



Winter 2002

STRAND News

Singapore's Esplanade Theatres on the Bay Opens

A Consultants View

By Theatre Projects Consultants

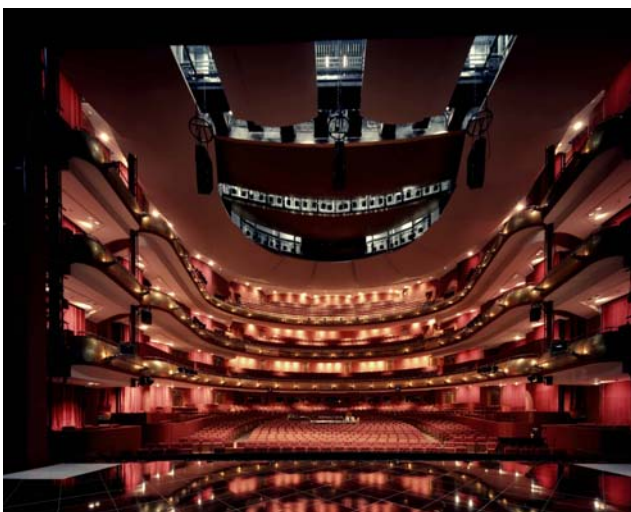
Nearly 30 years after the idea of an arts centre for Singapore was first conceived, and 12 years since the Steering Committee that guided its birth was formed, Esplanade - Theatres on the Bay, was formally opened on Saturday October 12 with a ceremony officiated by Singapore's President S R Nathan.

With a 2,000 seat Theatre, 1,600 seat Concert Hall, 250 seat Recital Studio and 220 seat Theatre Studio, plus outdoor performance spaces, private functions rooms, dining and shopping, Esplanade needed to be of the highest international standards and the Singapore government contracted world class companies to assist them with the project. David Staples, managing director of Theatre Projects Consultants, London, was among the first on the team: "We've been involved with Esplanade since 1990, when Theatre Projects Consultants was asked to write the brief for the complex. This involved researching the needs of the complex, including the national and international artistic programmes, and working with the client to decide on the most appropriate solution. In this instance, we were the first



The Esplanade at night photo courtesy the Esplanade Company Ltd Photo: Eujin Goh

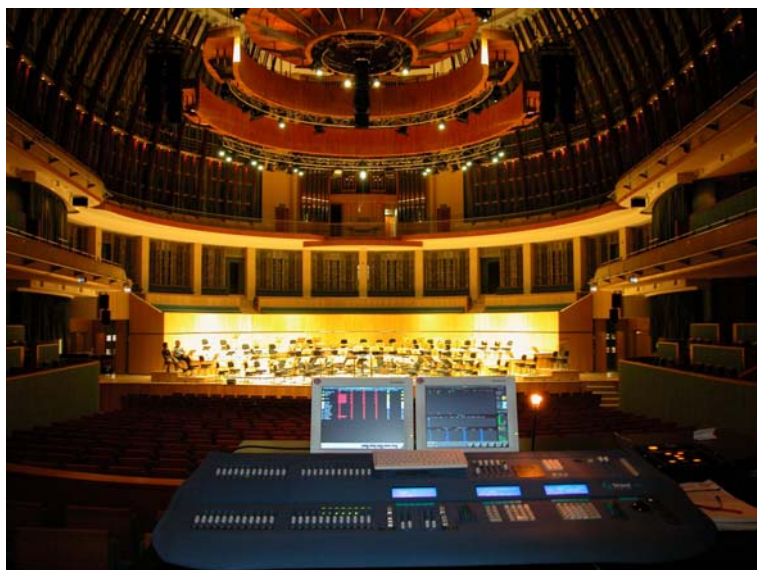
consultant to be appointed, writing both the theatre and the architectural brief and assisting in the selection of architects Michael Wilford and Partners of England and DP Architects Pte of Singapore. As the project developed and took shape, our role changed with it, as we went from being theatre planners to stage and auditorium consultants to theatre equipment designers and specifiers."



The Theatre photo courtesy the Esplanade Company Ltd Photo: Hidetaka Mori

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The view from the 550i console in the Concert hall

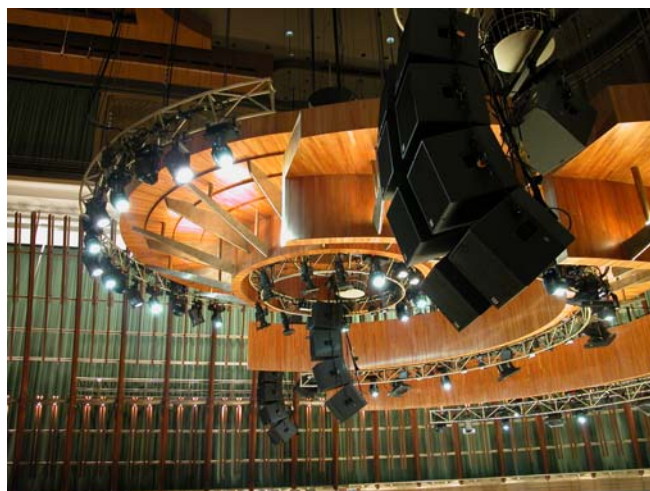
From the outset, Theatre Projects Consultants worked closely with Singapore's performing arts organizations, designing and planning Esplanade to accommodate the full range of performing arts, including both Western and Eastern, as well as the most advanced multimedia presentations. "Singapore is a pretty unique country," continued Staples. "It is small, with about three million people, and multicultural - 75% Chinese, while Malays and Indians constitute large minorities - and has four official languages - Mandarin, Malay, Tamil, and English. It also, incidentally, has one of the highest literacy rates in the world."

Staples and his team spent considerable time studying and understanding the needs of the eastern arts - Chinese opera, Indian music and dance, Indonesian and Malay performance while the venues are still Western in design, there are nevertheless characteristics peculiar to Asia.

When it comes to the performing arts, the single most important differentiator between East and West is that the East has no tradition of indoor theatre. Staples explains: "Eastern performance art almost always takes place outside - Esplanade's three week long opening festival featured some 600 free outdoor performances. Two main outdoor venues were incorporated into the design. The Outdoor Theatre, which sits on the 300m waterfront along Marina Bay, and The Edge, most suited for medium to large scale performances. There is also plenty of opportunity for people to meet, eat, drink and be entertained outdoors, including the open air Courtyard at Esplanade Mall, which gives diners the opportunity to enjoy outdoor aerial performances."

Internal venues also had to reflect Asian performance. In Chinese opera and Indian dance for example, the musicians are on stage with the performers, unlike western culture, where the orchestra is hidden in a pit. This called for a wider stage and the theatre's proscenium opening, which is adjustable from 14m up to 16.5m, is a good two metres wider than is usual in the west. Asian music is also different - louder and more percussive - and consequently Esplanade has a lot of acoustic kit to provide for the many different performances that will take place there.

Theatre Projects Consultants works very closely with acoustic consultants, in this case Artec Consultants, and the Concert Hall at Esplanade offers some of the most flexible acoustics in the world, with three main acoustic devices. It is connected to huge reverberation chambers, which double the volume of the hall, by 84 concrete doors which can be partially or fully opened in different configurations. These, together with 5,000 sq metres of acoustic banners, allow the hall to be fine tuned, even from one piece of music to the next. Finally, over the concert platform are three acoustic



canopies which can be raised or lowered as required and which are important in helping musicians on stage hear each other. The acoustic chamber gives the Concert Hall the form of a box within a box. It also sits on rubber footings to isolate the Hall from rail vibration.

The Theatre too had to be adaptable, but the design has not been compromised. In the intimate horse-shoe shape of traditional opera houses, with four galleries, the theatre houses Singapore's largest performing stage, which despite its size can be scaled to suit intimate performances, thanks to the adjustable proscenium opening. Theatre Projects Consultants also ensured a choice of floor surfaces with a ballet wagon, stored under stage when not in use, which has a resilient wooden floor to allow optimal performance for ballet. A series of acoustic banners can be lowered into the room to reduce the reverberation time.

The stage machinery for both the Concert Hall and Lyric Theatre was supplied by Mitsubishi Heavy Industries (MHI). Although MHI had never worked with a western theatre consultant before, Alan Russell, TP's technical director responsible for the overall design, knew the company's capabilities and had seen some of its Japanese installations. He was impressed by the quality of their work and this was upheld by their work for Esplanade, which included working with Bytecraft as their motion control supplier.

But it was not just the melding of East and West that posed challenges. Situated a mere 83 miles from the Equator, Singapore has a tropical rain-forest climate with uniformly high temperatures and rainfall throughout the year. Michael Wilford of architects Michael Wilford and Partners said: "We always try to make foyers a place of social intercourse, and so wanted the public areas of Esplanade to be open and visible to the outside world during the day, while at night giving people a stunning view over the city. This meant a lot of glass, which is not necessarily compatible with a tropical climate. The challenge was to design an essentially glazed building yet protect it from the sun and heat." Being so close to the equator means the movement of the sun is constant the year round, enabling the architects to devise a cladding system of petals, or fish scales, which, depending on the angle of the sun, are more closed or open than others. Thus the walls are protected from direct sunlight without limiting the views. It is this cladding, as much as the international quality of its venues, which lifts Esplanade out of the ordinary and lead Singaporeans to nickname it "the Durian", a local and - apparently - delicious fruit which has a noxious smell.

Surrounded by the high rise buildings of Singapore city, Esplanade is also designed to be viewed from above. "For example, the fly tower of a theatre is usually hidden from view, surrounded by buildings. In Esplanade, it had to be an integral part of the design", explained Wilford. There is also no 'back door'. The location, on Marina Bay, juxtaposed between the historic/civic districts and the modern city, gives the building three main public edges - Wilford describes it as a building with "three fronts and no backs" - and so the usual back doors of a theatre, such as the truck dock, suddenly become part of one of the frontages.

Wilford has worked with Theatre Projects Consultants before, commenting: "Theatre Projects is a very easy team to work with. We both have very strong ideas and inevitably get into debates about

certain elements, but we usually reach amicable agreements without compromising design details. And more often than not, the joint result is better than anything either of us would have come up with alone."

System Integration

By John Allen

The newest performing arts venue in Asia includes a 1600 seat Concert Hall, an 2000 seat theatre, a Recital Room and a Theatre Studio. The auditoria are located in a spectacular development by architects DPA based in Singapore and Michael Wilford & Partners in the UK on the banks of Singapore River in the heart of Singapore.

The installation of 24 racks of new SLD dimmers controlled by 550i consoles formed part of the production lighting equipment package awarded to Northern Light, Strand's UK based, but definitely international trading partner. The specification for the package had been prepared by Theatre Projects Consultants of London.

Northern Light took up residence on site in August 2001. John Allen was the Director in charge of the project with Dave Vandeppear as the Project Manager



*The elaborate window cladding system is a key element of the cooling system of the building - photo courtesy the Esplanade Company Ltd
Photo: Eujin Goh*

on site. Dave had previously had a great deal of experience on major projects with both Theatre Projects and, in particular, Strand dimming and control systems. He had spent over 2 years in Manchester, England, supervising installations at both The Lowry Centre and Manchester International Conference Centre. As Dave himself said the main difference between Manchester and Singapore is that the rain is warmer!

Northern Light's work included the full installation of production lighting wiring and the majority of the containment and the site team consisted of 3 Scottish

Supervisors working under Dave Vandeppear and a mixed nationality team of local electricians.

The Concert Hall was the first auditorium to reach completion with eight SLD racks in a dimmer room located behind the magnificent German organ. The 640 production and houselight dimmers and 124 non-dim circuits are controlled by a 550i console. There are two 510i units, one as back up and the other operating with the 550i as the main controls.

The same control concept is used in The Lyric Theatre where 1034 dimmers and 238 non-dims in 15 SLD racks are installed in two dimmer rooms, one in the basement under stage right and the other at FOH lighting bridge level on the left of the auditorium. This division of dimmers allowed cable runs to be kept to a reasonable length so that smaller diameter cables could be used. But even with this arrangement, the main trunking runs above the stage grid were extensive and containment here only feeds the grid windlass circuits. Circuits to stage galleries running down the rear of the proscenium wall.

In the installations in the Recital Room and Theatre Studio, dimmer quantities are more modest with only one fully loaded SLD rack in each space. Each of these venues also has an option to include a custom built roll-around rack, with 48 SLD dimmers, designed and built by Strand Asia. In the Studio where the quantity of circuits at 162 well exceeds the number of dimmers, a Northern Light Neutrik Powercon patch panel is included on the control gallery. The Recital room has fewer circuits so patching is not required.

In addition to Strand control systems, Northern Light's package also included over 200 moving lights and 1200 generic lanterns. Lantern selection, which was led by Theatre Projects, was made from many different manufacturers world wide but Strand HMI Fresnels, Bambinos, Alto PCs, Cantata PC's, Zoom focus SL's, Iris 4's, Toccata effects projectors and Pirouettes all feature heavily in each performance space. All Strand equipment was supplied to Northern Light by Strand Asia.

Strand ShowNet is used in each venue and there is a DMX multistream management system. This system allows twin streams of DMX to be routed to outlets around both the Lyric Theatre and Concert Hall.

With 16 nodes located at key points, the ShowNet DMX system delivers solid performance throughout each space.

The working light control systems in each performance space are System 2020 manufactured by Northern Light. Systems were custom engineered by Dave Webster, head of Northern Light's Engineering Divi-

sion, so that they could be controlled by both Strand's System Wide Control protocol as well as the more usual programmable logic control normally used by Northern Light.

System commissioning was carried out by Northern Light's Gregor Joy. Gregor is probably the most knowledgeable engineer outside Strand on SLD dimmers and he should be as he lives only 10 miles from the factory at Kirkcaldy, but if practice makes perfect 25 more racks in Singapore should add considerably to his abilities!



Photo: Mathew King

The Esplanade is a majestic complex and will become internationally recognisable with its twin dome shapes and highly original roof design of aluminium fins and glass. It will, undoubtedly, become a major touring and performance venue for many international companies visiting Asia in the years to come and it is a mark of the experience of both Strand and Northern Light that they were both selected for this highly prestigious development.

A technical perspective

By Leon Dark, Head of Lighting

The prospect of overseeing a new performing arts center appealed to me: new equipment, new staff, new surroundings, what more could a technician ask for? Upon hearing that the control equipment was to be Strand I was doubly pleased. When I arrived in Singapore from Melbourne in May 2001 the decisions regarding the equipment had already been made by TPC staff, so I missed out on that dubious pleasure. However, I could not take issue with any selections of LX kit.....however, the infrastructure discussions were to come later!

Apart from the control desks, Strand supplied the dimmers (SLD 96) and much of the lantern stock

(Pirouettes, 5 kw Fresnels, Altos PCs, Cantata PCs, SLs, Orions, Codas and assorted HMI's). Most of our conventional lanterns carry Rainbow scrollers, and yet again the Strand desks cope effortlessly. Joy oh rapture! The only problem is I rarely get my hands on the stuff, spending much of my time in the office writing rosters and all the mundane things one does in such a questionably lofty position!

There are four main venues within the complex, with a 2,000 seat Theatre, a



1,600 seat Concert Hall each using 550i desks, while the Recital and Theatre Studios utilize 300s. Apart from the SLD96 dimmers the 550is have the task of driving our High End fixtures: Studio Spots, Beams and Colors along with X Spots complete with framing shutters! Once the libraries are in

place the 550is seem to be worthy alternatives to our Whole Hog 2 which can run in parallel.

Our Outdoor Theatre, a wondrous piece of architecture on the nearby waterfront, was supplied via a separate tender. With a little persuasion a local firm provided us with a GSX and a 520, which we intend using in various ancillary spaces including our public Concourse.

Northern Light was the selected supply & installation contractor. The high quality of their workmanship is a credit to the skills of the staff sent to tropical climes for the task. The care taken in the provision of equipment from the many various manufacturers was similarly committed.

The tendering and construction industry was a new field for me, and presented a few surprises. From the theatrical "can do" it became the construction "how much is it worth?" Needless to say there were a few discussions along the way, some of which linger on, and will do for some time.

Paralleling the installation was the training required for the Singaporean staff. Some were skilled in the operation of other control desks while some were quite raw. Our own efforts at instilling knowledge included sending our four LX Seniors to various venues and companies in Australia for a three month stint. We remain ever grateful to the Sydney Opera House, Queensland Performing Arts Centre, Adelaide Festival

Centre, The Australian Ballet and Opera Australia along with many other equally helpful houses and technicians.

Northern Light, too, as part of their contract provided training in the operation of the 500 series desks. Collin Cuthbert and Gregor Joy passed on many pearls to the LX staff here. Those early seeds of knowledge are now bearing fruit. As expected, since commencing our three month Trial & Orientation period in July our board operators have constantly improved their abilities with each passing show.

During the Opening Festival we enlisted the help of the aptly titled "Technical Task Force", a group of Sound, Staging and Lighting Technicians who augmented the efforts of our staff during one of the busiest periods I expect the complex will ever see. The willingness with which Matt, Scott, Phil and David imparted their LX knowledge won't be forgotten.

The Official Opening on October 12th proved a success, and again the LX crew proved their worth. With experience comes knowledge, and in time we hope Esplanade can provide LX staff to equal any venue.

Gary Yap, the regional Strand agent based in Kuala Lumpur, visits us regularly to check on just how the systems are working. Occasionally he'll bring in prospective Strand purchasers from other regional centers for a tour of operations. Of course we're pleased to pass on our suggestions and show off our venues.

Low Wee Cheng of the Theatre's technical staff tells us about his experience with the control system: The set up consists of 2x 510i, 2x 550i and a ShowNet file server. One of the 510i is running as the main while the other 510i is running as a backup for the 510i. There are 2 550i running as the control surfaces. One of them is a backup control board. The whole system is linked up through the Ethernet system. "I find that the 500 series is a pretty cool theatre board. It's got a nice outlook and has all the faders and parameter controls needed to run a generic rig or a moving light rig. With the function of cue tracking, it makes life much easier when programming a moving light show. The function of Auto move in the dark is very useful too. It saves time when I do not have to constantly go back to the previous cue to preset the position and the attributes of the movers. When I learned about the Automod function, I found it to be absolutely fabulous. Now, I can set up an empty show with the control groups, colour groups or effect groups for movers and save it as a template."

Strand Lighting would like to thank all three contributors to our story on this remarkable new theatre complex. This stunning new facility will serve the people of Singapore for many years.

Los Misérables: Strand In Control In Mexico!

By Rob Halliday

It is one of the most successful musicals of all time, currently in its eighteenth year in London's West End and sixteenth year on Broadway. Yet despite those long runs, and countless other productions and tours, Les Misérables continues to win new friends around the world - currently in Mexico City.

The new production - re-named Los Misérables and sung in Spanish - is due to open in mid-November at the Centro Cultural Telmex's Teatro 1. Like many of the productions of the show, it is under Strand control. At the Palace Theatre in London, the show continues to be run by a Strand Light Palette 90: the more recent productions use Strand 500-series consoles, a change which took place in 1997 when lighting designer David Hersey undertook a comprehensive re-think of the rig for the new British tour of the show. To make the touring process more efficient, the lighting designer replaced many of the overhead cover lights with fourteen High End StudioColor moving lights. These were joined by two Strand Pirouette moving yokes fitted with Strand Beamlights to give refocusable specials, and Hersey's trademark Digital Light Curtains. With the lights rigged into specially designed truss that allowed everything to stay rigged during moves on the tour, the time taken to re-focus the rig at each venue on tour was dramatically reduced. To control the rig, Hersey and his programmer Rob Halliday turned to the Strand 500-series consoles which had served them so well on Martin Guerre and Jesus Christ Superstar in the West End the previous year.

The showfile from that production went over to Australia later that year, where the new moving-light version of the rig was retro-fitted to the existing Australian set. The following year, the same rig and showfile was used again, for a new production of the show in Antwerp, Belgium. And this Les Mis showfile is now very well traveled: as well as touring all of Australia, the Australian rig and its 520i console have visited Argentina, Brazil, Korea, New Zealand and even what was the first appearance of a West End musical in China, where the moving light rig was added to a version of the set brought over from America for a short season in Shanghai!

For the Mexican production, associate lighting designer Richard Pacholski has left the rig - supplied by Chameleon Touring Systems Pty Ltd and Technical Equipment Pty Ltd in Australia - relatively unchanged, still using StudioColors, Pirouette yokes fitted with Beamlights and Digital Light Curtains. To obtain the very smoothest movement from the Light Curtains, they continue to be



run from their own LightMoves software on an Apple Macintosh. However, the Mac is fed cue information from the serial port on the back of the 520i using the console's 'Go Key Output' setup option; whenever 'Go' is pressed the 520i sends 'Go' and a cue number to the Mac, so ensuring that the two controllers stay in sync even when jumping around the show during technical rehearsals. Pacholski is also using an SN100 node to allow him to keep track of channels and cues while operator Manuel Ruiz runs the show. The Centro Cultural's own 550i console will act as a backup console during the run of the show.



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The Robert Zemeckis Center for Digital Arts at USC. A Case Study in Future Technology.

By Chris Martin

The University of Southern California was recently presented with an opportunity to explore and extend the creative limits of Film and Television production. Already a world leader in teaching the latest concepts in digital technology, the USC School of Film and Television further enhanced its reputation of providing the most advanced products and techniques available to both students and faculty alike.

Seeded with a gift of five million dollars from noted film director Robert Zemeckis, and further supported with generous donations by Steven Spielberg, Ron Howard and other equally respected film makers, the University set about the task of creating a facility to exceed anything previously dreamed about in the futuristic world of digitally-produced motion picture and television material.

The stated goal of many educational establishments is to teach students about the environment they will encounter after graduation. USC set about the task of creating a generation of students who would actually set the creative and technical agenda out in that environment.

By bringing together the best and brightest people, both from within and from outside the School, USC created an expert team to conceptualize, integrate and execute this vision of the future. Early on in the project, it was realized that at least two production studios would be needed. One would be primarily devoted to film, the other to television. Although the native technology of digitization is similar in both TV and Film, much more similar than the current practice involving analog electronics and silver halide imaging, nevertheless, substantive differences exist between the two art forms. The University's goal was to preserve these differences, and yet capitalize on their similarities. Each studio measures approximately 60' x 80', with a 22' grid trim height.

Forman and Associates, well-known in the Hollywood film industry as the Strand Lighting representative and systems integrator, was selected to design, furnish and install the dimming, control, distribution, motorized grids, curtains and track in both studios. In addition, Forman provided a hard cyc in the television studio. The hard cyc is paintable, and may frequently be seen in a digital green finish.

Strand Lighting is was chosen for the project as having the widest selection of equipment available, as well as the most reliable. The depth of available hardware was particularly important in this project, since the two studios, although essentially independent of each other,



A technician works with Quartzcolor luminaires on one of the motorized grid sections.

are connected by a large, acoustically isolated air wall. This wall may be moved to provide one large shooting stage, with proportions especially suited to the 16:9 aspect ratio of HDTV.

The original contract called for Strand 520 consoles in each studio, although the University is always looking for newer products. The console design enables each studio to operate separately. However, when necessary, the systems in each space may be ganged under the control of one lighting desk. Each studio has a dedicated DMX universe, controlling about 200 CD80 dimmers of varying capacity. When production requirements so dictate, all 400 circuits can be controlled from one console from any one of four control locations.

Each studio has six motorized "pods", or mini-grids, each about 20' x 20', carrying the electrical distribution and associated feeder cable systems. Various auxiliary equipment can be installed onto these pods, depending on the nature of the shoot. The versatility of the CD80 product line is a key element in ensuring that, no matter what power is needed, the system can handle it.

Approximately 300 Quartzcolor lighting instruments were purchased. The rugged design and ease of maintenance are of paramount importance here. In addition, interchangeable parts across the family means easier repair, with less stock. A versatile mix of 1 kW and 2 kW Studio Fresnels, together with Arturo Softlights, Iris Cyc Lights and some SL ellipsoidals make up the lighting package.

It was important to the school that the Zemeckis Center system is the product of one single company, with just one point of contact. This philosophy ensured system integrity and reliability.

Version 2.6 Our Newest console Software is now available

Continually striving to improve our console in response to feedback and user suggestions and requests, we are proud to present GeniusPro/Lightpalette version 2.6, the latest version of the operating software for our 300, 400 and 500 series lighting consoles. The very latest version of this software, 2.6c, is now available from the Strand Lighting website, www.strandlighting.com.

So, what's new in 2.6?

- Dynamic Shapes. Now you can get the console to run complex movement shapes with your automated lights without having to program effects. Dynamic Shapes are covered in more detail in this issue's Console Programming Tips.
- Slightly re-designed screens, with black bars at the top and bottom of the screen instead of grey bars, increasing the contrast of the text in those areas and making the command line easier to read.
- A new UNBLOCK command, allowing redundant information to be quickly removed from tracking cues: [CUE] [x] {UNBLOCK} [*]; {UNBLOCK} is [SHIFT]+{SOFTBLOCK}.
- New setup options: now you can choose whether PREVIEW displays the last cue viewed in preview or the last executed cue, and whether a RECORD command takes the level of grandmasters into account or not.
- You can now update channels into effect steps, i.e. [1][+][2][UPDATE][FX][1.1] [THRU] [1.78] to add channels 1 and 2 to all of the steps of effect one.
- There are now new ways to select ranges of channels: as well as THRU ON to select the channels that on in a specified range, you can select THRU OFF, THRU ODD, THRU EVEN and THRU STEP!
- You can set a range of channels to a range of levels in one operation:
[1][THRU][10] [@RANGE] [10] [THRU] [50][*]
where [@RANGE] is accessed as [SHIFT]+[@]
- There's quick access to another macro: SHIFT-USER
- PREVIEW XREF has been considerably speeded up, and there have been speed increases in other areas of the console.

Plus many other refinements, fixes and improvements. Full details of the changes can be found in the console's HELP file under LINKS, NEW FEATURES.

2.6b will load shows created in all earlier versions of software and will run on all consoles with 8Mb or more, with 2.6b(i) running on consoles with 64Mb or more of memory and supporting multiple user operation. Why not download it now?

Strand on the Web

All Strand software and operating manuals are available on our newly update Website at www.strandlighting.com

Telekom Headquarters in Berlin illuminated by Strand Lighting

140 years ago the Imperial German Telegraph Institution building began communication operations. Returning to their historic foundation the current German Telekom Company has the building their new headquarters after completing an extensive renovation.

The design of the new Telekom headquarters by the Architectural Group Henze + Vahjen from Braunschweig has achieved a marvellous symbiosis of old and new. The restored and updated historic building complex, was originally built between 1863 and 1902 and is the largest and oldest in the telecommunication industry.

The architectural concept preserved original structures and added new. "All new elements of the building can be easily identified and are accentuated by the use of modern material" explains architect Heiko Vahjen.

The structure has a large open space or 'Lichthof' (light-patio), and is one of the largest atriums in Berlin. The space is very popular and has already been the setting for meetings with topics covering culture, politics, science, technology and German society. The new addition also received a multiple purpose atrium which is surrounded by office galleries and directly connects to a seven floor office building.

The design team sought to create architectural tension between the modern interior and the historic building through the use of a wide range of different materials. Warm coloured wood contrasts with steel and glass.

Mechanical systems also received attention with terrazzo floors supporting integrated heating and cooling systems. As a first in Germany, the atrium has ventilated floorboards consisting of a specially perforated wood.

The lighting concept for the Lichthof was developed by Strand Lighting's specialists from Berlin in co-

operation with T-Systems. The installation of the equipment was also completed by Strand Lighting and



Eike Hoebbel, was responsible for the project management.



The lighting systems are suitable for Television broadcasts and are appropriately equipped for different events such as receptions, press-conferences, talk-shows or product presentations.

The atrium which has a glass roof and a glass façade at the northern end of the building creates a

unique set of lighting challenges.

The strong daylight calls for the use of daylight sources, and Strand Quartzcolor Daylight PAR's and HMI's with 575 and 1,200 watt lamps have been used to provide key lighting for the space. PAR-lights form the majority of lights used as their efficiency is nearly double that of fresnel luminaires.

The HMI ballasts were placed in a separate room for easy access for maintenance. Since daylight sources cannot be dimmed using conventional dimmers all units are equipped with motorised dousers supplied by Hagenbach & Grill, and are DMX controlled by a 300 series Strand Lighting console.

The beam angle of the PAR luminaires is very narrow, and can be adjusted through the use of interchangeable lenses provided on the project. To achieve the fine tuning of the lamp and the matching lens a remote focus-mechanism is being used. All lights can be altered by use of a pole to control Pan, Tilt and Focus. The PAR-light focus allow for fine tuning the lamp position with the chosen lens. The design objective was to achieve an illumination level of 500 lux to the camera positions even without daylight.

The atrium in the new building covers an area 20 by 30 metres with a height of approximately 25 metres and includes a stage. The space also features a moving 8 x 5 m LED Video Screen, and is the first time that a screen of this type has been used in Germany. The fully rigged screen can be moved around the space providing an effective and flexible presentation tool.

White Light supplies a Strand 520i to the Duke of York's Theatre, and converts the lighting data so the show's run can continue uninterrupted.

By Brian Raven

White Light Sales has recently supplied another Strand 500-series console to the West End: this time, a Strand 520i for the Duke of York's Theatre in St. Martin's Lane. The console replaced an Arri Imagine supplied to the theatre by White Light some years ago, which was coming to the end of its life.

With a long-running show - the hit comedy *Stones in his*

Pocket - occupying the theatre, White

Light Sales and the theatre's crew had to ensure that they could slot the new desk into the theatre without disrupting the show's lighting design. Andy Fordham at The Service Company, a White Light Company, took the show disk from the Arri and using his collection of conver-



sion software tools, transferred it to the 520i. Thanks to this work, the 520i was in use controlling the show on the day it arrived in the theatre.

The delivery of this desk to the Duke of York's continues the ongoing success of the Strand 500-series consoles in the West End: in recent years White Light Sales have also supplied 500s to the Albery, Coliseum, Comedy, Her Majesty's, Piccadilly and Whitehall theatres as well as to the Royal Festival Hall, the Pit at the Barbican Theatre, the RSC in Stratford-Upon-Avon and many other regional theatres. The consoles are also in use on shows including *My Fair Lady*, *Taboo*, *The Play What I Wrote* and *Chitty Chitty Bang Bang* in the West End and *Miss Saigon* on tour.

iPaq/SN110 Update

Users of Strand's wireless remote and SN110 nodes can now get a full network view on their handheld remotes. Using the web browser SN110's with version 2.6 software can now provide a web page showing your entire network .

Node	Name	IP
imgbr	imgbr	192.168.3.21
serv	serv	192.168.3.30
imgbr	imgbr	192.168.3.21
serv	serv	192.168.3.30

Console Programming Tips - by Rob Halliday

Dynamic Shapes

One of the most exciting features introduced with the new version of the Strand operating system, GeniusPro/Lightpalette version 2.6, is Dynamic Shapes: the ability for the console to make automated lights move in complex patterns without you first having to write complex chases!

Using Dynamic Shapes for the first time requires a little learning curve: setting up and using the system is slightly different from using other parts of the console, since it is a type of behaviour that has not been available before.

Starting with an empty show, patch a moving light as you would normally:

```
[PATCH] [1] [@] [1] {@FIXTURE} [36][*]
```

to patch a Vari*Lite VL6 addressed as DMX1 to channel 1.

Dynamic Shapes are controlled using extra, 'virtual' attributes for each moving light. By default, these are not created when you patch a fixture so that older shows load into the console exactly as they did prior to version 2.6. To create the Shape attributes, go into the channel sub-menu in Patch, where you will find a new option:

```
[PATCH] {CHAN>} [1] {ADD SHAPE}
```

This will add the Shape attributes to channel 1; you can specify individual channels or ranges of channels in the usual way, but note that you are specifying a channel number here rather than a DMX address.

If you switch back to Live and select channel 1 then (provided you have set the Smart Channel Display setup option to Tracker or Tracker Preset) you will see

that channel 1 has the attributes you'd expect for the moving light you patched, plus nine new attributes numbered .91 to .99: PProfile, TProfile, PSize, TSize, PSpeed, TSpeed, PPhase, TPhase, PTRotate. P in each case refers to Pan, T to Tilt.

If you now look under the Console's Profile display:

```
[MORE] {PROF DISP>}
```

you will find that the console now arrives with additional profiles as standard, many of these designed to be used as Dynamic Shapes. This is the part that feels different, at first: when you set attributes .91 PProfile and .92 TProfile, you are not setting them to a level: you are setting them to follow a profile. So:

```
[1.91] [+].92] [@] [96]
```

will make channel 1's pan and tilt follow a sine wave, giving instant movement based around the position the light started in. (If in Single-Digit entry mode, you will have to type [@[9.6]; if in Command Line entry mode, you will have to press [*] to complete the command; if you load an older show that writes over these profiles you can get them back by deleting your custom profile, using the Archive screen to re-load your custom profile to a different profile number if you want to keep it.)

However, you may not immediately see the light move: the shape's size will probably be set to 0 and its speed may be set to 50%, which means 'stopped' (51% to FL increases the speed in one direction, 49% to 0 in the other). By using the left- and right-hand keys above the trackball (or the attribute selection button on an external trackball on a 300-series console) you will be able to bring these attributes under the control of the rotary encoders and adjust them to set the size and speed of the movement. Of the other attributes, Phase allows you to adjust the point on the movement shape where the movement starts, and PTRotate allows you to rotate the shape.

As the light is moving, you will not normally see the Pan and Tilt values on the screen change: these continue to show the light's base position. To see what the light is actually doing, you can change the channel display mode by pressing [SHIFT] [GROUP-DISPLAY] [GROUP-DISPLAY] which will switch to the CONTROL display. Now the Pan and Tilt attributes will show what the light is actually doing (though if you hit RECORD, the base value for the position will still be recorded). Pressing [SHIFT]+[GROUP-DISPLAY] again will return the dis-



play to normal.

Experimenting with different profiles on pan and tilt can produce lots of variations in movement, and you're not limited to the supplied shape profiles - any profile you create can be used. To help you get going, 2.6 provides combinations of profiles, phase, sizes and speeds to create some common shapes: these are held as new special groups numbered 992.1 to 992.8, each with a fairly self-explanatory name. So, typing

```
[1] [@] [GROUP] [992.1][*]
```

will make channel 1 move in a circle (-best seen with moving mirror lights; the behaviour of a moving head light will depend on the circle's size and origin). You might prefer to copy these groups to groups in the 1 to 750 range, so they behave as reference groups and you'd therefore see the light's Shape attributes saying 'Circle'. Alternatively, you can store your own combinations of profiles and sizes into groups: there is now a function filter called Shape to make storing these combinations easier:

```
[1] [UPDATE] [GROUP] [1] [@ATT] {Shape}
```

Dynamic Shapes not only make movement chases quicker to program than using conventional effects, they also make possible movement patterns that would be hard or impossible to achieve using conventional effects: for example, a light moving in a circle where the circle's size increases over time. To achieve this, you'd create a cue that set the light's Profile, Speed, Phase and Rotation (probably in a part cue with a zero second attribute time), but left its size at 0. Then in the next cue you'd slowly increase its size to a suitable maximum value over a slow time: the light would start moving in ever-increasing circles! Or vary the Rotate attributes over time across a range of lights to have them start moving in sync and slowly change to running out-of-sync with each other. Or put these attributes on submasters to be able to manually vary Dynamic Shapes.

The only other thing you might want to create is a way of quickly stopping Dynamic Shapes - for example, a group that set all of the Shape attributes to zero except PSpeed and TSpeed which would be set to 50%, and a Macro to set that group. That way, even when you get completely carried away with Dynamic Shapes, you can always bring the lights back to a sensible state! (- keep in mind that if you have Dynamic Shapes running and run Cue 0 to fade the lights out before you go to dinner, the Shapes will still be running! Make sure you stop them so your lights get a dinner break, too!)

Salamanca Spain named City of Culture

By Enrique Pereira

Along with Bruges, the Spanish City of Salamanca has been designated European City of Culture for 2002. The theme for the year is "Ciudad de Encuentros y Saberes"



Teatro del Liceu

(City of Meetings and Knowledge), reflecting the city's renown as an intellectual meeting point. With its emblematic Plaza Mayor, a university that dates back to the 13th century and the historic buildings that have built up around it, Salamanca was proud to become one of the first Spanish cities to become a Unesco Heritage site in 1988. As City of Culture, Salamanca strengthens its position as a "City of Thought" by breaking down the boundaries

between the past and the future. Alongside the renovation and expansion of existing cultural centres and the construction of several new ones, Salamanca hosts a wide-ranging programme of events that promotes it as an outward-and forward-looking centre of knowledge, learning and culture.



Centro de Artes Escénicas

Strand Lighting was chosen to provide all the professional lighting at the new Centro de Artes Escénicas de Salamanca and to renew the existing systems at the Teatro del Liceu, Auditorio Caja Duero and Auditorio de Olmedo.

Chemtrol, a leading Strand Distributor in Spain was chosen to provide new lighting control systems at Centro de Artes Escénicas de Salamanca. Systems provided to the theatre included 4 SLD96 dimmer racks, LD90 dimmer systems and a 520i console, networked together using a Strand ShowNet network. Francisco Revilla, Chemtrol's General Manager, tells us why they chose Strand for the project, "When a challenge of this nature appears, where there is no margin for error, the reliability of Strand equipment with its outstanding technology for controlling and networking professional light systems, gave us the comfort and trust we need to fit the needs of a high spec project. Strand Lighting has been in the professional lighting market for nearly one hundred years, and we had confidence with experience and advanced technology."