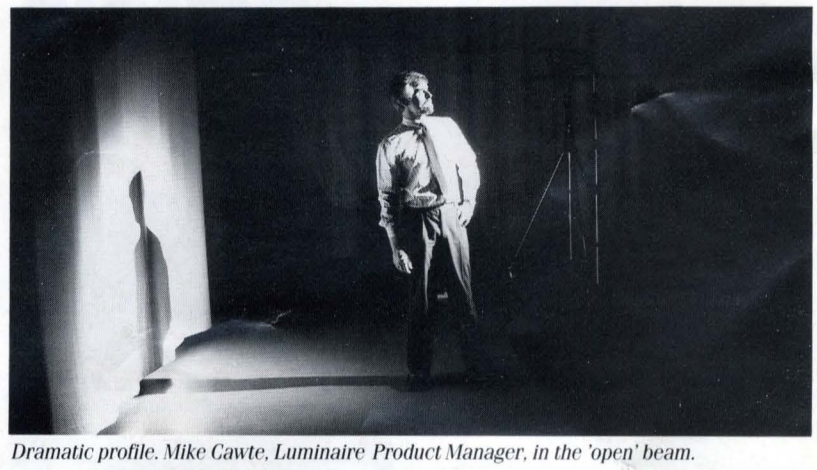
*Re Lamping. The internally crown silvered lamp is being offered up to the clamp. The flying leads will be connected to the terminals accessible through the top of the lamp house. Note the cover has been slid back.*



*Alan Luxford, at a throw of about 30 feet, in a lightly frosted beam.*



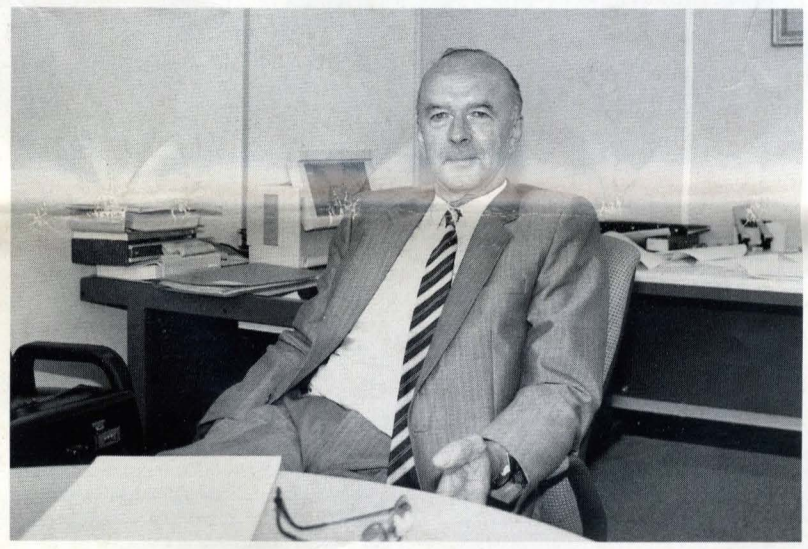
*Not a jet fighter taking off. I was trying, with the aid of a smoke machine, to show the narrow beam angle.*



*Dramatic profile. Mike Cawte, Luminaire Product Manager, in the 'open' beam.*

# Getting To Know You

*Oliver Hartree, Strand Lighting's recently appointed Managing Director, in conversation with the Editor.*



'I am looking forward to getting to know our customers, but in the meantime I hope this interview will help them know a little about me, and my ideas on the future of what is certainly the largest, and I believe the best, entertainment lighting company.' These were Oliver Hartree's opening words when I sat down in his office on a recent afternoon. We talked for over two hours. What follows is a narrative of direct quotes and deductions about the man and his ideas for Strand's future.

They say in business that you can tell something of a man by his office. If that be true then 'monastic' must be the image of our new M.D. The office walls are grey, the furniture is new but distinctly spartan in its appearance and, I suspect, its cost. No charts adorn the walls. No sporting trophies on the mantelpiece. There isn't even a mantelpiece. Any warmth needed enters through sibilant grills along with a meagre ration of air.

Oliver Hartree works at a simple desk which faces the wall as in a Victorian counting house. Visitors are sat at a round table on identically uncomfortable chairs. In one corner stands a computer terminal. Lighting is by uplighters, almost as though even a lampshade could introduce unwanted frivolity. But here is the first puzzle. The man has a strongly developed sense of humour and we were constantly diverting ourselves into increasingly irrelevant jokey side alleys on the world of lighting.

Oliver Hartree was born some sixty summers ago in Cambridge. His father was a Professor of Mathematical Physics and the family were very much part of the university establishment and all that that meant.

He was educated first in Canada as a wartime evacuee. He returned to the UK and with what must have been inevitability, took a degree at Cambridge. Although biochemistry was his first ambition, his degree in Natural Science actually led, after a three year stint with the Royal Navy, to specialisation in Metallurgy. Should you wish to write to him formally, MA, MSc, are the letters to use.

Oliver's first job was with the Bristol Aeroplane Company, now part of British Aerospace, but originally along with Rolls-Royce, the provider of aero-engines for a large segment of the world's aviation.

Oliver's work was the investigation of the behaviour of metals in the highly unfriendly environment of a jet's turbine.

He next joined AEI as a research metallurgist working on high temperature properties of metals. This included research into materials for the then nascent nuclear industry.

Then his career began to turn towards Strand's world, via posts of increasing responsibility in the production of power cables and switchgear.

In January 1984 he was recruited by Strand, initially on a specific contract basis, to spend a year looking at and making recommendations on our Kirkcaldy factory.

Some customers reading this may recollect that our factory, although it always made things well, did not always make them as promptly as would have been ideal.

It took Oliver very little time to see that Strand had, potentially, a wonderful asset in the modern, well-equipped plant that Kirkcaldy has always been. It just needed giving a focus, with clear objectives setting for its production team.

Very quickly there were dramatic improvements in production and in morale. This lead to far less rejection at the inspection stage, so production in a few months leapt up again.

As an example from today, nearly ten thousand Cantatas have been produced since last November, a consistent flow of product at a rate we have never approached before.

Four years were spent at the factory. Then came the summons to Rome. Strand were about to purchase the Quartzcolor television lighting business and it was essential to have management continuity during the change from Italian family control – and all that that meant – to becoming part of a major international group like Rank – with all that that means in terms of budgets, stock control, management objectives, etc.

Then, six months ago, came the summons to take on one of the two Strand Lighting top jobs.

Oliver Hartree now runs Strand Lighting Europe, Asia and Australia. Within the European company there are separate companies in Italy, France and Germany.

Disraeli made a speech once about eventually reaching the top of the greasy pole. But this implies vigorous climbing. Interestingly enough, Oliver has always been asked to take on increasingly difficult jobs. He has only applied for two jobs in his whole career, and one of those was his first!

To consider Strand and its future we have to look back a little. When I joined Strand twenty years ago, its worldwide turnover was six million pounds. This year it will be seventy million. Even allowing for twenty years' inflation, the company has still grown under Rank's aegis five or sixfold. And there have been management casualties.

As the rocket has roared up, various booster stages – and some space rubbish – have dropped away. But the achievement is indisputable. For one example, over half the world's total of installed memory systems are Strand made.

Now we moved in our talk into that difficult area to discuss in public, the future.

The considerable research and development effort will continue. New products must remain at the very centre of our effort. The work on motorised luminaires and their control is the lighting story of the eighties. Already in Germany (See front page item) this is the way both stage and television lighting is going. Because of the mammoth savings in time and money these systems allow, they are unstoppable. We are now with motorised control about where memory systems were in the days of MMS and QFile. Everyone is beginning to want the advantages, but the cost is too high for all but the wealthiest users. 'But we are working on it – watch this space for dramatic developments!'

*Ed:* 'How should new products be developed? Should a Marketing team specify them in detail, or should the engineers be given their head, as in Strand's glory days under Fred Bentham?'

*OH:* 'First – the world glory days are now! I believe Marketing and R&D are two sides of the same coin. Without marketing knowing and understanding what the emerging technologies can do and without R&D knowing the conditions and needs of every market, products will emerge that will only fill half the bill'.

*Ed:* 'So you are going to knock their heads together?'

*OH:* 'Well, let's say I encourage collaboration!'

*Ed:* 'Will world products still be our goal?'

*OH:* 'Yes. The policy is to develop products which have applications beyond one national market. For example, our new Beamlite 1000 was developed for Eastern Europe, but it will certainly find homes in Germany and Switzerland. As Lighting Designers travel the world, so they call for products that they are familiar with. Look at the success of the Leko now in Europe! "Song and Dance" and "Phantom" are just two shows heavily into Lekos. Soon Cantata will have a 110 volt axial lamp version to, as it were, return the compliment!'

*Ed:* (In a provocative mood) 'Surely there is no point in going beyond Galaxy III and Palette 3? What more can anyone want?'

*OH:* 'Well, they certainly want it cheaper! Software is the key. It's that area where future switchboard developments will concentrate. At the lower end we dipped our toe in the water with Action. That has been such a winner we now have Action 48. So you can start at a thousand pounds and go up from there.'

*Ed:* 'I sometimes think it must be more fun to be number two or three in the market, so you have the summit to aim at. Isn't being No. 1 for so long a little tedious?'

*OH:* 'If I thought that I would go back to motor bike scrambles – not that I always won them! We have quite a few advantages from being a proven market winner. One of these is acquisitions. Any company up for sale you can be sure will have been offered to us first. Sometimes, like Quartzcolor, we go straight ahead and we made one of the best business decisions I have ever been involved in. If we turn an opportunity down, its usually because we reckon we can do it better ourselves already! Another advantage is that we can recruit the best people. We have a brilliant engineering team – no! better say competent or they will all want even more money. And look at the Kirkcaldy lantern team! Cantata – a whole family – and now the Beamlight with over a million candelas from a 1K lamp!'

*Ed:* 'And the downside?'

*OH:* 'The bigger the company, the harder we must fight internal bureaucracy. I wage constant war against memos and long reports! "Keep it Simple" is my dictum.'

Perhaps this explains the so simple office, after all? ■

# Letters to the Editor

*Lightboard M*

Dear Editor,
I am writing this letter in an attempt to explain my thoughts regarding the Strand Lightboard 'M' lighting control console.

My name is Mark Owsley. I am currently the Scenic Designer and Technical Director for Clark College in Vancouver, WA and was formerly the Assistant Stage Manager for the School of Performing Arts at Portland State University in Portland, OR. I am also Production Manager for Chamber Music Northwest and have toured extensively with professional productions as well as a number of seasons of summer stock theatre.

Clark College recently completed an extensive remodel on one of their theatre spaces which included new lighting and dimming. Being a state school we were subject to putting all projects of this size out to competitive bid. Naturally we had representatives from every major manufacturer make presentations to us. As I am familiar with all of the products in real show situations my opinion was sought out to help with the final selection. We settled on the Strand 'M' board because it contained all of the features we felt were necessary for us to be able to train our students on the most advanced equipment available. To this time these features were out of our reach financially but with the new advances in technology we are now able to provide this 'tool' for our students. Along with Strand's excellent representation in the northwest by Stage Craft Inc, we felt that this would be the ideal system for our new facility.

Installation of the console and the CD 80 dimmer packs was done very efficiently and to our great satisfaction. I was then left with the manual and a date for a training session. Of course I couldn't wait and went ahead with the manual. I found the instructions to be very clear and precise. In a short time I was fully versed in every operation of the board to the point of knowing many of them as well as the training rep the next week. I believe that this was due to the style and layout of the manual and the ease I had following the self training exercises.

Our first production using the 'M' board was 'Indians' by Arthur Kopit, a play requiring the use of most of the features incorporated in the 'M' board. With this board I was able to fully design EACH CUE!, up and down times-waits-chases and even a complete re-patch using the patch tables. The information display is superior to anything I have used currently on the market; clear and useful, friendly if you will. I pre-programmed the board prior to our first technical rehearsal and dropped what would have been a 7 hour day to a 1½ hour rehearsal – truly a time saver as well. We have produced 3 plays as well as a world premier musical since then and have had no hard or software problems. As a training tool it can't be surpassed. I now have students begging me to let them design or run lights for our productions – VERY EXCITING.

So thank you Strand Lighting. This is the lighting system that has finally opened the ART of lighting to all levels of professional, educational and community theatre. I can't recommend it enough! Please keep up the good work.
Sincerely,
Mark S. Owsley, Technical Director
Clark College Theatre Dept, Vancover WA.

*More Lightboard M*

Dear Mr Harris,

I have just read your article on the Lightboard M in the Spring edition of 'Strandlight'. I have this day placed an order for the board. It is what I have been crying out for over the past few years. It would appear to be the answer for people like myself who have to perform instant lighting design for live shows where anything can happen and has to be covered instantly. The most obvious and heartening point about the board, is the fact that it has been designed for Lighting Designers who can accommodate and welcome the help of modern technology and not the Computer Operator who wants to be a Lighting Designer.
Yours sincerely, Peter Ardran, Director
D.S.A. Production Services Ltd London.

*'Lost Stolen or Strayed'*

Dear Richard,
Here's one for your 'Lost and Found' Column.
'From the premises of Roscolab U.K. on the 21st May 1988, 1 Action Lighting Control – Serial No. 172078, during a break-in'.
'If found, please return to Light Relief, Cardiff'.
Perhaps you could insert this ad. in Strandlight for us.
Yours sincerely,
Ian Holden.
Light Relief,
Cardiff.

# Television Quatre Saisons

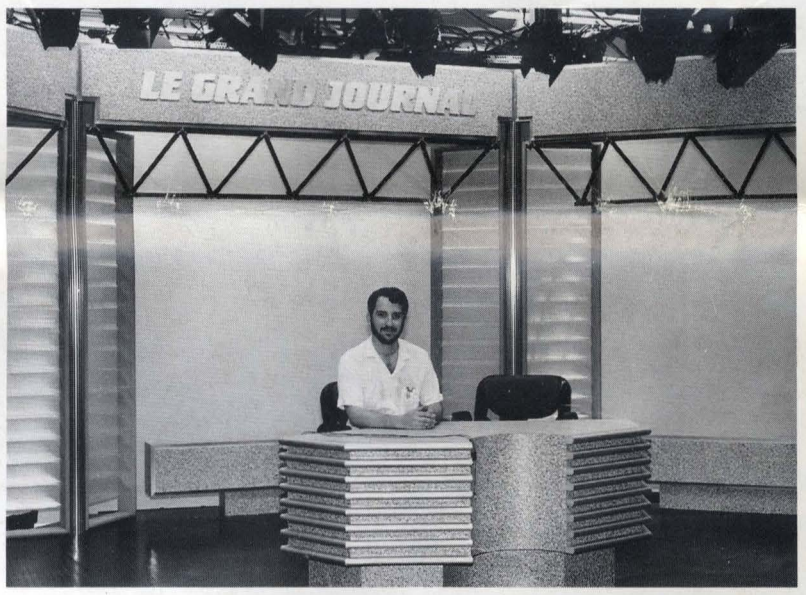

*Impasse: a situation in which the editor frequently finds himself!*

*Actually the new Quatre Saisons studio in suburban Montreal. Like another very well known Quartzcolor equipped studio, it is opposite an underground station. But not this time White City. (Can there be anyone in the world interested in studio lighting, who doesn't know that one alights from the London Underground at White City for the BBC Television Centre?)*

*The Designer and his Dimmers, Jody Good of ElectroControls.*

*Control by a Celebrity memory system. Now available from Strand world wide.*

*Plenty of Quartzcolor aloft! But note the simple barrel grid. These are still being installed in North America in 1988, simply because T.V. 'over there' has a vast amount of studio space and schedules that demand standing sets. The self climbing hoists and telescopes of intensively used European studios are rare indeed in North America.*

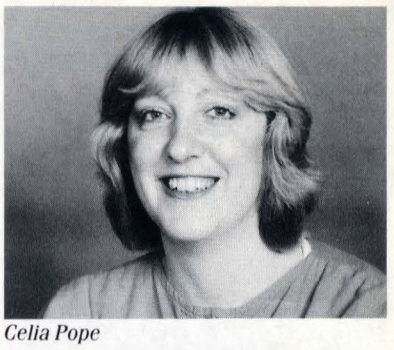



A new Studio Complex with lighting by Quartzcolor and control by Celebrity has recently been completed in Montreal.

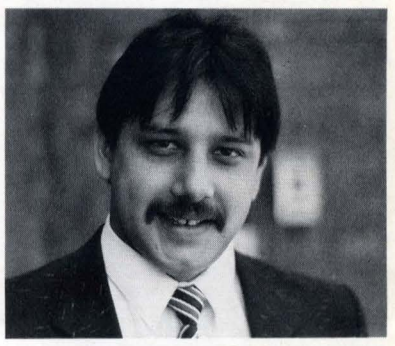
Canada was the first territory in which Strand's newly acquired Electro Controls range was offered alongside both Strand and Quartzcolor equipment. And a very successful marriage of products it has turned out to be. The proposal was made in Salt Lake City, the dowry was arranged in London and the ceremony was in Los Angeles. Here, in Montreal, at the Quatre Saisons studios, we illustrate an early consummation. ■

*Note: The project was placed through our Quebec representative:*
*Servispec-Prolux*
*6775 Bombardier*
*St Leonard, Quebec, Canada*

*Davis Goodman, Technical Director, poses at the presenter's desk for the Editorial Pentax. So much equipment – we are glad to say – to light so few.*



*Celia Pope*



*André Barham*

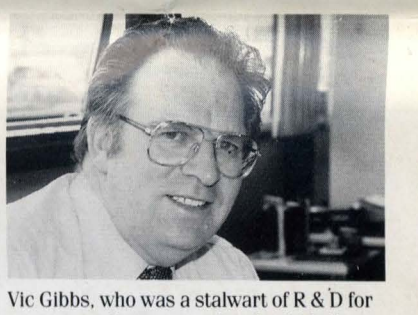
## Celia Pope Promoted and a New South East Sales Representative Appointed

André Barham has taken over Celia Pope's old territory, while Celia is now an Overseas Territory Manager.

André joined us a year ago in the service department, before that he was involved in computer servicing in the City of London. He is married with two sons.

Celia has now shaken off the dust of Isleworth and is looking after Scandinavia, Holland, Belgium and Luxembourg. As Export Manager Graeme Pusey remarked, 'Winter is on the way, so we have given her Iceland too'. ■

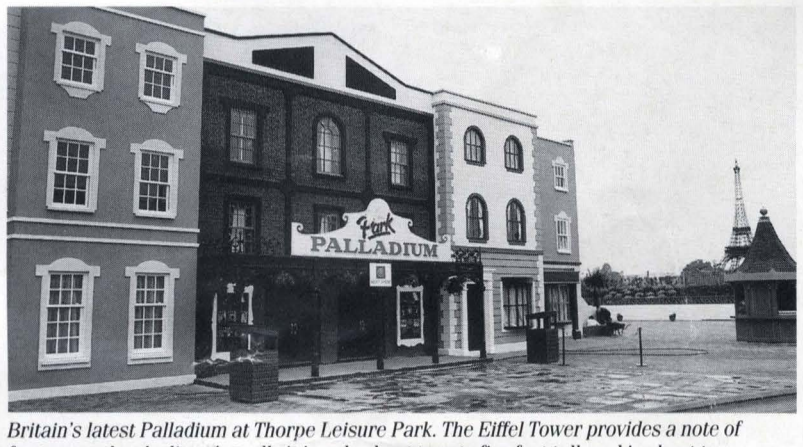
## Vic's Back!



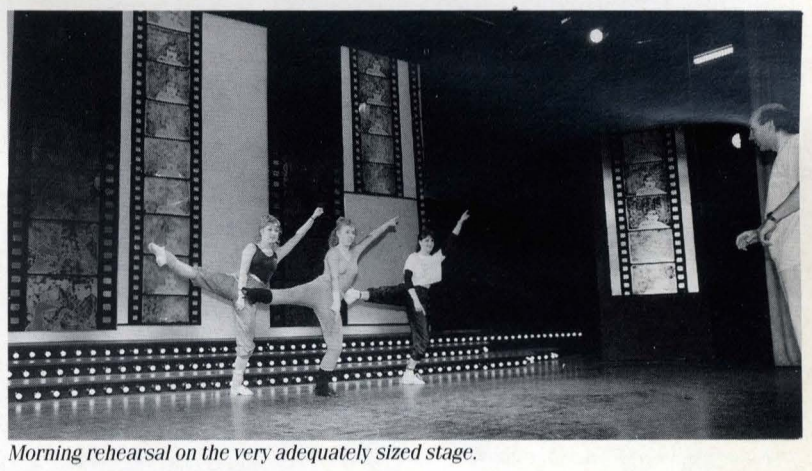
Vic Gibbs, who was a stalwart of R & D for some years has returned to the fold after a spell with another company. He is now our Manager of Quotations, Projects and Customer Service. ■

# Palladium on Thames

*The Editor visits a theatre in a leisure park, Thorpe Park near Staines.*




*Britain's latest Palladium at Thorpe Leisure Park. The Eiffel Tower provides a note of fantasy on the sky line. Actually it is only about twenty five feet tall, and is about two hundred yards from the Theatre!*



*Morning rehearsal on the very adequately sized stage.*

It must be because of England's weather. In spite of rides varying between giant blue and white tea cups in which a whole family can sit and be gyrated and the more vigorous thrills of Thunder River, which adds a dash of water to the dynamics, and numerous other outdoor diversions a traditional theatre in which up to five musical revue type shows a day are offered has now been opened.

Perhaps 'traditional' is not quite the word, as there are only stalls and no circle. What I first took to be intimate side boxes are occupied soley by Cantatas, so at least boxes are dedicated to 'the quality' in the Jane Austen sense even if it be inanimate.

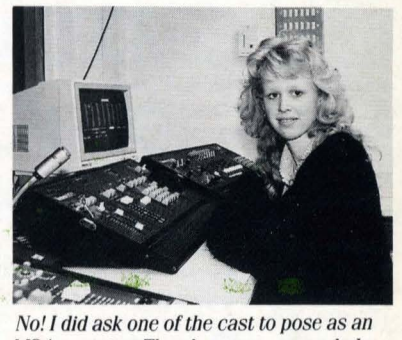
But the Palladium, as the theatre has been named, is a very pleasant auditorium indeed. For example, its 630 seats are of an up to date and very comfortable design, a mile away from the timber benches I have seen in so many 'Theme Park' auditoriums. They are upholstered in several shades of blue, while the walls are of dusty pink and grey. The raked floor is even close carpeted. None of those workhouse strips of carpet between the rows at the Palladium.

The lighting installation is generous. 40 Cantatas, 30 Punchlites, 14 Coda 4's and 2 Solo CSI follow spots controlled by an M24 and effects through 96 Permus dimmers.

The Theatre Consultant's hand of Mr John Whittaker, of Theatre Projects, can be seen in the well placed lighting bridges, as well as the general professionalism of the equipment and its installation.

The whole of the stage equipment and lighting was supplied and installed by Strand Agents A.S. Green & Company (Lancashire) Ltd. David Collier, their man in charge, must have made many an M6, M1, M25 journey to get this project so complete on a tight time scale.

So if you weary of a giant tea cup or even of a Mississippi stern wheeler, a lively musical review, well lit, awaits you! ■



*No! I did ask one of the cast to pose as an M24 operator. The glamorous young lady actually is the operator.*

# 'Using Strand Filters in the Theatre'


That knowledgeable and ebullient man of the theatre, Mr Francis Reid, has written a very useful guide to the current range of Strand Filters, both the colour and the diffusion variety.

He draws on his wide knowledge as a practising Lighting Designer, whose working life has ranged from Mozart at Glyndebourne to pantomime at Glasgow with side excursions in drama in the West End.

It may be unfair to pick plums from someone else's pudding, but here goes anyway with just a couple of examples of the wisdom on offer:

> *'The high intensity of light produced by Parcans allows use of the most heavily saturated filters. Note that the colour from a parcan will be considerably paler than the light from a conventional lens spotlight of similar wattage'.*

> *'It is difficult to light white cycloramas to a dark blue. Cyc cloths should have a very pale blue pigmentation which will aid response to blue light but not upset response to the rest of the spectrum'.*

There is a full list of Cinelux and Chromoid filters, describing their effects and giving typical usages – and many of them are not as one would first suppose.

This six page guide is available free on request from Strand Lighting or from their agents.* ■

**Not available in North America.*

# Australian News

## Tropical Geminis

In the past few months three separate tenders for lighting control desks issued in North Queensland have been awarded to Strand. On each occasion they chose Gemini as their preferred control system, thanks to the efforts of John Rippin, Queensland's State Sales Manager.

This network of Gemini Control Systems at Townsville, Rockhampton and Mount Isa now enables touring Theatre Companies to use the same lighting plot on floppy disc at each venue. Any change in circuit location being handled by the proportional dimmer patch, which is standard on every set up system. Gemini's programmable effects, the most powerful in the business, was another feature high on the priority list.

## Ambit gets Government approval

The Australian Federal Government have just moved house. The new Parliament House building was opened in April by HM the Queen.

The project took 10 years to complete. New South Wales State Sales Manager, David Kentish, ensured Strand Lighting was chosen to provide all the Architectural Lighting Control and Dimmers, all designed and produced in Australia.

Ambit unit dimmers were chosen for their reliability and compact size. Over 200 dimmers with by-pass switches were installed to handle the tungsten and fluorescent lighting.

Special 5 push button preset stations were installed to control the dimmers, finished in a colour exclusive to the project. ■

# Testing, Testing!

## The story behind Action, a truly multi national product.

*Action was designed as our 'entry level' memory system. One of its objectives was that the system had to be available at a price that could be afforded by a small to medium amateur dramatic group, a school, a pub or a club.*

We believe that where 'professional' lighting leads all others will inevitably follow.

Thirty years ago the professional theatre began sending its battens to the scrap yard – now, except perhaps when adapted as cyc. lights, practically all their thousands of fellows have followed, leaving directional lighting ruling the roost.

And I don't know if there is a professional theatre anywhere, defined here as a theatre that sells tickets, rather than throwing in a show as part of another deal, that still operates on a manual switch board. I doubt it.

So, following this logic of the spread of professional equipment, we decided to make a 24 channel, 99 cue plus effects memory board which because of its affordability would be available to practically everyone.

We were so convinced of its success that Action was the first board we ever produced that was designed from the start for manufacture in more than one of our factories.

Action is now in volume production in Kirkcaldy and will soon be in production in Los Angeles and Melbourne.

Before a company makes a commitment on this scale, it has to be certain the product is right – right for its market, right in design and right in reliability.

So, a long testing programme was the order of the day for the early prototypes.

In our R & D department we have small torture chambers in which desks can be cooked, then frozen. They are given a good shaking, to simulate ten years of touring on the back roads of Ontario or the country lanes of Greece, and to follow up touring procedure, they are dropped onto hard surfaces from tail board heights.

But, in the end, no testing we can do equals real life testing by theatre people rather than by engineers. A friend of mine in the motor industry told me that all engineers, simply by their training, have too much mechanical sympathy to make realistic tests. It is not that real users are rougher on equipment, it is just that they use it in the way it will actually be used.

So we sent out three desks to three different volunteers, each representing a different type of user.

We asked them to consider whether the facilities were right, whether the ergonomics were right and – above all – whether reliability was right.

We followed up with site visits and questioning. And when the boards came back to R & D at Isleworth, Myles Donoghue, the electronic engineer who handled the Action project and his colleagues gathered round to probe and test every pcb and every connection.

## Test No 1 – The Professional Theatre (The Salberg Studio Theatre of Salisbury Playhouse)

Our volunteer testers here were Peter Hunter, the resident Lighting Designer who came to Salisbury from the Redgrave at Farnham, and Christine Piper, assistant theatre electrician, who trained at the Bristol Old Vic Theatre School. Both therefore were fully familiar with the 'Strand Way' of control system philosophy.

Peter saw Action first at our 'Professional Launch' at Stratford last year, and saw again at our Road Show at the Southampton venue.

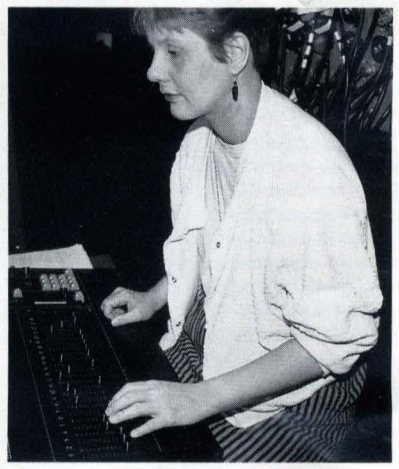
He was sufficiently interested to volunteer as one of our test panel.

The Salisbury Action was installed about ten months ago, first being used on a dinner show, 'Quirkish Delight'.

It then lit a comedy, but during this run was retrieved by Tony Brown, our head of R & D, who made a few changes as a result of our own in-house testing that was going on at the same time.

Back it came again, and back into use. But there was a problem – the goose neck light flickered! Strong feelings of relief for Miles Donaghue and our team that nothing more serious on the reliability front had emerged. (Note: We have now improved the goose neck connector).


*Salisbury Playhouse – scene of Action's professional Theatre test programme.*


*Christine Piper, one of the Playhouses assistant electricians in action on Action.*


*David Woodman (14) and Andrew Fordham (15) using their Test Action. Being bright lads at electronics and drama they have used their installed M24 to produce a V.D.U. display from the Action!*


*At the Redbridge Drama Centre. Ray Balcome, the Technical Resources Officer, who used his Test Action in Video production.*

At the time of the Editorial Visit providence was being well and truly tempted. Rehearsals were in progress for the Scottish Play. If that didn't bring out the bugs what could?

Final result of the test? Salisbury became one of the first customers for the production version of Action.

## Test No 2 –

This test was arranged by Ken Priddy, technical chief at our South London distributors, Luff Light & Sound, of Gautrey Road, London SE15. The School chosen was St Dunstan's College, an independent long established and prestigious day school for some six hundred boys occupying what is probably the only worthwhile building in Catford, not a part of London too often on the tourist trail. Catford lies between Lewisham and Dulwich, dignifying the former and bringing a breath of real life to the esoteric sylvan delights of the latter.

Ian Burgess, the head of the Audio Visual department at St Dunstans, was the staff member who was good enough to volunteer to carry out this test programme. Again, he and his students are very familiar with Strand systems. An M24 is their current school lighting control.

I visited St Dunstans after the system had been in use for just over three months. There were a number of criticisms. The strongest referred to our present manual*, which was considered acceptable as an installation guide and fine as a description in engineering terms of what each control did, but Ian felt that many people fresh to a memory system really needed much more basic knowledge from a manual. For example, terms such as 'Cross Fade' and 'Build' should be explained rather than understanding assumed.

Because they learned of so many unsuspected facilities in Action after a visit by Myles Donoghue, Ian wonders if a video couldn't be loaned with each system to allow the fortunate new owners to appreciate fully the power and flexibility of their new board. VHS & BETA, please.

He also offered some other opinions on the software that are being pondered deeply by our team. What were they? Alas, dear reader, there is always a remote chance that one of the eighteen thousand copies of Strandlight just might come into a competitor's hands and knowledge of this kind should be reserved for the companies who had the initiative to seek it out. After all, any car company will tell you that the most valuable cars on their strength are not the Managing Director's top-of-the-line de luxe example, but the engineering departments, 200,000 mile survivor of a rigorous test programme. That's the one you learn from.


*St. Dunstans School, Catford. 'Probably the only distinguished building within two miles' – scene of Action's schools test.*

## Test No 3 – The Drama Centre

This testing programme was carried out at the Redbridge Drama Centre, 'Where', may an overseas reader wonder, 'is Redbridge?' Well, in John Betjeman's words:

> *'At huge and convoluted Pubs*
> *They used to set us down from brakes*
> *In that half-land of football clubs*
> *Which London near the Forest makes'***

The late poet Laureate's words are so much more interesting than my merely saying that Redbridge lies on the eastern borders of London near Epping Forest.

The Drama Centre, where Ray Balcome, who is the Media Resources Officer, was our contact, controls all the Borough's technical drama equipment. Action was put through its paces for some twelve weeks, used both in drama by students and for lighting video productions by Ray. A number of suggestions came forward. Again, some of them I regret, must remain under the cloak of discretion, but he did feel that since the system was designed as a touring board, its chances of surviving unsympathetic get-outs would be greatly increased by a protective cover – not a cloth or plastic sheet, but a metal or a rigid plastic lid. St Dunstans School, incidentally, felt the same.

If this wasn't possible while keeping the price at the level required, then how about raising the vertical height of the two end cheeks, so that the sliders, faders and push buttons had at least protection from any heavy loads unthinkingly laid on them? Readers views are welcome.

Another idea from Redbridge that has already been adopted, was that the 'MemClr.' and 'Mod' buttons should have their importance emphasised by being red in place of the standard grey.

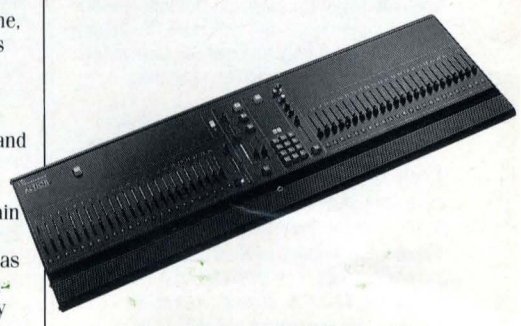
So, there is the story of three field tests. From our point of view good ideas have come forward and our basic design from the self diagnostic test programme to the illuminating 'Bump' buttons has passed the only exam that matters – the one the customer gives.

We have been tremendously re-assured by the reliability of 'Action' in the field. Reliability must always be at the top of the agenda on any theatre system, but it's especially vital for a board that may be used in some very remote spots. We, here in the U.K. are sometimes spoilt by the ever available Strand service from Ken Priddy and his like, strategically placed around the country. It's when you get to, say, a touring company in Australia that reliability really counts. We never forget that over sixty per cent of our production is exported – but perhaps the necessity to cater for this need for reliability is what keeps us number one at home? ■

**Now extensively revised*

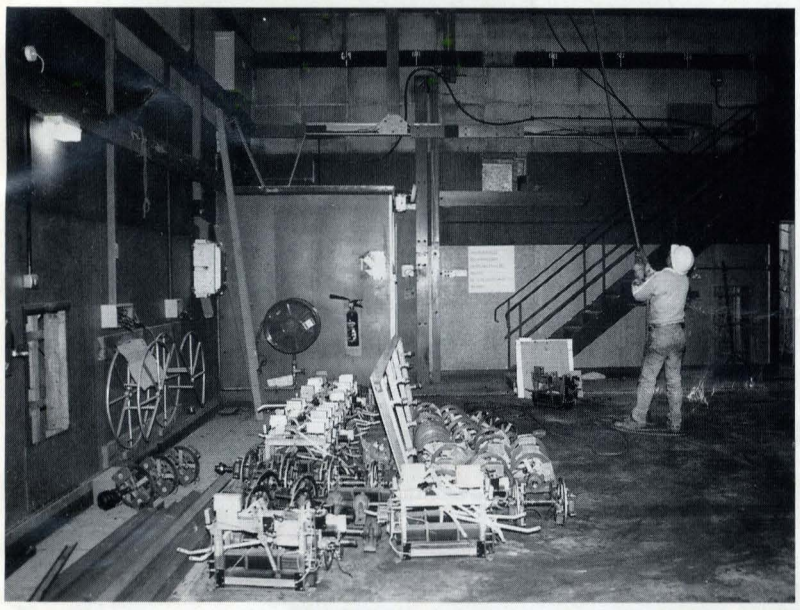
***John Betjeman's Collected Poems. Published by John Murray.*

# Stop Press

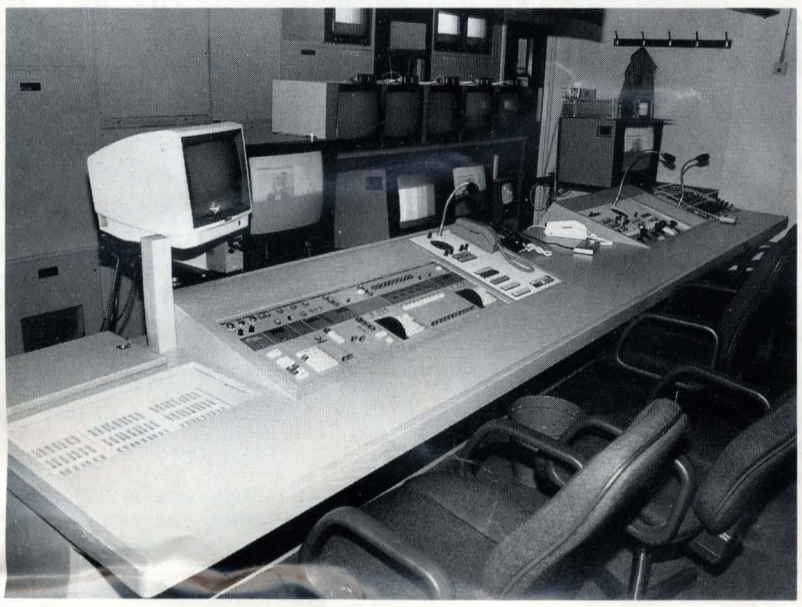


*We are delighted to announce that success has led to growth! So here is the very latest Action board – Action 48! There will be an opportunity to see this new board at the PLASA 88 Light & Sound Show at Olympia 2 11-14th September on Stand F150.*

# Elstree Updates



*The old gives way to the new. Strand electro-mechanical dimmers lowered respectfully to their rest. Twenty five years of good service. Think of it – they even dimmed 'The Power Game'.*



*The very handsome new Elstree Studio control suite with the latest Galaxy.*

*What a year was 1914! The original Elstree Studios were founded, so was the Strand Electric and Engineering Company Limited. And of course there was that unpleasantness with the Kaiser!*

Elstree Studios is probably the most famous name in British film history, with the possible exception of Denham which came much later and Pinewood which really only came into its own after the disagreement with Herr Hitler.

Many of the films of Leslie Howard, that typical Englishman with his pipe and his grey flannels, who was actually a pure bred Hungarian, were made at Elstree.

In later days the studios were taken over by the Lord Grade's ATV. It was at this time that Strand installed their first Control and dimming system. System C (Saturable Reactor) and electro mechanical dimmers.

Let me now tweek the memories of readers who have reached, as the French say 'A certain age'. Do you remember the 'Plane Makers' or the 'Power Game'? The editor, who has long passed that same certain age, seems to recollect an actor named Patrick Wymark who was the main protagonist. Well, these weekly black and white sagas reached a good eight to ten million viewers in those days, and both shows came from Elstree.

The Tom Jones Specials were also made here, so the studios have had as successful a history on the small screen as on the large. And now, in 1988, Britain's most popular series 'East Enders', is made on the same hallowed ground, while 'Allo, Allo', from the adjoining studio D, gives the present owners of Elstree, the BBC, a winning double.

It is not often that I boast of the grand company in which very occasionally the Editor moves. But during my visit I had the privilege of being taken by Mr John Hegerty of the BBC to the very good canteen, where we pushed our trays to the till immediately behind 'Réne', the excellent Gordon Kaye, who somewhat surprised me, such is the consistency and believability of his French accent, by requesting additional baked beans in tones which would more normally be encountered on the stage at Stratford Upon Avon.

Another interesting point in the old ATV control room is that already the idea of the 'infinite access' floor had emerged. The hardwood flooring strips were all raised some four inches to give space for cables, just as in today's computer rooms removable floor panels disclose a snakes nest of cable when lifted. To return to quality installations, I remember some years ago visiting with our Alan Luxford – who now looks after our UK sales to television – a theatre near Zurich where the dimmer room not only had an access floor, but the actual cabinets could be rolled forward like a keen housewifes' gas cooker to allow inspection of the rear. Real Swiss thoroughness.

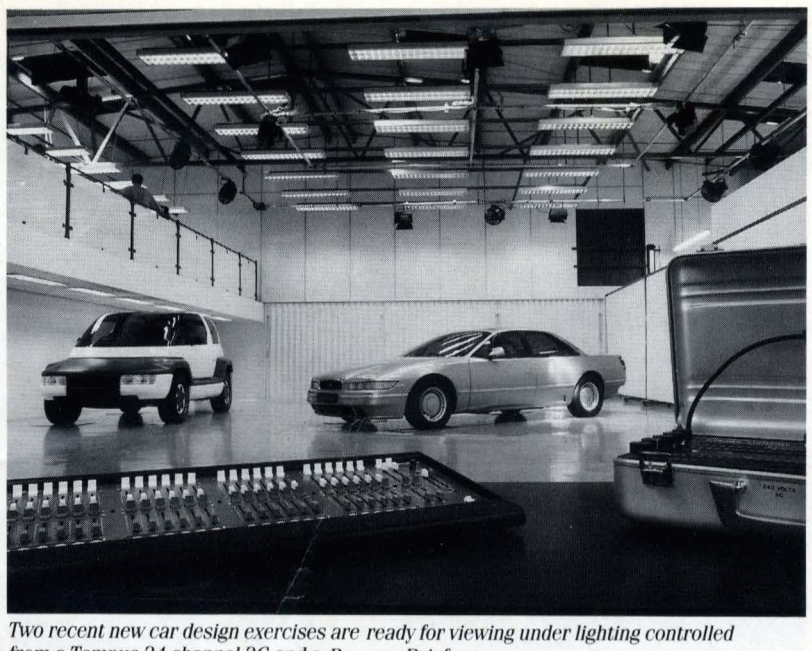
But if you want to see the very latest in television lighting control technology I would certainly be very proud to display the new Elstree set up. And you might even get to push your tray behind 'Réne'

During my visit the original Strand dimmers were being removed, as one of the two new Galaxys works its magic via Strand PIP dimmers, while the other will drive the existing dimmers, originally harnessed to a Q file. The original ATV control and dimmer rooms speak of an age when commercial television was truly a license to print money. Just a couple of examples of the quality of the workmanship which could be afforded a quarter of a century ago. The old Strand dimmers spent their trouble free lives in two lockable, room sized cages made of expanded metal on a steel framework. To prevent the possibility of a single drop of moisture, either by condensation or from a roof leak, falling upon them. A specially formed 'roof' with 'guttering' topped the cages – and this was made all of stainless steel, no less.

The large wall cabinets in which the control lines were terminated are a joy to see. Every cable runs in geometric perfection, while the screw heads holding on the wooden fillet around the door frame have all their slotted heads aligned!

Well, the new installation is no slouch in the quality stakes either and I will let the picture tell the story. But although Galaxy offers an infinity more than the old System C, there is no denying it is smaller. And of course, a great deal cheaper. Forget twenty five years of inflation and still a modern client will only pay well under half today in pound notes of what a similar sized control would have cost when ATV took over.

The age of brass and resistance wire has gone, and today's black boxes, or in Strand's case brown boxes, do so much more but do look rather less. I suppose it's the steam and diesel locomotive comparison in lighting control terms. ■



*Two recent new car design exercises are ready for viewing under lighting controlled from a Tempus 24 channel 2G and a Parscan Briefcase.*

# Designs In The Best Light

I.A.D. of Worthing are an international design company who carry out specialist styling and body and chassis engineering for the world's motor industry. They have chosen Strand Theatre Lighting to help display their designs to clients at their very best and to test colours and shapes under varying, but controlled, lighting conditions.

Our Sussex Service Agents, Messrs. K.A.V.E. of Hassocks, supplied and installed the equipment, and a very impressive job it is too.

I asked Martin Sellen, I.A.D.'s Contracts Manager, which car companies they had designed for. There was a pause. Had I asked an embarrassing question, with perhaps only an obscure name or two available? Hardly, "Well", said Martin. "I am just trying to think of those we *haven't* worked for!"

A project to which I.A.D. made a major contribution that is now just appearing on the world's roads is the new Volvo 440 and 480 series. In a very different role, the body panels of the rally-winning MG Metro GR4 was also born in Worthing.

Spread through 23 different buildings on an industrial estate, partly because of the company's rapid growth since it was founded in 1976 and partly to ensure security between work for different clients, the Main Styling Studio represents the heart of the company. It is here that our products are installed.

There are six Prelude Fresnels with colour wheels and controls, seven Nocturnes with barndoors and four Parscans with a Briefcase controller, power supply and Buffer Box.

There is a 24 channel Tempus 2G and a 24 Permus Rack.

The Briefcase, the Tempus 2G and Colour Wheel Controller can be plugged into two different positions in the studio. ■

*Parscans together with Preludes and Nocturnes light the Main Design Studio of I.A.D. Limited of Worthing.*

# Easter in Rome

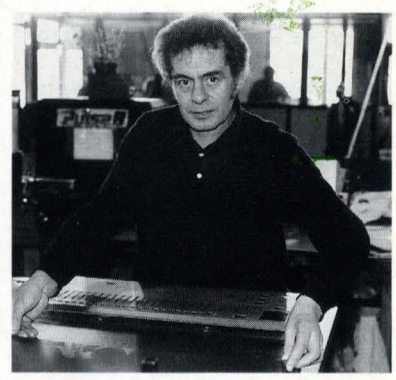
## By Night

*His Holiness the Pope in front of the Floodlit Colosseum.*

## By Day

*The floodlights that cast such a tremendous light – Quartzcolor H.M.I.s.*

# An Action 24 is Born



*An Action 24 is Born. Eddie Murdoch makes a desk front plate on a Kirkcaldy Pierceall punching machine. Ironically, the machine itself is controlled by a memory system.*

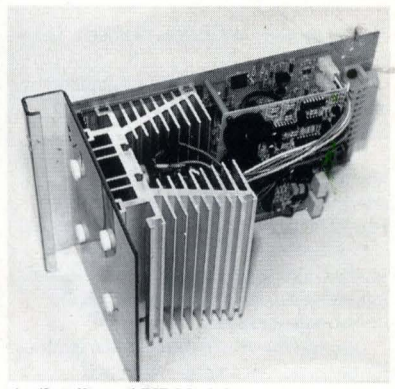
*Irene Dryburgh using a compressed air screwdriver on Action final assembly.*

# Intelligent PIP

We are not dealing here with a genetically programmed fruit seed, not even with the hero of 'Great Expectations', but with our very latest dimmer updates.

PIP dimmers can now, like chastened heretics or reformed alcoholics, confess their own faults on their Galaxy's V.D.U.

In conjunction with DFD Data Concentrators fitted to each dimmer rack, Galaxy is now capable of reporting lamp failures as well as the current status of each dimmer, and logging the occurrence of any faults such as NO LOAD CURRENT, NO OUTPUT VOLTS or DIMMER SHORT CIRCUIT.



*An 'Intelligent' PIP Module.*

The System will report 'DFD FAULT CLEAR' for the appropriate dimmer. Galaxy 3 Software supports intelligent PIP (when optional interfaces are fitted). Earlier Galaxy Premier Systems can be adapted. Fault messages are written on the Galaxy V.D.U. and, whilst channels whose dimmers are in perfect working order will continue to display their number and output level, if there is a dimmer or load fault the channel display will give the dimmer number and a fault code as an aide memoire.

'E1', for example, means there are no output volts, while 'E2' indicates a short circuit, and so on through a succession of possible maladies up to 'E7'. Only those dimmers appearing in the 'Active Format' will tell the operator of their troubles, to minimise any confusion, while faults on any dimmers in use will be added automatically to the Fault Log which Galaxy maintains, like any other good Strand Executive.

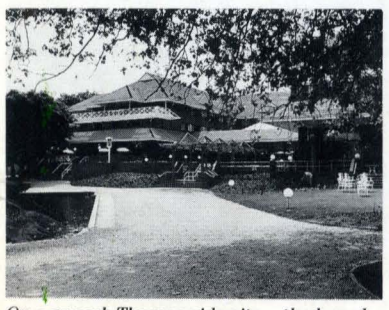
To reassure operators, a list of pending faults can be summoned to the screen or can be printed out.

It's almost a pity that PIP is so reliable that often I fear its intelligence may escape notice altogether. ■

# Caversham Hotel

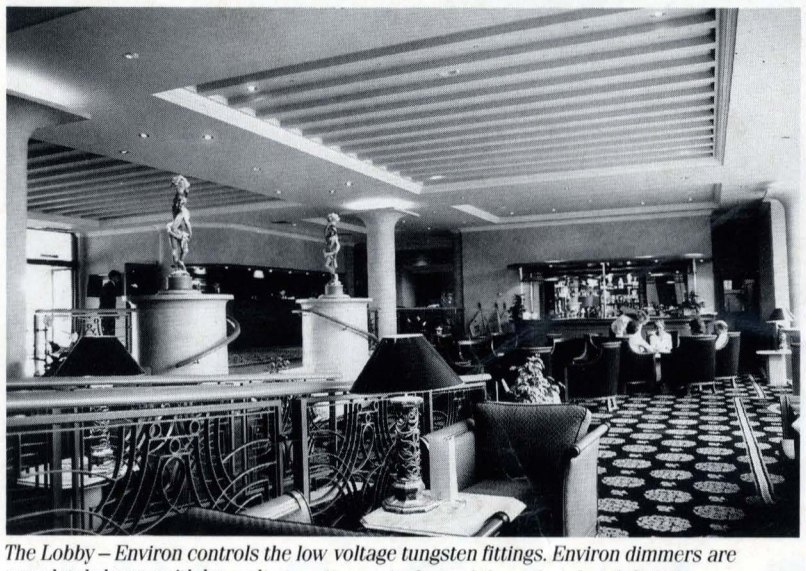
*By David Brooks*

Beside the banks of the River Thames at Caversham today stands a brand new hotel owned by Norfolk Capital Hotels. It was early 1987 when Ron Baumback, UK Field Sales Manager for Commercial Lighting, was first called in by Keith Irving of Keith Miller and Associates, Carshalton, to discuss the project. At that stage, no lighting plans existed although the need for a controlled dimming system had been recognised. Hence the call to Ron. Ideas were exchanged so that by May, drawings were available and a dimming scheme proposed. Not surprisingly for a project of this type many changes were made to the original lighting plan throughout the development. Although intended for a Christmas Eve opening, it was early in 1988 when the Environ dimmers were taken from their winter quarters in a site Portacabin to be installed. They are used for controlling, predominantly, low voltage tungsten halogen lighting in the entrance foyer, lounge areas, cocktail bar, shop, restaurant, ballroom and function room and in various meeting rooms. Based on Strand Commercial Lighting's plug-in modular Environ 2, it is a distributed system with each area having its own switch room. Most dimmers are of the preset variety; a few smaller areas being equipped simply with linear fader outstations. The electrical installation was carried out by Herbert Lascelles of Maidenhead.



*On a superb Thames side site – the brand new Caversham Hotel.*

As our photographs illustrate, the Caversham Hotel which opened in June 1988, is an attractive building in a modern architectural style, well equipped with facilities for guests and, with the aid of Environ, creating an attractive interior environment for guests to enjoy.



*The Lobby – Environ controls the low voltage tungsten fittings. Environ dimmers are completely happy with low voltage – increasingly used these days but definitely needing properly designed dimming.*

*The Dining Room. Environ pre-sets give push button bright and cheerful breakfast times, relaxed lower lighting levels at dinner plus 'Clean Up' for full white while the hoovers are plied.*


*(Left to right: Peter Burrows, David Brooks, Kathy Vertannes, Ron Baumback, Kevin White, Ed Pagett).*

# Strand Commercial Lighting Team

Seen here on a rare occasion with all the team gathered at Isleworth are the UK group responsible for promoting and selling dimming and lighting control products to the commercial lighting market. As described *left*, hotel projects provide one category of building where Strand's expertise can be applied, but the variety of applications range from dimming for retail stores to offices, conference facilities, finance houses and corporate buildings, which are just a few of the recent projects. ■

# One To Be Proud Of!

On Bastille day next year – 14th July 1989 – Europe's latest and most prestigious Opera House will open in Paris.

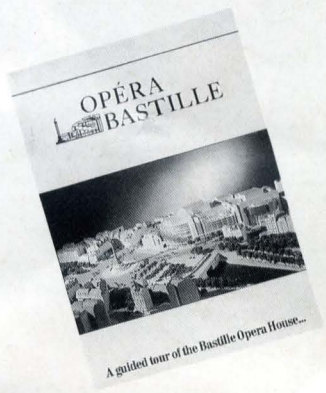
The Opera Bastille opening will mark the end of four years work on site and the expenditure of over two billion francs.

There are three auditoria. The main house seating 2,700 with two balconies and the amphitheatre, which will seat 500, and the studio which will accommodate 280.

I am delighted and proud to announce that the whole lighting and control installation will be by Britain's leading theatre lighting company. Can you guess.....?

Here are a couple of clues – 'Galaxy' & 'Cantata'.

We will be featuring the whole magnificent project and its lighting installation in a future issue. In the meantime, the heartiest congratulations to Bernard Bouchet and his colleagues in Strand Lighting, France. ■




# Quartzcolor Luminaires

Our product has been used for lighting the following box office bonanzas released during the last 12 months:

*'Who Framed Roger Rabbit'*
*'Full Metal Jacket'*
*'Good Morning Vietnam'*

as well as Academy Award Nominee: 'Hope and Glory'.

Currently shooting with our luminaires, at Elstree Studios, England is 'Indiana Jones III'.

Recently completed in England, for American syndication as a play for television is a new production of 'A Man For All Seasons' starring Charlton Heston.

For the record 'Full Metal Jacket', a Vietnam war drama was shot in a disused industrial zone in London. So much for movie make-believe.

Quartzcolor also featured in the lighting for the Academy Awards, the Emmy Awards, and the People's Choice Awards. Our equipment will also be in South Korea during August for the Summer Olympics. ■

# Percy Corry

We are sorry to announce the recent death of Percy Corry, for many years the Managing Director of Watts & Corry, who represented Strand in Manchester.

Percy Corry's interest in theatre was far wider than its application to business. He was a keen amateur actor, and a great supporter of all that was theatrical in the North West. He had achieved the grand age of 94. ■

# Service Comes With Strand

*Fred Brown – the member of the Isleworth Service Team who is responsible for all Service Agent Training.*

We believe that one of the factors which continues to keep us at the top in entertainment lighting is that with every product comes true service back-up. The more complex and sophisticated the equipment the more vital we believe the service support in the field to be.

A few issues back I wrote about our own service department, but now Russell Dunsire, our Sales and Marketing Director, has suggested I tell readers something about our network of service agents. To discuss a network as such would mean generalities, which are always tedious, so I have visited one service agent who is a good example of the twenty five in the U.K. and the many overseas. Although Luff Light and Sound, the agents concerned, are probably a larger company than some, being London based, their methods and skills can be taken as typical of a carefully chosen and continuously trained group.

Luffs are our South London distributors, selling not a few of our products, but my visit was to look into Luffs Engineering Service, who do regular servicing and emergency call-outs in the West End and Home Counties.

The service team is headed by Ken Priddy, the Engineering Manager, who came into the theatre technical world by an interesting route. He had been an R.A.F. apprentice and had progressed to dealing with radar, special signals and such, finally being stationed at Woolwich Arsenal. Some twelve years ago, the R.A.F. behind him, Ken was considering his future role in life. What better spot for philosophic introspection than his local, the Golden Anchor. He was approached by a fellow devotee of Best Bitter who was gazing with some doubt at a Strand 932 Card. After a short chat that revealed that electronics was an open book to our hero, the card was handed over for repair. From such small acorns do mighty oaks grow. Now Ken is assisted by Simon Cooper (B.Tech-HNC Electronics), Andrew Lucas (B.Tech-Nat.Cert.Electronics) and Colin Freeman to whom every theatre lantern, fixture or luminaire is a known quantity.

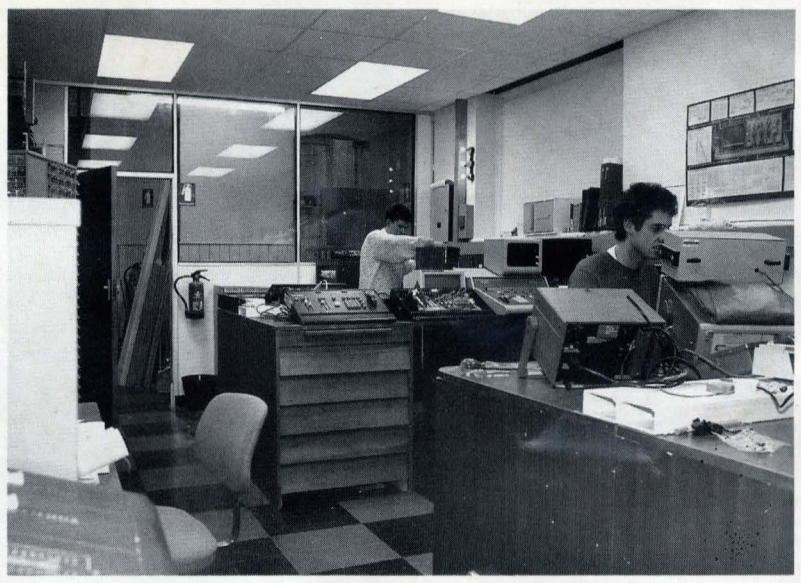
Luffs are great believers in Vodophone (a mobile battery operated telephone connected to the public telephone system). A few weeks ago a West End Theatre rang at 6pm. Their Galaxy power supply had 'gone down' and a live broadcast was to be recorded at 7 pm. Off went the engineer who kept in touch with the worried customer by Vodophone, a spare power supply being with him. By five minutes past seven the Galaxy was itself again on and the show was on.

Of course, most service work lacks – thank goodness – this element of drama. There is a steady business of refurbishment and overhaul. Lantern lamp holders deteriorate – and remember the *average* Patt 23 is now over fifteen years old and the *youngest* six years old, reflectors grow less reflective and cables chafe.

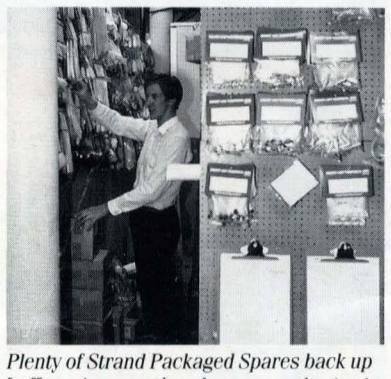
Luffs like most of our service agents, offer a lantern re-build service. This can be a simple mechanical and electrical overhaul, replacing cables, sleeves etc. as necessary, or a complete rebuild and re-enamel to bring a lantern as near to new again as spares availability allows.

Our Agents also normally offer contract maintenance service including an annual main service on controls and dimmers and emergency call-outs for contract customers without extra charge.

And, of course, for all Strand Official Service Agents the full resources of Strand's own service department are available as back-up. ■



*Ship shape indeed. Luffs service workshop.*



*Plenty of Strand Packaged Spares back up Luff service – as they do every authorised Strand Service operation.*
*In fact the very largest spares stock I have ever seen was that of our Norwegian agent. A large basement full of parts, including lantern bodies throng the ground floor storage area of the Larsens Oslo offices.*

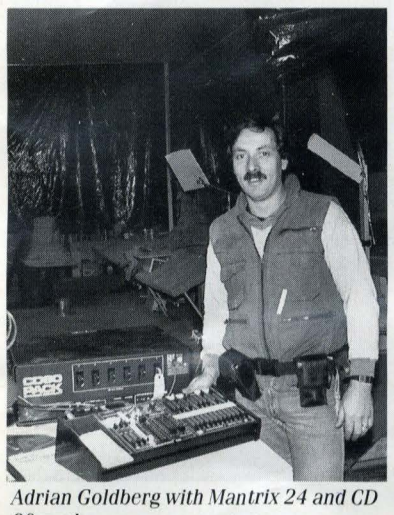
*Ken Priddy, who manages Luff Light & Sound Engineering, the section of Luffs responsible for their authorised Strand Service Agency, as well as supervising their sound operation and the Luff Special Projects Department. Were you impressed as the Phantom of the Opera's flickering candles rose through the mist? Ken's department designed and built the interface between the Galaxy and the two D.C. lamps in each candle, including the provision of a variable D.C. supply to allow dimming.*

# Captain Power

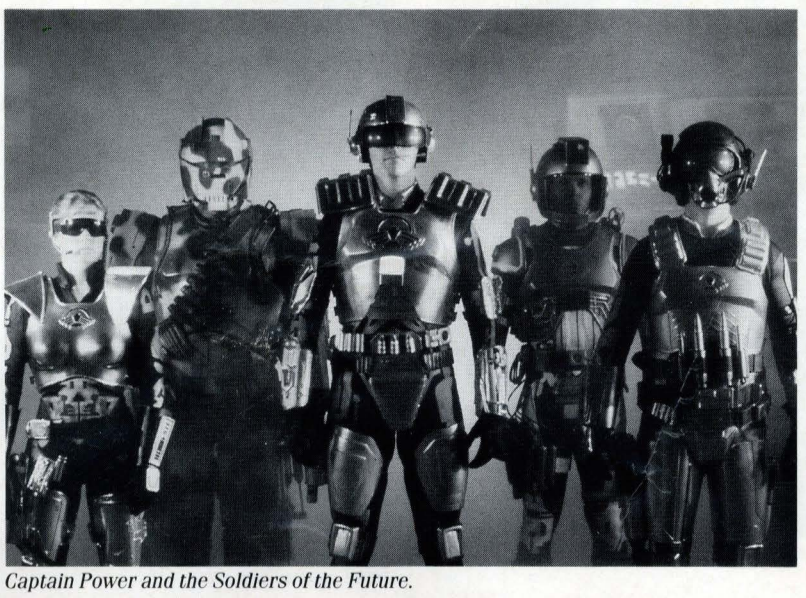
## or "Don't Shoot the sheriff when you can blast T.V."

*Haven't we all at times felt like taking a shot at the tube? Well, last season in North America many viewers – supposedly all kids – could zap baddies with an interactive 'XT-7 Power Jet Fighter' from the giant Mattel Toy Company. This firm, in conjunction with Toronto's Ventura T.V., has produced the world's first interactive programme (program?) Lest anyone be too concerned that violence may be encouraged, only robot machines can be 'zapped'.*

*I toured the temporary studio, where Strand and Quartzcolor are very much in evidence, and watched a sequence being shot. I was so impressed that I asked Adrian Goldberg, an ex pat from NW5, about his work among the 'Soldiers of the Future'.*



*Adrian Goldberg with Mantrix 24 and CD 80 pack.*



*Captain Power and the Soldiers of the Future.*

June 1987, after many months of on site planning, saw the commencement of shooting of 'Captain Power and the Soldiers of the Future'. Co-produced by Landmark Productions (U.S.A) and Ventura (Canada) and backed by Mattel, the toy giant, 'Captain Power' heralded the beginning of a new era in family television. Combining live action, motion control, green screen (Matte) production and Computer Generated Images (C.G.I.) the weekly action series is fully interactive with the 'Captain Power' range of toys sold by Mattel.

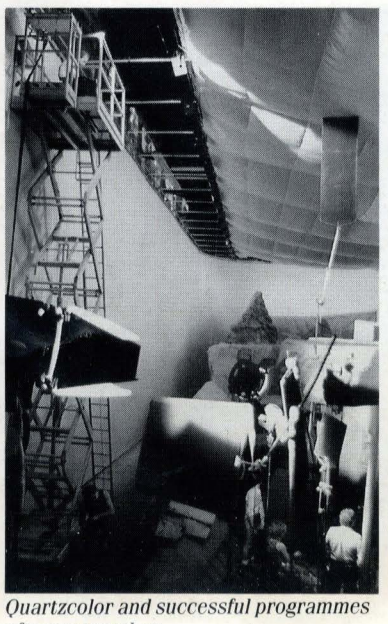
The building used for the production is a 100,000 sq.ft. former Toronto Transit Commission bus depot. The main area, approximately 500 ft. x 100 ft., was serviced by a suspended grid 30 ft. from the ground at 6'7" centres. At one end of this 'Studio A', an area approximately 200' x 100' was cyced 360° and became known as the Terraform. The balance of Studio A was used to house the other permanent sets including the 'Good Guy's' Power Base and Jumpship, and the 'Bad Guy's' Throne Room. At the far end of Studio A a 40' x 40' Green Screen Cyc was hung that would subsequently be used for all the flying and Matte sequences.

Power, the electrical type, was supplied to Studio A via three 3 phase 600 amp splitter boxes fed by three 225kva transformers. A fourth transformer fed Studio B and the Miniature's area via three 200amp splitters. The area that became known as Studio B measured approximately 50' x 300' and housed the various single episode sets as well as the model shop and motion control area.

*Effects play their part to good effect.*

Strand's involvement in the project started early when discussions between the Production and the lighting department, consisting of the Key Gaffer Maris Jansons and the Rigging Gaffer Adrian Goldberg, revealed that the space within the Cyc'd off Terraform was insufficient for the set to be built there. After an additional 20 ft. was added to the length of the Terraform and the grid plot reworked by Mr. Goldberg, the equipment order was placed with Wm. F. White Ltd. of Toronto.

The order consisted of 54 Iris 3 cyc lights, 162 Orion's to be grouped in 3's for the ground row, six 6 x 6K CD 80 packs and a Mantrix 24 channel with electronic patch dimmer board. As the Terraform was divided into three sections, The City, The Forest and The Desert, it was calculated that no more than 50% of the Cyc area would be needed at any one time, hence 36 dimmer outlets feeding the 69 circuits.



*Quartzcolor and successful programmes often go together.*

The colour selections, made after extensive tests by the D.O.P. Peter Benison and Maris Jansons, were initially selected to be 79 Blue, 21 Amber and 46 Red. Subsequently the red in the groundrow was replaced with Full Blue 50 to effect a 'whiter' daylight background.

The responsibility for the installation of the lighting system was left to Adrian Goldberg and his rigging crew. Although a recent arrival on the film scene, Adrian's extensive knowledge of dimmer systems and their wiring was a result of 5 years in theatre and 6 years with the Global Television Network where, together with assistant Bruce Whiteford, they rewired the main studio and installed a full CD 80 Rack system for the 232, 50 and 20 amp circuits along with a 60 channel Mantrix Memory board.

Around the perimeter of the Terraform each group of 4 Iris 3 cyc units were wired to a 70 amp distribution box from where three (one for each colour) 3 conductor 6 gauge feeds were run to the dimmer packs located at the north-east end of the Terraform. The ground row was run the same way except in groups of 6 instead of 4 due to the lower wattage of the bulbs (1000W vs. 1500W in the cyc's). All the 'Joy' ends of the 6/3 cable were clearly marked and grouped to make repatching as fast as possible.

The acting area of the Terraform was covered with a single silk measuring 127ft. x 67ft. behind which were hung 36, 6kW. space lights. These fixtures were circuited via 6/3 cable to two distribution points in the grid, power for which was run from one of the 600 amp splitters also located at the north-east end of the Terraform.

As shooting progressed certain norm's became evident. For instance, after episode 3 the amber (post holocaust) sky was abandoned. The daytime sky's used in the next few episodes were a combination of the two Blue's in the ground row and the 79 Blue in the cyc's. Night time backgrounds were generally the 79 Blue in the ground row kept at a level some 2 stops below the shooting stop of f4.5.

The realism of the skyscapes for both the Terraform and subsequently the Miniatures area was maintained with the addition of Adrian's Control Lighting (Electro Controls) vintage 1976 Paralipsphere 170's. These variable focus leko's* along with a supply of Rosco designer cloud gobo's kept the sky backgrounds varied and interesting.

After approximately two months shooting on main unit, the Miniature area complete with computerised motion control came on line. The duplication of the sky backgrounds necessitated the purchase of an additional 6 x 6K CD 80 for this area in order to balance the cyc and ground row lights.

By this time the experience of shooting had taught that the Mantrix 24 channel board was not capable of performing some of the effects or the wide level of control being asked of it. Adrian, who had taken over as Key Gaffer after Maris had moved up to become D.O.P. of the 3rd unit, decided to exchange the Mantrix for the new Lightboard M as the main control system and a basic 12 channel Mantrix for the Miniature area.

At the time the 'M' was not available in Canada, however, Strand lent the Production an 'M1'. In spite of some shortcomings the board served well, particularly after a 12 x2.4kW. CD 80 was purchased to be used in a mobile unit for control of the flashing and chasing lights designed into just about every other set.

The balance of the lighting package was rented from Lightsource, an equipment rental facility in Toronto, who provided the production with Ianiro 10K, 5K, 2K, 1K, and Mizar fixtures along with 2K Blondes, 1K Red Head's and nook lights.

Not counting the rented cable, over 5.5 kilometres of 6/3 cable was run for the cyc's, ground row and space lights, .75km. for main power runs, 1.5km. for secondary power runs and approximately $700,000 spent on the total lighting needs of the production, excluding salaries.

With the completion of the first 22 episodes in November 1987 the equipment was put into storage and the sets and building secured until such time as additional episodes ar scheduled for production. ■

*Note for European readers. Leko – a Strand North America Product has become the generic term for a focusing spotlight!

# The Welcome Flood

*by Nick Perry*

I am talking about the flood of orders you have been good enough to unleash on us over this last twelve months.

We thought it was thus time we introduced a few of the team who handle these orders in Strand on behalf of you, our customers.

The sales team, with their gleaming teeth and gleaming motor cars are the glamour boys and girls, but now I want to tell you about the support troops who turn the orders into the actual packets, cartons and packing cases that arrive at your studio, theatre or village hall.

We sell many thousands of different items into ninety different countries. Orders arrive by 'phone, post, telex, Fax and, especially for T.V. and film location shoots, by personal callers who frequently arrive in three ton trucks. Last week one of you in this category took away three 12K H.M.Is! We hope to see you again soon, Sir!

All the orders as they arrive have to be interpreted into a format which the computer can understand and the 'invisible items' added. For example, lamps and cables go with lanterns into the theatre market.

*Manual labour. Barbara Spratley and Nick Blackman open up some of the morning orders.*

*The Clever Part – Jose Joao enters the orders on the computer.*

*Your Ration of Isleworth Air – contained in bubble pack! Jim Innes and David Walsh send forth an Iadi.*

The judgement of the team has to come into play when offering customers delivery dates on goods not actually in the warehouse. If it was simply a matter of going to the production programme of the Rome, Los Angeles or Kirkcaldy factories all would be simple. But horseshoes and nails come into this. An obscure bought-out spring for a lamp holder could delay a whole production run, so liaison with the factories is a vital part of our job.

And now to the word that makes many a company tremble – Export! But for Strand this means nearly seventy per cent of our sales, so shipping, export documents, letters of credit and the odd ferry strike constitute the day to day story of the lives of our Sales Co-Ordinators. They are all young and energetic and they need to be. So far I have spoken about life on the Bridge and on the deck – now let us descend to the hold. (Actually the Warehouse is on the ground floor alongside the offices, but the Editor said 'use picturesque language').

Do you realise, dear overseas reader, that with every beautifully packed Strand product you receive a small but life enhancing cubic inch of good Isleworth air? We use miles of bubble pack, so if you care to pierce the odd bubble you could actually breathe the gentle airs of Middlesex in your own desert or tundra. Just one extra benefit of purchasing the world's best theatre and studio lighting. ■

# Motorized Chess on Broadway

Recently the Broadway version of the London musical 'Chess' opened. Lighting designer David Hersey, decided to use automated fixtures for the majority of the main lighting. A total of 36 Parscans and 45 Parscrollers, controlled by a Taskmaster console, are used by the production.

The set is a dozen triangular columns of 2 sizes. Each column spins and moves about the stage to create the various scenes. Because the set moves so freely, it was decided to use Parscans which are refocused and recoloured for each scene rather than hang an extensive range of dedicated instruments to light the many areas. The result is fewer lights, a simpler set-up and better dynamic control.

Automated fixtures are not just for effects anymore. More and more, designers are starting to realize the potential of these fixtures. Strand is proud to be supplying equipment for innovative lighting designers. 'Chess' won't be the last Broadway show to take advantage of the flexibility and savings of automated fixtures, it is a first. ■

# Strand Employees Climb To Success

Sixteen Members of Strand Lighting Hillwalking Club at Kirkcaldy successfully climbed An Socach, a Munro mountain in the eastern Highlands of Scotland as part of a Mass charity climb named 'Boots Across Scotland'.

More than 2200 people took part in the May Day Mountain Marathon, the aim being to have climbers on the summits of 277 'Munro' mountains (Scottish peaks over 3000 feet) at 1 p.m. The object of the exercise was to raise £20,000 for charities related to climbing activities, namely, Stobhill Hospital, Glasgow for life saving equipment Glencoe Mountain Rescue Team for Communications equipment and to set up a charitable Trust for injured climbers.

The sponsored event has been hailed as a triumph, already £56,000 has been collected and while money is still coming in, it is expected that more than treble the target sum will be achieved.

Strand employees from Kirkcaldy and Isleworth made generous contributions to the project, as well as those that participated in the event.

Strand's successes are not confined to the Theatre and Studio Lighting business. ■

Strand employees who took part were:

*Ann Dryburgh*
*Albert Duthie*
*Robert Brown*
*Jim Houston*
*Joyce Henderson*
*Peter McIntosh*
*Linda Martin*
*Bill Guthrie*
*George Paterson*

# One Hundred Per Cent

*The Editor visits the Hawth Theatre at Crawley whose lighting rig, controls and dimming are all Strand.*

My first thoughts were 'What a strange name for a theatre'. Was a Councillor Hawth Chairperson of the Entertainments Committee? Or surely if some son of Crawley had achieved thespian fame I would have at least heard of Hawth's Hamlet? Could, at last, a theatre have been named after its consultant? Certainly this was not the case, as we all know that the knowledgeable and elegant Graham Walne filled this role at Crawley. And, as we shall see, filled it very well indeed.

So when I arrived and was greeted by Chris Wilcox, the technical manager, the theatre's name was my very first query. The answer turned out to be simple. The Hawth is the area of wooded common on some of the acres of which the theatre now stands.

It is indeed an excellent site, and makes an interesting comparison with Basildon. [*See article below*] Both Crawley and Basildon, are new towns – ie, they are towns based on originally much smaller places, which received overspill population from London after the war. Basildon chose to build their Towngate Theatre right in the town centre, while Crawley, to my mind much more sensibly, chose a truly green field site.

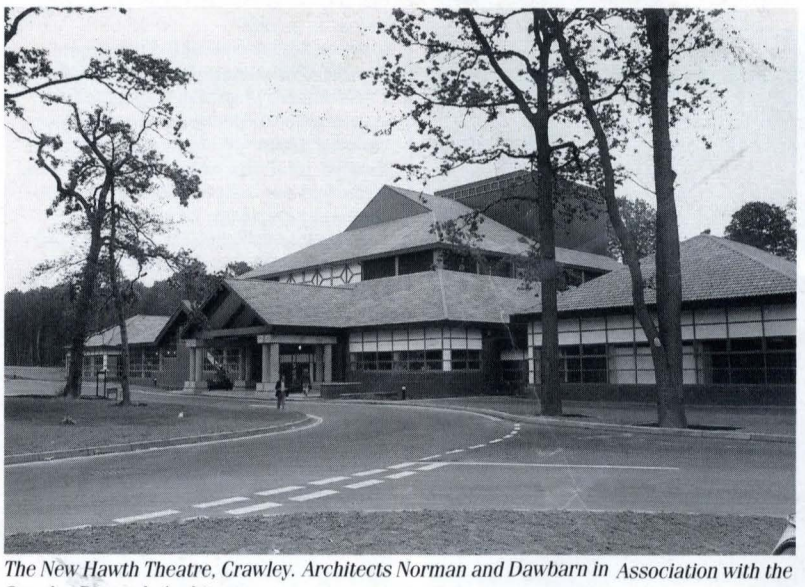
Consider these points. First, my guess is that ninety five per cent of theatre goers are car owners. If you grant this ask any car owner whether he prefers to go out in the evening using the delights of public transport with its convivial company and sometimes even song accompaniment, or would he select the independence, quiet and security of his own car? No contest.

Now I am sure Basildon has car parking available in a multi storey close by, but I must vote for a floodlit landscaped parking lot placed outside the theatre entrance as at the Hawth.

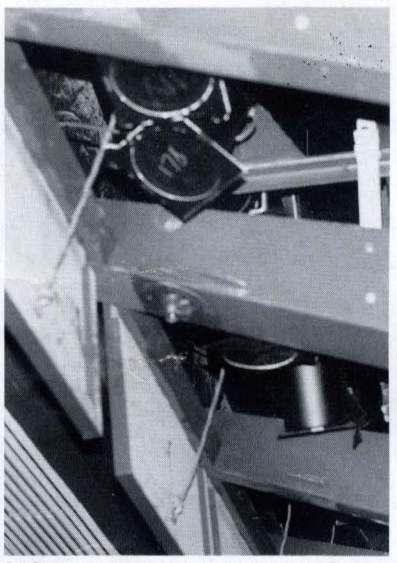
Externally I like the building very much, even though 'The Stage' compares it to a local Tescos. I provide a photo for readers to make up their own minds.

Incidentally, the debate about the siting of new provincial theatres has relevance to the Stage's comparison. Every reader of their local paper will know of the constant planning battles for the Tescos and Sainsburys of the world to get away from town centres and out to where cars can park.

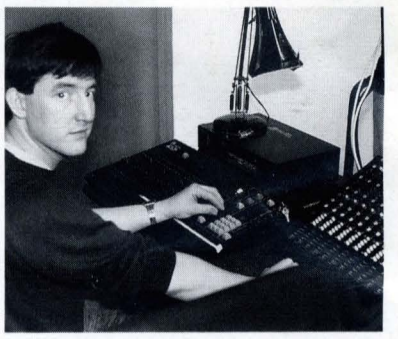
Why should theatres be different? Once more when we look at California we see the future. The magnificent Orange County Performing Arts Centre, at Cost Mesa, shares a vast car park with a local shopping mall developed as an overall concept. What happens when there is a matinee? Well how many matinees are there today, anyway?



*The New Hawth Theatre, Crawley. Architects Norman and Dawbarn in Association with the Crawley Borough Architect.*



*Lighting position ceiling traps just in front of the proscenium arch.*



*In the Studio Theatre. Chris Wilcox in 'Action'.*

*A well placed Gemini.*

*The Stage in the Main Auditorium.*

Back to the Hawth. The main theatre seats 850 in very steeply raked stalls and a horseshoe balcony. The stalls seating is reduced to 780 when the orchestra pit is enlarged to its 'Opera' size. There are facilities for re-arranging the auditorium for theatre in the round, and, by removing a few seats at the rear of the circle in front of the projection room, films can be shown. Finally stalls seating can be removed to leave a flat floor.

Just in front of the Proscenium there are manually operated ceiling traps concealing extra lighting positions, while both access to the main lighting bridges and their positioning is first class. To go with all this quality, Cantata 1.2 kws were chosen. The control in the main auditorium is by a 180 way Gemini with Effects Panel, Disc storage, Printer and Designers Remote Control. There are 174 x 2.5kW permus and 65kW Permus dimmers.

Electric winches operated from the lighting bridges have been provided for point suspension. This will be especially valuable should the theatre be used for the odd conference or product launch. Because it is convenient for Gatwick Airport, this seems highly likely.

*Cantatas on the bridge.*

At the time of my visit Northern Ballet Theatres' Coppelia was the attraction. Another of Hawths benefits derives from its site. It must have about the easiest get-in of any theatre in the UK. A large yard outside the scene door gives space for any of Mr Lucking's 'Queen Marys' to come in, turn and back right up. Oh fortunate crew at Crawley. There is also a studio theatre, seating 140. A jazz group had been there just before my visit and the Hull Truck Drama Company were moving in for a week on that day. Control is by Action, (how these are now spreading!) 24 permus 2.5KW and 4 x 5 channel 10 internally wired bars.

Obviously items will move between main theatre and studio as required, but in their usual homes the allocation is as follows:

*Main Theatre:*
2 x 1kW CID Solo Follow spots
8 x Cadenza 12/22 2kW profiles fitted with colour changers
22 x Cantata 11/26 1.2kW
30 x Cantata 18/32 1.2kW
20 x Cantata – Fresnels with Barndoors 1.2kW
24 x Cantata PC's with main doors 1.2 KW
10 x Cadenza fresnels with Barn doors 2kW
70 x Punchlites
8 x Iris Threes
8 x Coda Fours
6 x Coda Ones

*Studio*
*4 x Prelude 16/30's – 650 Watt*
*4 x Coda Ones* ■

# Cantatas Go To Work

In our last issue we showed you Cantatas – our superb new 1kW/1.2kW units in production at our Kirkcaldy factory.

Now they are actually getting into theatres and a very fine welcome they are receiving from lighting crews.

The most popular of Cantata's benefits?

First, the 360° rotating shutter assembly – when the lighting Designer suddenly wants the beam shape changing from letter box to pillar box a half turn of the gate is all that is needed.

Second, the new locking clamps which, because they grip by expanding a flanged steel disc inside another flanged disc, their grip will be completely certain without needing serious pressure on the handle. The design is really just like a vehicle brake drum – and we all park on hills from time to time and expect to find our car to be there when we return.

Third, the sheer output. Not only has the 1.2kW RSE 29 turned out to be a superb lamp, but the improved optics of the lenses and of the Edinburgh university computer designed reflector mean that Cantata is effective even in situations where a 2kW unit would previously have been needed.

## The First Cantata Installation

A completely modern design, by the Renton Howard Wood Levin Partnership, whose theatrical work includes the re-furbishment of the Old Vic, the Bradford Alhambra and the Theatre Royal, Nottingham, as well as the design of new entertainment buildings at Sheffield, Nottingham, Epsom and Northampton.

Tech Plan of Epsom were the highly competent Technical Consultants to the architects for the theatre equipment.

At the Towngate there are two auditoria. The main theatre with 550 seats on three levels, and a small 200 seat studio.



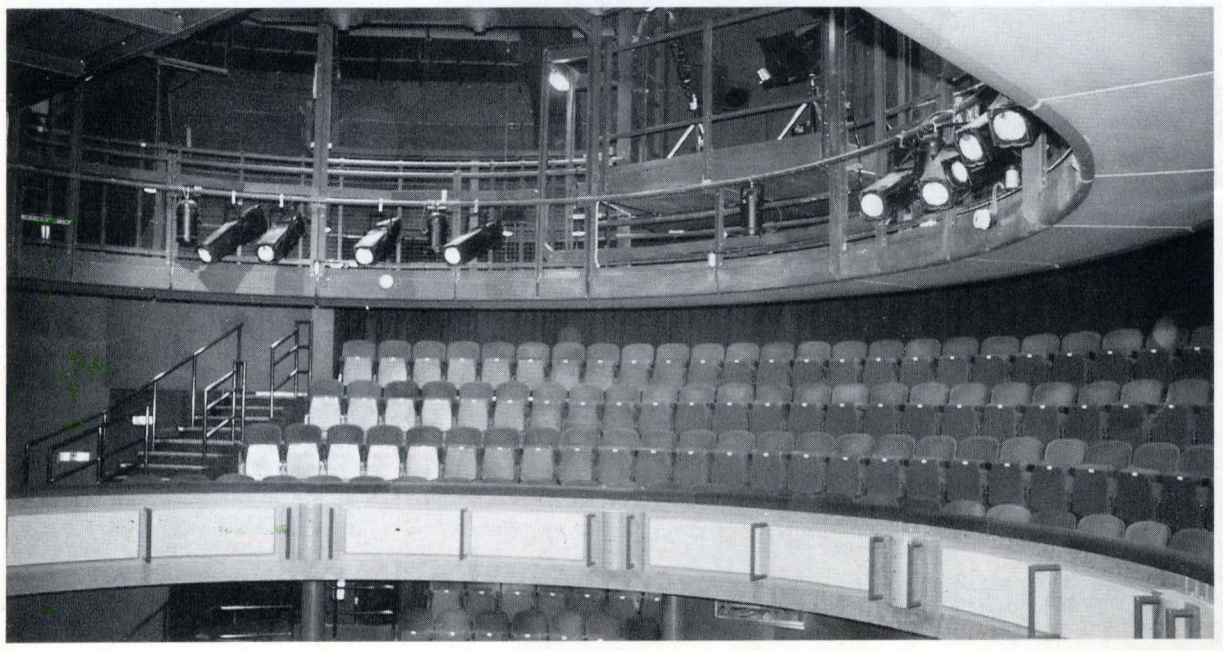

The main auditorium can have its seating moved on air castors to the basement on a large control elevator so that the stalls area can become a clear, flat floor.

The proscenium width can be varied by "moving towers", again on air cushions. I first saw this idea at the excellent Max Bell Theatre in Calgary, and I think it was first used in the U.K. at the Derngate Centre in Northampton by the same architects.

The lighting rig included the first Cantatas actually supplied to a theatre.

The equipment consisted of
*60 Cantata F*
*50 Cantata 18/32*
*10 Cantata*
*30 Punchlites*
*4 Iris 4's*
*4 Codas*
*2 Solo CSI follow spots and*
*10 Internally wired bars.*

There is a very comprehensive working light set up by those experts in this specialised field – specialised as, anyone who has blackouts persistently spoilt by the odd 100 watt GLS left on in the wings can testify – Messrs Northern Light, of Leith & Glasgow. Purely incidentally, of course, Northern Light represent Strand north of the border. ■



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