

STRANDLIGHT

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

How we suffered a disappointment, how a lesson was learned and how the world wide launch of a new system was the happy result.

Some time ago we lost an order for a control system.

This was disappointing enough, especially as in this case we expected success.

We already had equipment in the building concerned and the purchaser was — and remains — a friend.

When he told us he had chosen another system and explained why, we understood the reasons and decided to find the answer. We appreciated that there were some jobs where even Palette or Galaxy — successful as they have been — were not the ideal control.

At this point Strand North America were developing a new system, and, with some European and Australian input, we had the answer.

It is called Lightboard M.

The One That Got Away

The 'lost project' was not a typical theatre. They have many 'one nighters' where the

Suddenly It's 1967!

Lever per channel for lighting control memory systems is back — and so is patching! Both in 1988 style.

memory part of a systems function is only to make up convenient groups of lights or effects rather than to record and replay a designers careful plot.

There is no doubt that to compose lighting there and then, being able to seize the relevant fader is the quickest method because it is the most direct access from brain to light.

Lightboard M has a lever per channel, in increments of twelve, for controlling up to 768 multiplexed dimmers.

Our customer wanted, on occasion, to use that simplest of theatre control devices, the two scene preset.

After all, the operator must be able to set up for the Vicar's study to follow the love scene in a betting shop. (Don't try and identify the play — just random thoughts.)

Lightboard M In the simplest and most basic usage Lightboard M is a two scene preset with dipless cross fade, with LED bargraphs to tell the operator how far through a fade he is and with dual timers to set up those long boring-to-do 'fades to evening'.

I cannot now remember if space was a problem in the control room of the project of the 'Lost Board', but even the veriest cubby hole is no problem for Lightboard M.

Lightboard M The new system can control up to its maximum number of channels even if there is no room for a full sized desk. A quart can now, thanks to electronics, emerge happily from a pint pot, as the full complement of channels can be controlled from as few or as many faders as space, or dare we say budget, allows.

Because our friend intended to employ from time to time modern musicians he wanted to be able to 'play the board' as these wretches be-whored and be-strumpetted their hapless instruments. That meant flash buttons, and lots of group masters.

Lightboard M A flash button per channel is a Lightboard M standard. They can flash to "FULL", "OFF" or any level in between. They can also be set in a solo mode so that when pressed all the other channels go out. Either 24 or 48 submasters are provided, each capable of controlling isolated channels or entire memories.

Sometimes the 'Lost project' was to have a show which, it was hoped would run. This obviously meant the normal benefits of a memory system were on the shopping list.

Lightboard M can record up to 200 memories using the manual faders. For every well brought up English Strand trained operator there is an alternative digital keyboard as standard. The operator memorises in whichever way is most convenient for him for that show. Memories are loaded directly onto the cross fader for sequential re-playing. Cue sequences can be played back via a 'go' button. Disc library storage and printout are available. By use of a manual split cross-fader and a timed fader, multiple fades can be played simultaneously as can split times, delays, automatic follow ons and all manner of sophisticated memory play back offered by our other systems.

Our customer has had enough world wide experience to be a patching enthusiast in its modern sense. I mean that he appreciates the value of being able to put, say, all the dimmers for the blue circuits at the top of the cyc. onto one fader. He is definitely not one of that fast vanishing band who seek to save a few coppers by having twice as many dimmers as channels.

Lightboard M has four proportional patch tables. In each table any number of dimmers can be assigned to a single channel and each dimmer within that selected group can be given its own level. The four tables mean that allocations between dimmers and channels becomes a very quick and easy play. To go with the rock and rollers, fairly sophisticated effects would have had to have been offered — even though I fully agree that effects can have a more honourable role. Lightboard M offers nine types of effect, all as standard. Forward chases. Reverse ditto. Builds. Memory chases. Two effects running at once, etc., etc.

Our customer obviously wanted his operator to know 'where he was' at all times.

Lightboard M offers a colour V.D.U. This gives all the usual mode and status information as well as a running cue sheet.

If the 'lost system' was being specified this year, instead of last, so fast has the onrush of motorised lanterns been, that the control end for such lighting would certainly have been required.

Lightboard M offers control for Taskmaster (the Showchangers control) while remote colour change by Auto Scroll and Set Scroll can also be handled by specifying relevant options. If it has been available, our customer would probably have wanted a designers hand held control, and quite possibly that off set wing or even auditorium controls known irreverently in our company as 'Idiot Buttons'. These permit the most ignorant member of the building's senior management to bring up selected lights, previously grouped and level set by a far less ignorant member of the technical staff, by simply button pressing without entering the control room. This is done very neatly in Lightboard 'M' by using eight submasters, additional to those installed in the console, but remotely located.

The 'Lost Board' went from us at what we then considered a very low price. That was before Lightboard 'M', whose prices will, we believe, bring tears to the eyes of competitors in Germany, France and Scandinavia, let alone the U.S. and the U.K. Those same prices we are confident will bring joy to theatres, civic halls, conference centres and a host of other gattering places everywhere.

Lightboard M These few anecdotes of how we would have responded to a challenge if it had happened today are really to whet the readers appetite. A very fully detailed publication is available on request which gives the full Lightboard M's story. And you can try out a system by contacting your Strand Agent or local company office anywhere in the world.

Many Lightboard M's have been installed in the U.S. and by the time this issue of Strandlight reaches you, installations will be beginning in the U.K., with continental deliveries occurring simultaneously. So you will never be too far from a Lightboard M to try out for yourself.



The Lightboard M brochure is now available.

Strand and Electro Controls Consolidation

At a conference held recently in Dallas, John Pavacik, President of Strand Lighting North America, announced the consolidation of the two companies.

Strand and Electro are coming together.

All activities will eventually be based at our Los Angeles operation at the familiar Rancho Dominguez address.

Two divisions have resulted from the consolidation, the Strand Lighting Entertainment Group and the Strand Lighting Architectural Group. Each group will market the Strand and Electro products for their own individual markets.

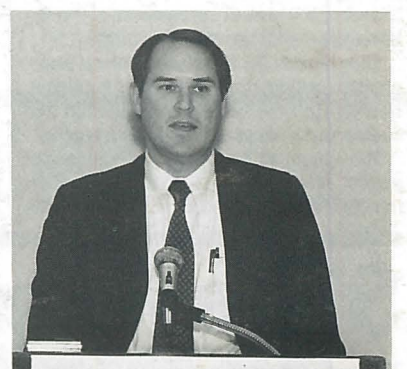
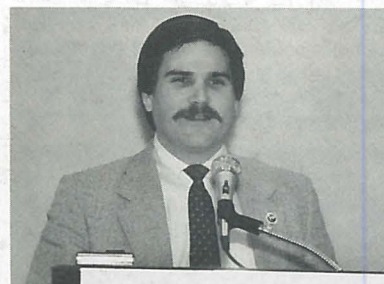
A large investment programme is being undertaken at Rancho Dominguez to provide manufacturing, administrative and service facilities for the dual product lines.

Electro products continue to be available world wide from the local Strand agent or subsidiary company.



It must have been a convivial gathering! Bob Schiller, Western Region Sales Manager (left) and John Pavacik (right), President of Strand Lighting North America, looking suspiciously cheerful on coffee — or was the cup designed to fool us over here in Europe, John?

Bill Groener will head up the Strand Lighting North America Entertainment Group.



Greg Zebrowski will lead the Strand Lighting North America Architectural Group.

Rick White, Vice President of Sales, Entertainment Group, is moving from Salt Lake City to Los Angeles. Donna Appleton is the Manager of Strand Canada. The success of the Canadian amalgamation of Strand and Electro Controls was one factor which encouraged us to take the same course in the U.S.

FROM THE EDITOR



The Editor makes no secret of his great liking and admiration for the city of Toronto. In fact readers were offered last spring a photo of him in the cap of the Blue Jays, the local baseball heroes. At my last visit, autumn chill winds were sweeping down from arctic regions. But warmth was immediately restored when the Canadian office presented me with the cap of the Toronto Maple Leafs, exponents of the art of ice hockey.

Strand Moves

As you receive this issue of our magazine, we shall be snugly tucked up in our new European Headquarters, a brand new building lurking behind that famous West London landmark, the campanile of razor blades, the Gillette Tower. Visitors should drive along the Great West Road to the crossing with Syon Lane, where they should turn north. Almost immediately they will come to a small roundabout, where the eastward direction will take them into a new industrial estate and we, well marked, are on the left.

The Strand Lighting Shop

As in the old building, we offer callers to our lighting shop not only a massive stock of Strand and Quartzcolor products, but the full range of Strand Filters—sheet and roll—and a complete stock of lamps, including the new RS29 1200 Watt halogen lamp for

our record breaking Cantata. Incidentally, we have never taken orders for a product so quickly ever before as for this new lantern. See elsewhere in this issue for the Cantata factory story.

Height Always Helps

We look forward to showing callers—please ring first to the sales desk—our full range in our new demonstration area. This not only covers a lot more floor space than the old Brentford demo. area, but has that most important advantage—height. The Editorial eye, although nowadays somewhat rheumy and glazed, estimates a good thirty-five feet from floor to ceiling. Why estimate and not measure to a hairsbreadth with a steel tape? Simple idleness. But height there certainly is, in ample measure, and the full Strand armoury is there for testing and comparison.

An Arts Council Lighting Course

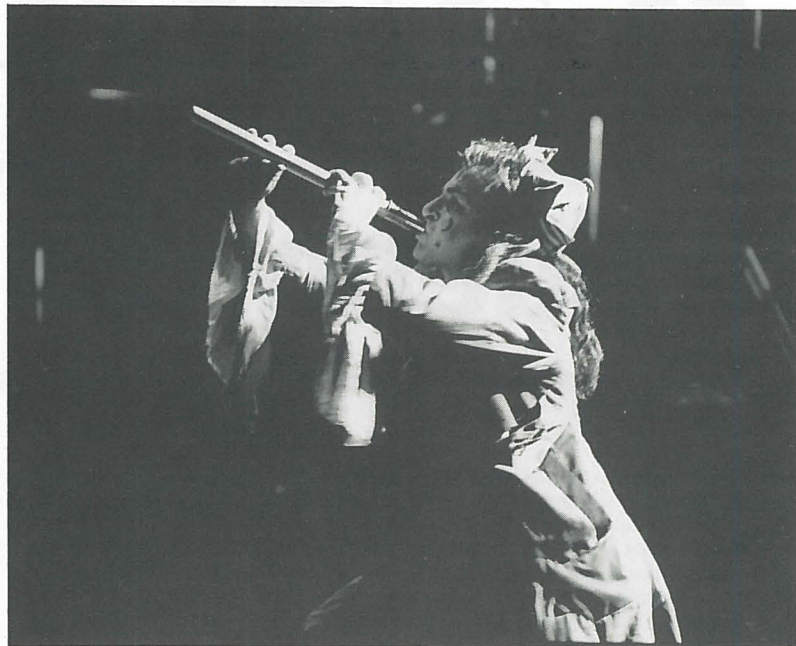
Between the 9th and 21st October 1988 the Arts Council is sponsoring a course in Theatre Lighting at their theatre in Portland Place, London. The Course Director will be Francis Reid, the latest edition of whose book on stage lighting we review elsewhere. Francis is not only a long term respected practitioner of the art of stage lighting, but he is also an excellent speaker and teacher. Among the speakers scheduled for the course are a stella gathering, including Fred Bentham, Richard Pilbrow, David Hersey, Robert Bryan, Robert Ormby and John B. Read. Other famous names are also involved. There are only twenty-five places on the course, so interested parties should contact The British Council, 10 Spring Gardens, Victoria, London SW1, as soon as possible. My guess is that the course, judging from the queries I receive about lighting learning opportunities, will be over-subscribed very quickly.

How Far North Northern Light?

Pretty far, it turns out!

Mike Smyth, Sales Director of Northern Light, Strand dealers in Edinburgh and Glasgow, tells me that he believes they have recently sold the furthest north Tempus and Prelude there is ever likely to be in the British Isles. They are for a new hall at a spot bearing the unlikely name of Unst. I am sure this is correct as Mike says so, but according to the Editorial Atlas—'Great Britain and her Dominions and Lands Across the Sea' pub. 1900 at 5/- (and I have no desire at all to have anything more recent)—the most northerly point in the Shetlands is the wonderfully named Muckle Flugga—but perhaps they rely on the aurora borealis, at least for effects?

The Pied Piper Leads With Strand Filters



Scenes from the recent National Theatre production for children, 'The Pied Piper' by Adrian Mitchell.



by: Camilla Aitchison

'That deep blue Chromoid 119 was marvelous', exclaimed Paul MacLeish who did the lighting design for the Pied Piper. This was the National Theatre's first introduction to Strand Filters and Paul MacLeish, who lit the production, agreed to use a mixture of Cinelux and Chromoid on their annual Pantomime, last year a production of 'The Pied Piper'.

Paul used Chromoid 119 to create the gloom of night time while the rats crawled around the stage. He was suitably impressed that such a deep blue could be used again and again without fading and is still being used for 'Country Mania'. He used Cinelux 203 and 403 to balance the stage colour in parcons. Full colour temperature Blue 201 (a colour developed for television) is used as a top light gobo wash to represent the evening glimmering through the trees.

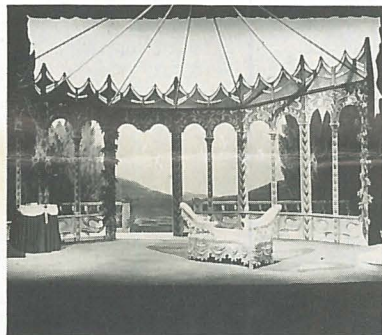
Being a Pantomime, Paul had to create an element of magic. Magic is made up of technical nightmares such as how to achieve a shooting star. After thinking of all sorts of ideas he came up with something beautifully simple. A tiny light bulb attached to a piece of string was drawn diagonally from top to bottom of the stage. Attached to one edge of the bulb was a piece of directional silk filters, chromoid 84, turned at such an angle that the light was reflected back along the path of the travelling bulb thus creating the tail of the shooting star.

As the Times said: 'Paul MacLeish's lighting made the climatic swallowing up a moment to send shivers down everyone's spine whether six or sixty.'

The Pied Piper opened before Christmas with lighting by Paul MacLeish—using Strand Filters new Cinelux and Chromoid.

Photos by Nobby Clark, courtesy of the National Theatre.

'Ring Round the Moon'



An amateur production by the Company of Ten, at the Abbey Theatre, St. Albans.

by: Mervyn Siberry.

We recently asked readers for details of any amateur lighting which they thought would interest other readers. This article, which I am most happy to print, recently thundered through the Editorial letter box.

Mervyn Siberry has a long term interest and involvement with amateur drama, especially with its lighting. He has lit at the Abbey Theatre, St. Albans and for technical college productions. He has also acted and has produced plays. (Ed.)

From the first encounter with the Screw-Down Bracket Handle Board with Capstan Master at Hatfield Technical College (now Polytechnic) I was hooked. The college Library houses a book on Stage Lighting by Frederick Bentham whose lectures were only a short train-ride away at the Strand Electric Demonstration Theatre in London. The theatre group called 'The Company of Ten' in St. Albans staged plays in which the principles learned could be put into frequent practice. Let's briefly examine one of them.

'Ring Round the Moon' by Jean Anouilh is described as a charade with music. The setting is a Winter Garden in the Spring of 1912. The Company of Ten, featured in the previous issue of Strandlight, remember this as one of their outstanding productions. The scenes range through morning, evening, night, the small hours and dawn. It is a strange dawn accompanied by fireworks. Hugo and his twin brother Frederick are both played by the same actor with exits and entrances astonishingly close. The Abbey Theatre has a fine plaster cyclorama on the rear wall of the stage but Hugo, leaving at stage left, would have to go down stairs, through the green room, the scenery dock, workshops, and race up more stairs to re-appear as Frederick at stage right. This led to a decision at the set design meeting that the lower part of the sky would need to be a ground-row angled to share the cyclorama lighting while masking the speeding actor from view as he runs across

the stage just in front of the cyc. The top of this ground-row is hidden by the top of the window arches. To blend these two skies together, both cyclorama and ground-row were painted with stage scenic white. When lit, it is impossible from the auditorium to tell how far away the sky surface is.

With this scene arrangement, all the cyclorama lighting had to come from above including a Linnebacht projector to give a cloud effect. Evening clouds and a fiery sunset were produced on the ground-row by an effects projector from the wings.

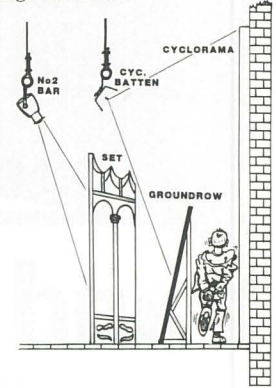
Decorations for the evening of the ball in Act 2 included two lines of Chinese lanterns flown in on scenery hoists. The ever-present sky in the background means very careful setting of the upstage spots with sharply crossed angles to avoid stray light. The atmosphere of the play is full of excitement and calls for lighting a little beyond the realistic. It is lighting always on the move, from the changing daylight and from the changes of mood throughout. One unforgettable moment is where two of the characters deep in conversation stray from the ballroom out into the conservatory while executing the steps of the tango like a finely tuned machine. Subtle changes to the lighting can enhance the effect while remaining unobtrusive. (If anyone noticed you moved a dimmer, you'd gone too far!)

Colour filters were chosen from the CINEMOID range. The cyclorama batten was loaded with two circuits of 19 dark blue, one circuit of 40 pale blue, and one circuit of 17 steel blue. The sunset effect used 34 golden amber. Front of house spots were crossed in pairs using 52 pale gold and 17 steel blue

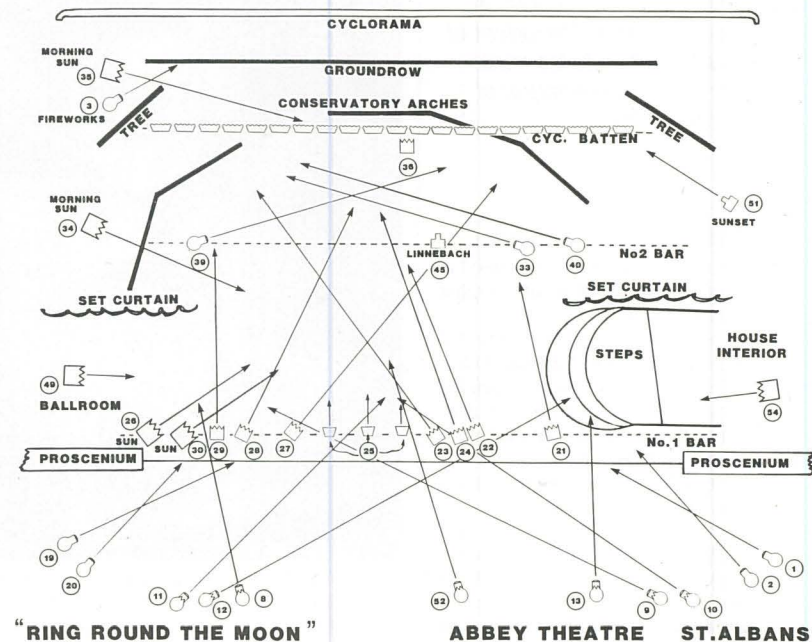
to allow for the variation of light throughout the day. No. 1 bar used 54 to give a rosier tint to the upstage acting area also balanced by steel blue. Daytime sunlight from the two large Fresnels on No. 1 bar was tinged with 53 pale salmon while the dawn sun from the wings upstage was clear white. The three sharply angled spots on No. 2 bar had 17, 52 and 54 to highlight the action in those areas. That leaves the light spilling onto the stage from the house interior and the ballroom both provided by 52 filters. (Of course, two of the colours mentioned are not part of today's Cinemoid range).

A total of 34 lighting units plus the cyclorama battens were used to light the production. All the control was well within the scope of the Strand JP60 3-preset board which was the original fit in the Abbey Theatre. Real fireworks were considered but could not be used within the insurance rules, so these were simulated with flashes and glows off-stage.

For challenge, interest and variety, when this play is chosen, insist that you are the one to light the show!



"Another frantic quick-change for Hugo/Frederick...."



The Celebration of a Nation



by Ian Haddon

First State '88 is an ambitious project by the New South Wales Government to show the history of the State in one Exhibition.

The venue is Darling Harbour itself a new prestige project that is nearing completion. Darling Harbour will house exhibition and conference halls as well as a huge hotel.

The Campbell Group, an exhibition and project management company were given the contract to stage the entire show. This

involves design work, manufacturing and erecting the sets, lighting the halls, and creating the atmosphere.

Discussions with Strand started back in early 1987. Since that time through until now just before the show opens, a close relationship has been maintained to ensure it all went according to plan.

The equipment lists include Lanterns, Gemini's M24's programmable Environ systems and 45 of the new Strandpak (12 x 2kW) Dimmer Rack. All this equipment will be used to provide the lighting for the various exhibits. Rosco which is distributed through Strand, was chosen to provide the filter, gel, and smoke machines to add the final touches to the sets.

With the successful relationship of the two companies on FS '88 we turned our hand to Expo. '88. Rathe Campbell's huge scenery workshop capacity in Brisbane and Sydney together with project management expertise has enabled the joint venture relationship of Rathe Campbell and Strand Lighting to win many of the pavilions contracts at Expo. More details and pictures in our next issue.

Steve Futers is Back!

Many of our studio lighting customers around the world will be pleased to hear that Steve Futers has rejoined our export department at Strand's European H.Q. at Syon Lane.

Steve has spent his whole career in the world of film and T.V. studios. He was originally deputy to the chief engineer of Pinewood Studios, and after Tommy Knight retired, Steve assumed the purple.

He then joined Strand's Quartzcolor operation. Over the last few years he has been in the Studio equipment business, but has now taken up lighting, his old enthusiasm, again.



Letters to the Editor

Oxford
Ohio
U.S.A.

23/01/88

Dear Mr Harris,

Having been a faithful reader of TABS since the very first issue and now Strand-light I note in the latest issue that you plan to do a future article on the Civil Opera House in Chicago, Illinois.

In view of this I thought that you might be interested in the enclosed article published by the General Electric Company in 1929 describing the original lighting control system which they manufactured for this Opera House.

I am sorry that the pictures are such that they do not copy well enough to be of any value to you.

Very truly yours,

Lyman C. Brennehan

What a fascinating document, Mr Brennehan! I hope to publish an article by our own Fred Bentham, the doyen of theatre switchboard designers on the Chicago system and its British installations. To what the appetite I will recall that there were three in England - each one entirely unsuitable!

The Bristol Old Vic Theatre School
2 Downside Road
Clifton
Bristol BS8 3XF
25/1/88

Dear Editor

I am currently studying at the above theatre school, on the Stage Management and Technical Course. I am trying to assess the possibility of compiling an historical research project on the development of both theatre and studio sound equipment within the last 20 or 30 years.

Do you have access to any archive material concerned with both or either spheres I have mentioned which you think may be of use to me? If not, do you know of anybody who may be able to help me?

I would be grateful for any assistance you may be able to provide, and I look forward to hearing from you in the near future.

Yours faithfully
Nick Hennessey

I have received this letter from a member of the Bristol Old Vic Theatre School.

Unfortunately there is nothing really in our archives on sound equipment - but perhaps a reader can help?

St. Peter's School
St. Catherine's Road
Southbourne
Bournemouth
Dorset

09/12/87

Dear Sir,

I am writing to you with a plea for help. At this school, we have a purpose-built 500 seat theatre, which is shortly to be totally refurbished and re-opened on a community-theatre basis. As a direct result of this facility, many of our students leave us to pursue a career in the professional theatre, a large percentage in the field of stage lighting.

We also run examination courses in Drama and Theatre Arts, with a speciality in theatre lighting. One of our recent innovations has been a programme in the collection, rebuilding and restoration of old theatre lights. Once completed, these are then housed in a store and used as aids in the teaching of future students about the design and usage of such lights.

The main difficulty has been in getting hold of such luminaires as most agencies simply scrap them when defunct or throw them away when refurbishing. If any of your readers know of such lights, which may be superfluous to requirements, I would be extremely grateful if they could let me know. We promise them a good home, and a future as an invaluable teaching aid.

Mr D. Sandham
Drama Dept.

System IDM To System LBM

by: Fred Bentham

Strand's retired head of switchboard design looks at the steps that led to Lightboard M.

Twenty-one years ago a photograph of a Strand Memory control appeared on the cover of TABS for the first time. Significantly it (system IDM) had a full set of dimmer levers and switches in addition to the record and recall controls. The initials IDM stood for instant dimmer memory. Eighteen months earlier my article 'Towards an ideal Lighting Control' had said that 'technical development, provided there was sufficient money, could allow us for the first time to survey operational requirements completely free of technical restraints,' i.e. dimmer memory was shortly to be launched. By that time I was no longer at home in the technology. In retrospect, it was not until Software programs came along in the 1970s that we were really free; but instant memory to liberate us from the labour of writing it all down was to most folk the giant stride in control. Devoting myself to the ergonomic side, resulted in two basic ideas: the first that with a memory control only a twin-master should be needed; i.e. to substitute one recorded cue for another. The second idea was that there must be an individual control, my rocker system of Ottawa and Stratford-upon-Avon preferably, or a lever, to each dimmer channel. A complete swing away from my beloved Light Console with its multi-masters and group-selection. Now at last we could instantly record or re-record every detail, operators must be disciplined to do just that. So the theory went, backed up by the instinct that I had better keep those early specs simple if we were to get any working system at all. However, as usual I tested and demonstrated any new control desk by trying to play colour music. You could say



Susan Dandridge Product Manager - Controls - shows Fred Bentham the way round Lightboard M. It took all of three minutes for our author to come to grips with our latest system. But he does think it should have the odd foot pedal.

that this was a habit or addiction I had picked up in my days of the super cinemas with their band shows, organ solos and colour changing. I immediately found that the trouble now with this vamping, or composition off the cuff, was to determine the ultimate destination of a change - i.e. what exactly to record as each cue. In other words, what was easy under my fingers on an ordinary 2-preset required a lot of thought if actual dimmer levels were to be recorded.

Of course at the most exacting time of all, lighting rehearsal for a show to run for days or for weeks or in repertoire, instant recording under each cue number and the potential to add, subtract or store them was wonderful. And to be able to go back to any cue in a twinkling of an eye was a miracle to

dazzle indeed. Yet as one visited increasingly sophisticated memory control installations, some operators would say they missed certain of the 'primitive' facilities they used to have on the old controls. After all, in the days when there was not a hope of instant cue recording, we had to include as many facilities to help them improvise as possible. It is in concert halls, town halls and other such multi-purpose venues that the one-night-stand strain is at its most critical. There should be a regular series of lighting set-ups, for example, to cover a soloist, quartet, or symphony orchestra of varying size with or without choir and so on; the object being appropriately located illumination. In contrast there will be theatrically elaborate shows where ideally the lighting and its changes are specific to

that production; but where there may seldom be enough time to work them out and record them in detail. In that case a judicious mix of the known with the novel will have to be devised. The result keeps the operator on his toes with a blend of record and vamp. The operator at home on his Lightboard M will enjoy these challenges. The more varied the shows, the more stimulating they will be. As to the more or less routine ones, the stage manager can select and activate such lighting from his corner or wherever using a Designer Control module.

The last reminds me of the 'black box' we made for the Royal Festival Hall in 1951. We didn't call it that but that was how it became known to the staff there. It was a small panel with a couple of rotary selectors and six push buttons complete with flex and plug. Nobody would think much of it today; but then the way the stage manager could work the Light Console, in its locked room way out-front, for the more routine shows was something to goggle at. As usual this set me retro-mavelling, so to speak. No need to go back to 1951, just think of what we couldn't have 21 years ago. For us designers LED indicators had yet to arrive and pilot lamps could be a considerable load. No VDU's it was a mimic diagram or nothing. We had to design and tool-up our own dimmer lever plug-in units and that ilk. No multiplexing, etc. and everything took up so much space - racks full, yet compared with what had gone before in the electro-mechanical servo age it was all so compact. It is strange to think of T.V. jobs without VDUs and even numeric keyboards had not been settled; we in Strand (and Thorn of their early Q-Files) used vertical columns for units, tens etc.

Back to Lightboard M. Here at last is a slim control panel with its own means of illumination. No longer is it necessary to hang a lamp over it or balance a desk lamp precariously alongside on the table. Here is proof that it is not just the things but the thoughts behind them that can make all the difference. So what about a plug-in floor module to allow the option of foot control of a couple of the Modes?

Yes - we can promise that our new range of 1K and 1.2K alternative lens - house lights are now really getting into production.



First after the machine shop all Cantata parts have to be powder coated in high temperature black.

Who is the man in the photo?

A safety mask plus noise of a factory at full production meant I never found out!



First on the actual production line. Marilyn Mair assembles lamp trays. The Cantata lamp tray is somewhat more complex than in our other fixtures as it features the two position lamp holder to accommodate the differing heights of the RS29 1200 watt and the RSE 1000 watt lamps.



The next stop is the lamp carriage assembly. Marie Bowie - doesn't she have a Texas branch of the family? - is in her ninth year with us.

I suppose we should admit that although we knew we had a good lantern the level of demand after the October launch took us by surprise. Usually there is a long build up while users evaluate and get used to a new fixture and then begin to order in quantity.

But Cantata took off at full speed, and then accelerated.

Anyway, Kirkcaldy is now working two shifts as well as at weekends and we have recruited a team of extra help. We have also changed some of our factory methods to speed production.

This photo story takes you inside the world's largest theatre and television lighting factory and introduces to you some of the people who are, perhaps even now, making your own Cantatas!

So please stick with it - Cantatas are coming!



Now the lenses are assembled. Elizabeth Davidson at work - Cantata is her last job. She retires this year after eleven years with us.



The lamp house goes together - with the help of Violet Hodge, one of the extra staff brought in to help us meet the tremendous world wide Cantata demand.

Cantatas Are Coming!



Lynn Vaughan at station No. 5 lamp house assembly.

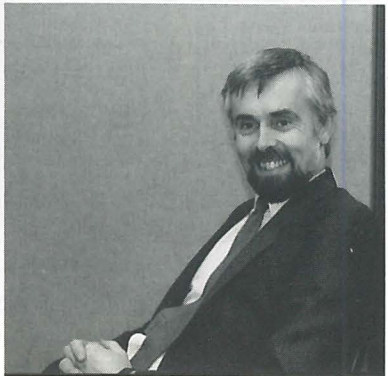


Lorna Brown puts the finishing touches to the lamp houses.



The Proud Father! Frank Cuthbert, Production Foreman, with the latest of 'his babies'. One is born every three and a half minutes.

Michael Cawte



Michael Cawte has recently rejoined Strand Lighting U.K. as Luminaire Product Manager - having spent the five years since leaving Strand as a Design Advisor with the Design Council in London.

He was originally trained as an Industrial Designer at the Central School of Art & Design in London and subsequently worked in numerous Design Consultancies on the aesthetic and ergonomic design of a wide range of products.

Michael first joined Strand in 1977 working on industrial design aspects of control systems and dimmers and took over responsibility for luminaire development in 1979. He was responsible for setting up the Luminaire R&D team in Kirkcaldy where he lived for three years. He is married, with three teenage children and now lives back in London.

The editor's visits one of the world's most advanced lighting showrooms in Boston, America's historic city.

Many good stories start in a bedroom. Visualise, if you are so bold, the Editor recumbent on his lonely couch on the twentieth floor of a Montreal Hotel. The bedside phone gives its peculiarly mellifluous North American ring, familiar to European ears from a thousand soap operas. Did this portend an adventure? Well, in a sense.

It was our ever vigilant marketing supremo, Bill Groener, of Strand Lighting, Los Angeles, who tracked me down to recommend a visit to the new Lighting Concepts Center recently opened by the Mass Gas and Electric Supply Co. in Boston, which utilizes our ENVIRON 2*, equipment in a most interesting way.

A few days later found me, with Len Wittman, our Regional Sales Manager and Stephen Gambino, who is the Strand products specialist with Boston Light Source Inc., our Boston representatives, at 193 Friend Street in Boston's commercial district.

As can readily be guessed from its name, the Mass. Gas & Electric Company goes back to the era when well established gas lighting was fighting it out with Mr Edison's upstart invention. Today the company have branches throughout New England, where they are the largest electrical wholesaler. Their new Lighting Concept Centre puts them in the best position to display fittings and fixtures of any sales outlet I have ever seen.

The Old Fashioned Way

We are all familiar with the traditional method of displaying lighting. A showroom whose ceiling is thickly encrusted with pendant fixtures, pull switches and price tickets. The walls often have a multiplicity of flambeau, pink glass shells and 'modern' black sheet metal wall washers with small holes, as though a ship's worm had been at work. Usually the wall displays cannot be lit, although they certainly have price tickets.

All this means that you can, after a fashion, see the fittings but you cannot tell anything about the light which they give and which is their sole purpose in life.

The 1960's Way

About twenty-five years ago a move began – in the more up to date companies – to display lighting in surroundings designed to give an idea of how they might look in an actual project. But there was usually another problem. Even if each light had its own control, these were usually grouped remotely in a panel containing up to fifty switches. Demonstrations were frequently enlivened by the showroom staff trying switch after switch seeking to illuminate the right fixture.

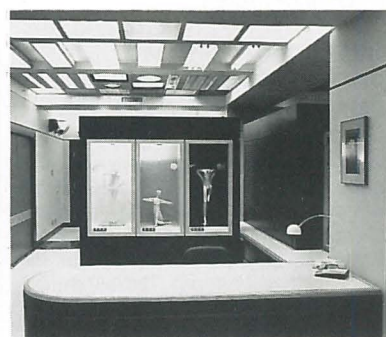
A Lighting Tea Party



On Boston's Friend Street, ground floor – a conventional sales and display area.



Lighting styles for the study.



Or the shop.



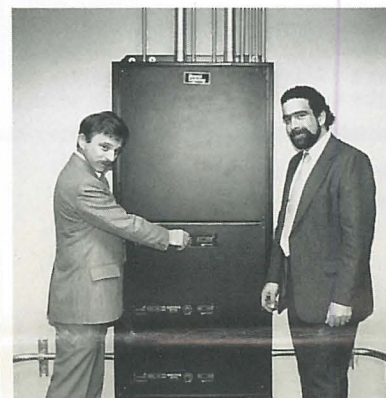
Upstairs a superb Environ controlled showroom, the Lighting Concept Centre, that lets callers see what lighting can actually achieve for them.



Testing light sources for colour rendition on fifteen identical table settings.



Lighting for the conference room. Kathleen Wholley, one of the Lighting Concept Centre's staff.



Two back room boys. Len Wittman, left, Strand area Sales Manager & Steve Gambino of Boston Light Source, with the Environ cabinets that control the whole showroom lighting.

*ENVIRON 2 marketed as ENVIRON Programmable Controls by Strand Lighting, Europe.

Into The 1990's

Mass Gas – as they are popularly known – have achieved a quantum leap forward in their new Lighting Concepts Center. They have taken the idea of providing full size replicas of typical lighting situations a long way on, and, most interestingly to 'Strandlight' readers, they have adopted a sophisticated form of control using the ENVIRON 2 programmable system.

What The Visitor Sees

Firstly, the Concepts Center is on the second floor, away from the hurly burly of a very busy sales counter. Once at the top of the stairs, the calm is that of an old fashioned bank. Discreet staff are of course available, but the whole atmosphere is designed to suit the specifier who wants to be sure of making a good choice.

The ENVIRON system, which controls every fitting on display, operates in either of two modes.

In Mode 1 the lights are controlled room by room, giving automatic but fully designed lighting in each of twelve discreet areas. Each area represents a type of lighting usage – a conference room, a study, a shop window, a patio, etc. Local control outstations allow visitors to change the lighting in each area between scenes, and the scenes have been set up to show fittings to their best advantage. An ideal balance is achieved by dimming because this showroom is designed to show the effect of the light rather than encouraging people to look at the fixtures themselves. Automatic timing can subtly change the lighting to bring every fixture into play while visitors look around. But because each scene, is a designed scene, nothing is random. And at the end of the day every light that has been used during the last eight hours is not still burning!

In Mode 2 the central control is released allowing each area to be individually controlled. Using a hand held unit or the central desk, the showroom staff can bring on any individual circuit and, for example, switch between two competing fixtures to help a client make a final decision. Obviously the system allows any presentation of circuits to be selected, balanced and, if required, memorised for recall. By using preset 9 there will be no interference with the other eight carefully selected lighting states. The electronic lock-out removes the risk of 'finger trouble', that bane of any control mode available to the great buying public.

But it's the unique use of ENVIRON that demonstrates yet another virtue of Strand's really rather clever system.

The Concepts Center is at Mass. Gas & Electric Co., 193 Friend Street, Boston MA 02114-(617) 523 4700.

The ENVIRON equipment was supplied through STRAND's Boston representatives:

Boston Light Source Inc. 63-1 Commercial Wharf Boston MA 02110 (617) 367 0910.

Romans in Toronto

No – I am not referring to the legions of ancient Rome, nor even to the legions of spots, floods and groundrows that the Quartzcolor factory have sent, via Strand Lighting's depot in Ontario, to the television studios of Canada.

On this occasion I am inviting readers to accompany me to the Holt Renfrew store in downtown Toronto. As always, the dearth of goods in a shop window indicates the quality of the offerings. Generally speaking, the fewer the articles displayed the better the quality. At Holt Renfrews a whole window may be devoted to one example of the dress designer's art.

The particular area I was to see was the Giorgio Armani 'Shop within a shop' where examples of Italian design at its most fashionable are displayed.

Lighting is by track mounted Strand Minims. There are a number of conventional downlighters to illuminate the circulation area, but the lighting of the clothes on display is entirely by Strand. While I aimed the editorial Pentax, Graham Likeness of Seven Spec. Systems, the local Strand Lighting representative, was able to surprise the sales ladies by showing them that the beam width on a Minim could be adjusted and that gels could even tint the light. But then, neither I nor Graham would know how to work Holt Renfrew's electronic tills.



The Holt Renfrew store in Toronto. The Giorgio Armani shop features superb clothes – and lighting by Strand.



Minims provide the display lighting. Graham Likeness models as a generous husband out shopping.

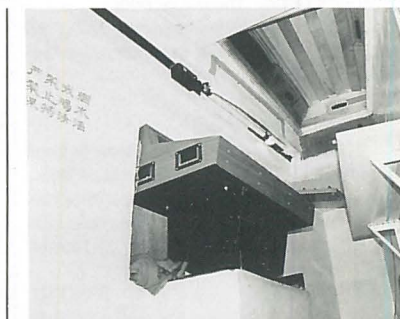
Looking Up In Beijing



Mr Yan, Lighting Director of the Tian Qiao Theatre, Beijing, left, and Strand's Jimmy Cheung, plus 120 STM dimmers far, far from home.

China has moved centre stage in many spheres, not least in theatre and television. A year ago in Strandlight we reported on the China Central Television Studios in Beijing – Galaxys, Geminis and M24's – now we have another glimpse into the vast land, a land with as strong a theatre tradition as any.

This time we are in the Tian Qiao Theatre in Beijing. The first shot shows Mr Yan, left, and our own Hong Kong Manager, Jimmy Cheung, posed before a very neat installation of S.T.M. dimmers. If only all dimmer rooms were as free of the clutter of one-day-



120 ways Gemini in a Beijing Theatre.

it-may-be-needed bric a brac that characterise so many of our own dear theatres. There even appears to be rubber flooring laid. What on earth will the dimmers do without their accustomed diet of cement dust?

Our second shot shows the unusual board position for the 120 way Gemini below the stage. The operator looks through a slot downstage, just in front of the float position. Not ideal if '42nd Street' is to tour there. The thought of all those tapping feet so close to the wizard of the board makes one wonder. Surprisingly enough, these photos were awaiting me on my return from Chicago, where the Lyric Opera originally had its board operator in the same position. (See article on Chicago Opera). The Tian Qiao theatre is the main touring date for foreign companies visiting China, as well as presenting Chinese opera, acrobatics, drama and concerts. Tickets are about 35p! The original dimming system, which we have replaced was made in East Germany, and was operated by wire tracker cables to remote electro mechanical dimmers of some variety, although we never got round to tracing the wires to see where they finally ended up.

Greek Revival

Theatre lighting is used in the British Museum to light the Elgin Marbles.

A few months ago Strand's Brian Myers rang your Editor with the exciting news that our equipment had been chosen to light the world most famous classical sculptures – the Elgin Marbles.

It was this that took me recently down to St. Albans – attentive readers will remember that this is one of my favourite cities. I had an appointment to meet Paul Ruffles, the Principal Engineer for the project, a staff member of the Oscar Faber practise, whose offices are there.



Paul Ruffles.

Paul was good enough to take time to tell me the story behind the lighting.

The Duveen Gallery at the British Museum was specially built in 1938 to house the Marbles. It was bomb damaged during the war, but fortunately Mr Hitler's contribution was not nearly as effective as that of the seventeenth century Turkish army. The damage this time was to the gallery and not to the exhibits.

By 1962 the gallery was re-opened. Natural light, through a roof lay light, plus fluorescent tubes comprised the somewhat unimaginative illumination.

Twenty years on it was realised that modern museum lighting, using theatre type equipment, was now increasingly in vogue. As we, dear readers, know so well, lighting can do so much more than merely provide illumination.

Very wisely, a series of experiments were undertaken, initially using 300 watt Minims on a bar suspended below the lay light. Because of work to the glazed roof itself, all daylight was at this point excluded by scaffolding.

It became obvious from these experiments that directional, as opposed to diffused lighting, brought out the delicate modelling of the sculptures as never before since they were lit by the Greek sun.

The Marbles themselves consist of three main elements. The frieze, of which about eighty metres of the original one hundred and sixty is in the museum. The frieze originally ran round the exterior of the Parthenon above the inner row of doric columns. It is now displayed along the walls the length of the gallery. The pediments, the triangular areas at either end of the roof, are displayed across the width of the



The Elgin Marbles re-lit using Preludes & Harmonys controlled by ACT 2 dimmers.

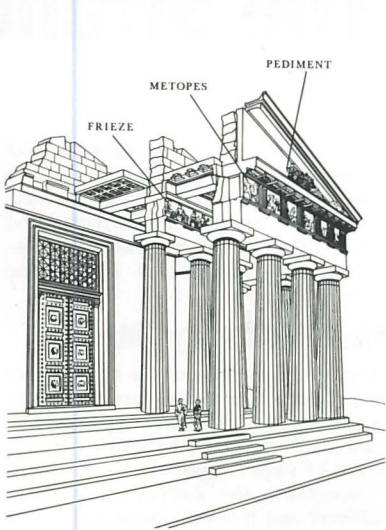


Diagram showing original position of the Elgin Marbles

transept galleries, while the metopes – the sculptured panels originally below the pediments – are exhibited as individual pieces of sculpture against the end walls of the transept galleries.

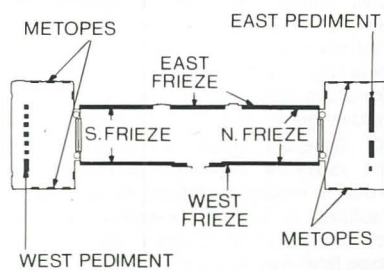
When the lighting experiments had determined the best angles and light levels the temporary rig was removed and 650W Prelude profiles were installed to light the frieze and pediments and 1,000W Harmonys to light the metopes.

Because the lanterns were now mounted at ceiling height the Harmony's throw is a good 25 metres, so 1Kw units were required.

The lanterns are housed in specially constructed enclosures in the roof void above the existing lay lights, with Unistrut supports which allow the lanterns to be moved readily to their ideal positions.

The glazed panels along the edge of the laylights were removed and replaced by half sized panes, so there is now a continuous slot 500mm wide along both sides of the length of the gallery and in the transept galleries through which the lanterns shine. Barn doors are fitted to the Harmonys.

The enclosures are ventilated as part of the galleries improved air handling system. As a further enhancement of lamp life, and



Plan of the Duveen Gallery at the British Museum.

to allow correct balance to ensure even lantern light output, all supply is via Strand ACT 2 dimmers.

Because daylight can once again enter through the ceilings laylights, a late winter's afternoon would seem the best time for we lighting enthusiasts to enjoy these superb examples of the sculptor's art, now enhanced by the power of today's stage lighting.

Clients

The Property Services Agency

Consultants

The Oscar Faber Partnership,
Marlborough House
Upper Marlborough Road
St. Albans
Herts AL1 3UT
England

Principal Engineer for Oscar Faber:
Paul Ruffles BSc CEng MIEE
MCIBSE



Lighting brings sculpture to life!



The very attractive auditorium. Note vintage 252's flanking the carousels!

A Playhouse Renewed



The re-born Playhouse at night, the floodlighting accents the architecture instead of swamping it in a flat glare, as so often happens.

by: Derek Gilbert

Glantre and Strand Lighting go to work together in the West End to restore the Playhouse Theatre.

The West End is where my own career in theatre lighting and engineering began twenty-two years ago. It was, therefore, particularly pleasing that one of the first major U.K. contracts of my company, Glantre Engineering Ltd. should be the refurbishment of the Playhouse Theatre, recently restored to the West End scene after a 36 year absence.

The theatre had first opened as the Royal Avenue in 1882 and was subject to substantial rebuilding in 1906/7 when the auditorium was remodelled in Franco-Venetian style with unique open balustrades to the dress circle and gallery. After a number of notable successes, the Playhouse was taken over by BBC Radio in 1951 and for many years served as the venue for the Goon Show, Hancock's Half Hour and such like. By 1976, it became surplus to the Beeb's requirements and lay derelict for some years until acquired by property developer Robin Gonshaw.

After lengthy dialogue, the Planning Authorities approved a scheme for complete restoration of the Playhouse and for the construction of three floors of flats and offices above; doubtless it is these that are financing the theatre to the common benefit of all. Reconstruction started in mid 1986 under the personal supervision of Robin Gonshaw and after expenditure of much blood, sweat, tears, toil and cash, the Playhouse re-opened in October 1987 with Howard Goodall's musical 'Girlfriends'.

Naturally the new stage lighting installation is based on a Strand control system as the old firm's domination of the West End market continues. A 180 channel Gemini console is located in a miniscule control room at the rear of the dress circle, while the permanent dimmer installation comprise 12 x 25 amp and 108 x 10 amp Permuss

modules in 6 racks. Environ dimmers control the houselights. There is an extensive production lighting wiring and socket installation with more than 60 of the dimmers having two parallel connected pairs of 15 amp outlets to provide maximum flexibility. The modular socket boxes also incorporate outlets for 13 independent and 4 rehearsal light circuits. No stage lighting luminaires were included in the initial scope of supply; it is intended that in accordance with normal West End theatre practice, these will be hired in by the production company.

The Playhouse is provided with a full specification working light installation – a rare feature in a West End commercial theatre. The system possesses three operational modes – 'Day', 'Night' and 'Show'. Certain circuits are restricted to use in one mode only while others can be made available under two or all three. Main working light control panels are provided for stage manager and lighting operator with additional local pushbutton outstations, controlling individual circuits at gallery and grid levels. The control rack, located in the dimmer room, incorporates electronic logic circuitry as well as all power contactors and fuses for working lights, cleaners, independent and rehearsal circuits. The working light control system was designed and built in-house by Glantre.

The sound installation is essentially a wiring, socket and patch panel infrastructure to accommodate an extensive production hire sound rig such as may be required by a major musical. The advantages of providing a substantial sound wiring and connection network are the fast and easy fit-ups as well as elimination of untidy temporary trailing cables, particularly to auditorium loudspeakers and the rear stalls mixer position. A basic mixer, tape deck microphones and loudspeakers have been supplied and should prove suitable for straight forward non-musical productions. Communications systems are extensive and include the stage manager's desk, ring intercom, cuellights, foyer and backstage paging, show relay, emergency telephone, barbells and deaf aid. We also engineered and installed the complete sound and communications system.

Participation in the Playhouse refurbishment has certainly been a rewarding experience, albeit a hectic one, fraught with construction problems and delays, design changes and programme changes all of which caused a lot of nightshift working in the later stages. The theatre's principal architectural features have been carefully restored while up-to-date and functional theatre systems and building services installations have been added. Robin Gonshaw and his team are to be congratulated on their performance in carrying such a difficult project through to a successful conclusion.

Spotlight '87 An Editorial Journey

Who doesn't like talking to a friendly and knowledgeable audience?

Your Editor had the honour, and pleasure, of being the keynote speaker at the opening banquet of the Lightning Symposium held in Montreal last October by the Society of Television Lighting Designers. The whole event was full of interest.

I have always maintained that, on a world scale, the technical aspects of both B.B.C. and U.K. Independent Television are second to none for consistently high standards. Consider for a moment how even the most turgid of quiz shows are superbly lit and impeccably recorded. Hardly even a mike shadow. Well, Central Television's Head of Lighting from their Nottingham Studios, Mr John Watt, illustrated his paper with a video of some of his own light entertainment lighting that really impressed the highly expert audience. I also learned that T.V. lighting has at least one trick that theatre cannot simulate. In one sequence John's lighting merged the studio floor and cyc. by 'burning out' the dividing line by over exposure – the edging four feet of floor and the bottom three feet of cyc. were lit to a level beyond the cameras acceptance, so a perfect white merging of planes. It is the



Right to left: John Davies, Head of Venue Operations, CTV Host Broadcaster, Calgary Winter Olympics, Mrs John Watt, John Watt, head of Lighting Central Television, Nottingham & Chairman of the British Society of Television Lighting Designers, Steve Futers, unidentified visitor and Radio Canada Hostess.

'how to do it' actual nuts and bolts of lighting that are so fascinating.

A Montreal Studio Reborn

One of the highlights of Tuesday's Panavision Tours was the visit to Mel Hoppenheim's fine new Panavision studios.

Mel has transformed the old Expo '67 theatre into a sparkling new complex with

three sound stages – 130' x 105' – 100' x 90' (with pit) and 100' x 90' all fully climate controlled and sound proofed, a camera and a lighting shop, and full production, wardrobe and make-up facilities. Truly a jewel right on the banks of the St. Lawrence and a setting worthy of Panavision's enormous stock of Quartzcolor luminaires.

Filter Material Used for Television



By Clive Potter

Clive Potter joined the BBC in 1953 as a Technical Assistant. He progressed to Engineering Manager, the category in the BBC currently responsible for most lighting on outside broadcasts. For over 20 years he was lighting the complete variety of programme material from sport, current affairs and religious broadcasts to documentary, light entertainment and drama. He is currently Head of Lighting Television OBs.

Filter materials used for Television fall generally into two categories. They could be informally known as Filters for Lighting Design and Filters for Lighting Control. There are links between the two categories and, of course, some overlap on their use.



Perhaps the most important link is that of safety. All filter material used for Television (and, I suspect, for professional theatre) must conform to the appropriate British Standard for flame retardant properties and subsequent behaviour under excessive temperature conditions. It is also extremely important that the stability of colour or filter effect is maintained over a wide range of operational situations.

Filters for lighting design, the category containing the whole colour range – reflective, diffusion and textured material – are probably most easily understood by the layman. The selection of these is determined by a combination of the following.



First, though not necessarily in any order of priority, the personal choice of the Lighting 'Person' (actual titles vary throughout Television!). Second, integration with other design considerations namely, set, costume and make-up and, thirdly, specific programme requirements.

This category, because it is based on intangibles and subjective judgements may be discussed very briefly or in depth for ever! consequently, for the sake of brevity, I have chosen the former.



Filters for lighting control require detailed selection against a broad technical understanding of the potential problems to be solved. For ease of explanation, typical requirements are

described separately, however, it is important to understand that final selection will be based on different combinations of any or all of the following types and that situations – especially on location – can change rapidly.

- Control of overall light level.
- Control of relative light levels.
- Control of light source colour temperature.
- Control of quality of light source.
- Control of reflected light.

a. A neutral density filter maybe used to control the level of light entering the camera. As its name suggests, it affects coloured light transmission uniformly. Other means of control of final exposure namely lens iris opening, selection of film stock emulsion speed for film cameras, and setting of electronic gain for video cameras, and exposure time, may introduce undesirable or inconvenient factors. For practical reasons the filter would usually be fitted to the camera but could be associated with the light source illuminating the scene.



b. In spite of the march of technology the Television medium is still limited in its handling of contrast, and though constantly improving,

control of relative lighting levels in the original scene is essential for good results. In this respect film cameras are considerably 'better natured' than current types of video cameras. To achieve the required limitation of this contrast a small number of practical options are available. Incandescent sources may be supplied via dimmers although then there may be colour temperature variations to be considered. With discharge sources normal dimming as used with incandescent sources is not yet practicable, consequently use of neutral density filter is the commonest method of reducing light output although some use is made of variable shutter devices. Sources over which we have no control, the most obvious being daylight, filtering either by N.D. material or by perforated types is a common method.

c. With the advent of colour in television, an added complication was the often undesirable effects of mixed colour temperature sources. Although it took some time to assess the range of acceptable differences, it to limit these differences usually by careful initial selection of sources and then by filtering. It is interesting to note that what was considered to be a problem at the outset is now used quite specifically as part of the lighting person's armoury!



Here the video camera has some advantages. In the film camera the colour response is governed by the selection of the appropriate film emulsion specification though, of course, this can be modified during 'grading' and processing. In the video camera the colour response can be adjusted over a fairly wide range at will either manually or automatically giving rise to the need to constantly 'White Balance' if light conditions vary. The process of 'White Balance' adjusts the proportions of red, green and blue by allowing electronic gain. Frequent use of light sources of different colour temperatures is unavoidable particularly on location. The most common example encountered is the mixture of incandescent and daylight or HMI, CSI, CID types. Usually the initial approach is to endeavour to match the minority source to the majority source

There is a very good coverage of equipment available but, inevitably any technical work on a developing subject must be something of a snapshot. Francis, unfortunately just chanced to press his button the very moment before the onrush of remote controlled lanterns, which are very much the latest technical development in this so fast changing field. In fairness, for economic reasons, the amateur and educational theatre will be the last to succumb to these, but succumb they will, just as they are now ordering 'Action' type memory systems.

To sum up, Mr. Reid has been successful in distilling his own experience both as a practical lighting man and as a teacher, and compressing all into 176 very valuable pages. Whatever other books on stage lighting one acquires, this one is the bedrock on the subject.

THE STAGE LIGHTING HANDBOOK, by Francis Reid.

Published by Adam & Charles Black at £9.95 in soft covers.

for reasons of time, cost and effort. However, it is rarely that simple for a number of reasons. Here are just some of them!

Any form of filtering introduces losses, and losses of output may not be acceptable. As a 'full correction' of incandescent to daylight for example equates with 1 F Stop, in effect half of your available light is lost! To increase the initial light level to allow for that loss may not be practical because of limitations in power supply or it may not be possible structurally to install that amount of equipment, or there may not be enough time available to install that amount of equipment. Perfect matching of correction filters to sources with very uneven colour output is extremely difficult and in practice with multiple sources is at best a compromise. Because of their uneven colour rendering discharge sources even when 'corrected' may have unacceptable or unflattering effects on some artistes' complexions and some architectural surfaces, particularly some types of stonework and woodwork. Often a practical compromise involves partial correction of one source and partial correction of another, for example, half correction on a window and half correction on the artificial light source. It is vital to understand that it is the overall resultant colour temperature that has to be within the acceptable range for the camera.



d. The quality of light used for Television is an extremely important factor. In this context 'quality' is defined by its relative 'softness' or 'hardness', usually assessed by characteristics of shadows cast, diffusion type filter may be used to soften hard light sources, this process being extended by using even larger areas of filter material illuminated by a choice of sources, since 'softness' is achieved by increasing the area of the source relative to the subject being illuminated.

e. Polarising filter is often used to reduce undesirable reflections from windows and car windscreens for instance. It is also possible under some circumstances to obtain a variable neutral density effect on, say, a window by applying polarising filter to the window and also to the camera and adjusting the relationship of the filters by revolving the camera filter thereby altering its relationship to the window filter. There are, unfortunately, some operational limitations imposed by this method, not the least being the loss of 2-2 1/2 stops minimum!

It maybe of interest to note that development of the solid state digital video camera may eventually render filter for lighting control redundant!

To conclude, and in the meantime some thoughts perhaps for filter manufacturer's 'back room boys'. An ideal specification for correction filters would contain the following.

1. Wide variable range of density – controlled electronically and therefore possibly remotely.
2. Wide variable range of colour, colour correction controlled electronically and therefore possibly remotely.
3. Wide range of sizes available.
4. Instantly changeable from flexible to rigid and matt or glossy surface.
5. Cheap!
6. Practitioners should *not* hold their breath.



The smile of Success! Camilla Aitchison, Filters Product Manager. Our recent re-launch of Cinemoid and Chromoid and the launch of Cinelux have been something of a triumph. Popular colours of Cinelux ran out four weeks into the campaign and re-order telexes were despatched factorywards. We are glad to say stocks are now restored, both at Isleworth and at our dealers.

Filters For Television The Strand Approach

By Camilla Aitchison

As Clive Potter has shown, the number of combinations of light sources that can face a lighting camera man are legion. So Strand Filters have produced 33 corrective and diffusion filters which singly, or in combinations, can solve most of the 'lighting persons' problems.

Neutral Density Filters:

Assuming all sources are the same, but we wish to reduce the overall levels of light, we have the basic neutral density filters – 3ND, 6ND and 9ND which reduce light, 1, 2 and 3 F stops respectively.

Sometimes the sources of light are different and it is not always possible to reduce the light levels by dimming, particularly discharge sources. Here again the source can be masked by neutral density filters. For instance to control the level of daylight entering a window, ND filters can be taped to the outside of windows; these have a tendency to rattle in the wind which upsets the sound technicians. Excellent alternatives are 270, a perforated screen which cuts out the amount of light entering a room – or varying degrees of tough spun, 214, 215 and 229 which reduce intensity and also soften the quality of light.

Colour Temperature Problems and Answers:

Each of the incandescent sources produce different colour temperatures and therefore each source needs a different colour filter for correction 236 corrects HMI to 3200°K and 237 also corrects CID to 3200°K so that they can be used with tungsten film, while 212 reduces the colour temperature of carbon arcs to 3200°K.

Daylight to Tungsten:

To correct daylight to tungsten Strand have produced a range of 'colour temperature oranges' which can singly or when, combined together, cope with all the different levels of daylight that the sun can produce. These are 204, 205, 206 and 223.

Tungsten to Daylight

If it is often necessary to correct tungsten light to daylight in which case there are a range of colour temperature blues of varying densities 201, 202, 203 and 218 which perform this task.

And Something Extra:

A major problem incurred when combining two or more filters is that the level of light transmitted is reduced. Strand has therefore produced 'combination filters' such as 207 which combine CTO (204) with 3ND (209) and 208 which combine CTO (204) with 6ND (210) to reduce light 2F stops and change its colour temperature.

To Soften and to Colour at the Same Time:

Often it is necessary to soften the quality of the light. Strand offer several diffusers which do this and change its colour (224, 216, 250 and 251). 228, 84 and 85 change the direction of the light while 271, 272, 273 and 270 all reflect the light and soften it at the same time.

Ultra Violet:

Finally, ultra violet can be a recurring problem. Strand have produced a filter 226 which absorbs U.V. and 213 which corrects white flame carbon arcs also by absorbing the U.V. content.

Australia's 200TH and Strand Lighting Australia's 1ST Two Birthdays which have a lighting connection

In the year that Australia celebrates its 200th Anniversary of the first fleet arriving, Strand Lighting Pty. Ltd., celebrates its 1st Anniversary. During the year major changes have taken place and many major contracts have been won. Included in the impressive list are Expo '88 and FS '88. These major events are being staged as part of the Bicentennial celebration.

Melbourne operation moved in September 1987. The new site a modern office/warehouse just 2km from the old site. Warehouse, Hire, Production, Service, Sales and Administration are now housed on one level. For those that knew the old site our new home offers staff and customers a far superior working environment.

To celebrate the opening of the new location and the launch of the new product ranges, our first 'open house' night was

held. The evening was extremely well supported with Architects, Consultants, Television, Theatre and Education folk all taking advantage of the product preview.

Cantata, Litescan, Taskmaster all received enthusiastic response – Cantata however, stole the show. The new range of 1.2kW Theatre Lantern which will replace Harmony will be available in Australia by the end of March.

Litescan and Taskmaster the 400W HTI automated Lantern and its control system will be available for hire mid '88 and is already available for sale.

This Product Launch is one of a number that are planned in Australia this year. Future launches will include a new Australian Dimmer Range, Control System, and Architectural Dimming and Control Products.



Francis Reid, I hope it was the Cantata, our new profile spot, that gave rise to Francis's smile of satisfaction.

Books Column

As the decade ends a further edition, this time the third, of Francis Reid's **THE STAGE LIGHTING HANDBOOK** is with us. This work is the standard for anyone wanting to know how to start the whole process of lighting a production and of how to organise the work. And many of its chapters could be absorbed with benefit by some folk who feel they already know it all.

It's a Good Life – Being a Strand Dealer!

The Editor is making a pilgrimage to visit our dealers. Although some of them may have a wry smile at the heading, we do believe they all get a great satisfaction out of serving you, our customers, whenever you call upon them – especially now that they have so many great new products to offer.



Stage Electrics of Exeter

Stage Electric's head office is on a modern trading estate, just outside the city of Exeter, with other branches of the company at Bristol and Plymouth.

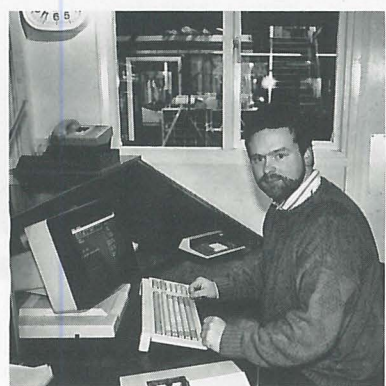
Stage Electrics has grown from a single unit, founded some years ago in the centre of Exeter in what became difficult parking territory, by Maurice Marshal and David Whitehead. Both the founders are still very much in control, while the business has grown to need a staff of thirty. The company offer sales, service and hire plus on site installation. As they are Official Strand Service Agents, I was pleased to see a workshop that was not only well equipped but is 'Fred Brown* neat'. Strand Part racks are full enough to intimidate any piece of equipment in their territory from breaking down.

Of course, Stage Electrics don't solely offer Strand products. Rather as a Rolls Royce dealer might have a few tins of car polish around, there are other goods available although for stage and studio lighting there is total loyalty to the old firm.

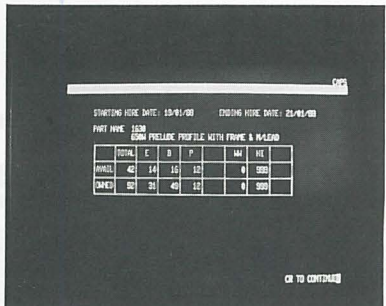
I noted a supply of stage fittings, scenery weights, Rosco scenery paint, music stands and many other items that go into the technical end of putting on a show. My glazed eye passed briefly over disco items, but regarding these I shall exercise the Editorial privilege of maintaining an Iago like silence.

*Fred Brown is the exacting member of Strand who is responsible for service agent training.

In Exeter, England and in Chicago, U.S.A.



Hire by Wire. Graham Puxley at the keyboard operates the – I believe – unique lighting hire software package developed by Stage Electrics.



The screen tells all – availability, value, cost and weight of lighting going on hire.

Hire by Wire

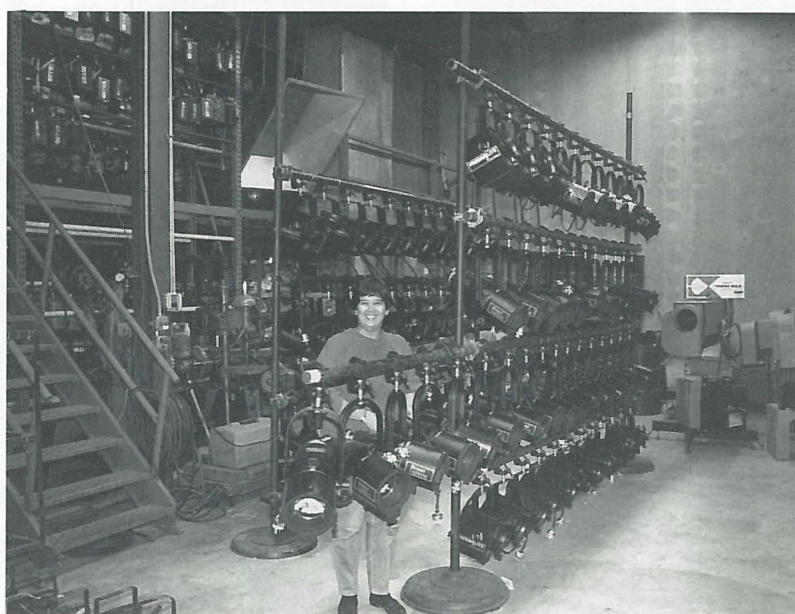
Stage Electrics have what I believe to be a unique computer system to control their hire operation.

Any Strand dealer – except in continental Europe where the hire of theatre lighting does not seem to be customary, will tell you how important a part of their business the hire of Strand Lighting is. Hires are made not only to professional and amateur theatres, but to schools, hotels and for commercial occasions such as product launches.

Stage Electrics computer system, which controls their hire operation covers all their depots with a link to Midland Theatre Services in Birmingham with whom their company is associated.

Now, suppose you, as a customer, call them to discuss a lighting hire.

You know what you want and you enquire for twenty Patt. 23's. At Stage Electrics the buttons will be pressed, as you announce



Kathy Zukasky, Grand's Sales Manager



In the workshop a l-o-n-g internally wired bar takes shape. John Rimmer at work.

yourself, to bring up details of your account and of your doubtless financial probity. The next button will bring onto the screen the Patt. 23 situation. With the hire dates typed in, the screen will display whether that depot has twenty available between those dates, how many are available at the other depots, the hire charge per week and the replacement cost for insurance.

It will also show the unit weight, and it will display an alternative product in case not enough 23's are available. The alternative here would be a Prelude 16/30.

Assuming the deal is to go through another button is pressed to bring up a 'contract page' on which is entered items such as delivery instructions – who should be contacted at the theatre, etc.

The computer will have automatically

totalled the charges, and the weights, so that a correct van (truck) can be allocated. The balance of Patt. 23's that will be available over the hire period for the next caller has been instantly calculated and will be in the memory, as will the location of the goods now hired.

The printed out hire contract, top copy for customer, second for warehouse and third for records emerges from the machine and, when instructed, a fully itemised and VATed invoice will also emerge.

Obviously product descriptions are in the computer's memory, but, and here is a clever bit, if the description is necessarily a trifle wordy, covering, say, a 120 channel Gemini, then assuming the customer to be a type who needs a full description, this is available from the larger memory of the word processor. Clever stuff.

For the customer the chances of error in charging or availability of goods is very much lessened, while for Stage Electrics the very greatest use of their hire stock is achieved, simply because the computer knows what is available, and when, at all branches.

This impressed Editor also assumes that outside re-hires to meet customer demand must be a great deal less than when staff memories are supplemented only by the traditional duplicate book. Of course, at any point in time, the system can display a total history of any item, so those that earn their



A good stock of Strand Filters for West Country lighting folks.

keep can always be identified.

The software that achieves all this, and more than I have described, was developed especially for Stage Electrics. I believe it is a route along which many other hire organisations will wish to travel.

Grand Stage Company, Inc 630 W. Lake St. Chicago

When I planned this article I was expecting to contrast our dealers in Exeter, a relatively quiet Cathedral city of a quarter of a million inhabitants set in England's beautiful west country, with a dynamic, tough Chicago set between lake and prairie. I hadn't been to Chicago at that point. Of course, I now know a little bit more about that fine city, including its superb Victorian buildings as well as its role as main showcase for today's architecture. I have written elsewhere about its magnificent Opera House.

When I came to contrast Stage Electrics of Exeter with Grand Stage of Chicago, there is much less to say than I anticipated. This is because the contrast is only in scale, with Grand Stage being a bigger operation, with considerably larger premises.

But the feeling of the two businesses, their stock and the enthusiasm of their staff all means that Kathy Zukasky, Grand's Sales Manager, could move into Exeter and be immediately at home, while Graham Puxley could emigrate to Grand Stage with hardly a pause in activity. Of course, both would have to learn that a 'Fixture' is a 'Lantern' and that a 'Pipe' is a 'Bar'. But then a Lighting Designer is just as important in both cities.

And, after all, Strand are increasingly offering their products world wide.

For anyone with any spark of interest in the technology of theatre on the grandest of grand scales the Chicago Opera is a real treasure house.

Fortunately for devotees of the glorious past, such as your editor, Chicago have not consigned to the skip all their outmoded equipment. Up to date items there are in plenty – witness the Palette 3 – but, for example, beneath the stage is the original thyratron board, valves in place. And just as in the Beijing theatre I have described elsewhere in this issue, the board operator sat below the stage, in this case using a periscope arrangement to see the lighting he was creating. For 1929, when in most of Europe that invention of the devil, the perch mounted board was still the norm, this was a truly advanced concept. I remember Strand's Fred Bentham telling me that the first of our Light Console remote control systems was in the orchestra pit at the Lisbon Opera, but this was not installed until 1940, so it looks as though Chicago was the first grand opera where the operator had any kind of reasonable view of the stage. To day, of course, the Palette 3 is in a control room at the back of the stalls. From his vantage point Bob Mutert can exercise his skill with an excellent view.

A Civic Monument on a Monumental Scale

Both in scale, and in much of the hardware, Chicago is similar to New York's Radio City Music Hall, that other great monument to the golden age of bronze, steel and stone architecture.

From the floor of the stage to the grid is one hundred and forty feet. Do you, dear reader, have the same difficulty I always have in transforming such a fact into a mental picture? Well – 140 feet is fourteen stories, so, as we say in my county of Lincolnshire, 'think on'.

The front curtain was originally raised hydraulically, in the strict dictionary mean-

Chicago Opera

ing of that word – i.e. by water power. A cylinder that would have graced the engine room of a Victorian steam ship, eighteen inches in diameter and ten feet long, had its piston driven by pressurised water to raise the curtain, which must weigh several tons.

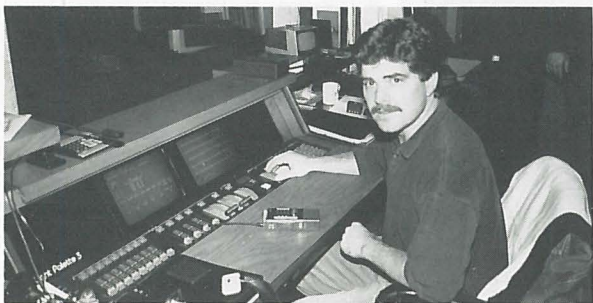
Giant water power rams operated the stage lifts.

An audience of three and a half thousand is accommodated, and because of the quality and strength of productions I understand capacity houses are usual, although I also understand that, unlike many European houses, there is a limited season.

Eddie Carroll, the Master Electrician, was kind enough to give me a full tour of his

magnificent theatre. I am always amazed at the hospitality I receive everywhere in the world. I can imagine what a nuisance an inquisitive visitor must often be.

After our tour we – I was chaperoned by our Jim Crooks, whose ample form carries the Strand Lighting banner so ably in the Middle West, were ushered into an eyrie



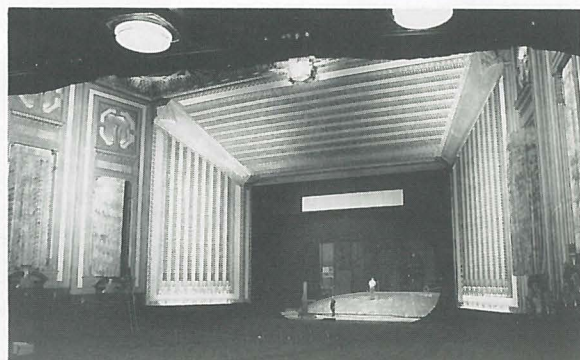
The latest in the noble line of Light Palettes, recently installed at the Chicago Lyric Opera. Bob Mutert proudly faces the Editorial Pentax. Note the superb hardwood desk – well, this is Chicago Opera, and a great architectural tradition has to be maintained!



The Editor below stage. Note the control wheels for the stage lifts to the right and the hydraulic rams to the left. The levers might have come from the Great Western – or perhaps the Atchison, Topeka and Santa Fe.



Jim Crooks, of Strand Lighting, and Eddie Carroll, Master Electrician, in front of the hydraulic ram that originally hauled aloft the several tons of velvet that are the main curtain.



The Proscenium – note figure giving scale.

which must have been at about grid level, the lighting design office. Here I had the pleasure of meeting Duane Schuler, head of lighting. Duane is also at home on the continent, and he lights often in Germany, that land which has such a devotion to opera that to work in German Music Drama is the ultimate accolade for any designer.

We had an hour's fascinating talk. How often I wish I could print for readers these behind the scenes discussions I have from Sydney to Calgary, but so many personalities and companies are the subject matter that lawyers would blench at my opening sentence.

Down to street level again in what I suppose I must refer to as an 'elevator', although to me these are devices short actors put in their shoes when appearing with junoesque leading ladies, and out into the Windy City, thoroughly bemused and impressed by a truly grand grand opera.

Technical Note

The new Light Palette three actually drives dimmers which were already there, from Another Manufacturer. People longing for the best in control can be reassured that any Strand system can be arranged to interface with any reasonably modern dimmers.



Lurking below the stage – the original 1929 thyratron system.

The Hotel Nikko Chicago



Chicago's latest hostelry, the Hotel Nikko. Lighting control & dimming by Strand's Environ.



Some views within this fine example of modern interior design, Lighting by Imero Fiorentino, dimming by Strand Environ.



During my recent Middle West sojourn, the editorial head lay in the greatest of comfort on the softest of downy pillows within Chicago's very latest hotel. And a very fine hotel it is too.

Behind the scenes the Nikko is extremely high tech., using all the latest electronics available to the fast changing world of hotel keeping.

The public areas are Japanese in their decorative style.

The lighting design was by a leading U.S. practise, Imero Fiorentino, and a very fine job indeed it is. Incidentally, the Japanese input comes from Japan Air Lines, who, I seem to recollect, have a Nikko Hotel in Tokyo.

Strand's connection was the supply of dimming, using our Environ 2 program-



mable system. Virtually every public area is under dimming control, as its increasingly the case in hotels today. There are no less than twelve 7759 cabinets, each containing twenty four dimmers. For non accountants among my readers, that makes two hundred and eighty eight dimmers – and this is an hotel, not a theatre or a T.V. studio. Of course, there are full conference facilities, with elaborate lighting control options, all on presets.

I mentioned that the hotel was high tech. Two days into my stay a very polite duty manager rang my room to merely mention in passing that I may have overlooked the fact that the credit limit on the editorial Visa card was perilously near exhaustion. I hadn't, but it was, so the back up card had to be hurled into the breach.

What's Brewing Here?



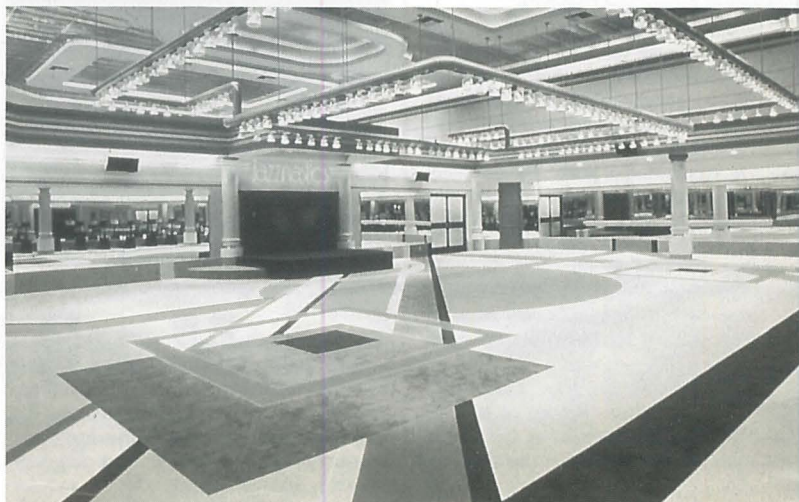
Peter Burrows with fluorescent dimming.

In case you think there is some sinister brew being conjured up and that the erie light cast seems somewhat dim, then you would be quite correct. In our picture, Peter Burrows, responsible for technical sales of Environ in the United Kingdom and Europe examines the latest development in fluorescent dimming techniques. Dimming fluorescent lamps is not a task to be undertaken lightly, unless that is you are using Strand's range of Environ dimmers.

For those in search of a real technical challenge, why not pick the notoriously

difficult to control 26mm diameter (T8) krypton fluorescent tube and just for good measure make it the longest available – an 1800mm (6ft) example. Due to their electrical characteristics the 1800mm tubes require special attention to ensure light stability. So if you think these ingredients brew up a daunting prospect you would be right again. But as our picture shows, Environ can dim such lamps to a very low level.

Environ Gets a Work Out



The Aerobic Dance Room at the Holiday Spa Health Club at Riverside, California.

John Richards in conversation with Mike de Millo of LDW Engineering.

Environ works out with the Holiday Spa Jazzercise Classes – and helps in the winning of three illuminating Engineering Awards.

Not only are the buildings of Orange County large, they usually have a very high standard of materials and finish. And purse strings are sufficiently open to permit their lighting designers an opportunity to show what they can do. In the larger projects, programmable lighting controls are frequently used – and this means Environ 2.

The project we are now considering – the Holiday Spa Club, Riverside, is one of a chain of exercise clubs where the lighting has been designed by Mike de Millo of LDW Engineering Ltd.

This club has won Mike the following accolades. The IES Edwin F. Guth Memorial Award of Excellence for 1987, awarded at the IES National Conference, the IES Award of Merit, Southern California Section and an IES Citation – the Special Distinction Award for Lighting Design Application, Southern California Section.

Said Mike:

There was a need to expand upon all the design techniques used on past clubs. The requirement to improve design technique was due to the owners commitment to offer the best possible facilities for their members combined with the emphasis they place on the aesthetic value of environment they create, maintains their position on the cutting edge of the fitness industry, as the leading developer of health spas and clubs in the U.S.A.

'This is not a 'discotheque', disco lighting techniques would not have been appropriate as they are normally designed for low ceiling dark spaces. Disco luminaires are normally 100 watt lamps and low voltage.'

'For Riverside we needed to use 200-250 watt Par lamps to create special effects at a 25' throw. These lamps proved successful, but with our next installation we plan to use Lekolites. These will be easier to colour, we can design with gobo's and create unique pattern projection. There is a slightly higher operational cost for an architectural application as more electricity is used, studio lamps cost more but since the design of the environment is essential to our success these issues are not important.'

'In every installation we try and stretch the design envelope a little further. I especially enjoy going back to our earlier installations to examine the 'operation' success of my lighting designs. What we are trying to do is break past the concept of the proscenium arch. At Holiday Spa we have created a new style of proscenium arch. Four of them, as the exercise area is surrounded by mirrors. The 'Jazznastics' classes are both participants and observers, to use the correct analogy, they are the audience and the spectators at the same time.'

Strandlight is Published by Strand Lighting Limited

Editor:

Richard Harris
Strand Lighting
Grant Way (off Syon Lane)
Isleworth
Middlesex TW7 5QD
United Kingdom
Telephone 01 560 3171

North America

Bill Groener
Strand Lighting
P.O. Box 9004
18111 South Santa Fe Avenue
Rancho Dominguez
CA 90224, U.S.A.
Tel: (213) 637 7500

Asia

Phil O'Donnell
Strand Lighting
802 Houston Centre
63 Mody Road
Tsimshatsui East
Kowloon, Hong Kong
Tel: 3-685161

Strand Lighting
LOS ANGELES
NEW YORK · TORONTO
LONDON · PARIS · BRAUNSCHWEIG
ROME · HONG KONG
MELBOURNE

Strand Lighting Limited,
Grant Way (off Syon Lane),
Isleworth, Middlesex TW7 5QD
United Kingdom
Telephone: 01 560 3171 Telex: 27976
Fax: 01 568 2103

An M24 Goes to the Bank

Commercial Presentations Ltd. and P. A. Carlson are currently running staff seminars for the National Westminster Bank in seven locations in the U.K. The Robert Luff Company, our dealers in South London, hired them the Strand lighting rigs for these very sophisticated 'shows'.

On a recent morning I set off for Chiddingstone Castle, down in Kent. My purpose was to see a novel application of our M24 Memory System.

Thanks to the courtesy of the National Westminster Bank and of Commercial Presentations, I spent a fascinating day.

The 'audiences' for these presentations are the staff of the Domestic Banking Division. Yes – all of them. Hence there are seven venues and with three shows a week, the whole programme will take nearly six months to complete. A total of fifty seven thousand staff members will have seen the show.

What's it all for?

It was stressed to me that this was not a training exercise. It was to introduce staff to some new banking concepts and to the architectural and equipment ideas showing the way Britain's leading banking group are heading.

The Venue

I arrived at the castle to find a large temporary structure. As I pushed open the door a rush of warm air greeted me. Positive air pressure is an excellent protection against draughts. Inside is an auditorium which seats 148. To the sides are syndicate rooms for that part of the day when smaller groups are working together. Heating – very effective – is by calor gas.

From an empty car park to completion took only four weeks to have the unit ready for its first 'audience'.

The Day's Presentation – with emphasis on the lighting

Video, Audio Visual slides, live – i.e. human speakers and a final practical presentation are all involved. Lighting Designer Simon Tapping has ensured that what should be seen is seen, but his use of theatre lanterns has ensured that not a single unintentional distracting beam will reach the eye of a single banker.

When the audience – for so I must call them – arrive houselights are up for an informal, loosely structured 'getting to know you' session. A video, via five suspended screens in the centre of the ceiling, calls for half level lighting. Nothing easier, via the M24 and Strand dimmers. The audience next divide into four groups which retired beyond the editor's lens, no doubt to the discussion of high finance.

After lunch they all return to the main auditorium to find the seating, which had been in two sections facing each other, has been moved on its tracks to make up one bank of seating facing the 'proscenium'. A screen is flown in for the A.V. presentation. A speaker takes his place at the lectern. The lighting at this juncture is very nice, as 'leafy' random patterned gobos are used in the Harmony's lighting the speaker, suitably orange and blue tinted, so there is no feeling of 'the man in the spotlight', but everyone can still see him perfectly. One remembers the old dictum, 'if you can't see, you can't hear'.

After the A.V. sequence, the house lights dim out and there begins a twenty second sequence into which the M24 squeezes no less than fifty seven cues introducing the Bank of the Future. But what a twenty seconds!

The screen flies out – gobos spin, pink and blue mini PAR batters dazzle the audience, smoke billows forth – incidentally to be cleared very fast by the excellent ventilation – and there, on stage, real in timber, glass and stainless steel is the interior of an actual Bank of the Future – and jolly impressive, too.

Twenty busy seconds.

All the cues in this sequence are accomplished by the M24 in a third of a minute. The sequence is started as the music is started and all keeps in step.

I doubt if Natwest staff have had such a pleasantly exciting time for many a banking day.

My thanks to P. A. Carlson, Commercial Presentations, of 64-66 Glenthorne Road, W.6, to Sonia, Chris, Andre and Paul, their on site team, and, of course, to the National Westminster Bank for a fascinating day seeing an M24 carrying out an unusual task with distinction.

Working for the bank and looking very cheerful, even if informally garbed for a bank: Paul Kent, Chris Nolan, Sonia Olliviere and Andre Nolan, the Commercial Presentation staff on site.



A knightly tent in a castle garden – lit by Strand.



M24 – the system that runs it all.



Gradually the 'Bank of the Future' is revealed.

