

STRAND News

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A New Bolshoi *by Alan Luxford*

In 1987 the Government of the old Soviet Union raised the idea about the reconstruction of the famous State Academic Bolshoi Theatre (to give its full name) in the heart of Moscow. The Bolshoi is the oldest Russian musical theatre and represents the pinnacle of Russia and Soviet musical culture. Along with the decision to reconstruct the theatre in



Main Auditorium of the "Branch of the Bolshoi"

1987 it was also decided at Government level to build a new Bolshoi Theatre. This decision was made, as the existing theatre would have to be closed for the duration of the reconstruction, which could take many years. One of the major problems to overcome is the river which is running underneath the theatre is moving the foundations.

As with any large and complex project the paper work for the construction started in 1987. It was not until 1993 that a decision was made to who the general contractor should be. The building work finally started on the construction of the Branch of the Bolshoi Theatre on the 28th September 1995 with a completion date of the September 1997.

System Design

In 1998 I traveled to Moscow to create the lighting equipment specification with the Bolshoi's lighting designer Damir Ismagilov. While there the dimmers (originally EC90SV Reporting) Ethernet and control systems were agreed with the Bolshoi's main power engineer Alexander Ivanov who is now head of lighting at the Bolshoi theatre. It would be 5 years before the vision that they created as a group would be realized. During that time I would become the first individual from the west to be admitted to the International Federation of Artists (member 4192) for my work in designing lighting for Russian theatres.

The collaboration resulted in one of the most sophisticated theatres in Russia with one of the most sophisticated light rigs installed anywhere in the world. The utilization of the theatre drove much of the design as a typical day would have a rehearsal in the morning, a matinee performance in the afternoon at and an evening show with three different performances. As the working height for the sophits varies from 10m to 12m above the stage a moving light rig was the only way to get a quick turn around of these different performances.

At the Bolshoi they use a lot of stage cloths and luminaires have to be provided to light them. Strand Lighting engineered for the Bolshoi 144 custom Coda 1000 watt 4 circuit luminaires, which are double hung on the 7 sophits. In addition we also designed a 6 function Toccata Pirouette which has motorized



The first lighting bridges (sophits) at the new Bolshoi with its large rig of customer made Coda wash lights and Pirouette automated lights

control of Pan, tilt, focus 1, focus 2 and Iris plus colour scroller.

Completing the rig were standard Pirouette 2kW PC units and 1000W Beamlite units all fitted with colour scrollers. A total of 96 units were supplied for the project.

All of the stage lights are controlled by two 550i desks in the main control room (configured as main and back up) and a 520 console acting as a stalls desk.



The main dimmer room with 14 SLD 96 dimmer racks

in the auditorium. Two PC's with Strand console emulation software on them provide access to the system in the two Lighting designers offices.

All of the controls are connected over a fiber optic Ethernet network designed by Victor Mikheev of our Berlin office. In addition to connecting consoles together data is sent to the 16 SLD 96 stage dimmer racks, 2 SLD 96 house light dimmer racks and all of the automated lighting in the building using ShowNet SN series nodes. All of the racks feature up to 96 – 5kW dimmers with hi rise time filter chokes to insure quiet operation. In addition all racks feature redundant tracking back up processors. House light controls are all Strand Outlook series that work with the architectural con-



Each dimmer rack features dual dimmer processor electronics with Russian language displays

trol electronics built into every SLD processor.

Installation

To complete the installation of this system Strand worked very closely with its Yugoslav distributor Svetlost Teatar for the equipment design, dimmer layout, and Ethernet distribution. Svetlost Teatar was a sub contractor to Waagner Biro who was the main technical equipment contractor. The



The main Bolshoi Theatre is shown here in the foreground with the Branch of the Bolshoi at the side

installation began in the spring of 2002 with a team led by Svetlost. Strand's Victor Mikheev who commissioned the complete system during September and October 2002. The Bolshoi staff was amazed that only a single Ethernet cable was needed to plug into the 500 series consoles to be able to control the entire lighting rig.

The first performance of the Russian Opera "Snow Maid" in the Branch of the Bolshoi was on the 22nd November 2002. The lighting design received good reviews and all of us were delighted to have played a part.

While the new "Branch of the Bolshoi" is enjoying their first year in production there is still no proven plan for the reconstruction of the main Bolshoi Theatre so there are now 2 Bolshoi Theatres in Moscow. It is still hoped that the main Bolshoi will close for renovation rather than have a step by step reconstruction but there is talk that it may close in 6 month increments so the reconstruction could take many years to complete.



One of the two 550i consoles used in the theatre with its 4 monitors complete with Russian language displays. In the foreground are the Outlook architectural controls that were built into the main desk furniture.

Facts and Figures at the New Bolshoi

Theatre Area:	25,000 sq. meters
Stage dimensions:	30m X 25m
Grid height:	22m
Lighting Bridges (Sophtits)	7
Seating Capacity:	960

Control and Dimming:

Control Consoles:	2 Strand 550i 1 Strand 520i
Network Data Racks:	5 Cabinets

Stage Dimmer Racks:	14
Houselight Dimmer Racks:	2
3kW Hi Rise dimmers:	1152
5kW Hi Rise dimmers:	144
3kW Non dims:	108
4kW Non dims:	108

Stage Lighting:

Profile Spots:	74	232
2kW PC's		
650W PC's		20
5kW Fresnels		10
Beamlights		76
Coda 4 - 1kW		146
Coda 1 - 1kW		10
Orion ground row		24

Automated Lighting:

Toccatà Pirouettes	20	
Standard Pirouettes:		34
Beamlight Pirouettes:		42
Colour Scrollers		300

To see a light plot of the theatre in PDF format or a riser diagram of the electronic systems at the Bolshoi please visit www.strandlighting.com and select the Support Tab and Newsletter. Under Newsletter you will find a download directory for two Bolshoi drawings.

HER MAJESTY'S THEATRE

by Shirley Jensen

Her Majesty's Theatre is a 950 seat provincial theatre in Ballarat, Victoria, Australia. Built in 1876 it is the oldest purpose built theatre in Australia. It still retains many of the original workings; from old paint frames, to timber pulleys and been through a series of renovations over the years.

Stuart McKellar took over the job of Technical Operations Manager 2 years ago after having toured shows into Her Majesty's over many years. He saw the need to upgrade the technology and bring it in line with most other theatres in Australia. Having learnt to operate on one of the first Strand 430's in Australia at the Victorian Arts Centre, Stuart had become accustomed to its operation. "So when I took over at Her Majesty's I decided to investigate the cost of the 530i. This is where I started my upgrade plan - desk first, then DMX systems and then Lamps. Bytcraft is company that I have dealt with for a good 10 years, so I approached both their sales and service team for advice and help."

"We spent many months of talks and meetings, deciding which way we needed to go. First we upgraded our old daisy chain DMX system to a patch system and completely re-wired the whole building with 2 streams of DMX. We also added cat5 connections to all points so we can upgrade to nodes when money permits. We installed all the cables and all terminations and fit-off's were done by Bytcraft Entertainment's Service Department."



A Front elevation of the theatre

Next came the lantern upgrade. The theatre has a very small front of house slot and Stuart wanted to get a 5 colour wash from the position. "I found that the SL fitted in beautifully" says Stuart, "because of

its size. We had a trial unit and I had my crew play with it and give their views. It was all hands up, saying we love them. Decision made. They found the output to be high and commented on the great finish and size. We love the 360° rotation of the yoke."

"With Bytcraft Entertainment's help we added to our lantern stock and upgraded the theatre to the highest possible standard. Without them it would not have been possible."

The upgraded lighting system includes:

- Strand 530i 750channels
- Strand 301 backup
- Strand 24/48 200 series desk
- 40 x 15/32 SL's
- 4 x 10' SL's
- 1 x 5' SL's
- 24 x Cantata 1.2k Fresnels

These has been added to the existing lamp stock of 70 profiles and 35 1kw Fresnels. "In the coming years I see us replacing at least 40 of the old profiles with SL's." says Stuart. "We are very happy with both the service and back-up Bytcraft Entertainment and Strand have delivered to us. It was always pleasing to know we had the support and the generosity of the team at Bytcraft - Steve, Shirley, Janet, Darren. Not once did they make us feel like we were a country venue or a poor cousin to the big city. Thanks guys!"

"Where to now? We will have to wait and see the next gadget to come out of the Strand factory!"

The New Hampstead Theatre

By Rob Halladay

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February saw the official opening of the new Hampstead Theatre in London. Founded in 1959, the theatre company aims to be the home for new and emerging writers; in the time since it has provided a home for the early works of Mike Leigh, Pam Gems, David Hare, Harold Pinter and others as well as a launch pad for the careers of actors including Jude Law, Jane Horrocks, Alison Steadman and Rufus Sewell.



Since 1962, the company has performed in a theatre created as a temporary home intended to last ten years. Nearly forty years later, Britain's National Lottery

provided them with the chance to create a more permanent home, in a custom-designed building housing two theatres, a rehearsal room, administrative offices, dressing rooms and a light, airy foyer-and-bar area.

The main auditorium is an intimate horse-shoe shaped auditorium over two levels with a forestage lift making the seating capacity variable between 140 and 325 seats. The stage area can be raked, and is fully modular while overhead there is a counterweight flying system, with a tension-wire grid above the auditorium making rigging and focussing here easy and flexible. The second venue is a small studio called The Space.

To help equip their new home, the theatre's production manager, John Titcombe, and chief electrician, Greg Gould, with theatre consultants Techplan turned to Strand's Bill Richards to pick the most suitable products. Knowing that lighting designers would want to use the latest lighting technology, including automated lanterns and colour scrollers (the theatre's stock includes two Strand Pirouette PCs and two Vari-Lite VL1000TS units as well as Rainbow scrollers), they needed a control console that would deal with that equipment while being familiar to crew members and lighting designers, easy to use and reliable. They chose a Strand 520i console with 350 channels, adding a 510i console as a tracking backup, Gould being familiar with the console from his time at the Royal Exchange Theatre in Manchester.

Lighting data is taken to the dimmers using Strand's ShowNet network, with twin-output SN110 nodes used to convert traditional DMX data where required. The use of Ethernet allows the console to be easily moved from the rear-of-circle control room to the auditorium when required; at other times the crew use a Strand iPaq wireless Ethernet remote to control the rig from the stage. These control systems, the 300-series console used in The Space and the Strand Bambino 5kW fresnels and Coda floods in the theatre's stock, were supplied by London Strand dealer White Light.

The Hampstead team also selected Strand to provide dimming. Originally planning to use LD90s, the team eventually decided on the latest dimming technology from Strand, specifying three SLD-96 dimmer racks that control production lighting and houselights. Dimmer modules are RCD equipped, some feeding to outlets directly and some via a mains patch. The crew also have a selection of alternative modules which can be slotted into place where required - most usually using contactor modules to provide non-dim power to the moving lights. The dimmers were supplied and installed by Strand dealer Northern Light.

With all of the new technology in place in the main theatre (and with Gould currently experimenting with - and excited by - the very latest technology, in the form of fault-reporting from the dimmers to the console), the equipment stock from the old theatre is still in use in The Space. This includes a vast selection of Strand equipment from Quartets back to vintage Patt 23s and 123s still giving good service!

In the three months since the new theatre opened it, and its crew, have survived a hectic schedule of shows and all have come through unscathed! Gould remains full of enthusiasm for his new equipment, in particular praising the console for its reliability and ease-of-use. With the bedding-in complete, the theatre company looks happy in its new home and set for the next forty years...



Wireless Ethernet Applications Grow in Popularity

Birmingham Royal Ballet Goes Wireless *by Bill Richards*

Touring their lighting control system, often means cables run from the Wing Rack to the Production Desk rack to allow the lighting designer to get console video. Fine if you have the time, but often as with most touring theatre, Birmingham Royal Ballet often have a need to quickly strike the equipment. A time saving solution was needed by Nick Ware from BRB and an approach was made to Bill Richards at Strand Lighting to solve the problem.

In conjunction with Chris Hooley from BRB, Strand Lighting have designed and commissioned a state of the art Wireless Ethernet system to allow Shownet signals to be distributed to the required points.

Two Wireless Access points were supplied to provide a Locked Ethernet Bridge to the production desk, whilst a further access point provides "open" connections for Wireless Handheld remotes and wirelessly enabled PC's and Mac's to operate. BRB already makes use of a G3 Mac to act as a remote console, and so this now allows further expansion of the system. Further facilities have been designed into this system to allow connection to other networks via a Router Gateway for future connections to other file servers and email. With the ACN standard no longer a pipe dream, this further enhances the BRB system to take full advantage of the standard when it becomes published later on this year.

For full information on how to make the most of your networks, contact Strand Lighting for a full consultation.

Project Equipment List:

Production Lighting Control Desk: 520I

Nodes: 2 x SN102 and 2 x SN103R

Access Points: 3 x Wireless Access Points in custom configuration.

Remote controls: 1 x iPAQ

Wireless DMX at the Hummingbird Arts Centre in Toronto

By Richard Goode

Strand Lighting Canada was asked to solve a difficult challenge for the production staff at the Hummingbird Theatre, current home of the National Ballet of Canada and the Canadian Opera Company. Tom Taylor

the theatre's master electrician needed to get DMX quickly and easily on to the fly bridges, electric pipes and the balcony rail. The crew would string DMX cabling from the downstage right optical-splitter to the bridge and electrics as needed but it was time consuming and often in the way of rigging and props. The balcony rain out in mid house with DMX scrollers and rotators we an even bigger challenge.

Tom Taylor and Assistant Head Electrician Richard



Karwat worked with Strand Lighting Canada's Richard Goode, National Sales and Marketing Manager to package a wireless, configurable and portable DMX solution. The SN110 nodes were custom mounted in an aluminum frame to hold the Access point complete with power supplies, a pipe clamp and Stage pin cord. Tom Taylor commented, "the

solution has to be a complete package, lightweight and small so a stage hand can climb up and install it on a pipe and plug it into power". The access point status indicators are visible for simple diagnostics and the frame offers a home for the antennas to fold down during storage. A single access point located at the proscenium wall completes the wireless network for the remaining four portable wireless nodes.

Richard Karwat said "I used a node just the other day when the Opera wanted a gobo rotator fed with DMX in a location where no permanent DMX was available No cables to run, just plug in the node and move on". The Shownet file server for archiving show files is used to web browse the SN110 across the wireless network and configure the SN110 DMX ports.

Project Equipment List:

- Production Lighting Control Desk: 550I
- Stage Control Desk 520I
- File Server
- Nodes: 2 x SN104 and 2 x SN100 and 4 x Sn110
- Access Points: 4 x Wireless Access Points in custom configuration

Strand in the West End by Rob Halliday

Two new musical productions in London - one a revival of a hit musical, one brand new - are making use of Strand's 500-series control systems.

Tell Me On A Sunday, at the Gielgud Theatre, is a revised production of an Andrew Lloyd Webber show which first played in London and then in New York in the early eighties. Then the show was the first half of a double bill called *Song and Dance*; now the show has been expanded into a seventy-five minute long, one woman show charting an English girl leaving home and moving to Manhattan and the relationships she encounters along the way. The show stars Denise Van Outen, who has become a familiar figure in musical theatre after her appearances in *Chicago* on both sides of the Atlantic.



Directed by Matthew Warchus and designed by Rob Howell, *Tell Me On A Sunday* has been lit by double Olivier-award winning LD Hugh Vanstone, with a rig that includes Vari-Lite VL5 and VL5B washlights, and VL6Cs and VL1000TS spotlights, all supplied by VLPS in London. The entire rig is controlled from a 530i console, programmed for Vanstone by Steve 'Spooky' Parkinson.

Opening shortly after *Tell Me On A Sunday*, on the other side of the River Thames at the National Theatre, was an altogether different musical - the outrageous, explosive *Jerry Springer - The Opera*. Not quite the fare one might expect at the National, with lines like 'Chick With A Dick' and 'My Mom Used To Be My Dad', the show takes as its starting point Jerry Springer's daytime TV show. In the early stages the show is like an over-the-top recreation of that show on stage with singing. Then Jerry is shot and taken to adjudicate on a debate between the Devil and Jesus....

The show began life at the tiny Battersea Arts Centre in south London, before being expanded and presented at the Edinburgh Festival in 2003. There Tony- and Olivier-award winning lighting designer Rick Fisher became involved with the show; lighting it with Martin Mac500s and Mac600s controlled by a 500-series console programmed by Vic Smerdon. For the season at the National's Lyttelton Theatre, Fisher and Smerdon have expanded the rig, which now includes sixteen High End StudioSpots, 28 Martin Mac600s and six Vari-Lite VL5Bs. Once again,

though, the entire rig is under Strand control, using the Lyttelton's 500-series main and backup consoles which run the automated and conventional lighting.

To the surprise of those outside the show - but the delight of those involved - *Jerry Springer - The Opera* is a hit, even gaining approval from Springer himself. As he says, "how many people get to become an opera in their own lifetime?"

In Memoriam James Fuller

by Donna Appleton

James Charles (Jimmy) Fuller 1920 - 2003

Jimmy Fuller, 2002 winner of the Wally Russell Lifetime Achievement Award for his contribution to entertainment design and technology on the international stage, passed away suddenly on Thursday May 22nd, in Toronto, Canada. Jimmy leaves behind his wife of 58 years, Eleanor; daughter, Susan; and five grandchildren.



Jimmy Fuller as he received his Wally Russell award with Phil O'Donnell CEO Strand Lighting and Donna Appleton of Strand Canada.

Jimmy's support of Strand Lighting and before that Strand Century and Century Lighting was unparalleled. Always famous for his deal making, Jimmy concluded his last deal with Strand just two days prior to his passing.

Highlights of a long and successful career in the Theatre:

- President, IATSE Local 58 1962 - 2000, Gold Card (50 Year) Member of the Local
- Chief Electrician, O'Keefe Centre (now the Hummingbird Centre) 1960 - 1987
- President, Canadian Staging Projects, for two decades Canada's premiere theatrical equipment supply company

Jimmy was a tireless supporter of the Canadian Opera Company and was still active as their Lighting Consultant. He was a mentor to Wally Russell and they remained close friends and business associates for many years.

A man who was honest and fair, a tough negotiator and a benevolent human being, his handshake was his word. Jimmy will be missed by all who knew him.

From Berlin To Broadway - In Denmark by Rob Halliday

From Berlin To Broadway was the name of the show - but this revue of the music of Kurt Weill actually took place in Denmark rather than Germany or America!

Produced by Det Nordjyske Operakompagni, *From Berlin To Broadway* was directed by the company's Artistic Director, Nigel Warrington, designed by Isla Shaw, with lighting by Bruno Poet.

Featuring four performers, the show incorporates the two main periods of the composer's life, with the first half featuring his work in Germany with Bertolt Brecht and the second his compositions following his move to America. A simple yet flexible set design allows enough variation to reflect the differing moods of the two periods, with video projection providing historical images in the background. Lighting follows this plan: cool and austere in the first half, then with light bulbs around the set revealed and more dramatic col-



Photo courtesy Carl Eric Hesseldal

our and chases in the second. A relatively compact rig gained added versatility from an upstage line of four Martin Mac300 washlights, which worked hard to provide backlight specials and a range of colour washes.

Control for the rig was from a Strand 520i console, supplied to the production by Strand's Danish Distributor, Teadan. This, along with the video material replayed from PowerPoint, was operated by Nordjyske Operakompagni's technician, Thomas Arnold. During plotting Bruno Poet, an experienced 500-series user, operated the console himself.

To allow Arnold to trigger cues independently, Poet configured his Macintosh iBook laptop as a remote console - Arnold then used the Mac's 'g' key to run cues while



A view from the Lighting Desk

Poet continued to programme undisturbed. Full details of configuring Macs in this way can be found in the new information booklet, *The Apple Macintosh in a Strand World*, which can be downloaded from the Strand website.

Berlin To Broadway opened at the Jomfru Ane Teatret in Aalborg, playing a season there before transferring to Den Anden Opera in Copenhagen.



Photo courtesy Carl Eric Hesseldal

ABC Television and the West Hollywood Center for Early Education a study in contrasts

by Chris Martin

This is an account of two projects, different in every conceivable respect, yet tied together by the vision of one person - Norman Russell, the respected theatrical and television industry consultant, and principal of Norman Russell Design.

I recently spent a day with Norman, at his busy office in the idyllic California city of Santa Barbara. Situated close to the Pacific Ocean, I realized that here was the perfect environment in which to spend time thinking about the true requirements of a project, without pressure of any kind. It was in this setting that the framework for these two projects was developed.

The first job was KABC-TV, Channel 7, Los Angeles, the West Coast flagship station for ABC-TV. Two news studios were constructed on an existing Disney property in Glendale, California. The two studios, mirror images of each other, were approximately 80' x 100' each. Strand Lighting was selected to engineer and manufacture the dimming and control systems for both studios, and provide a comprehensive lighting instrument and spares package. Each studio was specified with over 500 channels of CD80SV dimmers with intelligent feedback, along with Strand's award-winning 550i control console and a distributed DMX backbone.

Strand also supplied several additional systems throughout the facility, including dimming and control systems for a 70' x 70' newsroom, as well as controls in miscellaneous news-desks, edit suites and control rooms.

Mr Russell also specified motorized grid systems for each studio, together with a third in the Newsroom. Each studio grid consisted of 15 independently motorised pods, allowing maximum flexibility in both set and lighting design. The grid systems were engineered, furnished and installed by Stagecraft Industries of Portland, Oregon. ABC-TV remarked that the close relationship between Strand and Stagecraft was a significant factor in producing a well-coordinated and effective installation. Sasco Electric, the installing contractor, was pleased with the Owner's selection of Strand Lighting for this job. Strand Lighting, according to Sasco, is a contractor-oriented manufacturer, with fast response, good documentation and the best-designed equipment.

The entire project was managed by Forman and Associates, the Strand Lighting Representative in Los Angeles.

In contrast to the massive engineering scope and financial commitment of the KABC-TV project, Mr Russell also gave

me his views on another of his jobs - The Center for Early Education, in West Hollywood, California, is a small school, with perhaps 450 pupils. However, like many schools today, CEE suffers from significant financial pressures. Therefore, one constraint on the consultant is to provide a system that is relevant to future technology, and meets a very tight budget requirement.

Strand Lighting was able to engineer a system, meeting all of the project criteria, and yet within the budget. After careful evaluation of many products, Strand Lighting CD80SV dimming and a 300 Series console were selected. An independent house lighting control system was included. There is even sufficient room in the system to allow for future expansion as the school's needs grow.



The school is particularly pleased that Norman's design allows for a full proscenium stage, including two front-of-house electrics, even within the confines of a multi-purpose room. A clever arrangement of roll-out bleachers provides a traditional raked audience seating area. All of this in a multi-purpose space that is also used for basketball!

One service that Norman offers, unique in the industry, is "Stage Lighting 101". While Strand Lighting is very proficient at teaching new users how to the most out of their equipment, Norman produces a short seminar on the techniques of how stage lighting can be used in various scenarios. Strand Lighting products, being extremely versatile, are ideally suited to this type of seminar, where student skills may vary widely. The CEE students were particularly impressed at the ability of the Strand SL lens barrel to rotate through 360 degrees, a design unique to Strand. The installing contractor, who also attended Norman's seminar, said that Strand Lighting and the local representative, Forman and Associates, "always came through" during the construction process.

Interestingly, Norman noted over lunch that in some ways projects like KABC-TV are "easier" to conceptualize and specify, than those like CEE, where much has to be accomplished with less.

Two projects, two different sets of goals, two budgets, but one common thread - the vision of Norman Russell.

Pennsylvania High School Auditorium Gets New Lighting System

by Rob Rowlands

Industry, Pennsylvania, June 2003. Flames, sparks and puffs of smoke indicated that the vintage stage lighting system at Western Beaver High School was on the verge of dying. Besides the obvious safety concerns, the system was no longer capable of supporting the thriving drama and music programs of the Industry, Pennsylvania school.

The original system consisted of a slider patch panel with resistive dimmers for the stage lighting and motor-driven auto-transformers for the house lighting. The only point of control was from the floor-standing unit measuring about 8



The original dimming system with its built in patch panel took up valuable wing space.

feet long by 4 feet deep, which consumed valuable space in the stage wing. Repair parts were no longer available, leaving the system operating at about 50% capacity and failing fast.

Mr. Enrico Antonini, School Superintendent, contacted the engineering firm of Santangelo and Lindsay, Inc. to design and engineer a new stage and auditorium lighting system. Joe Santangelo and Jim Runatz of this New Brighton, Pennsylvania firm developed a plan to provide for the current technical needs and allow for future expansion and upgrades, while ensuring safety for the students, faculty and audience.

Mr. Santangelo commented, "We knew the dimming and control equipment needed replacing and, after further investigation, found many more deficiencies. For instance, the front-of-house catwalk position was obstructed by a ceiling piece. By removing about 6 inches from the onstage edge and utilizing the height-adjustable yoke of the Strand SL ellipsoidal, we were able to deliver more light than ever to the stage."

Specifications for the system were prepared with guidance from Repco II under the watchful eye of John Bartus who

commented, "We chose the CD80SV for its reliability and durability, while the Series 300 console provides ease of operation and expandability."

The power distribution equipment was in decent shape; simple upgrades included new stage pin devices and additional outlets in the beam position. The existing fixture inventory was a mixture of obsolete and somewhat useable fixtures. The oldest fixtures

were retired to the dumpster, and the inventory was upgraded with Strand ellipsoidals, fresnels, worklights and cyc-lights.

The system was installed by Turney Electric, Inc., Beaver Falls, Pennsylvania under the supervision of Mike Patterson. Project management was provided by Dan Polk of Vincent Lighting Systems, which supplied the equipment via distributor Elliot



The new system provided more space back stage and increased capacity

Electric Supply. "Everyone on the project truly worked together towards its successful completion. Our client is extremely happy with the results and feel they got a good value,"

commented Runatz. Bartus added, "It will be a long time before the school will either need or want another system".



300 series 24/48 Console

Founded in 1978, Vincent Lighting Systems has offices in Cleveland, Cincinnati, Pittsburgh and Detroit. The company is comprised of a 50-person team handles lighting sales, rentals and production services. Vincent Lighting Systems provides theatrical, television and architectural lighting for a wide range of customers .

Understanding what the Strand 300- and 500-series lighting consoles call 'reference groups', and which some other consoles call 'preset focuses' or 'palettes', is the key to dealing with moving lights on these consoles.

The concept of the reference group is to separate what you want a light to be doing - pointing to downstage-centre, being in colour red - from how the light actually achieves that effect - which might involve it having a pan and tilt value of 58/28 or a certain combination of cyan-magenta-yellow values. There are many advantages to working in this way. One of the most useful is when you have a light pointing to a particular place in many cues. Using a reference group means that if you ever need to re-focus the light to get it back to pointing there - perhaps because the rig has changed height, or you've moved to a different venue on a tour, you only have to update the one reference group for that position rather than lots of different cues. Each cue knows that the light is meant to be pointing to down-centre, but it is only when you actually run a cue that the console looks up the relevant reference group to see what the light needs to do to make it point to down-centre.

The other principal advantage is that the console's moving light channel display (which you see when you set the Smart Channel Display under the [SETUP] screen to TRACKER PRESET then switch back to [LIVE] and select a moving light) becomes more meaningful; if you've used reference groups you'll see that the light is set to 'down-centre' in 'red' in a 'dots' gobo rather than just a collection of meaningless numbers. This makes it easier to examine what your show is doing - and also easier for an operator to tell when there's a problem later in the life of the show. If the screen says the light should be red and it's actually green, there's probably a fault with the light!

Reference groups in the 300- and 500-series consoles (note that 400-series consoles, unless upgraded to use a Pentium processor, cannot use reference groups) are a variation on standard groups, traditionally used to provide easy selection of multiple channels. Traditional groups are recorded as they always have been - for example:
[1] [THRU] [10] [@] [5]
[GROUP][100][RECORD] (assuming direct 1 digit channel control mode)
will store those channels at that level into group 100. You can then type

[GROUP][100][@][5]
to quickly set those channels to 25% - 50% of their recorded level.

Storing reference groups works slightly differently. Patch a moving light as channel 1, make sure Smart Channel Display is set to TRACKER PRESET, switch back to the [LIVE] display, then select the light and use the trackball to move it to a particular position. Then type:

[1][UPDATE][GROUP][1][*]

You will see that all of the intensity and attribute values for that channel have now been replaced with G 1. This means that they are using the value stored in Group 1. If you give Group 1 a name:

[GROUP][1][TEXT] down centre [*]

you will see that it now says 'down centre' instead of 'G 1'; if you look at Group 1 in preview, you will see that it now contains the values that the attributes were set to.

This is not a good example, however, since every attribute is saying it is 'down centre', which doesn't make much sense for colour, gobo or any other function apart from pan and tilt. When storing reference groups it is a good idea to separate different attribute types into different reference groups. This is easy to achieve using the console's function filter feature. Select channel 1 again and move all of the attributes so that they no longer say 'down centre' but instead show numeric values. Then type:

[1][UPDATE][GROUP][2][@ATT]{position}[*]

[GROUP][2][TEXT] piano [*]

[1][UPDATE][GROUP][101][@ATT]{colour}[*]

[GROUP][101][TEXT] red [*]

Now the light should say it is pointing at the piano and is in colour red - which makes much more sense. (note that @ATT is called ATTRIB on 300-series consoles).

Now record the light in that position and colour in a cue:

[CUE][1][RECORD]

When you look at that cue in preview, the labelling of the groups makes it easy to see what the light will be doing even if you don't have access to WYSIWYG or similar visualisation systems.

If you now select the light and move it somewhere else, then run cue 1 you will see that it returns to the position 'piano' and colour 'red'. If it turns out that the piano has moved, you would have to refocus the light to the new position and then store that position in the 'piano' group, with the cues that use that group then automatically being corrected. If you have a real light attached to your console you can try this for yourself - run cue 1 then move the light. You can then type:

```
[1][UPDATE][GROUP][2][@ATT][position][*]
(if you can't remember the number corresponding to a particular group, holding down [SHIFT] and pressing [GROUP-DISPLAY] will set the console to 'Preset Display' mode, where group numbers and names are shown; repeat that command and you'll get 'Control' display showing group names and the values stored in the group. Press again to return to the normal display).
```

Alternatively, and more usually, you can use the 'magic update' facility introduced with software version 2.5 by just typing:

```
[UPDATE][GROUP][*][*]
```

This finds any lights that were set to reference groups, sees that they have been moved to a new setting and automatically stores that setting into the correct reference group. If you need to limit its behaviour you can - for example, if you moved lots of lights but only want to update the values for channel 1 you can type:

```
[1][UPDATE][GROUP][*][*]
```

or if you've changed the position and colour of lots of lights but only want to store the new positions you can type:

```
[UPDATE][GROUP][@ATT][position][*][*]
```

or any combination thereof.

Unlike some consoles, the 300- and 500-series consoles do not place any limitations on which groups store which types of attributes - position, colour and so on, allowing you to arrange things according to taste. The only rule is that only whole-numbered groups 1 to 750 can act as reference groups. Within that you might choose to use groups 1-100 for colour, 101-200 for beam (gobos, beam edge focus and so on) and 201-300 for position. Point groups can make handy spacers between different sets of reference groups.

Using reference groups also makes it very easy to recall stored information later on. For example, if you'd stored a colour red as group 1 you could later set a light to that

colour by typing:

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

However, you could also do this without having to remember the group number by typing:

```
[1][@][GROUP][TEXT] red [*]
```

or even just

```
[1][@][TEXT] red [*]
```

Chances are, you wouldn't even have had to type all of the word 'red' - as you start to type a group name the console finds group names that match what you've typed so far and displays them at the bottom of the command line; when you see the name of the group you're after you can just press [*] to select it. If you name your colours using Lee and Rosco numbers - either because you're using those colours in scrollers or you've made matching colours in colour-mixing lights - you won't even have to reach for the keyboard to select a colour - just type

```
[1][@][TEXT][03][*]
```

And for groups that you need to recall frequently - for example, gobos and colour, you can make macros to select those groups ([@][GROUP][number][*]); use macros 101 and up and set your submaster bump buttons to 'Mac' and your reference groups are just a button-push away.

Once you become familiar with reference groups, they suddenly offer all sorts of possibilities.

They're invaluable for blind-plotting shows in advance - if you know you want the light to be in red in cue 1, make a group called 'red' by just storing any old values in it and use it in cue 1 all in preview. When you actually get to the theatre mix a red with your light and store it into the correct group; all of the cues will suddenly look right.

They're also useful for more than just attributes. Writing a complex chase for many lights in preview but not sure what the actual levels need to be? Why not have the intensities in the chase go from a reference group called 'bright' to one called 'dim', then set the actual levels later?

Best of all - work you put in to creating reference groups on one show becomes time saved on the next show that uses the same type of lights. Take your first show, delete the cues but keep the reference groups - particularly those for colour and beam information - and you have useful building

blocks that can be used again and again. If the second show uses different channel numbers from the first even that doesn't present a problem - use AutoMod, as described in the Fall '02 Newsletter (downloadable from the Strand website) - to move the information to the new channel numbers.

The Strand Academy

Many of our users are unaware that Strand provides training programs on a regular basis in nearly all of our sales regions. Programs include Operator training and advanced programming work shops and complete hands on technical service training for our Authorised Service Centers and their staff. Regular programs are held in our Berlin, London, Los Angeles and Toronto offices as well as special group seminars at Trade Shows and for groups of professionals wherever they gather around the world.



Lighting Designer Bobby Harrell conducts a hands on training session for IATSE console operators in the mid-west U.S.

For further information contact your nearest Strand Lighting Sales office to inquire about upcoming events or to request a seminar in your area.



Strand Quartzcolor Update New MKII Fresnels

Our popular range of Studio and Location Fresnels have just under gone a complete fine tuning of their performance and operation. Working closely with our customers, engineers in Rome have improved the operation of all Tungsten Fresnels starting with the STUDIO 1K and moving up through the entire range up to the BAMBINO 10K.

The biggest single change in the range is the new wire focus mechanism providing smooth easy to use focus operation. The new design supports both pole and manual operation.



Other key improvements on the MKII range include:

- An improved lock off mechanism
- Updated focus knobs
- New lens doors that provide better support for barn doors and accessories



All Mark II fresnels offer improved accessory support, and focus mechanisms.

Quartzcolor has also begun introducing their new fully illustrated parts list across the entire range. The new parts lists are packed with every light. Currently the new parts listing is available on all MKII fresnels and our Red-head range of open face location lights.



The Strand Newsletter is published electronically four times a year. To receive your copy write to us at newsletter@strandlight.com