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# Bristol Hippodrome: In a New Light

Claire Beeson reports on a world first lighting installation for Bristol's Grade II listed theatre . . .

**UK** - Designed by eminent theatre architect Frank Matcham for Oswald Stoll, Bristol Hippodrome first opened its doors in 1912. This year - at the grand old age of 105 - the theatre has been treated to a number of cosmetic procedures, each sensitive to its Grade II listed status. Chief amongst the updates is the world's first installation of the GDS Fade to Warm (FTW) ArcLamp houselighting system, but theatre owner ATG also took the opportunity to upgrade and improve other facilities throughout the venue.

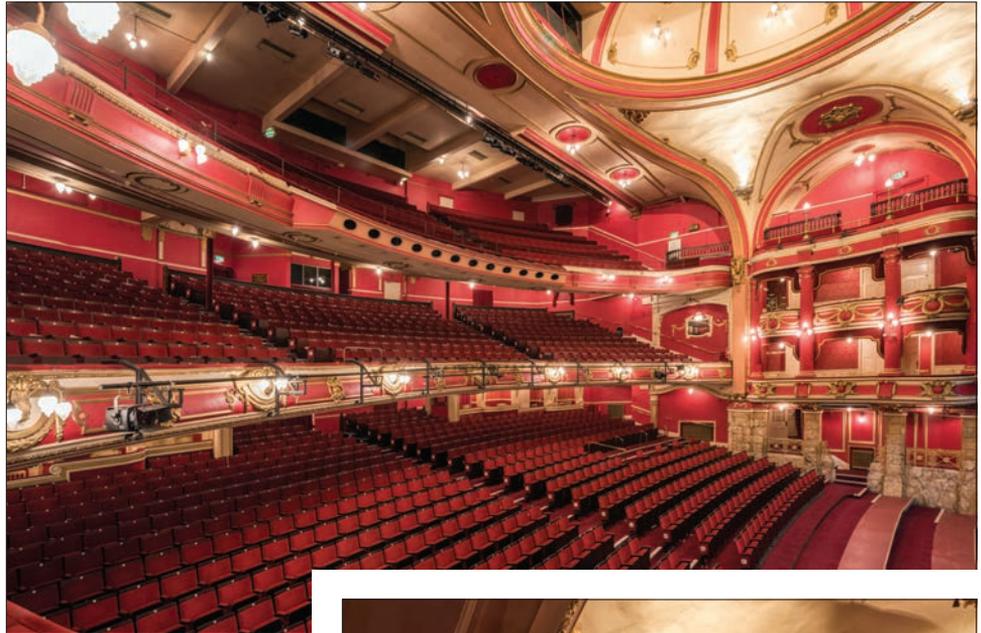
New seating in the stalls and grand circle has been installed by Northern Seating, whilst a new pit lift from Unusual has already come into its own on the National Theatre's touring production of *War Horse*, allowing the crew to utilise previously dead space and affording the theatre the option of increasing its seating capacity in the future. The Hippodrome has also benefitted from a fresh lick of paint, refurbished dressing rooms, carpets and various other technical enhancements.

## GETTING THE GLOW

In replacing the tungsten houselight system in the theatre's 2,000-seat auditorium, care had to be taken to maintain the look and feel of the historic venue, traditionally illuminated with the classic soft lighting of glass empire shades.

Installed at the Hippodrome by Bristol-based Push The Button (PTB) and designed and manufactured by fellow Bristolian GDS, the FTW ArcLamp proved the ideal solution, having secured the prestigious PLASA Award for Sustainability at the PLASA Show in 2016 for its potential to replace outdated auditorium lighting systems.

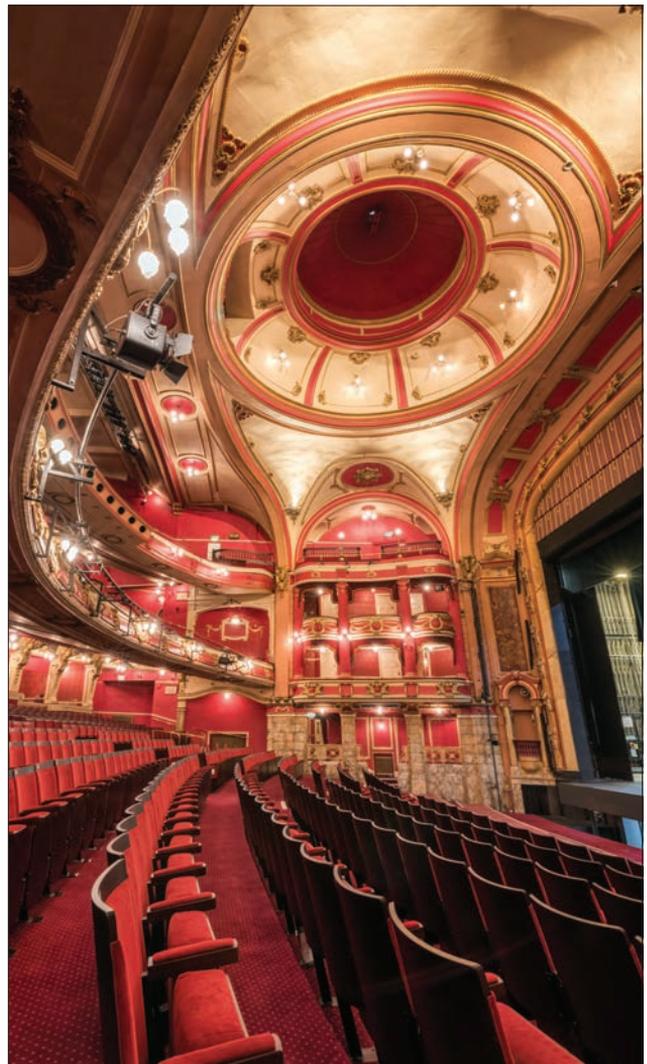
ATG's Brendan Gage comments: "We were introduced to the FTW ArcLamp by PTB, who we approached to refurbish the auditorium



lighting. Our decision was assisted by the healthy reputation of GDS equipment, who also manufactured our blue wing workers [GDS Blues System] installed in 2005, which work fantastically."

He continues: "The FTW ArcLamp is the first lamp to overcome the biggest stumbling-block for LED houselights - the dimming curve. Earlier attempts have suffered from a thumping drop in light rather than the gentle enveloping fade out of traditional incandescent lighting. The ArcLamp has a wonderful dimmer curve - even with a lamp pressed to your face the fade is gentle, especially at the end of the fade - that also matches the change in colour temperature that incandescent lighting gives."

On the development of the new LED lighting solution, Matt Lloyd of GDS comments: "Whatever GDS does in terms of developing an LED lamp, it has to be better than anything else on the market. The benchmark for achieving that would be to perfectly mimic a tungsten lamp, not only in terms of colour rendering but also its capacity to dim to an atmospheric warm ambience.



"In developing the ArcSystem Fade to Warm, we embarked on what was close to a two-year journey, placing a lot of technology into a lamp that can run for 55,000 hours owing to its intelligent thermal management, whilst exactly matching the appearance of a 45W light bulb. Fade to Warm retains all of ArcSystem's advantages such as the perfect dimming, the environmental and cost benefits - without having to sacrifice the capacity to dim houselights to the familiar, comforting glow associated with the theatre experience."

### PUSHING THE RIGHT BUTTONS

Installed by PTB - with project manager Nick Ewins assisted by Ben Noble and with Gary Burrows managing the site team - the retrofit nature of the ArcSystem enabled the team to largely utilise the wiring of the Hippodrome's previous installation to keep costs down. "A re-wire of a building of this type, and on such a huge scale, would have made this unfeasible," says Gage, who worked in close collaboration with the PTB team on the upgrade along with ATG's Stuart Graham and Peter Tovey. "I'd also like to give a special mention to Pete Loft and Greg Rowell who were involved in the very first feasibility calculations for an LED conversion," he adds.

No stranger to the Bristol Hippodrome, PTB's MD Nick Ewins comments: "The Bristol Hippodrome is very close to my heart as I remember working on upgrading the venue's gas emergency lighting to a central battery system much earlier in my career. Like all LED retrofit projects, the upgrade to ArcLamp required careful planning and preparation. As an installer, your preparation is key to the success of the project. In this case, we were working with old infrastructure and cabling, reinstating missing fixtures and working in a Grade II listed building."

In all, PTB installed 212 FTW ArcLamps with their associated drivers, plus an ETC Echo Control System and two PTB-created replica chandeliers. Meanwhile several of the theatre's other existing fittings were replaced with PTB-designed or sourced alternatives.

Ewins continues: "PTB installed one of the first GDS ArcSystems at the Birmingham Hippodrome and we have been busy upgrading houselighting systems ever since. Our team has a strong grasp of the approach needed with these retrofit installations and we are looking forward to carrying out many more of them in the future. It was great to work with Pete [Tovey] and Brendan who both had considerable input into the project."

### A WARM RECEPTION

The system is already having a positive impact on the working life of the Hippodrome's in-house team who no longer have to replace bulbs on a daily basis. Gage comments: "The life of the new lamps has

meant that instead of changing a few lamps a day, we've regained hours of time back, limited our exposure to difficult-to-access areas and found the running budget is looking a lot healthier. Regaining these staff hours has helped us focus on supporting visiting shows to a higher standard and realising other projects."

Owning some 46 venues internationally, ATG keeps a keen eye on the ever-changing landscape of LED products in a bid to lower energy consumption and maximise the benefits that energy saving products can offer. Stuart Graham, head of technical operations for ATG, comments: "Our challenge is to ensure that new LED technology introduced to our venues does not compromise the experience of our patrons or the objectives of the producers and companies who use our venues."

He continues: "ATG were the first to implement the ArcLamp when we installed it in the Savoy Theatre in 2013, and since then we have carried on with our programme of houselighting upgrades." With LED retrofits to the houselighting systems at the ATG-owned Piccadilly and Playhouse theatres also recently completed, the successful installation of the new FTW ArcSystem at the Bristol Hippodrome is the latest step forward for the group. "We will continue to evaluate our venue lighting systems across the group and implement appropriate low energy technology wherever the opportunity arises," says Graham.

Although the implementation of LED lighting systems doesn't come cheap, Gage is positive about the Hippodrome's investment: "Whilst the tungsten lamps were comparatively cheap, due to the guarantees on the FTW lamp and the support from PTB our initial running costs have already dropped significantly. Long term, this couples with the savings on air conditioning to help offset the installation cost. These factors also help with ATG's sustainability goals. Fewer lamps being replaced results in less waste; less by-product heat means saved energy and less electricity used to light the auditorium. A triple whammy for the green agenda."

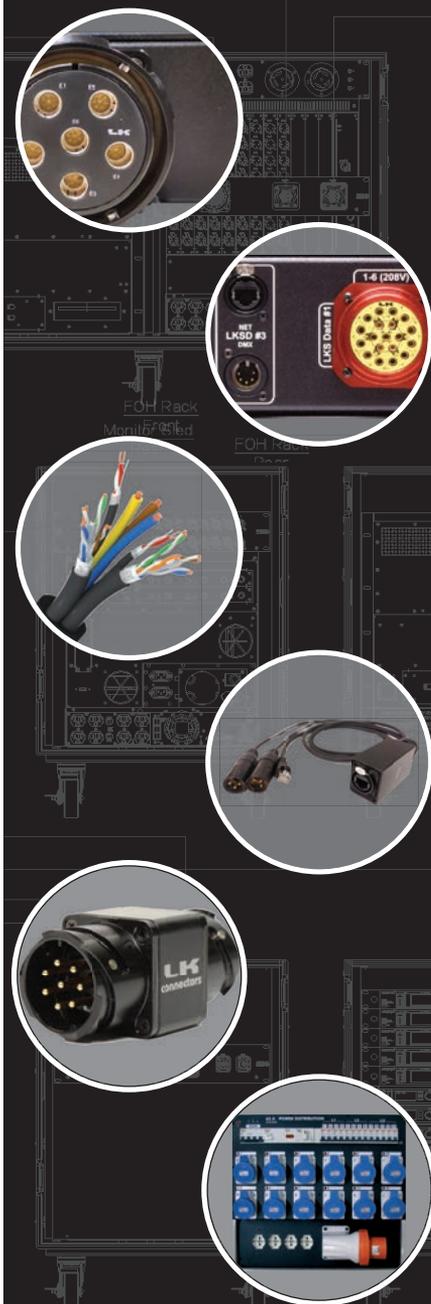
A mark of the upgrade's success is that it has gone unnoticed by the theatre's patrons. The houselights work just as they ever have, dim just as they ever have and are controlled just as they ever have been.

Clearly pleased with the new system, Gage concludes: "Auditorium lighting is required to meet two very demanding and sometimes contradictory ideals - light the auditorium to express its beauty and to provide the ambience of a 'theatre environment', whilst ensuring the audience are safe. The ArcLamp is both bright for safety and gentle for the art!" Glowing praise indeed . . . ☘

▶ [www.ptb.co.uk](http://www.ptb.co.uk)

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Rome, Italy  
[www.linkitaly.com](http://www.linkitaly.com)  
+39 06 227251



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