

STRANDLIGHT

THE INTERNATIONAL JOURNAL OF STRAND LIGHTING

A new worldwide company

A NEW RANGE OF WORLDWIDE PRODUCTS

Why one company?

Strand Electric of London was founded in 1914. Century Lighting of New York opened its doors in 1929. Now the two companies, both of which have been part

of The Rank Organisation for a number of years, have been integrated into one worldwide operation.

In a sense this decision is really a reflection of what is happening in the world's theatres and TV studios.

The strong national differences in lighting techniques, and thus equipment, have become less and less marked. They have never really existed to as great a degree in television lighting because the whole industry grew up too quickly to let

national differences take root. But as recently as fifteen years ago I very well remember how the theatre in France, for example, demanded lever-per-channel lighting control. Digital call up - "Non!" America still persisted with shared dimmers and patch panels. At the same period many theatres in England still relied on battens and footlights for their basic stage illumination.

The modern directional style of stage lighting that everyone today accepts as

the norm was greatly aided, if not actually made possible, by the Leko in America and the Patt. 23 in England. Readers who have followed my argument so far will guess which were the two companies responsible for these two literally epoch making lanterns, luminaires or fixtures! And here, of course, we touch on a problem - language.

Dear English reader, what do you think is a "striplight"? Dear American reader, what do you suppose is a "batten"? They

are, of course, identical items. Well, names may differ, but equipment is coming closer and closer together and that is why we believe Strand Lighting, manufacturing in three locations, designing in two, and listening to customers everywhere in the world, is the logical step.

Lightboard XP and Showchangers, described in this issue, are true World Products. More will follow, and we will be describing them as they are released.

Who actually runs Strand Lighting?

So far as the customer is concerned, the representative or sales agent they deal with is our company. We know this very well.

But I thought readers might be interested in a few brief details about the men most responsible for Strand Lighting's world operation.

Our President is **Marvin Altman**. He is



Marvin Altman

a Canadian citizen, born in Montreal. From 1981 he was President of Strand Lighting in North America (Strand Century) and became President of the new international company in October 1985. He was recently voted 'Man of the Year' by the American Society of Lighting Directors in recognition of his service to the society and its objectives. His headquarters are in Long Beach in California.

Our 'Local' - if this is a suitable word to describe continents - management reflects our three trading areas:

John Pavacik is President of Strand Lighting (North America) and is responsible for operations in the Western hemisphere. He is based at our plant in Los Angeles.

This company has sales and distribution facilities in New York and Toronto, as well as at the Los Angeles



John Pavacik

operation. There are additional sales offices in Dallas, Chicago, and Atlanta.

Michael Lowe is Managing Director of Strand Lighting (Europe) whose offices are in Brentford, a few miles West of London on the road to Heathrow Airport. This location is significant, as this company looks after Strand's very important business in the Middle-East,

Africa, Russia, Scandinavia and the Comecon area as well as Western Europe, and the few miles to Heathrow are frequently travelled by our own staff on their sales journeys and by our customers coming to visit us. There is a sales office in Paris, and sales and distribution from Salzdahlum in West Germany.

I have been trying to think of a better phrase than 'the rest of the World' to describe the vast area administered by our Hong Kong office. I believe the latest economists' phrase is 'The Pacific Basin'. Anyway, it stretches from Japan to Australia and New Zealand - all incidentally, very important Strand markets.

We have factories at Rancho Dominguez in California, Kirkcaldy in Scotland and in Hong Kong.

Many of our staff have a lifetime's experience in lighting for entertainment. We are represented in nearly every country in the world by agents, many of whom have just as long experience.



Michael Lowe

Finally, a few words about television lighting. We are fortunate to be the World distributors of Quartzcolor equipment, made by Ianiro of Italy, and have been for nearly twenty years.

Now - enough about our own internal arrangements. We believe it is our products and their use that you will be interested in, so please read on.

Showchangers*

THE FIRST OF THE INTERNATIONAL PRODUCT LINES FROM THE NEW WORLDWIDE STRAND LIGHTING GROUP

by the Editor

As with all our future products, these remotely controlled and programmable lanterns are designed to be as acceptable in Hong Kong as in Brentford, and in the Los Angeles Music Centre as in London's Albert Hall.

All the world's - now - a stage

The pop World is a byword for international tours, and has been since the Beatles conquered America a quarter of a century ago.

At the more serious end of the entertainment world, Royal Shakespeare Company productions have visited Tokyo, the English National Opera has been to Florida, and Stuttgart Ballet have visited London's Coliseum.

It is the same story with lighting designers. Jules Fisher lights in London as well as in New York, and Richard Pilbrow returns the compliment.

David Hersey is a New Yorker who lives in London and lights everywhere, but I am not quite sure what that proves, unless it is that really first class lighting design is wanted everywhere.

Showchangers' on show

I first saw an in-house demonstration of this system at Brentford one Friday last March. About a dozen of us trooped into the demonstration area to find Andy Collier and Joe Thornley, both of our

marketing department, plus a lighting bar rigged with Par 64 units, Iris floods and a number of other lanterns, each mounted in a special yoke and fitted with what appeared to be a rather plump colour frame holder. Cables snaked intriguingly along the bar - far more of them than would be normally expected.

The mysterious garden hose

The suspended bar was connected to a briefcase control system in a small aluminium flight case by what appeared to be a green hose. This turned out to be the cable carrying all the command information. The demonstration began. Andy stepped to the console while Joe retired to a comfortable chair, thus emphasising their hierarchic relationship, and the show was on.

And what a show it was.

First, the Par 64's gave a few moments of gyrations that were a cross between the opening of an old Fox film and the London blitz. This process happens because on 'power up' each unit goes through a calibration process, finding its own limits of movement and referencing its 'home' position. During this diagnostic routine, if a light hits a ladder or a flat it will back off one degree and will not go past that point until it has been re-set.

Then, on cue, the lanterns all came together and directed their beams on a Galaxy console that stood in for the star of the occasion. I rushed forward, drawn as



Rigging Showchangers at Disneyland

a moth to the flame, but by then all the lanterns had tilted to light the audience.

220° of tilt

What amazed me was that as many lanterns as were selected could tilt through their yokes, i.e. from lighting the platform to dazzling the audience, in two seconds. Imagine an operator, never mind ten of them, accomplishing this little gymnastic masterpiece.

Of course, things don't have to happen so fast. Up to twenty seconds can be programmed for any particular movement.

Get out the sticky tape

Scrolls can be made up as required, providing the right thin film Chromoid type of material is used, by joining the colour panels with a special sticky tape.

Each scroll will handle from 3 to 16 different colours. The type of controller determines whether the maximum number is the full 16 or is limited to 10.

The effect of a thousand watts of projected heat on a sticky tape join? This potential undoing is dealt with by two fans per colour changer. **continued overleaf**



*World Product for all markets.

FROM THE EDITOR



Two of the longest established companies in lighting for entertainment have come together in a new international operation - for full details see P. 1.

As part of our worldwide approach, we now offer this, the first issue of *Strandlight*, our new magazine, in which we hope to provide information of interest to everyone in the world of theatre and television lighting.

We will cover product news, dealing with new luminaires, dimmers and controls, and interesting applications of these products.

Sometimes it will be as large a contract as Vancouver's Expo 86, sometimes as prestigious as the Swan, the Royal Shakespeare Company's new smaller theatre at Stratford-upon-Avon.

Sometimes it will be an unusual or interesting theatre or TV project in a school or a small video studio.

Frequently it will be some matter that is included because the Editor is interested in it, and thinks that readers should be. Recipients of the old *Tabs* magazine will recognise this approach immediately.

We shall be appearing three times a year and we hope to hear from readers all over the world. Articles on relevant subjects are very welcome, and we intend to have a section for readers' letters in all subsequent issues.

We will only discuss our own products. We will not go in for comparisons - after all, it would hardly be fair. After you have seen the product news in this issue, we hope you will agree.

Product availability. Where Strand products are only available in certain markets because of the supply voltage this is indicated by a special footnote.

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Your own Personal Copy

If you do not receive your own copy of *Strandlight*, please apply to your local Strand Lighting office. We are pleased to put anyone with an interest in stage or television lighting on our free mailing list.

Please give your full name and address, including Post/Zip code, and indicate your own area of interest.

Showchangers

continued from page 1

Knowing one colour from another

How does the system know where it is, and how to bring in the selected colour? It counts the joins as they go through, and memorises from the first colour. Suppose open white - a clear gel - is at one end of the scrolls and red is, say, two thirds along and green one third. The ever present chip is quite clever enough to compute a change, say, from red to green without having to return to open white.

Another job for your memory system

Showchangers can be driven from a memory system by means of a special 'black box' interface, or the special briefcase console can be used. The console allows up to ninety-nine colour channels, each channel allowing colour, pan, tilt and speed of movement to be recorded.

If the system is driven from a memory board, the five control channels per lantern are required, Pan, Tilt, Colour, Speed and Level. Patching and grouping permit ganging of multiple unit functions.

Black belts - with teeth

The actual movements of the lanterns are made by toothed reinforced rubber drive belts, like smaller versions of a camshaft drive on a modern car engine.

This has the advantage of giving a drive with no slippage, so that when the servo motors obey their electronic commands to move or to stop, these commands are accurately transferred to the mechanism.

The micro processor is programmed to cushion starts and stops, while the

toothed rubber drive belts permit manual override while under power without damage to the drive shafts.

Rigid must be the word

Because of the torque produced by suddenly moving twenty lanterns through perhaps 60° of tilt and at the same time 30° of pan, the lighting bars must be firmly fixed. An ordinary suspended pipe will not be anything like firmly anchored enough to avoid considerable torque reaction. So rigid clamping is vital.

Operation

Any competent memory board operator will be at home with the system in a few minutes.

Touring is tough

So are Showchangers. Because the pop and commercial presentation scenes are by their nature touring operations, the system has been designed for rugged use.

Sale or hire

Showchangers, yokes, colour changer and controls can be purchased outright, or we are confident that many hire companies offering Strand equipment will have the system available for rental.

Up the ladder

No one really believes climbing a ladder is a sensible preliminary to setting a lantern. When one considers the revolution electronics has brought to lighting control over the last twenty years, the actual light on the end of all this sophistication still depends on muscle

power, even if aided by a pole or a lallescope, to get the light actually where it is wanted.

It is as though a farmer went out to plough with the latest diesel tractor and

then proceeded to drag a bent stick through the earth.

Well, Strand Lighting have made a real start on that bent stick - and we call it SHOWCHANGER.

Lighting for Television

Strand Lighting have produced a 26 page guide, illustrated with pictures and diagrams, on the technique of TV lighting.

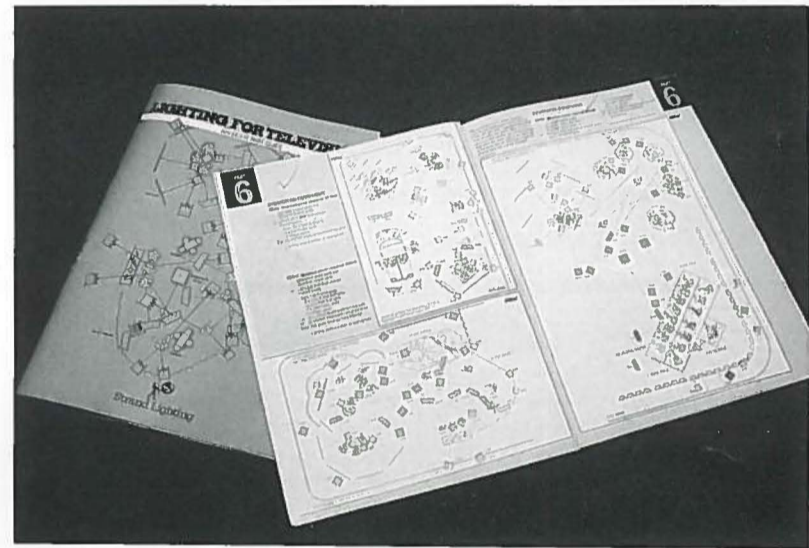
Sections are devoted to aspects of general theory and practise, suspension systems, and the various types of filament and discharge lamps available.

Lighting for interviews, current affairs, music and drama are all covered.

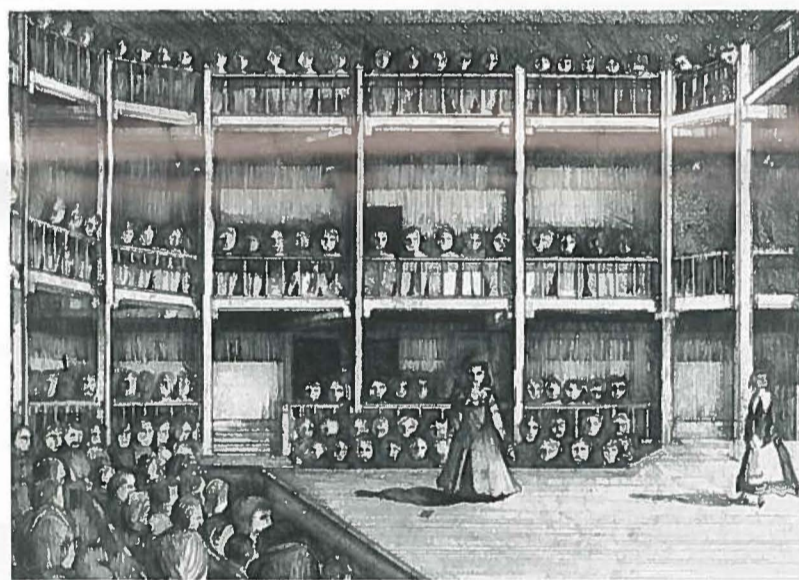
The drama section has diagrams

labelled as an hotel bar, a supermarket, a car dealer's yard and a phone box by night. From this selection I deduce a somewhat thick ear play.

There is a great dearth of printed material available on TV lighting practise. We hope this publication will be useful to both programme and video lighting folk. Its information is applicable worldwide.



The new Strand booklet "Lighting for Television".



Tim Furby's original sketch that helped to make it all possible - see article.

Avon's new Swan

The Editor visits the latest of the Royal Shakespeare Company's ventures at Stratford-upon-Avon.

The telegraph boy calls

On the morning of the fire which destroyed the original Victorian Shakespeare Memorial Theatre in 1926, a pill box hatted representative of the Postmaster General picked his way between smouldering beams and fallen masonry looking for someone to accept his buff envelope.

This turned out to contain a telegram from George Bernard Shaw congratulating all concerned on having lost a theatre of which he, G.B.S., disapproved. History does not record the reaction.

The present Royal Shakespeare Theatre was built on an adjoining site, opening some six years after the fire. The auditorium of the old theatre was then used for rehearsals, and was known as the Conference Hall.

The 1932 theatre holds 1,500 people. In 1974 the "Other Place" was opened a few hundred yards away for productions, particularly of new plays, suitable for

audiences of 150.

This left a clear opening for a venue to hold a medium sized audience, partly for a new policy of plays by Shakespeare's contemporaries and partly, I suspect, because the main theatre all too often during the tourist season has its 'House Full' boards out.

A benefactor arrives

Two years ago an American visitor to the Company Gallery at Stratford was impressed by a model of a proposed new theatre which had been designed six years before, but had remained unrealised for the usual financial reasons.

This mysterious visitor later offered to pay for the whole of the proposed new theatre. He only made one condition, his identity was not to be revealed.

Apparently every day Trevor Nunn, the Joint Artistic Director of the R.S.C., expected a call on the general lines of "Ever been had" or "April Fool". Fortunately this just proves he was being pessimistic, and now the project, at the time of the Editorial mid April visit, is very close to completion.



Final Galaxy panel is slotted into place.

A wall of faces

The architect, Michael Reardon, has followed the design of Jacobean theatres, with a large thrust stage surrounded on three sides by three tiers of seats. These tiers are of timber but, dear reader, please immediately clear your mind of visions of Olde Tea Shoppe blackened beams and other God woterie that my description may bring to mind.

The whole effect is actually completely up to date. For example, the vertical rails of the ballustrading are of simple square sections and thankfully we are spared any knobs or curlicues.

The selected timber is of a very attractive honey colour - the Editorial eye thinks Douglas fir - and the close fitted russet red carpeting gives a warm welcoming feeling with not even a hint of the municipal.

Because productions in the Swan will depend on the lighting to support the actors rather than scenery the gentlemen of my own interest seem to have enjoyed a very fair say in things.

Lighting galleries criss cross the ceiling and are completely free of the odd pipes at 5'6" height which have occasionally stunned the Editor in less well designed theatres. The view from the control room is so complete as to be slightly vertiginous until one becomes used to it. A sheet of glass, inclined at a 5° outward slope, runs literally from floor to ceiling, so the Galaxy operator can see from straight down to the lighting galleries above. The sound acolytes enjoy an equally commanding view from next door.

Why the Swan Theatre?

This just proves that one can always learn from Press Releases, because only when reading the press pack issued by the R.S.C. did I learn that the Swan Theatre was a rival house to Shakespeare's own Globe - plus, of course, the company has had a swan as its badge since 1961 when it became the Royal Shakespeare Company, and this choice came from Ben Johnson's eulogy on Shakespeare as "Sweet Swan of Avon".

Strand lighting installed at the Swan Theatre

Control:
288 Channel Galaxy 2 Arena.*
1 Channel Control
2 Playbacks
1 Memory/Output Panel
1 Group Masters unit
1 Preset Panel
1 Effects Panel
1 Special panel fitted with Tempus 12 way desk.
All fitted in a two tier desk.

Dimmers:
Eleven 24 x 10A Permuss Racks
One 12 x 20A Permuss Rack

Lanterns:
40 Prelude 16/30
30 Prelude F
36 Harmony 15/28
20 Harmony P.C.
10 Cadenza
30 Parblazers

*Available in all 220/240v markets.



Environ dimming and ballasts control the cornice lighting in Cliveden's Dining Room

Environ adds to atmosphere

The Editor visits Cliveden, the Thameside stately home which now houses a de luxe hotel.

"Alas poor Fred, Who was alive and now is dead."

As every schoolboy knows this is the opening couplet of an elegy proposed, somewhat cynically, for Frederick, Prince of Wales, the eldest son of George II.*

The connection with Cliveden? The original house on the site was lived in by "Poor Fred", whose son, who became George III, had a few problems with his American colonies.

Subsequently the present house at Cliveden was purchased by William Waldorf Astor, one of the better off descendants of the colonists. His son completed the circle by becoming not only a British subject, but a Peer of the Realm. His wife, Nancy Langhorne of Virginia, in 1919 became, as Lady Astor, the first woman member of Parliament.

Between the wars Cliveden was famous for its house parties, when a typical weekend would have brought together George Bernard Shaw, T. E. Lawrence and Winston Churchill.

The house and grounds belong to the National Trust, and they have leased the house to Blakeney Hotels, who arranged for the entirely sympathetic redecoration and furnishing that now give their guests true Cliveden comfort and luxury. As part of this work the magnificent dining room has had fluorescent lighting installed around the cornice to illuminate the ceiling.

So that the lighting picture can be matched to the mood, the cornice lights can be dimmed using Strand Lighting's Environ fluorescent dimming*. The tubes are controlled by our Environ dimmable ballasts.

*When checking in my local library's Dictionary of National Biography to make sure I had the right Fred, I came on this disapproving comment by the Victorian author of the short sketch which is all poor Fred is given.

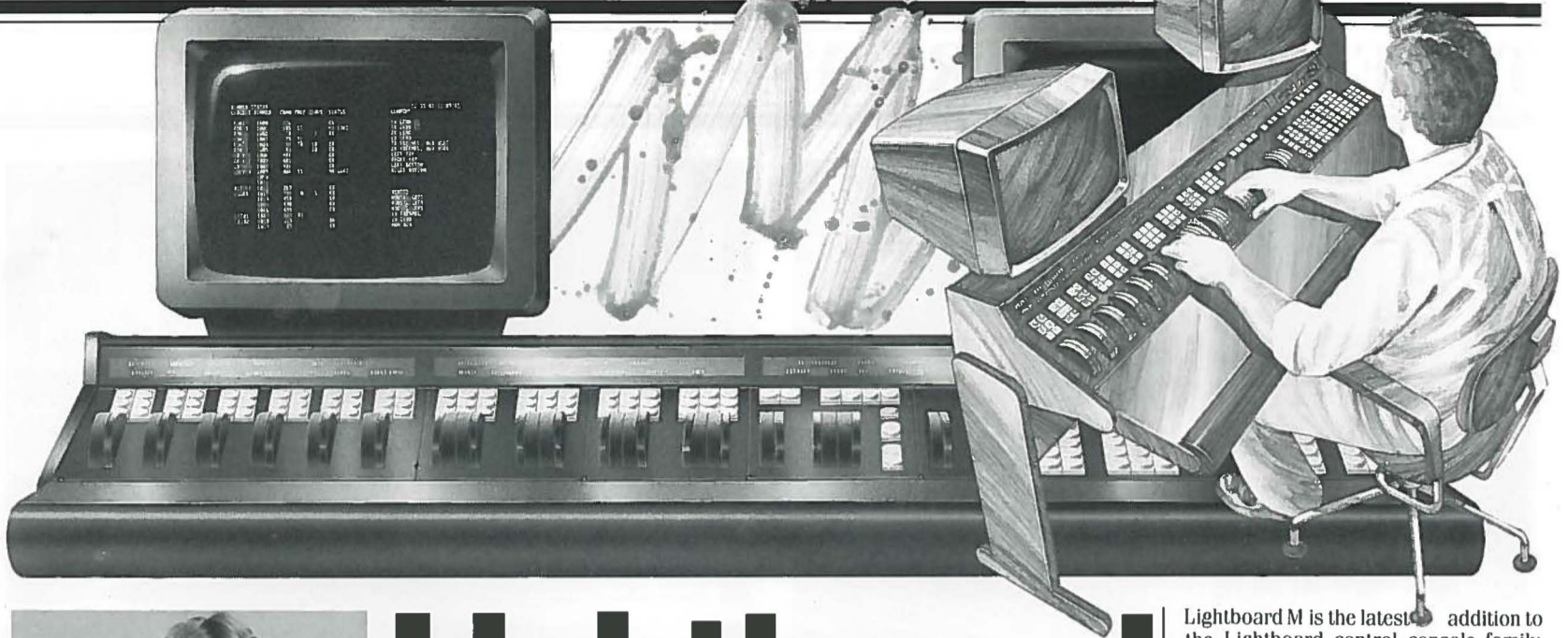
"The Prince's pursuit of the fair sex was never in any way inhibited by the normally accepted standards of gentlemanly behaviour."

*World Product, available all markets.

New London Representative



Celia Pope has recently joined the U.K. Sales Team. Celia was previously with Dynamic Technology, where she was responsible for the sales of their lighting control and audio visual products.



By Susan Dandridge

LIGHTBOARD 'XP'

Lightboard XP* is the flagship of a range of consoles utilising recent advances in computer technology. The XP stands for 'executive processor': the heart of the new system.

Lightboard XP uses distributed processing, each processor having assigned functions all controlled by the executive processor. The 'architecture', found in multi-tasking computer systems, offers virtually unlimited growth and power.

A number of functions have been included in the Lightboard XP which were found in the original Strand Lightboard of the late 70's, but could not be included in subsequent consoles because of the existing processor limitations. A sample of the capabilities which have not been seen since the original Lightboard include the ability to drive up to eight separate desks, each completely autonomous. This permits one executive processor to drive multiple control systems in multi-auditoria or studio applications; or, in a single theatre, the assistant designer, operator and stage manager can each access separate information, and operate independently of one another. Discrete CRT/VDU displays can be used with the eight control desks.

Not seen since the original Lightboard is the ability to create a 'historical archive' of cues. When in auto-log mode, as each cue is recorded into the system, it

Lightboard

is also automatically stored on disc. If the cue is later modified both the original cue and the revision are available on disc for retrieval. There are many other such exclusive features and capabilities found in Lightboard XP.

The system can drive up to 4000 dimmers on 4000 discrete channels with a minimum of 200 cues of storage in the potential worst case, i.e., all 4000 channels moving in all cues. Yet, the system may be configured to meet the particular needs of a given installation.

The **Command Module**, where the operator sets levels, records cues and programs all other instructions into memory, contains eight programmable function keys which record any sequence of button pushes entered on the keypads, or instructions entered via the alpha keyboard, and then execute that series of instructions upon command with a single key press. The Command Module also contains a local display which reflects each function and reduces the operator's dependence on the screens.

The **Playback Master Module** and **Playback Modules** provide immediate independent override of up to eight cues or cue parts. Regardless of the number of faders in the desk, any of Lightboard XP's 255 parts can be accessed manually either prior to cue initiation or during playback. Each cue or cue part can be started, stopped over-ridden manually, rate modified reversed or completed instantly or in the programmed time. All of these functions are immediately accessible by the press of a single button.

Located in the Playback Master Module are three 'Learn Keys' which will automatically record duration, fade profile and part delays of manually operated or rate modified cues.

Submaster Modules are available with either 6 continuous wheels which can also act as rate modifiers when effects are loaded, or with 12

potentiometers for absolute analog control of recorded groups, effects or channels. Local displays provide continuous information regarding submaster status. Bump to full, bump out and independent functions for each submaster are available through a single key. Up to 48 submasters may be included in a control desk.

The **Display Module**, as well as providing access to Live, Preview, Effects, Profile, and other standard modes, provides an area for crew and focus notes, Auto-Mod and a three tiered 'Help' display for operational guidance throughout the system. In Set-Up Display, defaults may be selected for replacement or move fade operation, Tracking or Q-Only cue modifications, set levels, direct dimmer access and system parameters.

An integral alpha-numeric keyboard is standard in each control console and may be used to access functions and for general console operation in the event of a module failure.

LIGHTBOARD 'M'



By Debra Garcia

Lightboard M is the latest addition to the Lightboard control console family. We have combined software designed for the Lightboard XP and expanded features now incorporated in the Mantrix control console series.

Its operational procedure is a departure from the "Command Line" philosophy of the Light Palette console. Lightboard M is a direct action control desk similar in operation to European lighting control consoles.

One basic feature of the Lightboard M is its modular design. This allows expandability within the system. Up to 96 channels of two-scene preset control can be added (via channel modules) to the Command Module, which is the core of the Lightboard M system. This module facilitates programming and playback of up to 224 cues, groups or special effects. Each **Channel Module** incorporates twelve channels of two scene preset control and associated momentary action buttons. The user does not require the addition of Channel Modules to address the 96 control channels. Channels may be addressed digitally via the keypad in the Command Module. The user has the option of adding manual control to the memory system without requiring an interface and the modular design allows the user to choose his own layout.

Lightboard M can drive 384 dimmers (up to 768 dimmers with **Dimmer Expansion Module**). The system can support up to 48 overlapping, pile-on submasters. Each Submaster Module includes 24 potentiometers with associated momentary action buttons.

Other features include: two diplex crossfaders, two special effects playback faders, momentary action button level control and solo (which is similar to remainder dim). The system can also support a **Peripherals Module**. This module provides interface ports to a disc drive for memory storage, RS-232 printer interface and a colour monitor. Lightboard M is also capable of supporting the Galaxy focus remote and has multiple patch tables.

This control system is a powerful addition to our new Lightboard family. Lightboard M will be demonstrated at SMPTE in New York City, October 25 through 28, 1986.

*Available in all markets.

Redheads go to blazes

The Editor visits the Hertfordshire Fire Brigade and finds out about an unusual, if distinguished, role for some Strand Lighting equipment.

As many readers will know, one of the most popular and widely used T.V. luminaires is the Redhead, manufactured by Quartzcolor Ianiro and marketed throughout the world by Strand.

Just for anyone who may not be familiar with this unit, it is a small and very lightweight variable beam flood, made from polyester fibre glass and using an 800 watt tungsten halogen linear lamp. It has a toughened glass front.

Why a 'Redhead'? The body of the fitting is integrally coloured orange. Yes -



I know, but 'Orangehead' merely sounds punk.

Having seen thousands of the mains version in use around the world, I decided to have a personal look at one of the interesting derivatives, the 'Fire Brigade Redhead'.

This version was developed a few years ago and the main point is that it is fitted with a G6.35 lampholder to accept a 24 volt 250 watt lamp, so that it can be operated directly from the fire engine's electrical system, or operated from two car batteries.

One recent fine morning found me on my way to Hertford, the very pleasant old town, where the County's Fire Service has

its headquarters. There I talked to Senior Staff Officer, Donald Kent, who gave me the main reasons why Hertfordshire are currently fitting each 'appliance' - this, I now know, is the fireman's term for a fire engine - with two Redheads.

We went down into the drill yard to look at a gleaming 'appliance' already fitted with a special unit consisting of two Redheads mounted on a short horizontal bar and with a switch.



There are a number of different uses. They make an ideal compact high performance light source to take into a building on the end of a three hundred foot wandering lead. Or, mounted on a tripod, they can floodlight the outside of a building or used as a 'spot' when an escape is being raised.

Mounted on a sixteen foot mast on the vehicle itself they can provide a flood of light to illuminate an incident such as a road traffic accident. When used like this a shorter lead is plugged into a socket on the vehicle. When a lot of light is needed quickly one just plugs in and turns on.

No separate motor generator sets to be started up.

One last but very important point - the Redhead is a surprisingly economic way of bringing a lot of light to bear on a subject.

We would like to acknowledge the work of the Scientific Research & Development Branch at the Fire Service College at Morton in the Marsh in the application of the Redhead for emergency service.

*World Product. Available all markets.

From Oak to Maple to Palm Tree and back

The Editor travels fourteen thousand miles and sees a world of show lighting – from Vancouver's Expo '86 to what may be the world's most well lit TV Studio, to a fabulous new Opera House.

Sunday: Canadian Capers

Toronto airport. Hellish delay while a full Jumbo load is very slowly decanted through a single customs man collecting forms declaring that I had neither plants nor animals with me which could harm Canadian agriculture.

At the car hire desk I am offered various vehicles of increasingly exotic names of which I had never heard. End up by asking for the cheapest.

Monday: Early to Rise

Woken up at half past six by the usual early North American rush hour outside the hotel and arrive at the company's new very pleasant office and warehouse. A very "Strand" atmosphere with theatre posters on walls and an immediate offer of tea. I am obviously known here. After a morning of arrangements, and some gossiping, off in the afternoon to see a recently completed job at the H.J.A. Brown Education Centre. Volunteer to get myself there in hired car. Directions are given – "West on 401, South on Highway 10 and make a right into Hurontario Street".

Set off sedately having read about 55mph speed limits and then discover posted signs on 401 saying, as I thought, '100mph'. A few minutes later am wondering why I am overtaking every other car in sight – hardly believable that the cheapest choice could manage this. Next sign explains all – '100 kilometres per hour', so hastily become more legal.

The H.J.A. Brown Centre is a large attractive brick and glass structure with copper-green roofs. The whole building is another hopeful sign that the concrete Fuhrer Bunker school of architecture has at last run its course.

On arrival I am met by Ian Robertson, the Production Co-ordinator, who kindly showed me round and demonstrated the lighting system.

Firstly, why are Strand's products featured in an education administration centre, be it ever so grand?

The answer is that more and more often the sophistication of real lighting control is being called for. In this instance specified by Art Henschel, the Engineering Consultant for the project.

The companies who can deliver advanced lighting control tend to be those with a theatrical lighting background. The moment the requirement for programming goes beyond "off" and "on", this becomes true. The gradual change of lighting states from "cue" to "cue" as well as the balance between circuits means dimming is necessary – and quality dimming was first accomplished in the world of theatre lighting.

The lighting in the Board Room, where the twenty-three elected Trustees meet every two weeks in public, is the main area of Strand's contribution. A large circle of thirty 4 1/2" 500 watt Variable Focus Lekos are mounted high in the gabled roof, while two 1KW's are wall mounted for extra punch when needed.

Control is by Environ 2 pushbutton stations controlling Strand dimmers, although so far only four presets are allocated. These are – 1) Cleaners lighting – fluorescent only. 2) "Business Programme" – Tungsten, fluorescent and Lekos full up. 3) "Slide Presentation" – lighting down to approximately 10%, step lights come on and the electric blinds are lowered to cover the roof lights high in the gable. The low maintained lighting is to allow enough brightness on the tables for note taking.

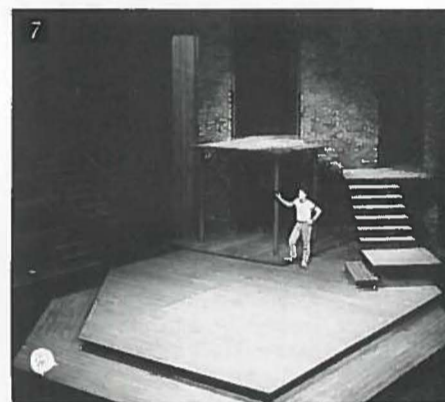
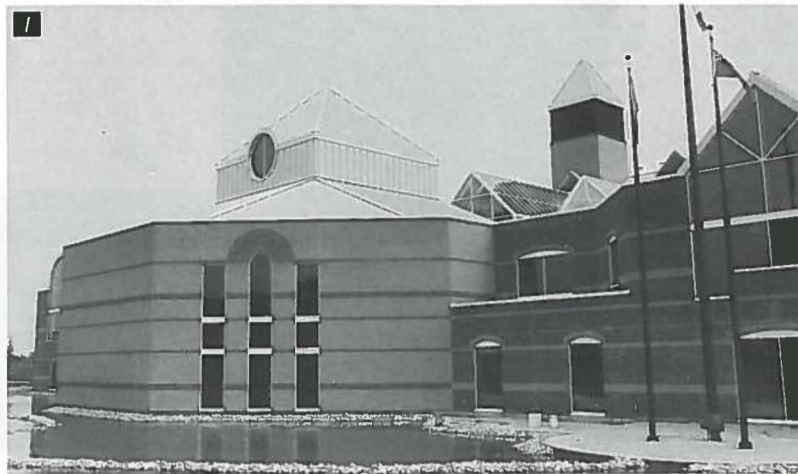
"TV Programme" – This is full up plus the extra 1K Lekos focussed on the lectern position, to allow video taping of proceedings.

There is a master slider fader on the wall in front of the TV camera position.

Tuesday: T.V. Ontario

A very bright and hot start to the day. Depressed by jovial characters on the radio who persist in telling their listeners that "they can look forward to a wonderful day" – and then add that it will reach thirty degrees! Anything over eighteen is definitely over the editorial ideal.

I set off, with Donna Appleton, our manager in Canada, to meet Alf Hunter down at the Trinity Studios in suburban



Toronto where he is lighting a show for TV Ontario. Alf is the Treasurer of the Canadian Chapter of the Society of Television Lighting Designers, and is very well known to many English friends in the parent society. Although I am always fascinated by local accents and speech forms, and rather pride myself as being at least at Colonel Pickering's, if not up to the Professor Higgins level, Alf's softly modulated speech had me confused. Lowland Scots? Not quite – the North American 'a' puzzled me. Then the answer "Of course, I grew up in Edinburgh".

Once again I was struck by the relaxed atmosphere of studios outside the U.K. No other country seems to have the pressure on studio time that one finds at, say, the BBC Television Centre.

I was glad to see pole operated Ianiro above, and Mantrix plus Strand dimmer packs below.

Stratford Ontario

In the afternoon I set off, down the '100mph' route again, but this time my destination was Stratford, Ontario.

I have long wanted to visit this seedling, planted twenty-five years ago largely by Tyrone Guthrie's efforts, in rural Canada. The sheer boldness of organising a Shakespeare Festival in such a small town has always impressed me, especially as this was done when the whole idea of the out-of-town theatre was really new. Without checking back on early issues of TABS, I can only think of John Christie's creation of Glyndebourne as an equivalent venture.

John Neville is now at the helm at Stratford. Unfortunately he was away at the time of my visit, so contented myself by leaving a note reminding him that I had last spoken to him in 1972 in the Lamb & Flag, Strand London's entirely unofficial staff canteen.

My guide at Stratford was Peter Lamb, the Technical Director, who was kind enough to defer a visit to his dentist when

I rang him. This prompted the sour Toronto office comment that he obviously wasn't actually in pain.

As I have always found, you have to actually visit a place to understand it.

I never, for example, quite understood Charlotte, Emily and Bramwell until I went to the Bronte parsonage and found it to be a tiny house, with cottage sized rooms and a cupboard in which the maid had to sleep. Conversely the Stratford Festival Theatre is much larger than I anticipated. It seats 2300, with generous aisles and seat spacing, as compared to the nearest equivalent I can think of, Chichester, which seats 1374. Stratford must be quite a challenge for voice projection for some actors.

My commercial instincts were warmed by the nearest thing to a saturation ceiling lantern rig that I have seen outside a busy TV studio. The Festival's Montacutes and Capulets can have their little differences beneath no less than 300 hundred Strand luminaires. Control is by that operators favourite, Light Palette Dimmers also by Strand Lighting.

After a little work with the Editorial Pentax, Peter took me down to their new venture, "The Third Stage".

This is precisely what it is, because as well as the main Festival auditorium, there is the Avon Theatre in town, and now the latest addition.

This is fascinating. In the Summer, the Third Stage Company, a group of young professional actors who are usually in their first classical theatre roles, take over a very pleasant timber built hall which according to its name board, belongs to the Kiwanis.

I estimate the hall was built about 1900, with some less than happy nineteen-sixtyish additions at the lake end. During Winter, Badminton takes the floor. At my visit, a rehearsal was on. As we went in, I heard a young lady remark that all the perfumes of Araby would not put her hand right, so we were plunged from the innocence of raquet and ball to the tragic depths of the Scottish Play.

Temporary seating – cushions on stepped staging – round a thrust acting area, give the audience of three hundred excellent sight lines. The mini Light Palette (120 way system, controlling 96 CD-80 dimmers) is perched in a kind of crows nest behind the steeply stepped seating, a good sixty feet above the floor. The sound desk is equally lofty. Non vertiginous board operators only, please.

As the main Festival company tours each Winter, the lighting from the Third Stage becomes the touring rig. A very interesting visit and more good friends of Strand discovered.

1. Exterior of the Trustees Board Room. The fountain pool is actually part of the building's air conditioning, the water from the air chillers being passed through the fountains and pool.

2. Interior of the Board Room. Access for lantern setting and re-lamping is by a moveable air driven hoist. Wisely a slow up fade has been programmed for the Lekos so lamp life should be long.

3. Ian Robertson at the control position. Quite correctly, probably the best view point in the room!

4. The control pushes. The lockable plexi-glass covers show that school children do sometimes penetrate to the holy of holies of their Trustees!

5 Strand's stars come out! The 300 ceiling luminaire rig at the Festival Theatre.

6 In Winter, Badminton – in Summer, darker deeds. Exterior of the Stratford Third Stage Theatre.

7 During a break in rehearsal, Alan DeLuca, Theatre Electrician, takes the stage for the Editorial Pentax. From the Director's table he received the rather surprising instruction "open your body more!"

8 On the road to Stratford.

Wednesday: To Expo 86

Time to leave Toronto, Donna Appleton and her staff and other good Ontario friends. Once again a completely full Noon flight. The same motive that was leading me westward at thirty eight thousand feet was no doubt motivating most of my fellow passengers - Expo '86, the great international exhibition on a site virtually at the centre of Vancouver's tremendous harbour.

Taxi into the city, through flower bordered lawns, the effect rescued from the merely pretty by a snow capped mountain range in the background. Pleasant small houses with low pitched roofs set in lush lawns. A distinct aroma of long established affluence covers this part of the city.

I am to stay in one of several apartments which Strand leased to house their staff during the long installation period of the lighting equipment. Meet our resident maintenance engineer, a wizard of Light Palette, Chris Mentis who hands over the apartment door key and somewhat shatters me by telling me that we are due to tour the exhibition that evening.

Should an actor drink before going on? It is widely held that he shouldn't. But, in this case, suitably strengthened by a substantial nip from the Johnnie Walker duty free I present myself half an hour later for the tour. As we walk down to the site I make two discoveries. Firstly, our apartment is very handy for Expo, and, secondly, Chris Mentis is one of the wittiest men in North America.

At Expo we join Phil Bernard, the Strand representative in Western Canada, and we board the mono rail which runs round the site. Severe dislocation of the editorial neck is threatened as I am told first to look left at the Kodak Pacific Bowl which has Strand Lighting and then immediately look right to where the Yukon Pavilion is also Strand illuminated.

Once safely back on the ground, it now being late evening, we repaired to the terrace of the "Canadian Club" where superbly lissom blonde waitresses ministered to our almost every want.

Plates before us, glasses to the right and left we awaited the evenings fireworks. The only trouble with fireworks is that the visuals pall after the first few rockets and the audios make conversation difficult. I refuse to descend to "oohs" and "ahhs". I suppose this sounds a touch sour, but for a child of the London Blitz, fireworks must always be just the teeniest bit tame.

Thursday

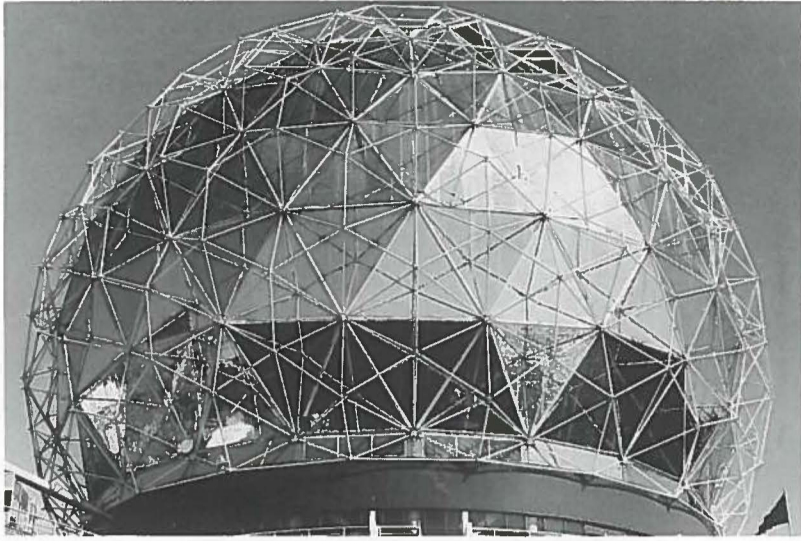
There are no less than twenty nine major areas which formed our main lighting contract, to a value of four million dollars, by far the largest individual project Strand has ever undertaken.

Basically a Pavilion is a Pavilion. One has a lighting control and a varying number of lights. The artistry and interest lies in their use. A mere listing of the equipment would be tedious both to read and to write, so here is a description of just two specific buildings - one very large and one more modest. The photo layout in which the Editorial Pentax sought to catch some major parts of our contract gives an idea of its scope.

The Expo theatre

This is a truly vast structure. Stepped seating for over four thousand, and an enormous stage. The audience roofed over but no walls. The whole structure a kind of giant wood, concrete and steel construction set. The intention is to disassemble the theatre at the close of Expo and then re erect it on a new site. The entertainment offered certainly has variety. Bob Newhart, Liberace, and the Mormon Tabernacle Choir. Some acts appear for one performance, others for a week.

The on stage lighting consists of 600 one kilowatt medium angle Par Cans controlled by 474 Strand CD80 dimmers managed by a Light Palette TV 2. The control booth is centre auditorium and there is a Mantrix board to act both as back up for the main memory system and to allow manual operation for the one-



Expo Theatre—Followspot cabin



Hong Kong Pavilion

nights. I think we would all agree that the now virtually universal memory system does not really match up to a good manual control for the one off light entertainment situation.

The Palette sub masters have the intriguingly named "bump buttons", pressing which instantly brings the circuits allocated to that sub master to full.

In the wings there is a stage equipment memory control, manufactured by Hoffend, incorporating Strand Light Palette circuitry and supplied as part of our overall contract, which memorizes and controls the height of the on-stage bars. Strand also contracted for the stage drapes thus taking the responsibility for the whole of the on stage technical package.

In your interest the Editor climbed to the dizzying lighting bridge which spans the auditorium. F.O.H. Lekos are there in plenteous supply, while three glass cabins contain the follow spots and their servitors.

Why glass cabins? Perhaps winds are high at this altitude, or possibly a Canadian spring is not always balmy. I abandoned this eyrie as a sound test of the mammoth loud speakers began.

During the afternoon we spent some time in the Folklife Pavilion - one of the more typically smaller sized exhibits. The pavilion is really a kind of village square with various areas in which there are different activities. One gentleman was carving a large baulk of timber into a statue of a beaver very quickly - he was using a chain saw.

Another of these areas was a small theatre where ethnic dancing was threatened. I had visions of some of the dull shuffling I have endured on occasion and began a panicky search for an escape - but I was wrong. The ethnic groups who perform are not merely those indigenous to Canada but also those who now live in the Senior Dominion. A very lively Caribbean band were sending forth

Lighting by Strand



Folklife Pavilion—Caribbean Band



Alberta Pavilion

mellow notes during my visit. Like most of the shows in Expo admission is included in the overall entrance fee.

A small theatrical rig of Par Cans and Lekos controlled by a Mantrix with the near inevitable CD80 dimmers and a single C.S.I. follow spot.

Dear reader, did you know that Vancouver boasts at least one very pleasant Greek restaurant? And did you know that Greek beer is STRONG? Well, Chris Mentis, Tom Janus, Strand's site project manager and your Editor, will now all be delighted to confirm both facts.

Friday

First, to the Canadian Government Pavilion. This is away from the main Expo ground and is actually on the pier from which cruise liners depart, turning as it were right for Alaska and left for the tropics. While we waited to enter the vast pale tent-like structure we hung over the pier rail watching while white coated minions offered long drinks to short sun burned passengers reclining on the upper deck of the liner berthed alongside.

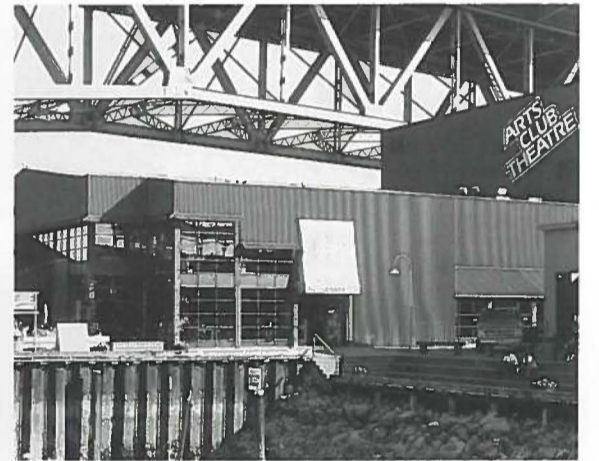
The Canadian Government Pavilion was probably the most popular single venue, containing the Imax Cinema as well as the other exhibits. Vast queues, but friends at court were contacted and in we went. Strand lanterns everywhere.

Exhibits of varying quality. Every few minutes people all looked up, so did we, and we then saw clouds of number 36 pink smoke erupt round a white plastic balloon. This then launched itself and floated round the whole interior, obviously under full control but no cables. Below, in still and quiet dignity, a single beautiful Indian canoe, marvelously shaped and patterned, held my attention.

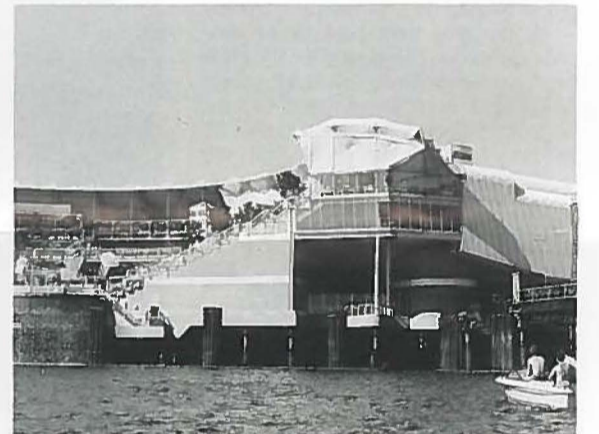
I asked Chris Mentis why he thought so many of the visitors were either under 16



Expo Theatre—auditorium



Vancouver Arts Theater



Expo 'Waterfront' view from the Harbour.

or over 70. "Easy" he said "they have lasers for the kids and chairs for the old folks. How can they miss".

Gin and salt water

In the afternoon we toured the perimeter of Expo in Phil Bernard's motor cruiser. A lovely trip of sun and spray, always close to the brilliant and varied buildings of Expo. A full size reproduction of H.M.S. Bounty lies at anchor as part of the festivities. We all three toasted Captain Bligh and naval discipline in pink gin. And we raised our glasses again to Leonard Auerbach and to all the many designers, architects and artists who created Expo '86. And we didn't forget Phil O'Donnell and our own Strand team who installed, and now maintain the major part of the lighting which contribute so much to this great exhibition.

A theatre interlude

During our maritime harbour exploration the Vancouver Arts Club Theatre hove into view on the starboard bow. (Micro Q control and Canadian Strand Dimmers.)

We lowered the front ramp and charged ashore, glasses at the high port. A great little theatre, absolutely bang full of atmosphere. The stage was set for Tom Stoppard's 'The Real Thing'. If I had not been so short of time I would have been back that evening. As it was we paid tribute to one of England's best current playwrights by consuming a plate of fish and chips each while seated in the sun on the terrace at the rear of the theatre.

Saturday: South of the Border

The next move, this time southward to Tinsel Town, or the City of the Angels. I had to get myself from L.A. Airport over

to Anaheim, where I was to stay the night, so as to be adjacent to Disneyland.

Climb into a small van, with seats and windows, as a cheaper alternative to a taxi. This is fine, but rather on the principal of the seaside pleasure boat, the driver does not shove off until the van is full. An hour is spent driving three times round the airport and calling out "anyone for Anaheim". Eventually seven more are press ganged aboard and off we go.

Early in the evening I am collected by Susan Dandridge, the Strand product manager responsible for Showchangers, the remote control pan, tilt and colour-change luminaires described elsewhere, her husband, and my colleague from England, Edwin Lockwood who is the engineer responsible for this product range.

Show Changers in Disneyland

The great news for Strand is that Showchangers have been selected by Disneyland to enhance the lighting of one of their attractions, a giant outdoor disco called Videopolis.

We drive in through one of the staff gates, with rather more difficulty than I would expect at Fort Knox, and I am given a brief visitor tour. The enormously successful Disneyland has been going about thirty years, and is far too famous for any words from your Editor - with just this small exception.

continued overleaf ▶

THE EDITOR'S JOURNEYS

The Editor afloat again

I was taken on the 'Pirates of the Caribbean' ride, in which a series of small craft float down a narrow river through a series of adventures, down water shoots, through a jungle etc.

At one stage the boat goes through some apparently burning buildings - as a result of the pirates paying a visit. What interested me here was to see that the very realistic effects are achieved by the oldest theatrical tricks. The ribbons over the fan, the orange flicker wheels and vibrating sheets of reflective clear plastic film. But superbly well done and immaculately maintained.

A final clever point. When the boats stop they are mechanically held rigid in the water so there is no delay while people get up the courage that would be required to enter an actually floating boat.

Videopolis and Show Changers

This is a wide flat floor, with some arena seating in front and a large rig of Par Cans and other luminaires where the stage would be. Lighting, video and sound control is from an open windowed control room facing the 'stage'. Video screens are to right and left.

The Showchangers had not been installed at the time of my visit, but the very heavy rig created some terrific effects.

Hundreds of happy young Californians gyrated under the ever changing colours.

My thoughts went back to the time, only thirty odd years ago, when the whole area was covered by quiet orange groves, and the parents of the animated clientele were probably living a much harsher life in the Mid West or North East of this vast country.

Sunday: Beverley Hills etc.

I admit it! A day of tourism with Bill Groener, our North American Marketing Manager and his charming wife. We tour the LA Freeways and I am shown fascinating land marks and lush homes.

In the interest of research I enjoyed my first Mexican food. I was cowardly enough to take out insurance in the form of copious supplies of Heineken larger, but this proved unnecessary. Mexican will certainly grace the Editorial table again.

Monday: Paramount TV studios

Am collected from my hotel by Debra Garcia, our Product Manager for controls. A girl with a strong theatre background and a remarkable toleration for at least one eccentric Englishman.

As a long time thirties and forties film buff my approach to the famous gates of the Paramount Studios combined enthusiasm and great anticipation. I was not one bit disappointed, although television is now a very substantial part of the production schedule where not so long ago Crosby, Hope and dear Betty Hutton were among the hired help. On a grander scale, Cecil B. De Mille's production unit also hallowed these acres. In fact the great man now lies in a cemetery literally overlooking the lot.

I was first taken to meet Michael Kaiping, the head of set lighting, who not only gave me some fascinating stories - too strong for you, dear readers - but also took us on a tour of inspection.

We looked at the enormous lighting stock Paramount has, much of it probably going back to the thirties, including phalanxes of arc Brutes.

An-old lightning flash

In their store I came across a device made of two 2" x 1" six foot long pieces of timber, joined at their centres by a nut and bolt, but loosely, so that the pieces



The Orange County Performing Arts Center. A Flyman's 'model' view.



Richard Harns and Cecil B. De Mille. The Editor visits one of his hero's memorials.

could open and shut like scissors.

One end of each piece had a bunch of about twelve half inch carbons attached, while heavy cables led to a 1200 Amp resistance. When the scissors are operated the carbons touch, and when separated - there is the very lightning that marked Charlton Heston's parting of the Red Sea. Apparently this is considered the very best lightning available.

3000 Lights in one Ceiling

We then went on to the main TV stage, No. 29. This enormous space has no less than three thousand laniro lights permanently rigged on raise and lower bars controlled by a Hoffend desk. The lights are handled by a Light Palette 2 and CD80 dimmers. One reason why these dimmers were chosen, Michael Kaiping told me, was that they could operate without any air conditioning of the dimmer room. A good natural air flow is all that is needed.

Stage 29 is currently dedicated to a very popular variety type show called 'Solid Gold'.

Few poles in the U.S.

From my own, admittedly limited, observations pole operation, so universally popular in Europe, appears to have made little headway in America. I queried this in several studios I visited and was always told "People don't want to spend the money over here". I don't believe this is the reason. Good business men, and that the American TV Producer



Paramount Studios. Inside these famous gates Stage 29 has no less than 3000 laniro Lights! See article.

certainly is, will always spend for efficiency. I think one reason is because there are so many more daily, or at least thrice weekly, shows, so standing sets and rigs make good sense.

Statistics at a studio like Paramount are mind bending - here is just one. Their annual electric bill is a nice round sum of one million dollars.

I sit where Alan Ladd sat

Lunch was taken in the commissary. I enjoyed a 'Western Omelette' as a kind of tribute to Shane. After all, Alan Ladd's buckskin clad posterior may well have graced the very chair into which I so respectfully lowered myself.

Tuesday: The Orange County Performing Arts Center

An early start down the Freeway to Costa Mesa, in Orange County. This is not only one of the most prosperous parts of Southern California, but is also developing rapidly into a city in its own right. Banks proliferate, but set among these black glass temples to finance are at least two buildings that tell us that man lives not by wheat futures alone.

There is a small repertory theatre, the South Coast Players, and next door one of the most impressive new theatres I have ever seen is nearing completion.

Because it is unfair to photograph any building before it is complete, I limited

myself to just a 'flyman's eye' view of the model in the Art Center Offices.

Acoustics make themselves heard

Actually two models have been built. The four foot high one I show here, and a much larger one - in fact 1/10 scale so that one can walk into it, which was made to test the acoustics. This aspect has obviously had a very large influence on the design. No wall surface is at a square angle to the stage. The shape of the arch, which is geometric but somewhat irregular, and the unique balcony arrangement - a double balcony to one side and a single to the other - all had acoustic as well as aesthetic objectives.

Fine tuning of the building is by hanging 'acoustic banners' which are lowered and raised from the roof on powered bars controlled by a memory system. The theatre will seat three thousand.

The lighting is by Strand luminaires controlled by a Light Palette 2 with 550 circuits and a CD80 dimmer per channel. There are two FOH lighting bridges each with three vertically mounted rows of Strand fixtures. The total lighting includes no less than 432 Leko's plus sundry PAR and laniro Fixtures.

The production policy will be primarily orchestral and operatic.

One excellent idea is that a translation of the Italian or German text will be projected on a special screen as the opera unfolds. This seems to me to give the best of both worlds. The original complete sound, as Verdi or Wagner meant us to hear it, plus comprehension. I

think it was the critic Alan Monkhouse who remarked that he found it difficult to judge the acting in a French language tragedy because he "couldn't weep and strike matches at the same time". It sounds as though Orange County have got round that particular problem."

The lighting in the auditorium is from large canoe shaped bowls and downlighters and is designed by Jules Fisher - as well known and acclaimed in Europe as he is in America.

The exterior is going to be superb. It is clad in red polished granite, with none of the wretched rough concrete that has ruined the appearance of so many theatres in England. A giant arch, echoing the traditional proscenium, dominates the theatre front. A large glass and metal sculpture of a firebird will hang within the arch. This area has lighting designed by Tom Ruzika, a lighting designer who has done some fine work in California but was not known to me before this visit. I don't doubt he will soon be very well known indeed in Europe as well as at home.

A few more details of this fabulous project.

The grid is 110 feet above the stage. It has 92 lines on counterweight sets. The orchestra pit lift is in two sections, which can be independently operated.

That sometimes neglected area, the rehearsal room, is superb. The floor is identical to the stage itself, so any dancer has a familiar floor surface. Swivelling wall panels allow 'live' or 'dead' sound for musicians.

The final cost - which has been raised entirely by local subscriptions with no taxpayers money involved at all - is estimated at over seventy million dollars.

* Just as we go to press I hear that Covent Garden are to adopt a similar system.

The car exacts its price

One problem for the theatre is that matinees are out. This is because, with no public transport, 2000 cars may have to be accommodated, and when the local businesses are open and the shopping malls functioning there almost certainly won't be space in the adjacent multi-storey car parks.

I have asked our West Coast correspondent, Craig Wolf, to attend a performance so that he can let us all know how everything works out in actual performance.

One last word - Philip Mosbo, the Director of Technical Operations for the Centre turned out to be a Tabs reader of long standing. (Tabs was the English theatre and TV lighting journal, founded in 1937, which I edited during its last five years before it was superseded by Strandlight.)

I meet another Tabs reader

The last two days of my visit were too crowded with events to produce a sensible narrative. But one meeting especially stands out. Debra Garcia and I visited the offices of Tabs reader Bill Klages, one of America's leading TV lighting designers, who in fact heads a complete lighting service group. I have persuaded him to tell us in our next issue all about his mammoth lighting project for the July 4th re-dedication of the Statue of Liberty - so watch this space.

Incidentally, Bill operates from one of the world's most romantic addresses - Sunset and Gower. In fact his offices are actually in the old Columbia film studios. I hope he is not troubled by the restless ghost of Harry Cohn, the greatly feared Studio Head of whose well attended funeral Red Skelton remarked "Well, it only proves what they always say - give the public something they want to see, and they come out for it."

West Coast thoughts

Theatre on the West Coast is, to judge by places like the Vancouver Arts and the Los Angeles Theater Center, is alive, well and adventurous. TV is alive and well, but not anything like as adventurous as its own technical community would like. But both areas have been fine to Strand - not just as customers, but as the inspiration of many of the new products which are now emerging from our Research and Development team.

M24 in two unfamiliar roles

Four years on

It was 1982 when we introduced M24*, the first memory system at a really affordable price. I remember very well the launch at Brentford to our dealers from around the world. There was a great deal of enthusiasm for the whole concept, even more when the price was announced, and when Andy Collier picked up from behind a screen a battered old television set - no doubt from someone's loft - and the audience saw that it was happily displaying the cue sheet - well, we all knew we had a winner.

Five hundred plus systems later I thought it might be interesting to describe two representative non show business applications.

*Available in all 220/240v markets.

M24 at Porsche Cars (GB) Ltd

The M24 memory system seems to be leaving its theatrical home more and more often nowadays.

I have seen them controlling the lighting at conferences, at product launches and in hotel ballrooms.

But for the first time recently I visited a commercial building utilising M24's many talents to provide a really sophisticated lighting control concept. Of course the building itself, the new Porsche headquarters for their U.K. operation at Theale near Reading, is a very long way from the image that 'commercial building' may conjure up. It is itself a very sophisticated total design package. The architects - the Dewhurst Haslam Partnership of Tunbridge Wells - were responsible not only for the building and its landscaped setting, but also for the whole visual package. This included selecting the furniture, carpets, etc.

I have visited many new buildings in my time but somehow in this one, whether by company discipline or by some other miracle, there is a total absence of the selotaped notices written with 4H pencils which seem to infest so many new offices.

The centre of the building is an atrium, which provides a display area for four gleaming cars which stand on a floor of polished black granite. At one end of this area there is a cascade of water down the wall into a wide pool with five bubbling fountains. The pool is extended round three sides of the floor, so that the display area appears to 'float'.

Fountains, the cascade, the trees and the hanging plants as well as the company's logo, and of course the cars on display, are all lit by downlighters and underwater fittings in four circuits, all under the control of the M24.

The adoption of such an advanced lighting control system was part of the architect's brief to create in the building a positive enhancement of Porsche's very strong public image. I suppose its products fall very much into the dream category for a good many enthusiastic motorists, and dreams need constant reinforcement.

Not only does the lighting allow the glittering 911's and 928's to be seen under ideal conditions but the M24's many memorised programmes allow the whole appearance of the atrium to be changed literally by pressing a button. And, of course, it is not a series of finite choices of lighting, but 199 choices, which can not only involve 'active' lighting sequences and changes, but can be 'tuned' as required.

Incidentally, a somewhat bizarre note was struck when I rang to arrange for my visit. A charming female voice said "No, don't come on Tuesday - its the day for cleaning the leaves - painters have been working overhead". Of course, where no rain can fall, the maintenance man must take over.

Overlooking platform 12



Overlooking Platform Twelve - M24 at Gemex

I have known Manchester's Central Station since, as a lad of eleven or twelve, I was taken from the family home in Warrington into Manchester to have lunch at the nearby Midland Hotel with my one successful uncle.

In later days, after the last train had departed, this noble building fell into a sorry state, being put to the menial purpose of car parking. The overweening automobile literally standing on its fallen rival of the railway. I must though, confess, that there was great atmosphere still lingering in the enormous train shed, particularly if one drove in late in the evening with the whole vast space lit by only a few hanging bulbs. One walked back from the car to the attendant's kiosk alone in the largest enclosed space in the North of England.

After many years during which a variety of ideas for the building's use were mooted, the decision was taken to preserve the train shed itself, and convert

it into an exhibition centre, demolishing and replacing an undistinguished clutter of brick buildings that had grown up in front of the main hall.

Ove Arup & Partners (Manchester) the very well known firm of consultant engineers, were appointed to be responsible for the design and execution of all the electrical and mechanical engineering, while the architectural design work was undertaken by Essex, Goodman & Suggitt, Brian Crabtree being the architect in charge of the project.

Now all this effort, completed in a very short time considering the complexity of the operation, has come to fruition under the newly minted name "Gemex".

As well as commercial and trade exhibitions, sports meetings and other large scale spectacular events will be featured.

Because these could range from show jumping to pop concerts the actual lighting needed will be hired in as required.

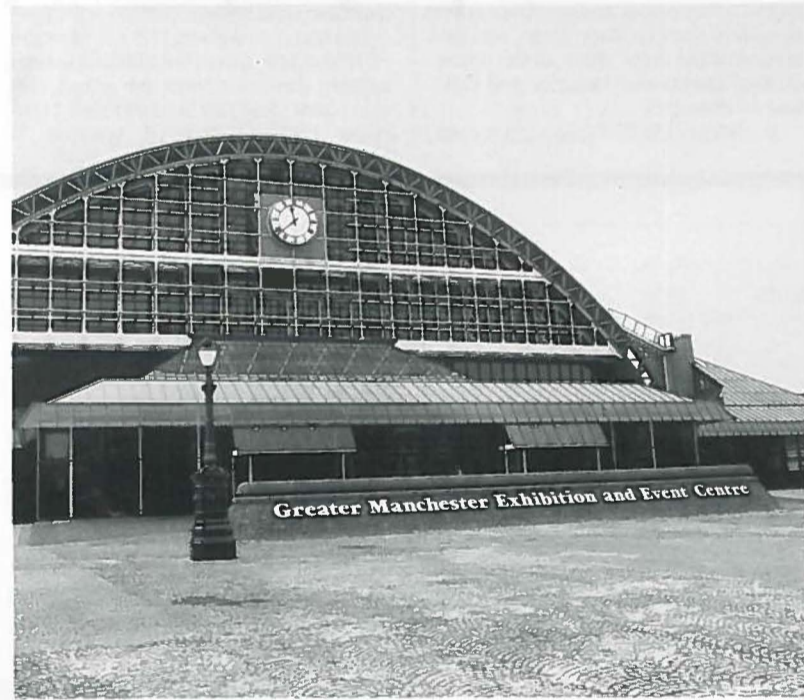
Distribution wiring terminating in sockets around the building has been provided, with a permanent lighting control memory system, a 120 way M24, and Permuss dimmers, installed in the main control room over what I believe was the parcels office on Platform 12.

Through one of the original eyebrow windows the operator will have a very good view over the whole of the now levelled floor area.

Because M24 uses multiplexed control lines to the dimmers it will be a quick and simple matter to put the main desk under one arm, the effects desk under the other arm, take a coil of multi core cable in one hand and the V.D.U. in the other and thus equipped set off to select the best operators control position for the coming event.

The Permuss dimmers are incorporated in the main switchgear cabinets in the control room, which was manufactured by the locally based specialists, Messrs. L.T. Switchgear, through whom Strand's equipment was supplied.

Whether the event will call for lighting by Harmony and Cadenza or Polaris and Bambino, the M24 will be there and ready to provide the most sophisticated control or effects - and, of course, to provide them again and again just as the lighting designer wanted.



Exterior view of the Greater Manchester Exhibition and Event Centre.



The Porsche Cars' showroom.

STAFF CORNER

CALIFORNIA



Walter Beasley has been with Strand U.S. for nine years. He lives in Anaheim, no doubt surrounded by orange groves.



Alfredo Galang joined us in 1980. He assembles p.c.b.'s and lives in the San Fernando Valley.



Henry Ho tests p.c.b.'s. He has been with us for nine years and lives in Cerritos, California.



Aram Adamian is a machinist at Rancho Dominguez. Joining us ten years ago, he is a resident of East Beverley Hills.



Pedring Abella is the leading man on lantern assembly at our U.S. factory. He joined us ten years ago and lives in Gardena.



Jordan Gonzales joined us six years ago. Jordan lives in downtown L.A. and the Editorial Pentax pictured him assembling a Light Palette.



Wally Yuen has been with us nine years. I was told he was "The number one guy on custom wiring". Wally lives at Monterey Park.



Estevan Solis is the man who gets the products out to our customers at Rancho Dominguez. He has also been with us four years, and lives in El Sereno.



Eloise Tucker lives in Glenwood. She has been with us for nine years and is a p.c.b. assembler.

THE SAME WORK BUT 6000 MILES APART

Strand products for 100/110v markets are manufactured at Rancho Dominguez in California, while 220/240v areas are supplied by our plant at Kirkcaldy in Scotland. I recently met and chatted with members of both teams - naturally the Editorial Pentax went to work.

KIRKCALDY



James Keddie joined us at Kirkcaldy six years ago. Both men "label" our products. Walter by engraving, while Jim does silk screening.



Audrey Murphy has been assembling p.c.b.'s at Kirkcaldy for four years. Audrey lives in Linkstown, Kirkcaldy.



Henry meet Helen Morris who has been at Kirkcaldy 13 years and also tests p.c.b.'s. Helen lives in Glenrothes.



Jim Young, who joined us at Kirkcaldy three years ago does the same work as Aram and lives in Glenrothes.



Lorna Brown assembles our 220/240v lanterns. She actually looks too young to have been with us for seven years. Lorna lives in Kirkcaldy.



Irene Dryburgh has been at our Kirkcaldy plant for 15 years. She lives locally and is pictured assembling a Gemini.



Edward McCormick who also does prototype wiring lives at Chapel West, Kirkcaldy. He has been with us no less than fifteen years.



Jim Innes has the same responsibility at Kirkcaldy. Jim lives in Dunnikier and has been with Strand four years.



Christine Wotherspoon does the same job, assembling p.c.b.'s, at Kirkcaldy. She has been with us seven years and lives in West Torbain.

The stage and the lighting rig

By David Beaumont

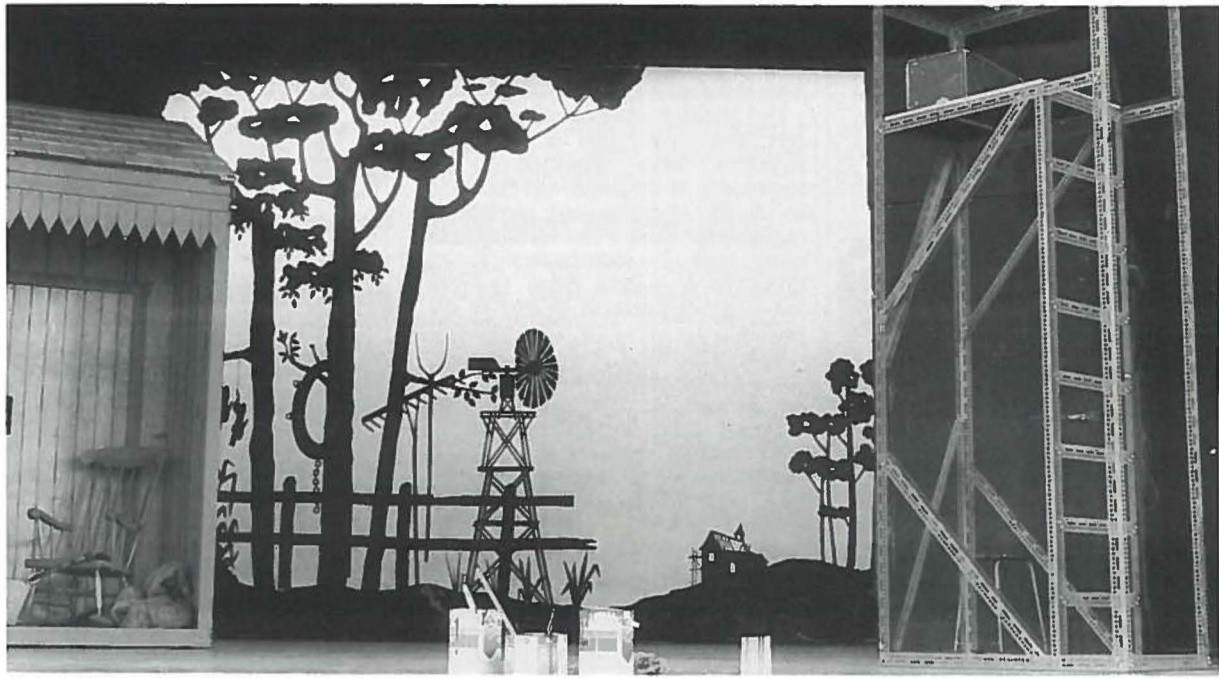
After the much admired photos of David Beaumont's production designs in the last issue of *Tab*s, we asked him to write about the latest production at Bicester School where he is a member of the teaching staff.

The stage is a typical school stage in a flat floored hall. The proscenium is 24ft with wing space on each side of 7ft 6ins. The stage is 20ft deep, with an apron of 5ft, with a working height of 15ft. I have an intense dislike of the masking borders that often give the appearance of dirty grey washing technicoloured by the proximity of the lighting bars, so our ceiling void is masked with horizontal panels of black, fireproofed hessian, on wires stretched across the stage from the wings. This is seen as a black void by the front rows, and, since it does not hang like borders, the upstage area and cyclorama can be lit from the No 1 bar.

There is a 100 amp supply connected to an eighteen-way Strand Mini-2 purchased fourteen years ago. The most useful facility we have is the remote control desk and a long control cable, enabling the operator to be almost anywhere in the auditorium. The majority of the lanterns are Strand 23's and I23's. We have some Prelude 28/40's and four original mains voltage Mini spots. The rest are an assortment of fresnel and profile lanterns of uncertain pedigree, with some sealed beam units, floods, and an elderly compartment batten lighting the cyclorama.

The set

Because of the Dream Ballet sequence, it was necessary to create as much space as possible on the stage for the local dance school. For our stage with no flying facilities, and very limited wing space, I came up with an idea that seemed to satisfy all conditions. It was to create a 'back cloth' with a permanent silhouette, set against a plain cyclorama. The cloth was a black gauze (15ft x 24ft), supporting an applied silhouette design of an 'Oklahoma landscape' (newsprint cut out, fixed with Copydex, and then painted black! Remarkably effective I was told!). The rest of the set



Taken - very obviously - during a rehearsal!

Oklahoma!

was built upon two trucks which, when struck were 'parked' each side of the stage. The reverse side of each was painted black so that when struck they appeared simply as part of the wing maskings. Scenes were set in view of the audience by costumed stage hands, manually rotating the trucks and moving them to positions pre-marked on the stage floor. Additional set dressings were then positioned. One truck was the porch to Aunt Eller's farmhouse, the other the Smokehouse. This truck was made so that the whole of one side could be opened to show the interior as it tracked downstage to its position. Both trucks had their own lighting and functional doors in the back wall to allow entry by the cast.

Lighting the show

I started by dividing the stage into lighting areas. The apron is 5ft deep, but almost 40ft wide. The extreme outer edges were not used, so I divided them

into three. The downstage area, immediately upstage of the arch, is 24ft wide. I divided that also into three. The upstage area was divided into two. I now had eight main areas to light.

I now worked towards the idea of lighting each of these areas with at least three lanterns. Two from the front, separated by about 90 degrees as the motivating light was coming from the O.P. side, then that lantern was given a straw (3) gel, the other had a cooler, but complementary - lavender (36). The third luminaire was used to back light the area at a fairly acute angle in open white. I have come to appreciate the way in which back lighting enhances the 'modelling' of the characters. All three of these lanterns were patched to the same dimmer. The areas on the audience side of the proscenium could obviously not be back lit. I had now used three luminaires on each of the five stage areas, and two on each of the three areas on the apron, totalling twenty-one lanterns and eight dimmer channels.

Oklahoma calls for some-night scenes.

I ignored the areas that I had been lighting, and used four 300W sealed-beam units tinted steel grey (no 17) to down light the main stage area. All four of these were patched to one channel. Two fresnels were hung from the No. 1 bar (also steel (17)), to highlight the centre down-stage area. The FOH bar had two further fresnels, with lavender (36), to pick up the down stage actors with a warmer tint. This added eight further luminaires, connected to three channels. The night scenes were lit with these additional lanterns, specific acting areas highlighted with the 'normal' lighting at a low level.

Our elderly 24-compartment batten lights the cyclorama at a distance of only 30 inches. It was originally three circuits, now re-wired in two circuits to lessen the patchiness caused by the nearness of the batten to the cyc. One circuit of 150W lamps, blue (19), and the other 100W lamps, blue (32). For Oklahoma, two 200W floods, straw (3), were used to light the outer ends of the bottom of the cyc.

For the Act I Dream Ballet, I wanted some lighting that complemented the dancers, and gave a dream-like quality. The place is a grove on Laurie's farm. For this I used two Prelude 28/40's with 'leaf' gobos and a mid-green (22) gel, from the FOH bar. I put three PAR 300's on booms lighting directly across the stage, O.P. side straw (3) P. side lavender (36). I find cross lighting effective because it

enhances the form of the dancers, particularly when complementary tints are used from each side. With limited resources, I cannot use colours that are too saturated, too much useful 'illumination' is absorbed in the filters, and I can not afford to 'tie up' too many luminaires as 'specials'. Three more dimmer channels have been used so there is only one left on the main board. Before dealing with the 'specials', I connected the final channel on the main board to some additional open white fill-in lighting on the FOH bar. The down stage centre area needs that little extra illumination to add that touch of brilliance to the 'big numbers'.

We used three 'specials'. Two floods lighting the interiors of the trucks, while the porch of the farmhouse was lit from under the eaves with a flood, gelled straw (3). Jud Fry's smokehouse had a flood, lavender (36). (I would have liked to use a neutral - yuk! - gel in this flood, but had nothing available.) Both trucks had long flexible leads, and each had its own dimmer. The third 'special' was a made up batten of 'chinese lanterns' to set the party atmosphere of the Box Social. These were made from a set of ten low-voltage 'patio lights', wired in series and fitted with white paper globes that picked up the individual colours of the lamps. This batten was 'flown' in the roof void, and dropped in at the beginning of Act II and had its own dimmer. The control for the 'specials' and the houselights was by small portable dimmer units.

Neither a low budget, nor limited facilities, need deter one from designing an imaginative and effective lighting plot for an amateur production. I always start by flatly refusing to even consider the use of the fluorescent tubes in the hall when an audience is present. Nothing is more likely to destroy the illusion of theatre. I light the auditorium with ordinary tungsten filament lamps at the lowest level compatible with reading the programme! (Yes, I get complaints, which I usually ignore.) I know, however, that if I start off in this way, the relative brightness of the stage, compared to the dimly lit auditorium, will allow me to take liberties with my lighting that might not otherwise be possible. Also, I rarely run circuits 'full up', except at very specific times, such as in the final number of a show. By doing this, I always have something 'in reserve'.

**Yes, I know sunlight filtering through leaves is not green, but it looked good in this context!*

The T28 - A new lamp for the theatre

Thorn EMI Lamps have introduced a new theatre lamp for 220/240 volt markets that we believe will be of interest to users of Patl 23's and I23's, the T28.

It is a T.H. 500 watt 300 hour lamp, P28 base, 3000K colour temperature and is an alternative to the T1 and T17. We believe this new lamp is an attractive deal when one may not obtain the full life of 750 hours from a T17, but the colour temperature and the constant light output for life of a halogen lamp is required.

Touring, of course, is never a recipe for a long lamp life.

I also rather doubt that schools, with their lanterns averaging perhaps a few hours use a week, get full life from a 750 hour lamp. Mechanical damage is always a risk.

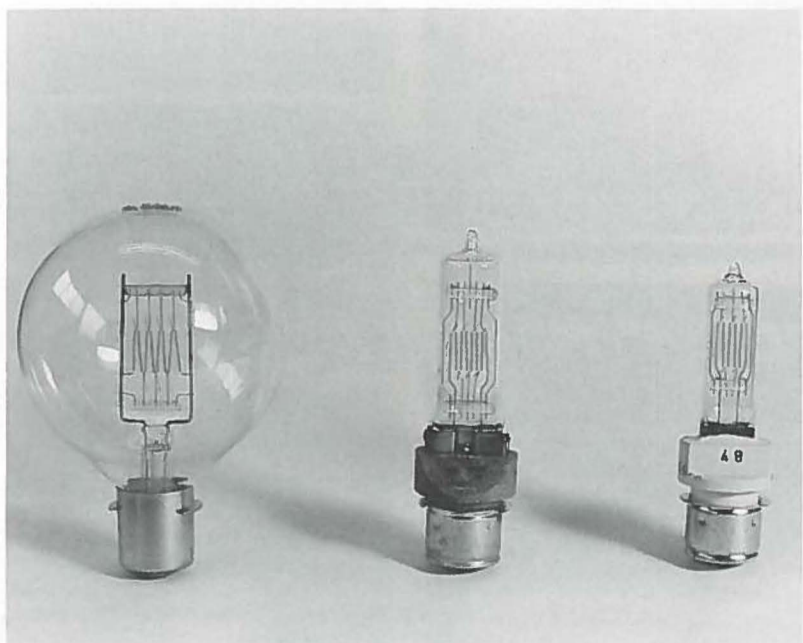
A T17 in a school lantern is a bit like a man who goes hang gliding as a change from trial biking during his time off from deep sea diving. Physical misadventure may unship his filament before old age catches up with him.

For the long professional run in a lantern front of house, which is virtually never altered, the 750 hour T17 must remain the best deal.

But I strongly recommend all you Patl 23 and I23 users out there to contact your local Strand dealer, stockist or distributor and give the T28 a trial.

Comparison Table				
Type	Description	Rated Hours Life	Price	Cost per Hour
T1	500W Tungsten	200	9.90	4.9p
T17	500W Halogen	750	21.80	2.9p
T28	500W Halogen	300	11.50	3.8p

These lamps are for 220/240V markets only.



Electro Controls

The professional lighting industry in the United States is diverse and multi-faceted. It would be difficult, if not impossible, for one manufacturer to completely address the wants and needs of this broad constituency. The Rank Organisation has announced the acquisition of Electro Controls, the second largest manufacturer of dimming and control products in the

United States. The Company will continue to operate as Electro Controls with headquarters in Salt Lake City, Utah. By calling upon the services of two independent sales networks, Rank will now be able to offer a more complete range of both complementary and competitive products. It is intended that through the separate, yet parallel, efforts of both Strand Lighting and Electro Controls, the best interests of the American lighting community will be served.

Russian around for Strand Showchangers in Moscow

We recently showed our full range of equipment at a large scale TV & Theatre technical show held at Moscow's

Exhibition Centre under the title SVIAZ 86

Technicians from all over the Soviet Union and from the Comecon countries were able to see a Galaxy Premier 384 channel, a Gemini, an M24 and the new P.I.P. (Plug-in Professional) dimmers.

Our complete luminaire range was on display as well as the full laniro line.

Showchangers were there to perform their evolutions and demonstrated that they could all turn red - or any other colour - by remote control.

Showchangers are one of our new 'World Products.' As they were on display in Moscow units were actually being installed in Disneyland. A world product indeed!



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