

From Paraffin To Preludes

"Make the Wookey Hole Caves more dramatic and exciting." That was the challenge thrown at lighting designer Steve Wentworth by the management of Madame Tussauds, who operate the Somerset tourist attraction.

Considering that in the 1920's the caves were lit by the highly dangerous method of throwing paraffin onto lakes in the caves and then setting light to it, finding an even more dramatic lighting system seemed like a tall order.

Fortunately for Steve he knew where to go for help and devised a lighting scheme using Strand theatre lighting and water-

proof equipment. The main problem with Wookey Hole, near Wells, was the amount of water running underground. Steve's lighting scheme had to contend with underground lakes, a sizeable river and countless rivulets, and constant trickles of water on all surfaces.

An additional problem was the low temperature inside the caves — on average 9°C — and the exceptionally high humidity.

Steve chose the driest possible locations for the theatre lighting equipment, basing his scheme on the Strand Cantata and Prelude ranges, with motorised effects discs and gobos; waterproof fittings; 1000 Watt waterproof floodlights; low voltage fittings; Par 64 cans and under water fittings for use in pools and lakes.

In conjunction with electronics experts from Madame Tussauds, he devised a computerised system to run low voltage motorised units with colour changers in the final cave.

Built-in is a digital sound store allowing music to be played during the finale to the tour. Altogether, 240 separate circuits were needed, using marine waterproof cable running from a central point in each cave to outlying waterproof socket boxes. This alone took ten weeks to complete, since fittings all had to be attached to rock faces.

It was found that the guides could not guarantee positioning themselves in the correct place to operate the lights each time, so in the end an infra-red system was designed to allow them more flexibility.

A Smart computerised control system was used to record up to 12 presets per cave. This offered 12 faders per page of storage with the option of recording a total of 12 cues per cave. The system was adapted to accept an infra-red signal to allow any of the 12 cues to be selected in any sequence. Each guide has an identical hand-held transmitter with 12 selection buttons to correspond with the 12 lighting states in each cave.

To cope with humidity, dimmer wall racks were fitted in each cave, with each dimmer containing thermostatically controlled heaters.

With lights and fittings hidden from public view, an exciting effect has been created, with rocks apparently springing to life at the touch of a button. The main advantage of the new system is that it can be reprogrammed in the future, as circumstances dictate.

Equipment used includes 13 Prelude 16/30 profiles, 2 Prelude 28/40 profiles and 5 Cantatas.

Wookey Hole caves, in Somerset's Mendip Hills were formed millions of years ago by an underground river scouring-out the limestone rock. Dripping water inside the caves has formed huge stalactites and stalagmites. In recent years divers have discovered previously unknown caverns along the course of the river.

Touring the Galaxy

Richard Harris visits Mike Odam and Paddy Paterson, of Limelight Designs, in deepest Surrey and hears all about the touring lighting rig for 'Song and Dance'.

A touring rig can mean many things. It can be a couple of 23's, four 123's and a Junior 8 assisting an amateur group to look reasonably professional while doing a three hander in a village hall.

At the other extreme I remember seeing a pop group arriving at Manchester's Ringway airport. They and all their flight cases had been disgorged from a 747 early that morning after a flight from Miami. A dozen pantechicians then trundled to the Free Trade Hall. They did one 'concert' and were off the next day for Tokyo.

Closer to the latter than the former is the subject of this piece, now in its U.K. phase.

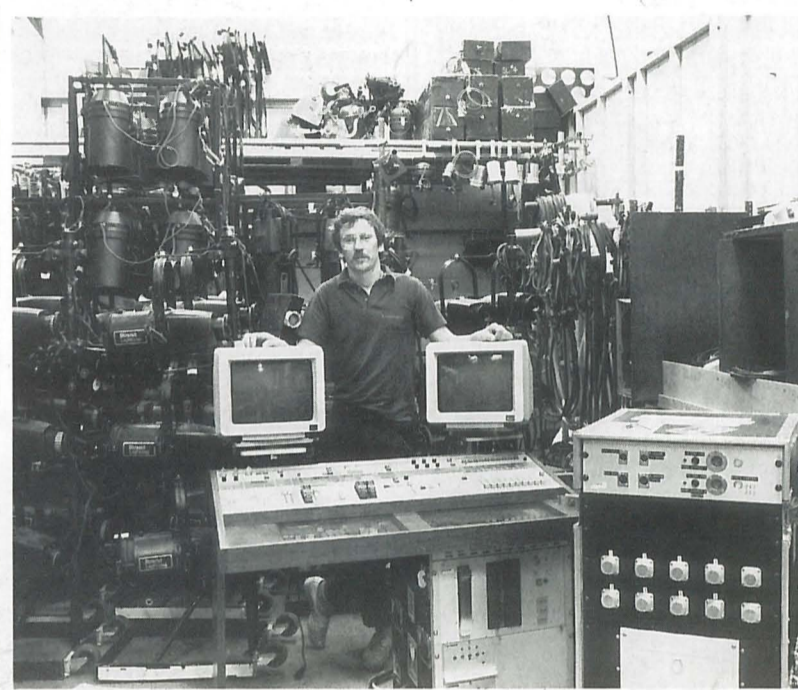
Andrew Lloyd Webber's 'Song and Dance' was always planned as a touring

All the rig is either flight cased or 'meat racked'. The Galaxy for example was very cleverly adapted by Luff's. The crate, which has its own flight case, goes under the desk at one end and a folding leg supports the other end. A flat flight case contains the desk, separate small cases holding the VDU's in warm rubbery embrace for travel.

Notable among the all-Strand lantern rig are the Lekos. These truly are now the world's 'professional' touring lantern.

Attentive readers may remember that 200 Lekos contribute to Andy Bridge's superb lighting for 'Phantom of The Opera'. I asked Mike if he would do another tour taking all his own lighting with him again. 'Yes, because we are totally self-contained', he said.

'When you have only got two days to set up that really counts. I tell the theatres we are going to that we shall need 400 Amps and 3 phases — and that's all we shall need!!'



The Hardware Behind the Glamour: Mike Odam poses with the touring lighting rig temporarily at rest in Limelight Designs Surrey Depot. The complete rig, including a Touring Galaxy, is on hire from Luff Light and Sound and the lighting is all Strand. Note the Lekos on their 'Meat Rack'.

The Northern School of Contemporary Dance

How a redundant Leeds Synagogue took on a new role.

Last year the first professional dance training school outside London opened in the Chapel town suburb of Leeds, a large West Yorkshire city, famous as the home of Britain's ready-made clothing trade as well as of many engineering companies.

The local council provided a grant for the purchase and conversion of a synagogue whose congregation had long since left the area. A further grant was provided by the Gulbenkian Foundation.

The lighting rig was designed by Jeff Riley, the School's Technical Director, who worked out the scheme with David Cusworth, our local area representative.

Stage width is 16.25m, depth 8.38m, giving a usable dance width of 12.5m. There are four lighting bars, the cyc. bar having twelve 1kW Nocturnes, the No.3 bar having four 2kW Cadenza F's for back lighting, No.2 bar having eight 1.2kW Cantata F's (four with 4 way semaphore colour changes) and two 26/44 Cantata

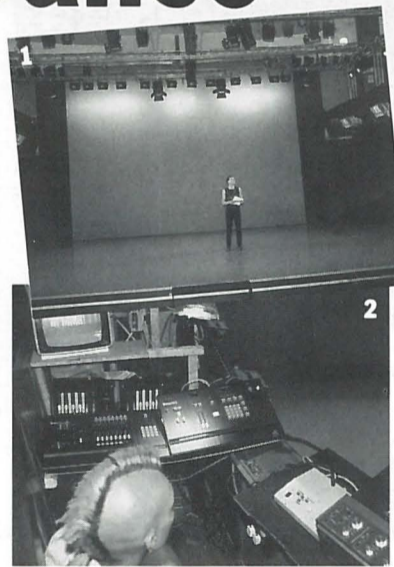
profiles. No.1 bar, half a metre in front of the setting line, has eight 1.2kW Cantata F's (four with colour changers) and two 26/44 Cantata profiles.

As always for dance, side lighting is a key element. In the Northern School the stage is masked by three wing flats and each of the bays created has on each side vertical fixed booms, each boom having a 1.2kW 18/32 Cantata profile and two 1.2kW Cantata PCs. There are also six-side high mounted 1.2kW Cantata 18/32 profiles.

The back lighting to the grey 'Studio Isora' cyclorama is by 'rescued' lengths of compartment battens. These old dears lie on their backs giving their all and still enjoying a useful life after at least forty years of looking down!

Control is by 120 channel M24 and M24 effects. There are fifteen Act 6 dimmer packs mounted on the inner face of the now disused balcony. The joys of multiplexing made this location as convenient as any other.

A most interesting and well-planned and



executed project in an interesting building of very high quality.

- 1 An audience eye view.
- 2 At the M24.

Transformation Scene

How a Victorian classroom became a Video Production Studio

About a year ago our Midlands representative, Terry Abbs was called in by Queen Elizabeth's School, Mansfield, Notts. Their idea was to transform a mid-19th century classroom into a Video Studio. It was next to the Drama Room, and had the great advantage of good ceiling height.

With the addition of black wall drapes to secure a full blackout, a fixed internally wired barrel lighting grid, Preludes plus Minims with Tempus dimmers and control the job was done — and now the 'Sir John Eastwood Old Elizabethan Studio' is a fine extra facility for the school.

1 Before: A Victorian classroom — but it had potential, with sufficient headroom.

2 After: The "Sir John Eastwood Old Elizabethan Studio", used for Video production.

3 Schoolboy learning to use a Strand Tempus 2G manual control board.



show. When Luff Lighting and Sound, Strand's South London dealers and now one of the countries leading rental houses, won the contract to supply the whole rig, including a Galaxy, they handed over the whole of the equipment to Limelight Designs. Limelight have the responsibility for running the show lighting as well as ensuring that the rig arrived at each venue and is erected, checked and focussed on time.

And what a tour it has been and continues to be. Arranged to suit the availability of theatres rather than the convenience of travel, Plymouth led straight to Bristol but then came Amsterdam followed awkwardly by Leeds. And at this point the ferry strikes did cause the odd moment of anxiety.

Consider last Christmas. Mike Odam and his team did two shows in Frankfurt on Christmas Day, 'getting out' on Christmas night to open in Hamburg two days later.

The show's lighting design, by John B. Read, involves a box truss over the stage which at its maximum is 48 feet by 26 feet and is flown 30 feet above stage level, with ladder frames at the sides hooking onto the trusses. There are wheeled side booms, moved away while the 'Song' scenery is deployed and then used during 'Dance'. A backlighting bar is rigged on a house bar and bars 1 and 1a are rigged just inside the pros. In Germany a special FOH truss went on tour, but in the UK, host theatres' own FOH lighting has been used.

The rig goes into a 40-foot trailer and takes up about a quarter of another trailer. The touring electrics team consists of Mike Odam himself, the Galaxy operator and two production electricians. Once the show is running a member of the team goes ahead to the next date to prepare the ground and of course, this arrangement ensures that at least one of the Limelight crew is fresh, however tough the get-out has been. Mike recalled one get-out which happened at the same time as a rock and roll get-in. And the scene dock was so high above the ground level that a hoist was involved.

The whole 'Song and Dance' lighting rig can be set up and flashed out in eight hours. The carpenters lay the false stage floor, then focussing goes on from about 8a.m. to, say, 3p.m. while the dancers warm up. Then there is a final check and the team return relaxed, confident and ready for the evening show. Except on the odd occasion when 'focussing' finished at 7.29 for a 7.30 curtain!

The Touring Rig

No.	Description
1	Galaxy Control System
196	2kW Dimmers
20	5kW Dimmers
212	Strand Punchlights (Par Can) — (220 Volt Lamps)
175	Strand 6 x 12 Lekos
69	Strand 6 x 16 Lekos
2	500W Beamlites
16	2kW Cadenza Prism Convex
7	2kW Cadenza Fresnel and barndoors
1	Quartzcolor Bambino Fresnel 2kW
2	Solo 2kW Followspots with stands
10	Semaphore colour change unit for Cadenza PC
2	Optimist smoke guns
30	6-way internally wired 7ft 6ins bars
8	Lamp Ladders
8	Mobile Booms
1	2 Rung Zargees Ladder
1	6 Rung Step Ladder
1	Tallescope
120	Lengths muticore socapex
1	6 Way Q Light System

All above to be meatracked or flightcased.

Trussing

7	Corner blocks
17	8FT
10	4FT
9	5FT
12	1 Ton motor hoists

Plus all assorted rigging and distribution for above.

All trussings to be 'toberone' type painted black.