

# Power Cuts . . .

## Sarah Rushton-Read reflects on trends in theatre lighting

West End theatre saw record attendance in the last year. Partly driven by the plethora of musicals teaming up with TV talent shows, attendances reached 13.6 million, up 10% on the already record-breaking year of 2006.

The ever-increasing sophistication of production values also pay a part, across a variety of sectors from the huge Disney and Cirque Du Soleil spectacles to West End musicals and beyond. Shows such as the Cirque extravaganzas often include complex automated flying sequences and are increasingly looking to incorporate tracking technologies to tie show elements such as lighting, video and automation together. In response came products such as Cast's promised Black Box system and Stage Technologies' F-Light tracking system, both of which allow automation to talk to other technical parameters on stage.

At the same time, much of the theatre industry is looking to cut its carbon emissions considerably, giving careful consideration to the equipment they use and how it's employed. Managers, designers and technicians are also rethinking how they approach normal accepted theatre practices and are looking for alternatives for those that are not so energy efficient.

This year's PLASA Show hosted the Green Theatre Seminar Programme and supported the launch of the Lord Mayor's Greening London's Theatre initiative. Instigated in association with The Theatres Trust, the Society of London Theatre (SOLT), Arts Council England and the Professional Lighting and Sound Association (PLASA), Green Theatre is a reasonably simple action plan that outlines the most practical and effective measures theatres can take to reduce energy use and save money. (Find out more at [www.london.gov.uk](http://www.london.gov.uk)).

While most of these savings will need to happen in front-of-house areas and through modification of building infrastructure and systems, there is good news for those looking to improve the efficiency of performance lighting. Energy efficient fixtures have been launched by ETC with its latest range of 70W HID Source Four luminaires, available in ellipsoidal and PAR versions. ETC also reminded PLASA attendees of the 375W HPL lamp option; Source Four product manager Tom Littrell

says: "Many smaller venues may be employing the 575W or even 750W lamps for short or medium throws. They may be over-lighting the stage, expending extra energy. In many of these cases, the 375W lamp is sufficient."

Selecon introduced its high frequency, variable voltage 80V Direct DMX Power Supply which supplies 80V to energy efficient 1200W lamps in its Pacific range and the Rama 175 High Performance Fresnel. The resulting light is bright and white with the output of, or near to an equivalent 2.0/2.5kW mains voltage luminaire.

Clay Paky's Alpha Beam 300, won an award for its powerful yet eco-friendly credentials. Energy saving has also been built into architectural and FOH control systems such as the ETC Paradigm (redesign of the Unison system) and the Pharos architectural lighting controllers. Both respond to various environmental factors and will adjust lighting, heating and automated systems as required.

In addition, lighting designers are looking to employ energy efficiency across their artistic endeavours. Leading lighting designer Paule Constable is championing this with a series of top tips. She advises that good pre-planning is essential: every light rigged should have a clear use and purpose and that they should not be over-specified - i.e. a higher wattage than necessary; always try to look for alternative, more efficient ways to carry out accepted practices, such as keeping deliveries to a minimum; and keep lines of communication open with production electricians to always look for energy-efficient alternatives throughout the lighting process.

Of course, the spectacular still inhabits the theatre and always should. No-one is saying that creativity should be compromised by over-zealous energy efficiency. With ever increasing improvements in the manufacturing processes and ultimate efficiency of automated fixtures such as those from Martin, Vari\*Lite, Clay Paky and Robe, no one should have to.

Also as the price of LED comes down, applications such as LED full cyc lighting is increasingly possible. A good example is the EvenLED product, available to hire from White Light, which is currently being used on the Mary Poppins cyc'. Comprising 1sq.m tiles, each contains 16 wide-angle



Photo: Andy Brining

RGB LEDs that enable even lighting of a cyc' from as close as 25cm.

Another very strong trend is the stealthy take-over, by ETC, of the nation's lighting control rooms. This has been further compounded by distributor White Light's announcement that it's sold 23 Eos and Ion consoles to the Ambassadors Theatres Group.

Nevertheless, until the very last day of the show I felt that most product development in lighting was, on the whole, incremental. I was wrong! At 3pm on the very last day I was invited by Robe to a sneak preview of a new generation of Plasma lamp technology-based products. 'Plasma lamp technology?' I hear you ask, 'What's that?'

Well, the Plasma light source promises a similar revolution in projection lighting products as LED did 10 years ago for coloured wash lighting and video screens. At 140 lumens/watt, Luxim is producing a pill-sized Plasma bulb that it says is around 10 times more efficient than traditional incandescent light bulbs and twice as efficient as current high-end LEDs. They also beat CFLs hands-down, which produce only around 50-80 lumens/watt.

Lifetime is approximately 20,000 hours, Colour Rendering Index (CRI) is 91, so it's not ugly and, most importantly for the entertainment industry, a relatively large amount of power can be pumped through them, meaning a tiny bulb can produce 30,000 lumens or more - not something an LED can achieve. If what Luxim and indeed Robe say proves to be true, then there are exciting developments afoot - watch this space . . .