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LIGHTS!

THE JOURNAL OF LIGHTING FOR
ENTERTAINMENT & ARCHITECTURE

SEPTEMBER
1991

VOL. 2 ISSUE 3



**JASON DONOVAN
AND HIS AMAZING
LIGHTING**



Strand Lighting

Step Into The Limelight with Strand's Educational Resource Pack



Amazed by Arcs? Baffled by Barndoors? Confused by Controls?

Then 'Step Into The Limelight' with this new teaching pack. Strand's A-Z guide of stage lighting equipment for schools and amateurs. This unique resource pack provides a complete teaching and learning program comprising:

- 15 wall posters in colour
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- Colour filter samples
- Scale design stencil
- Technical drawing pen
- Photocopy masters of a scale lighting plan, plot sheet and patching chart

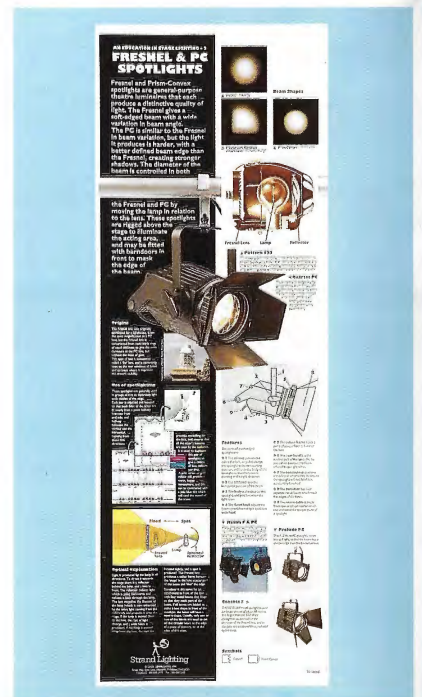
Special offer to *Lights!* readers, the complete Strand Educational Resource Pack for only £37.75 including postage and VAT. Simply complete the order card in this issue and send it to Strand Lighting at Isleworth.



Strand Lighting

A REPUTATION BUILT ON BRILLIANCE

Strand Lighting Limited
Grant Way, Syon Lane, Isleworth
Middlesex TW7 5QD Tel: 081-560 3171



New products show the way forward...

One of the greatest problems for any manufacturing company is to maintain the momentum of new product development.

Immense effort and enthusiasm is put into designing and making a new range of products to launch at a major international show; the emphasis then shifts to selling the new range and before anyone has time to draw breath, another year has passed and the marketplace is eager for the new year's offerings.

In the past we have been justly criticised for creeping into a shell for a couple of years between each major product launch. This year is different.

After the success of the 1990 launch which included new ranges of digital dimmers, luminaires and memory controls, we are poised to deliver another feast of products across our ever broadening product range.

Turn to the centre pages for a pictorial tour through the new lighting equipment for 1992: manual controls, luminaires for stage, TV and motion picture, architectural controls, digital dimmers, educational aids.

Being an international company, and publishing an internationally-read journal means that we often publicise products which may not be available in your country. This is usually for reasons of compatibility with local power supplies or national regulations.

Your local Strand company or dealer will explain the availability and pricing of any Strand product in your area.

Finally, as we were going to press, we learned that Hollywood lighting director George Spiro Dibie, featured in this issue, had won a further 'Emmy' for creative lighting.

This latest award is for an episode of the popular television series 'Growing Pains'. Strand Lighting sends its congratulations to this most deserving of award winners. Well done, George!

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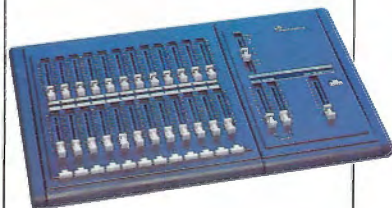
George Spiro Dibie's hands are all-important when taking light readings close to TV stars such as Joanna Kearns, of 'Growing Pains'.

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The new Sainsbury Wing of Britain's National Gallery shows art treasures at their best with Strand lighting.

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A new manual control desk is launched by Strand this month. Discover LX.

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Front cover: Jason Donovan in the revival production of *Joseph and The Amazing Technicolor Dreamcoat* at the London Palladium. Lighting is by Andrew Bridge using a Galaxy 3 memory desk to control lighting, colour scrollers, smoke machines and light curtains.

Photo: Rex Features

In larger than life Hollywood, one aspect of the movie world – lighting equipment – is destined to become smaller in future according to a respected cinematographer

BE CREATIVE AND THINK SMALL

by Richard Humphries

On the fashionable boulevards around Hollywood the distinctly unsettling greeting 'Hi, Sexy' is guaranteed to provoke a warm response.

For it is the catchphrase – used with total disregard for gender – of the remarkable George Spiro Dibie, whose TV and film work has been appreciated by millions around the world, probably without them realising it.

Even in 'Tinseltown' itself, where everyone is an individual, 'Dibie' is a unique character. A dedicated family man, he is known and loved by all. He is the only cameraman in the USA to be retained under contract by a major studio, in this case Warner Brothers.

With four 'Emmys' and six nominations to his credit (plus a clutch of other awards), he is currently President of the Camera Guild and also of the American Society of Lighting Designers.



'Head of the Class', starring Scots comedian Billy Connolly

Dibie's role is now that of supervision cinematographer for Warner Brothers. In short, he produces the studio's pilot programmes and sets their style, ready for others to copy when they go into series production.

One of his notable successes, seen across the western world, is the pilot for the

series 'Head of the Class', in which Scots comedian Billy Connolly has recently assumed the starring role.

Add to that such TV series as 'High Chaparral', 'Night Court', 'Growing Pains', 'The Ten of Us', 'The Molly Maguires', 'Barney Miller', 'Buffalo Bill' and films such as Barbra Streisand's 'On A Clear Day' (as gaffer), and he is firmly placed on the entertainments map.

Dibie has his own, very clear ideas of where television and movie lighting is now, and where it ought to be going. But what of the man himself?

His background is cosmopolitan to say the least. Born nearly 54 years ago in Jerusalem to a Greek father and a Lebanese mother, he was educated at a Catholic school run by Franciscan monks during the days when the Holy Land was a British protectorate. He speaks Arabic and French fluently and English enthusiastically, with more than a hint still of his Middle East origins.

He said, 'All my life – even when I was eight years old in Jerusalem – I wanted to be in the movie business. I used to cut out cartoons and project them. I wanted to be a director, but things did not work out that way.'

He graduated from the Pasadena Playhouse (which spawned such notable talent as Dustin Hoffman), having arrived in the United States at



George Spiro Dibie

the age of 18, and began learning about life the hard way.

'When I arrived in this country it was nothing but hard work,' he said. 'I was like a little kid going into a candy store. You cannot have that candy until you have the money to pay for it.'

'I had a lot of study, working part-time and going to school... working up to 18 hours a day. Little by little it allowed me to move up. My mind was always on cinematography.'

'But it was very difficult to break into films. When I finished college I went to a wonderful actor called Danny Thomas and said 'How do I get into the business?'

'He said, 'Well, you need five years experience first.' It was Catch 22. How do you get the experience if no-one will give you a job? So you go and do all kinds of jobs – documentaries, commercials, corporate... by doing that I trained myself. I learned the hard way.'

His big break came with the film 'Don't Look Back – Sachel Page' about the black baseball player of that name. When the entire production crew was fired, Dibie was on hand to take over as cameraman. Then the producer had a

heart attack and decided 'Let Dibie direct it'. And from there, as the film says, he didn't look back.

At that point, the film industry was about to be eclipsed by television, although too few realised it at the time.

He explained, 'When I arrived in the States it was very sad. Television had come along but the major studios refused to accept it. They said it was a fad and would soon be gone. I have always been open



Technical briefing on the set of 'Night Court'

to new technology but a lot of people in that period would not touch television.'

Fortunately for him, Dibie fell on his feet, professionally speaking. One of the TV shows handed to him was

'Barney Miller', about a New York police squad room. It went on to become one of the top shows across North America.

As a profitable sideline, he set up a production company, Dibie Dash Productions, with his next-door neighbour, working from a garage, where they made documentaries at weekends and sold them. Their speciality was 'motivational' films with titles like 'How To Get A Job', aimed at minority groups. This was at a time when unemployment was, especially for poor blacks, a fact of life rather than the social choice of 'dropping out'.

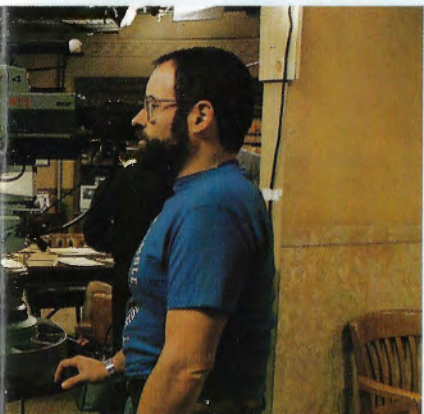
The Emmy awards he has collected over the years were for 'Mr Belvedere' (pilot), 'Growing Pains', the 'FYI' series, and 'Highway to Heaven', part of the 'Ten of Us' series.

In addition, he has picked up a Gold Award from Houston International Film Festival and many other awards from Columbus Film Festival for documentaries.

His hectic lifestyle is plainly not for the workshy.

'Hey, I love this business!' he explained. 'I tell everybody that if they want to be in films they have to love it. I love it and I get such a lot out of it. I also like to put a little back - that's why I am active with all these societies.'

'A lot of people try to get on my crews but places are severely limited. New people come onto the crew because we do very big shows and we take on extra people. If someone works hard, we notice, and they are in.'



'I hate to say it but some of the younger generation get tired half way through the day. Yet if someone is a hustler, works hard and has a good attitude, we say "why don't we hire him?"'

What of the future of movie lighting? He said, 'We are going through a revolution at the moment, especially with Kodak EXR film. It is fast film and is becoming much faster. We are going through the natural light revolution.'

'A lot of people panicked and said, 'that means we don't use lights'. We have proved to everybody that they are wrong. Most of the Emmy's I got were awards for creative lighting. To do creative lighting you need more equipment to paint with.'

'In the industry today, with the fast film, we need smaller units - maybe more powerful - to give us a better spread.'

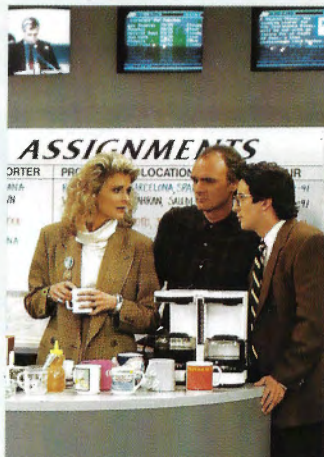
'I use juniors mostly, babies and sometimes, seniors. That's for film, because the film is fast. In video they have the CCD camera. I have done a show called 'Halloween' where I went from five to ten, then fifteen footcandles. I used Strand's HMI units - three Sirio 12K's. These were the biggest I used. After that I jumped down to juniors.'

'We used the Strand 12K HMI for a huge scene in a cemetery with a lot of smoke. I used them like a triangle. At each angle I put a Condor and the light was 68 feet high, covering the whole backlight. In one area we shot high and there were two backlights and when we moved to the other side it always worked the same way. But the rest was smaller units. You don't need heavy equipment today.'

'The other area where we worry today in the States is High Def. Japan has a system, the UK and Europe have the Eureka system, with 1250 lines. In the States we don't have it, but five systems are being tested, although they are digital, not high def.'

'At Warner Brothers we came to a decision. We have a star called Linda Laven and we did a pilot show with her, which was picked up by ABC as a series. We said: what happens if this show runs for five or six years? To protect the investment of Warner Brothers we have originated on 35mm film. You can transfer that to any system in the world. I advise everybody to go to that. No matter what they do with high definition it is still 1100 lines versus the film's 2200 lines.'

'In the future I see film lighting equipment becoming smaller. At the end of



Candice Bergen in 'Murphy Brown'

April we held a two-day workshop on Stage 9, with ten cinematographers, when we all showed how we lit a particular scene. None of us used big equipment. It was all small equipment and going for creative work to control the light.

'I use dimmers to control the light but we don't have dimmers on our stages. We have rented them in the past. Very few motion picture studios have dimmer systems, although eventually they will go to that.'

How did he view the new technology in lighting control systems? He said, 'In the motion picture industry, computers mean nothing. What we need is something to get hold of at the last minute. For instance, when someone comes in through the door, the sun is hot and I want to make a last-minute adjustment. Now I could not do this with a computer.'

'The other problem in the industry is that we don't have enough qualified people to run these computerised systems. The rule is: the simpler, the better. Why? Because it is daily hire. We don't hire somebody who works there for 52 weeks.'

❖ I see film lighting equipment becoming smaller ❖

'When you have a show you hire someone for the week and they don't have time to learn something complicated. That is the biggest problem in the motion picture industry.'

Of his own method of working he said, 'When I do multi-camera, next to my chair I have four small dimmers - they are about 50 years old - to correct myself. I also use the Multi Cue. It is very old but useful for correction

at the last minute. We do plan on getting new equipment, however. Maybe next year.'

One section of the movie world has particular cause to thank George. The word amongst the Hollywood ladies is that there is no one who knows better than George Spiro Dibie how to show them at their most flattering on screen.

Candice Bergen was once advised to insist on having George brought in to light her for one show, the pilot for 'Murphy Brown', because 'He knows how to light a woman.'

But there is more to this than just flattering the female ego. It is a matter of practicality.

He said, 'One female star wanted to wear very pale make-up but I said 'No. You must have a California tan. We want to sell this show and make a lot of money and there's one hundred people here in this crew depending for their living on your face.' She saw sense.'

'If a star trusts your judgement and knows that you are working hard to show them at their best, then they are happy and they don't create problems for the studio.'



Markie Post, star of 'Night Court'

'Hi, Sexy!' is so well known in movie circles as the Dibie catchphrase that George even has it printed onto promotional 'handout' ball-point pens. So how did it come about?

'It came from Barbra Streisand,' he explained. 'When I am taking a reading next to a star's face I have my hands up close to them. Now, if you have been handling sardines at lunch it would not be too good for the actor or actress, so what I do is to splash a little cologne on my hands.'

'Barbra noticed this straight away. Each time I went near her she would say 'Hi, sexy!'. It became a joke between us and then I started using it all the time, to everyone. If nothing else, it puts people at their ease and makes them smile!'

New Lighting for Britain's Heritage

Versatile architectural lighting was needed for the new Sainsbury Wing extension to the National Gallery at Trafalgar Square in London – and Strand Lighting had just the answer.

The National Gallery, opened by Her Majesty Queen Elizabeth II on July 9, houses many of Britain's art treasures. Each painting has to be considered individually, in lighting terms, since the age of many works of art renders them sensitive to strong light.

As a result, a system of Permus and Microdimmer architectural lighting controls was installed to provide local area flexibility where necessary throughout the new wing.

This allows staff at the National Gallery to set overall lighting levels with recordable presets for both public area and exhibit illumination.



A GREAT BARN OF A THEATRE



When visitors describe The Grange in Worcestershire, England, as 'a great barn of a theatre' it is not so much a reflection on its size as a simple fact.

James Wellman and David Swift have converted a 12th century barn next to Bretforton Grange, near Evesham, into one of Britain's most unique theatres.

Lighting equipment includes a 24-channel Permus dimmer rack, Prelude fresnels and profiles, Cantata follow-spot and an Action 24.

THINGS ARE LOOKING UP AT THIS HOSPITAL



We all know what it's like... there you are in a hospital outpatients' waiting area with nothing to look at but four walls and a few out-of-date magazines.

But all that has changed at Llandough hospital in Cardiff, Wales, thanks to some bright

students, Strand colour filter, and Strand Lighting's local distributor, Light Relief.

Postgraduate art and design student Sara Cunningham from Cardiff Institute of Higher Education, with the help of pupils from St. Cyres Comprehensive school, came up with this design.

ICON COMES ALIVE WITH MINICUBES

A modern 'kinetic' icon, commemorating the life of Brother Edmund Rice, founder of the Christian Brothers, has been given a new dimension with Strand architectural lighting.

The original icon, which is now in the shrine dedicated to Edmund Rice in St Anne's church, Liverpool, England, was designed and made by the artist Desmond Kyne.

A lighting system for icons has been devised by Brother Andrew Rock following experiments to find a suitable way of handling reflected lighting from painted glass and engraved metal.

Best results were obtained by using a number of 12-volt halogen lamps with dichroic



reflectors to provide an even light from different angles. He has now devised a system called 'Ikontrol' to demonstrate lighting effects for icons.

...AND THERE WAS LIGHT

The Pope's annual 'Via Crucis' broadcast from the Coliseum in Rome on Good Friday provided a fitting uplifting occasion for the first public show of a new Quartzcolor luminaire.

This year the new Super Quasar MSR 2.5kW luminaire

was included in the lighting rig. Excerpts from the broadcast were subsequently transmitted by many TV stations around the world.

Super Quasar is based on a single-ended MSR lamp to give a powerful narrow beam of light, which can be adjusted by drop-in lenses.



Strand Lighting

New Products for '92

LIGHTS!

EXTRA

SEPTEMBER 1991

This September heralds the official launch of a comprehensive list of new products, accessories and upgrades to our existing catalogue of products. Strand Lighting is a world-wide company serving many diverse markets and needs. Some of these products may not be available in all countries of the world, so please contact your local Strand sales division for details of product availability and pricing.

LX

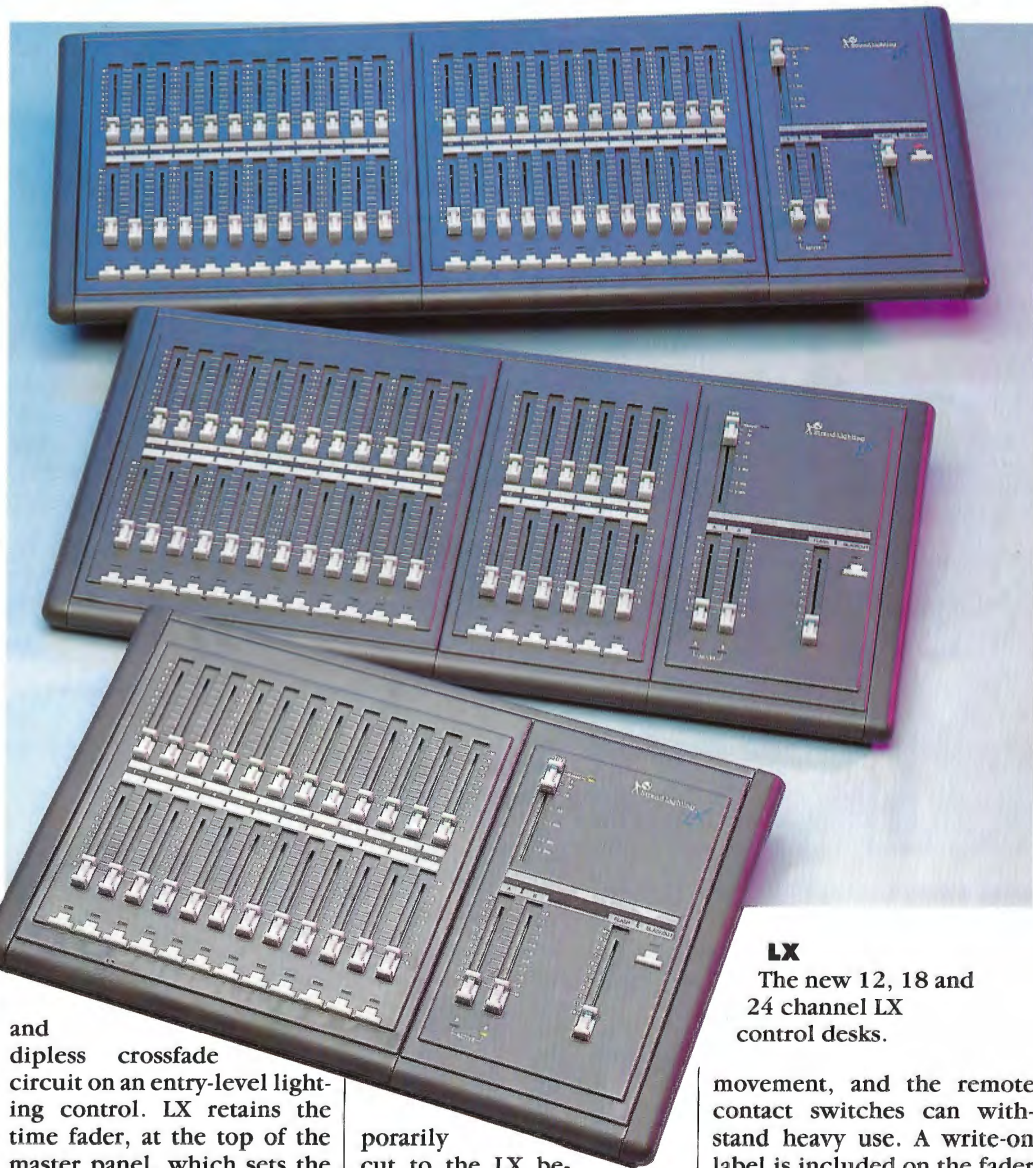
One of the high spots for Strand this September is the launch of a new range of manual control desks called LX in Europe and Mantrix LX in North America. The LX replaces the ACT and Tempus ranges of desks which have sold extensively in Europe and Asia for the past 11 years.

The LX is a two-preset desk with wire-per-dimmer connections to either +10V or, outside North America, minus 10V dimmers. In its positive voltage version, LX offers either 12 or 24 ways. The -10V version, is available in 12, 18 and 24 ways.

Each channel has an LED indicator, which lights in proportion to the channel level, and a bump button. The bump button flashes the channel to the level set on the flash master fader, if it is higher than the current output for that channel. When set to zero, the flash master disables the bump buttons to avoid unwanted effects on stage.

Both presets are controlled by separate master faders, and they are moved together to give a dipless crossfade. Lead-lag fades are performed by moving the faders separately. Mimic LEDs light up whenever the preset is active.

Back in 1980, both the European Tempus and North American Mantrix 2S desks broke new ground for Strand by including a crossfade timer



and dipless crossfade circuit on an entry-level lighting control. LX retains the time fader, at the top of the master panel, which sets the preset master faders to work either manually, or to a time set on the scale from one second to five minutes. Unlike Tempus, there are two internal timer circuits connected to the time master; one for each preset. This new feature enables the operator to delay either preset in a timed crossfade.

The blackout pushbutton and associated LED (which lights when blackout is active) has a short-term memory which ensures that the desk resets to the blackout state that existed when power was turned off. So if power is tem-

porarily cut to the LX between scenes, it won't flood the stage with light when power is restored.

The decision to follow the same control panel design as the MX memory desk makes LX extremely compact and lightweight. The 12-channel desk is only 452mm (18") wide, and 285mm (11") deep. The 24-channel version is only 714mm (28") wide. The injection moulded control panels are in dark grey with contrasting fader knobs and push buttons.

The control surface has been specially designed with slots to reduce lateral fader

LX

The new 12, 18 and 24 channel LX control desks.

movement, and the remote contact switches can withstand heavy use. A write-on label is included on the fader panel for custom reference numbers.

Control connections are 8-pin DIN sockets for the minus 10V versions and 15-pin mini D-type sockets, which are compatible with CD80 digital dimmer packs in North America, for the two +10V versions. The 8-pin DIN connectors fit the Tempus and Act range of dimmer packs. All LX desks can be powered from an optional external 15V battery eliminator power supply, although the minus 10V versions can draw their power directly from Act or Tempus dimmer packs.

Sirio 2.5kW

New Sirio 2.5kW
Twin and 4kW
Bambino MSR.



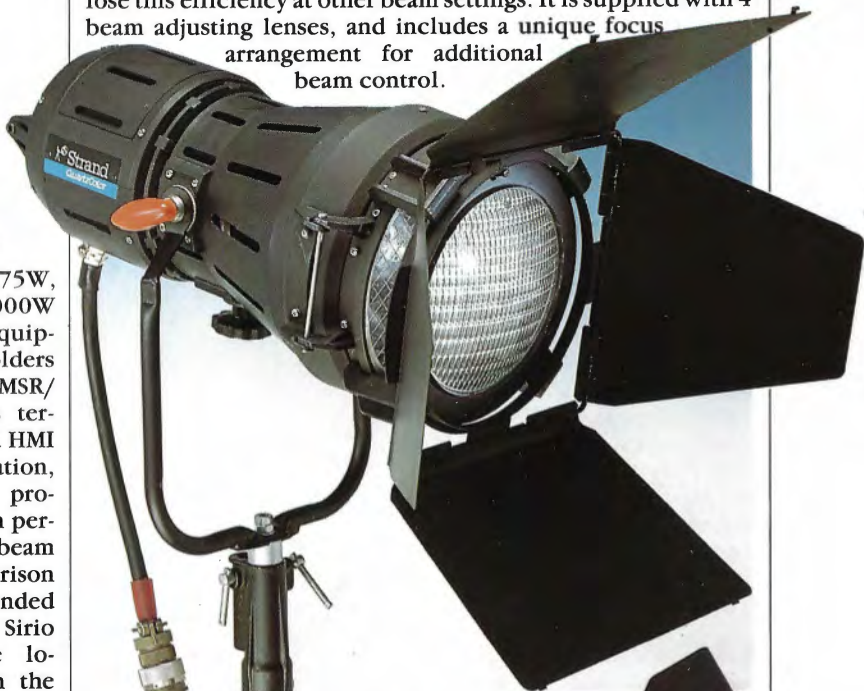
Sirio Twins

This unique range of 575W, 1200W, 2500W and 4000W 'daylight' fresnels is equipped with twin lampholders for both single-ended MSR/HMI lamps as well as terminals for double-ended HMI lamps. In this configuration, the single-ended lamp provides an improvement in performance and beam angles in comparison with the double-ended sources. The Sirio Twins offer the location electrician the unique ability to use an alternative source if supplies of replacement lamps are scarce.



Super Quasar

Developed for location film lighting applications, the new Super Quasar uses either a 2500W MSR or single-ended HMI lamp. It has long throw, narrow angle capabilities, and its efficient axial optical system means that it can provide the same peak intensity as a Sirio 6kW HMI in spot, but it does not lose this efficiency at other beam settings. It is supplied with 4 beam adjusting lenses, and includes a unique focus arrangement for additional beam control.



Super Quasar

New Super Quasar uses either a 2500W MSR or single-ended HMI lamp.



Sirio 575 Twin

New Sirio 575 Twin for either a 575W MSR or HMI lamp.

Sirio Bambino MSR

Two new Sirio Bambino fresnels have been upgraded to join the MSR revolution. The new 2500W and 4000W MSR heads are compact versions of the equivalent wattage Sirio Twins.

Sirio 1200

New Sirio 1.2kW Twin and 2.5kW Bambino MSR.

Sirio 4k Twin

Sirio 4k Twin for MSR or HMI lamps.



Electronic Ballasts

Strand electronic ballasts are now available for all HMI and MSR light sources from 575W to 18kW. Standard features include either flicker free or quiet running change-over switch and a dimmer to reduce the intensity of MSR lamps (holding the colour temperature constant), or to balance colour temperature of HMI lamps.

ENG kits

This new range of 3 lighting kits is specifically designed for news gathering applications and is ideal for location film lighting. This flexible lighting system offers a choice between 123W HMI or 200W MSR discharge sources or a 100W or 250W battery powered or 300W mains tungsten source with pistol-grip handles. Options include mains or battery powered electronic ballasts, cased or belt batteries, battery chargers, stands, gaffer grips, filters, diffusers and adaptors.

Minim

Minim F and PC return by public demand! The popular mini spotlights were withdrawn from production last year, but are now available with an up-to-date specification. A new rear handle incorporates the cable entry and clamp, and wiring has been upgraded to meet the latest European safety standards (EN60598). Minims are available in black or white, and are now packed individually with a CP81 300W lamp. They are also suitable for use with M38, M40 or T18 lamps if required. A lens guard is now standard on both models, and a fibre colour frame is included.



Miniflood

New 100W to 250W Miniflood for both architectural and stage applications.

Mini flood

New to both the architectural and stage lighting markets, this compact floodlight uses a 78mm double-ended linear lamp which is available in 100W, 150W and 250W ratings. The floodlight is complete with wire mesh, safety glass and a colour filter frame. The lamp is not included.



Minim

Return of the popular Minim F and PC with improved safety features and 300W lamp.

Prelude

Improved Prelude range.

Prelude

Prelude has become a world standard 650W 220/240V range of profile spotlights. We have been able to improve on this very popular range by upgrading the specification of the lenses, by adding lens cleaning access, improving the durability of the power socket and adding a new design of tilt lock. The new white plate lenses give a whiter beam of light and improved focusing. The Fresnel and PC versions retain their original optical design, although they are being upgraded with the new power socket and tilt clamp.



Cantata

The Cantata range of luminaires is expanded by the addition of two new condensor-optic profiles. Called the Cantata Optique profiles, these spotlights cover a wide range of beam angles in just two versions: the 8/17° and the 15/44°. The other benefits of condensor-optic profile spots are: better focus; less colour fringing at the edge of the beam; and a flatter field for excellent gobo and shutter projection.



Lightpalette 90

The hugely successful Lightpalette 90 maintains its position as one of the world's leading lighting controls because of constant user input, particularly from Broadway and European users, and a commitment to on-going software development. New features this September include more informative status and performance displays, with a better use of colour, and a quick load routine for the submasters using the bump buttons. These upgrades make LP90 even more spontaneous in use. For further details of the availability of these software upgrades, contact your nearest service centre.

Educational Resource Pack

'Step into the Limelight' is a comprehensive teaching aid designed for teachers, lecturers, students and pupils who have an interest in the technology of theatre lighting. Prompted by recent changes to the way drama is taught in schools in the UK, with more emphasis on practical elements of theatre, this pack includes 15 colourful wall posters, detailed teachers' notes, a basic lighting stencil, technical pen, design sheet masters, and a pack of 10 colour filters. Each poster develops a different theme such as the various types of luminaires, analogue and digital dimmers, manual and memory controls, automated lighting, safety, and plotting a show.

Minispot effects

A new addition to the popular Minispot range of luminaires is the Minispot effects unit. Designed for use with 12V 50W or 75W dichroic lamps, the Minispot Effects can be used with a wide variety of 6" animation discs such as clouds, patterns, liquid oil or simple breakup discs. The luminaire is supplied complete with lenses and motor. Lamps, conventional transformers and effects discs are available separately.

Colour filter

The two ranges of colour filter and diffusion media from Strand have been extended with more colours. Strand Filter, the polyester base filter range has eight new colours, and a revised colour swatch book is now available. Chromoid, which is the higher-temperature polycarbonate range, is being extended by twelve new colours. Look out for the new black and silver re-usable, environmentally-friendly tubes for packaging and storing Strand Filter and Chromoid products.

Architectural timer

To increase the flexibility of a Microdimmer or Preset Multidim installation, we have introduced two new control stations and a timer module. These accessories enable lighting scenes or presets to be recalled automatically according to the date or time of day. The timer offers up to 560 automatic preset selections, is simple to program and has a 24-hour clock and year calendar. The interface stations include a local preset and a timer on/off facility.

EC90
EC90 digital dimmers.

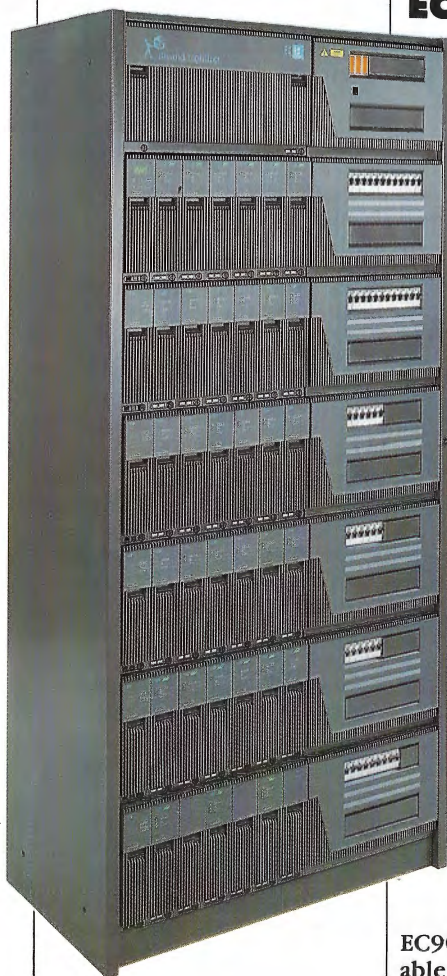
Lightpalette 90
New software features.

EC90 HD - High Density dimmer racks

The High Density, hard wired version of EC90 is now in production. HD dimmers provide economic and high density digital dimming where the mechanical and performance specifications of EC90 modular dimmers is not so important. Dimmers are permanently installed in crates, and four versions are available:

24 x 10A, 12 x 10A, 12 x 25A, and 12 x 25A (slave). Up to five crates of any type can be fitted to a large rack, and a maximum of 3 crates will fit into a small rack. EC90 HD crates can be installed with modular crates in the same rack to give added flexibility in planning the installation. A data sheet describing all versions of EC90 digital dimming is available on request.

EC90 digital dimming is available on request.



LIGHTS!

For further information please contact your nearest Strand Lighting dealer, or write to:

The Marketing Dept.
Strand Lighting Ltd.
Grant Way
Isleworth
Middlesex
TW7 5QD
England



LIGHTING FOR ALL OCCASIONS

The growing trend for city-centre hotels to be used for seminars, trade shows and exhibitions has prompted one London venue to be prepared for anything.

Rank Hotels' 418-bed

Royal Lancaster Hotel, overlooking Hyde Park, is a popular choice amongst conference organisers. Its Nine Kings Suite, which can be sub-divided into a number of smaller units, has recently been refurbished to give the

latest lighting and sound facilities for virtually any kind of show or display. In a combined theatrical and architectural lighting installation, Strand Lighting dealer Luff Light and Sound installed Lightboard M and Action 24

control desks, an M24 effects board, 144 Way Permus dimmers, a special Control Patch system, with two programmable Environ systems – one in the suite and one in its foyer – and 96 ways of Permus house light dimmers.

PROFESSIONAL LIGHTING FOR UK SCHOOL

Students at an English school are the envy of many professional companies following completion of their new drama studio. The studio has a purpose-designed lighting system from Strand Lighting, which has brought the latest theatre standards within their grasp.



SCHOOL ENGINEERS RE-INVENT WHEEL

Five schoolgirls with an interest in engineering set out to re-invent the wheel, and with the help of Strand Lighting's Tony Brown as their tutor, they did just that.

The wheel in question was the operator's channel control wheel found on some lighting control desks. Their project was carried out under the Engineering Education Scheme. After considering a number of solutions they devised a belt system, running over an arc support and revolving at either end around a small wheel. This allowed the control below desktop level to be reduced to 45mm.

The school is Hainault Forest High School in the London Borough of Redbridge and is the base for students from a number of the Borough's schools who wish to study Performing Arts to Advanced-Level.

The lighting installation is considered by Strand to be one of the best of its type at any school in Britain.

A performing area of 12 x 9 metres includes space for easily-assembled raked seating, with the entire area covered by a purpose-designed lighting grid.

Structural steelwork supporting a pitched roof was used to carry lighting power cables and also to bear a suspended sub-frame to which luminaires are clamped.

An Act 18 two-preset control desk runs a mix of 20 luminaires distributed across the grid on four bars. They are four Prelude 16/30 650W profile spots; eight Prelude F 650W fresnels with barn doors; four 650W Prelude PC's and four Coda 500/1 cyclorama floods. Additionally, a continuous-frame fluorescent lighting grid provides house lights for class sessions or any possible future use of the studio for examinations.



MEXICAN SHOWCASE FOR PREMIERE

One of the first major international hotels to have Strand Lighting's Premiere system installed, the Marriott Cancun in Mexico, has become a showcase for the product.

Premiere was installed in 1990. It is still one of the largest Premiere systems in operation. Premiere was chosen for its power and versatility plus the fact that it is simple to non-technical staff to operate, making it ideal for hotel applications.

The 450-bed hotel is on the Yucatan Peninsula, with views across the Caribbean, making it a popular resort for

conventions with North American and European companies.

Premiere is a fully-programmable control system which can be custom-designed to suit each application. It provides up to 64 control stations ranging from simple push-button to menu-driven commands and features 128 channels, each with a possible 128 presets, controlling up to 512 dimmers. It can also interface with a building management system and, if necessary, can be pre-programmed off-site with a PC.

DON'T THROW IT AWAY!

If you are considering clearing out your filing cabinets – keep your eyes open for Strand Lighting literature.

We are currently compiling a Strand archive, to give us an historical record of the way

the company has grown since 1914.

So if you come across any of our literature which is of no further use to you, please call Andy Collier at Strand Lighting, Isleworth, England.

If you are neither actor nor writer it is sometimes all too easy to feel isolated from the mainstream of the theatre world. Continuing our series on the professional bodies who speak for the lighting world, we take a peek behind the curtain at the Association of British Theatre Technicians.

THEATRE-LAND'S VOICE OFF-STAGE

Considering that live theatre in Britain has a pedigree stretching back to before the time of Shakespeare it is nothing short of remarkable that the 'backroom boys', and girls, did not have their own professional 'voice' until the early 1960's.

But what the Association of British Theatre Technicians lacks in history it has more than made up for with effort. In general terms it is the professional body representing everyone in the UK who is involved in theatre, with the exception of actors and writers. That is to say... everyone from theatre managers, lighting and sound technicians through to make-up artists and scenery carpenters.

Most significant of all is ABTT's advisory role, particularly the influence it has had in the design of new British theatres in recent years. However, the Association has been more concerned in recent years with its own fight for survival, following cutbacks in its funding.

ABTT is governed by elected officers – all of them working theatre personnel – although day-to-day running of the organisation from its offices in Soho, just a curtain call from London's West End theatreland, falls on two people. Ken Smalley is ABTT's Publications Officer, and as such edits and publishes the Association's newsletter, information sheets and other publications. Ethel Langstreth is Executive Secretary but also acts as coordinator and secretary for other theatre organisations sharing the building.

In Ken's words, 'The ABTT is there to help those who help the actor. This is obviously a very wide brief but until the early 1960's there had been no one filling this role.

'Our Theatre Planning Committee has been one of our most influential activities. Since this started, we have commented on more than 300 new theatre schemes. Along the line the Arts Council of Great Britain made it a requirement that all Housing the Arts applications should be vetted by this com-

mittee and that gave us a lot of clout.'

In addition, ABTT's other committees on lighting, sound, materials and safety, have brought pressure to bear on manufacturers over the years. This has ensured that the theatre world has had a 'voice' with the various industries. As a result, this may have prevented unacceptable products from being foisted onto technical crews – and has no doubt saved a lot of potential heartache in live performances.

One of the greatest early milestones for ABTT was when the influential Architectural Press published a series of planning guides on theatres in *Architects Journal*. These were compiled into a single publication by ABTT and entitled 'Theatres'. This has since become the 'bible' for theatre architects, consultants and staff, having been reprinted many times over.

With more than 1100 members throughout the UK, the ABTT sees its primary function as being one of influencing and informing about new developments and existing legislation.

Ethel joined ABTT in the mid-1960's, and Ken in 1970 as technical officer. The burgeoning of technical literature has seen two important ABTT publications being founded, again with the primary intention of passing-on information to members who may have little direct contact with their colleagues in other parts of Britain.

ABTT News is a regular monthly update on anything of relevance happening within the industry. A glossy international magazine, *Sightline*, is published quarterly and gives a more in-depth look at specific technical aspects of theatre, and recent productions of note. The editor in this case is Ian Herbert.



As an indication of the close family links within the lighting industry, *Sightline* was founded to continue the basic groundwork set for the lighting world by a previous Strand Lighting publication, *TABS*. When *TABS* ceased publication, Fred Bentham left Strand and was instrumental in founding *Sightline*.

The Association also publishes its own information and data sheets plus relevant Codes of Practice relating to the industry, study guides and also stocks any other publisher's publications which may be of interest.

Before joining ABTT, Ken was general manager of London's Mermaid Theatre, the brainchild of Bernard (later Lord) Miles, head of the famous theatrical family.

Links with the Mermaid were renewed this year when ABTT's annual Trade Show was held there. Over the years this has become an important showcase for the industry and it provides a rare opportunity for association members to get together with manufacturers and to study the industry's latest developments. The range of interests covered goes from lighting and sound to scenery and costume.

●Regulations are being piled on in every country. Our job is to keep members informed●

On the international scene, ABTT comes under the all-embracing 'umbrella' of OISTAT which, translated from the French, is the International Organisation of Scenographers, Theatre Architects and Technicians. This organisation has a system of 'hosting' meetings in various parts of the world, so keeping all theatre technical staff in contact with their overseas counterparts. The secretariat of this organisation is based in Prague.

There are also close links with ABTT's sister organisation in the United States, USITT.

One thing that ABTT is not, however, is a trade union. It is barred by its Articles of Incorporation from being so.

'What we are here for is to keep members abreast of what is going on,' says Ken.

'Regulations are being piled on in every country and one of our prime functions is to keep the members informed.

David Adams, Honorary Secretary of the Association and Chairman of the Safety Committee, himself a production manager of many years' standing, added that the Association saw its future role very much in the area of informing regulators as well as the industry, and of ensuring that new legislation and regulations took full account of the special needs of the theatre. He said 'We have recently been closely involved with the Home Office in the revision of the *Guide to Fire Precautions in Places of Entertainment* and with the City of Westminster and other London Boroughs in the revision of the *Rules of Management*. Our members have assisted the British Standards Institution in the formulation of *Guidance on the Design and Use of Places of Assembly*. We recently co-hosted a two-day conference, SAFE-T '91, on theatre safety, which attracted a wide range of legislators, managers and technicians.

Membership of ABTT costs £30 a year, and is open to anyone, regardless of nationality or professional qualifications. 'The theatre doesn't put a lot of importance on paper qualifications,' said Ken. 'Experience and ability are far more important.'

If you would like to learn more about ABTT or apply for membership, contact: Ethel Langstreth, ABTT, 4 Great Pulteney Street, London W1R 3DF, England. tel: 071 434 3901.

MX – Did You Know?

You may be one of the hundreds of people all over the world who chose MX (or Mantrix MX) memory control desks for their smaller scale shows. Since its introduction a year ago, MX has proved its early claims of flexibility and reliability, and we have been very pleased with the complimentary comments received from many users. One of the results of our dialogue with them is a wealth of operational short-cuts and tricks which can provide additional features not included in the operators' handbook.

*by Richard Farthing
Strand Research & Development, London*

Here's a list of the ten most useful operational hints which get the best out of your MX system whatever its channel capacity.

1. Pulsating light effect

If you record an effect with 1 step (either a group of channels or a scene with levels) you can get a smooth on-off pulsating effect by setting the effect type to 'cycle'. To get a firelight effect set the same effect to run as a 'flicker'. A 'chase' will give a regular on/off flash.

2. Programmable effect attributes

Many people are not aware that the 'type' and 'direction' of an effect may be selected and hence recorded at any time during the recording of an effect. Then, when running the effect, you only have to select it and press GO. The effect type may be changed later, when selecting or running the effect, without changing the recorded type.

3. Effect Editing

This is very powerful on MX. The easiest way to edit an effect is to pretend you are re-recording it. Press RECORD, followed by the effect number. you wish to edit, and you will find that the MX has put you at the last step in the effect. [Hint: this is a quick way to find out if an effect has been recorded or not: for an un-recorded effect you will see step 1].

Using the +/- keys you can now run through the effect seeing which channels or scenes have been selected for each step. You may add or delete channels, or change the selected scene using the flash buttons at any step. The step number is shown on the display.

You may even edit an effect whilst it is running. To delete or insert steps use the FX edit menu (refer to the manual).

4. Copying and combining scenes

Set record mode to OUTPUT in the Record Scene menu. Bring up the selected scene(s), channels etc, and press the required flash button to record the combination. You may also capture effect steps in this way.

5. Solo mode

With flash level set to 0, any flash button gives a flash to blackout facility.

6. Remote power cycling

MX retains its state, including running effects and fades when powered off from the mains (ie not using the on-off switch). This can be very useful if you want to turn a preset show on and off remotely. It will also maintain its MIDI state, allowing a sequenced MIDI show to start remotely.

7. Sequencing to tape track

If you want to cue a set of scenes from a tape track, record the scenes, and then record an effect with each step as one of these scenes. Record the effect as type AUDIO/MIDI. Make sure the effect type in the SETUP SYSTEM Menu is AUDIO, not MIDI. Record standard AV tones on your tape track, connect the tape machine to the audio input, and each tone will cause the effect to advance

one step. Note that the effect will not actually start until the first tone, allowing you to start the show from blackout, if required.

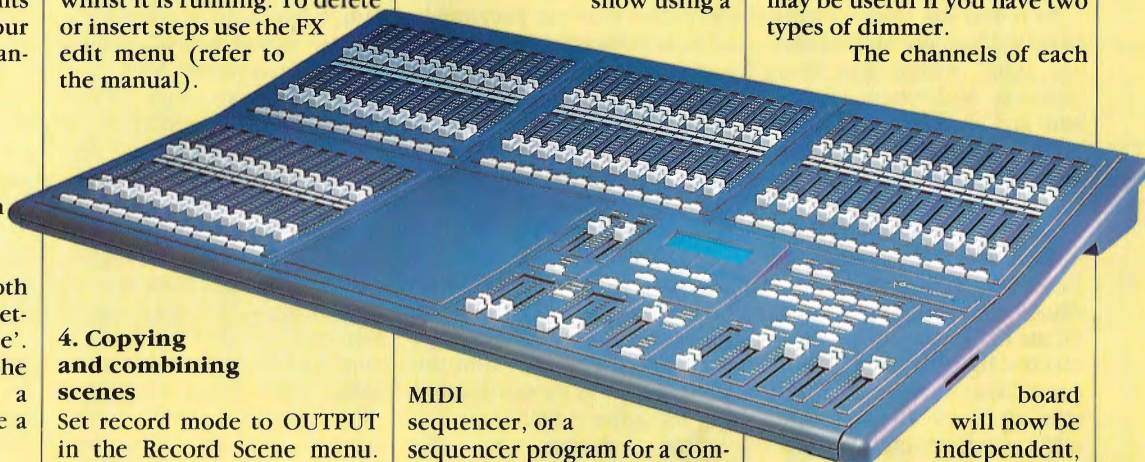
You may need to set the audio level fader quite low to eliminate tape noise. Note that this will work in conjunction with (6) above for canned AV shows.

8. Remote cueing or show recording via MIDI

It is extremely easy to record a show using a

of your MX system by using several desks each controlling a different sequential group of channels, all mastered from one desk. Connect the MIDI OUT of your master MX into the MIDI IN of your slave MX. Set the master into MIDI OUT mode as above, and set the slave into SLAVE mode. You will need to connect the relevant dimmers to each system. You may run the different systems with different multiplex standards which may be useful if you have two types of dimmer.

The channels of each



MIDI sequencer, or a sequencer program for a computer such as the Atari ST. In either case the cost can be less than you might think.

You don't have to understand all the MIDI codes that MX produces, just connect MX's MIDI OUT to MIDI IN of the sequencer, MIDI IN of MX to the sequencer's MIDI OUT. Set the board into MIDI OUT mode (SETUP, CONFIG, I/O menu), set the sequencer to RECORD and do your show. (You will need to have recorded the scenes and effects that you want already). Every time you press a key (with the exception of the menu controls), or move a fader, MX sends out a code to say what has happened, and the sequencer records these.

At the beginning of the recording it is advisable to press the SYNC key on the menu. This sends out a complete snapshot of the state of MX, so that when you replay the sequence the board is in exactly the right state.

Set the board into MIDI IN, press PLAY on the sequencer and your light show will be faithfully reproduced with fades as you recorded them, effects etc.

9. Channel Expansion using MIDI

This expands the capacity

board will now be independent, but all master controls (A/B, C/D, Grand Master, FX controls and submasters when in scene mode) will be controlled by the master board.

If you want to slave more boards, there is no logical limit. Connect the second slave's MIDI IN to the first slave's MIDI THROUGH. You can carry on doing this until the signal gets too distorted, which in practice will happen after 3 or 4 units are slaved. However proprietary MIDI buffers (which are very cheap) can be used to buffer the master's signal indefinitely.

10. Memory card information

Anything stored on a memory card by one MX can be used by any other MX even if it has a different channel capacity. For example, a show is recorded on a 12 channel system. If played back on a 24 or 48, just the first 12 channels will be used. Similarly the first 12 channels of a 24 channel show may be accessed from a 12 channel board.

[Editor's note: If you have developed any ingenious tricks with your MX, please let us know. Published ideas will receive a *Lights!* T-Shirt.]

DISCHARGE LIGHTING COMES OF AGE

We sometimes consider the dawn of electric lighting to have been the introduction of the incandescent lamp in 1879. But by that year there was already in existence a business based on arc lamps. This included (as the British House of Commons Select Committee on Electric Lighting was to learn in 1879), a well known installation at the Albert Hall in London, which had succeeded in reducing the cost of lighting by one third. The electric arc had been known since 1802 and in 1808 Sir Humphrey Davy demonstrated an electric arc light, but it was not really suitable for small spaces.

So it was the search for the so called 'sub division of electric light' which was being pursued. And where the carbon arc seemed unlikely to provide a suitable solution for smaller lighting packages, incandescent lamps could.

As with many significant innovations, there was a dependence on other critical discoveries and developments occurring, in order for electric lighting to proceed as a practical venture at all. It was not until 1867 that the self excited generator was developed. Until then dynamos consumed more energy than they produced and so a reliable, economic supply of electricity did not exist.

Secondly the advent of the Sprengel Vacuum pump provided the means to produce the incandescent lamps. These were first demonstrated in 1879.

It is interesting that the two fundamental mechanisms of producing light – the electrical discharge and the incandescent filament – remain the basis for all popularly used light sources to this day.

Whilst the incandescent or tungsten filament lamp as it became known, provided an inexpensive and convenient means of lighting, discharge light sources enjoyed their greatest use initially in streetlighting from the early 1930's and increasingly in a variety of exterior and industrial situations as improvements were introduced.

A major discovery of suitable fluorescent coatings during the 1930's enabled another aspect of discharge lighting – the neon tube – to be developed into a practical fluorescent light source.

However it is the discharge lamp which has always enjoyed a high potential effi-

cacy, but this has previously been at the expense of colour and has limited practical applications. For Strand another serious constraint has been the general unsuitability of HID (high intensity discharge) lamps for dimming in theatre applications.

The introduction of a new generation of compact HID lamps such as CSI/CID and HMI formats in the late 1960's and early 1970's brought improvements in colour rendering and appearance.

First shown at the Photokina exhibition in 1972 extensive HMI product ranges rapidly made progress in the motion picture industry. They were a compact replacement for the carbon or 'brute arcs' and provided the higher illuminance levels required for the colour broadcast of OB sporting events.

These lamps work on the arc discharge principle but owe their improved colour rendering to a mixture of metals introduced in small but carefully controlled proportions as halide salts into the arc tube to give additional spectral emission lines. This provides a balance of colour lines in the spectrum, which merge into a white light.

Unlike incandescent lamps they do not produce a continuous spectrum and colour temperature cannot truly be ascribed. But they are generally regarded as having a high or cool colour temperature referred to as 'daylight', measured at 5600°K which is equivalent to the colour temperature at midday under an overcast sky. Incandescent lamps have a low or warm temperature of around 3000°K.

A wide range of HMI lamps has been available in a tubular double ended format and

Strand's Quartzcolor Sirio range uses lamps from 575W through to 18000W.

Recent developments in HMI lamps have resulted in a more compact single ended format from 200W up to 4000W for which Strand is developing a number of new products including the recently announced Super Quasar 2500 SE and developments of the Sirio range (Sirio Bambinos and Sirio Twins).

New Developments in Single-Ended Metal Halide lamps – the MSR

A new range of metal halide lamps has been developed in single-ended format, known by the designation MSR (Medium Source Rare earth lamps). Their spectrum is comparable to the HMI and MSI lamps already well established for 'daylight' applications. The spectral energy distribution is a quasi-continuous spectrum due to the multiple line spectrum of rare earth elements and a continuum of molecular radiation. These lamps also enjoy very good colour characteristics with an equivalent colour temperature of 5600K and a colour rendition index (CRI) > 90 giving a good match to daylight. These short arc length HID lamps enjoy high luminous efficiency in the range of 80 to 100 lumens per Watt (depending on rating) with very high illuminance and offer new opportunities in the design of studio and location lighting luminaires.

There are two families of MSR lamps now available. One, started from a relatively low ignition pulse (2kV to 5kV), in 200W, 400W, 700W and 1200W ratings, being single ended lamps with a prefocus lamp base. The other a family of hot restart lamps requiring ignition pulses between 25kV and 60kV and designed in such a way to ensure arcing from such high voltage pulses does not occur within the lamp base or internal structure available in 200W, 575W, 1200W, 2500W and most recently 4000W. It is this second family which is being introduced into the Quartzcolor range.

Electrically these lamps are compatible with the existing Strand Quartzcolor ranges of HMI ballasts in both compact and electronic formats.

A useful feature for balanc-

ing lighting levels on location work is an ability to dim to around 40% of nominal power, whilst maintaining a stable colour temperature, when used with Strand Quartzcolor electronic ballasts.

Electronic Ballasts

One major requirement of HID light sources is their need to operate from an AC supply in conjunction with a series ballast. The ballast stores energy and acts as a current regulator to maintain the arc as the mains voltage alternates through the cross-over point 50 or 60 times a second.

Although the eye sees a constant output from the lamp, the arc is actually changing following the mains supply, and the light output increases and decreases with the mains waveform. When discharge lighting is used with TV or film cameras, this effect is dramatic. A reel of exposed film shows the scene rapidly fading away to darkness and then fading up again as the mains supply alternates.

Using DC to supply the arc does not help, as the continuous uni-directional current gradually destroys one of the electrodes of the lamp. The solution is to provide the lamp with an AC supply which switches direction very quickly: a squarewave.

The electronic ballast therefore has two functions: it provides the constant current capabilities of a copper and iron ballast unit to maintain the arc, and it supplies power as a square wave which can be synchronised to the camera's shutter speed to eliminate the flickering as a dark frame is projected. The electronic ballast is frequently called 'flicker-free' for this reason.

Devices which can reliably withstand harsh operating conditions are now commercially available at an economic level, and this has led to new generations of electronic, flicker-free ballasts for the ratings of HMI and MSR lamps used in the Quartzcolor range from 575W through to 18kW.

The reduction in weight, flicker free operation, dimming capability and greater compactness all combined to provide smaller, powerful lighting systems for motion picture and location needs.

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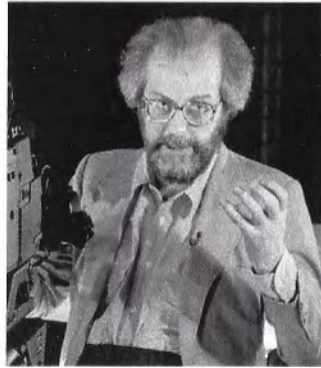
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TEACH YOURSELF LIGHTING - WITH THESE VIDEOS



Two videos on lighting released this September form the first in a series aimed at supporting training.

The videos, brainchild of Graham Walne, form part of the Theatre Skills Video Library produced by The Greenlight Company who have assembled an award winning team. *Lights* readers may recall a questionnaire researching the subject and Graham would like to thank those whose replies provided useful information in designing the series.

The release of the videos mark Graham Walne's 25th year in the industry as an international lighting designer (recently lighting at the Bolshoi), author and consultant. The videos benefit from his extensive experience

teaching at the major drama schools. Graham is also the Chairman of the AETTI, the body delivering National Vocational Qualifications for backstage personnel.

For the educational market Greenlight are providing a Training File including classroom projects, assessment guidelines, OHP transparencies, training and careers information.

Future Events

Lighting Forum Meeting

The first event in the season of activities organised by the Lighting Forum is being hosted by Strand Lighting at its London headquarters on September 17. Entitled 'Light, Colour and Perception', the evening promises to be both educational and entertaining.

Any designers or consultants involved in architectural lighting should contact Edward Pagett at Isleworth.

Strand Lectures

A series of evening lectures is planned during the Autumn. The lectures, which are intended for amateur lighting enthusiasts, school pupils and teachers, will cover the basics of stage lighting, how to use and maintain the equipment safely, and basic control board operation. The lectures will be held on mid-week evenings in Strand's showroom in Isleworth, West London. A nominal charge will be made. If you are interested in taking part, and would like to receive a registration form, please write (enclosing a stamped addressed envelope), to Andy Collier at Isleworth.

1991 Waldron Lecture

This will be held at the Bradford Museum of Photography, Film and Television on December 2, starting at 2.30 pm. The subject will be techniques and concepts in theatrical and architectural lighting and presented by a speaker from Strand Lighting.

For further information please contact: Mrs D Barnes, The Institution of Lighting Engineers, Lennox House, 9 Lawford Road, Rugby, Warwickshire, CV21 2DZ, England. Telephone: 0788 576492. Fax: 0788 540145

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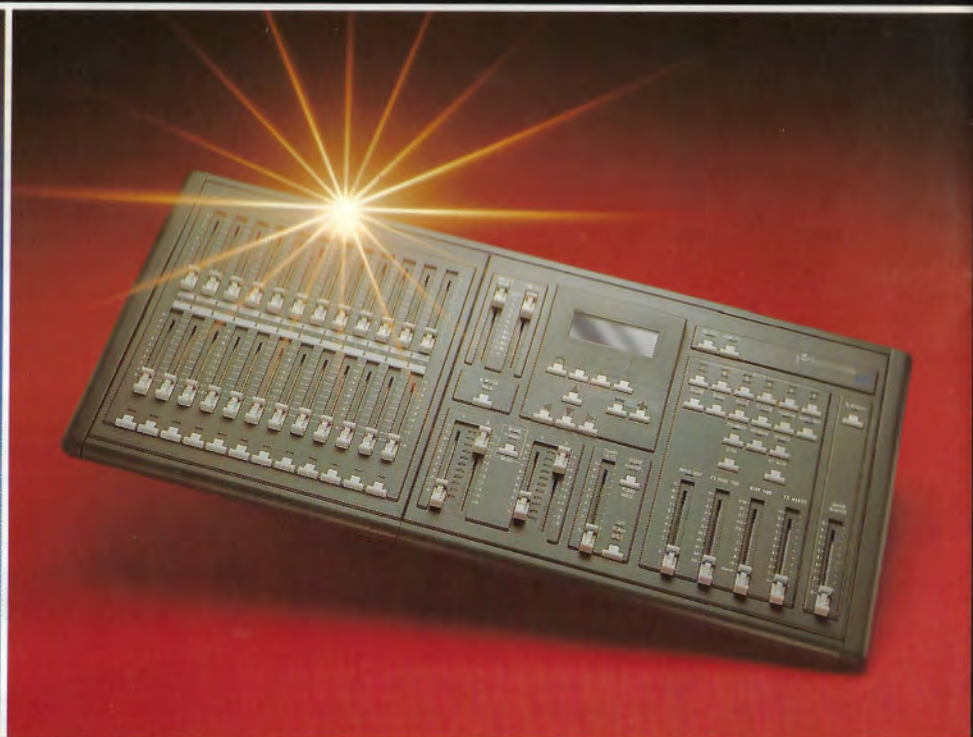
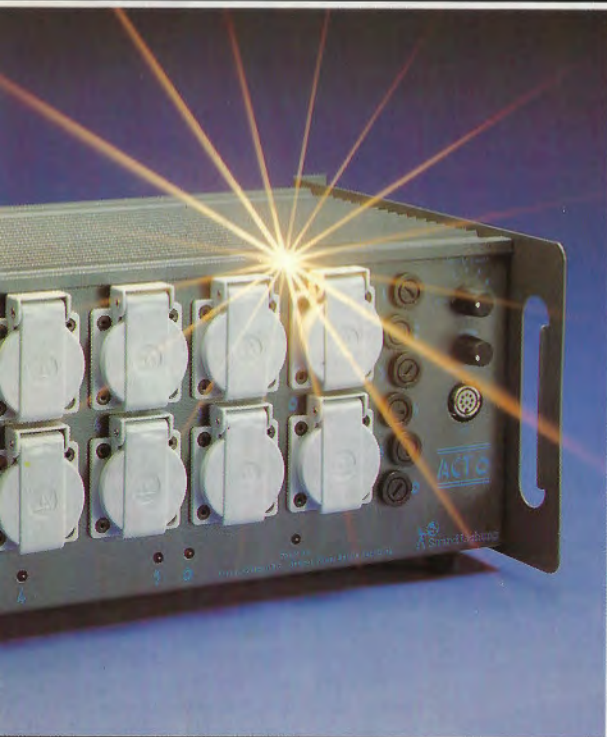


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