

motion dampening for moving lights

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## About RSC Lightlock

The RSC Lightlock is a revolutionary new device for the entertainment industry, which allows moving lights to be rigged on very lightweight hanging or flown, structures.

Until now it has been impossible to hang moving lights onto trapezes, lightweight automated bars or pantographs due to unwanted oscillation in the structure. The RSC Lightlock is the first device of its kind to counteract and eliminate unwanted movement of automated lights on lightweight structures and opens up a plethora of lighting solutions.

## RSC Lightlock benefits

The main benefits of RSC Lightlock the RSC's lighting invention are:

### **Creativity**

The device enables the creative benefits of moving lights to be used in a broader variety of theatre, TV and film situations as it removes the need for heavy duty mounting infrastructure.

### **Flexibility**

Use of lightweight rigging means that the moving light can be situated virtually anywhere and the halting of movement ensures that there are no 'out of action' moving lights.

### **Quiet Operation**

The RSC Lightlock emits low noise levels, which allows its use during live performances.

### **Health and Safety**

The RSC Lightlock reduces the need for bridges or trusses and therefore reduces the need for working at height when maintaining or adjusting a light.

### **Cost efficiency**

Moving lights can be maintained at ground level by lowering the rig to where staff can safely maintain or adjust them. Avoiding working at height results in significant time savings for the entertainment industry.

### **Environmental**

A lighting designer can choose to create the same design with a smaller rig, resulting in a cost saving and environmental benefit.

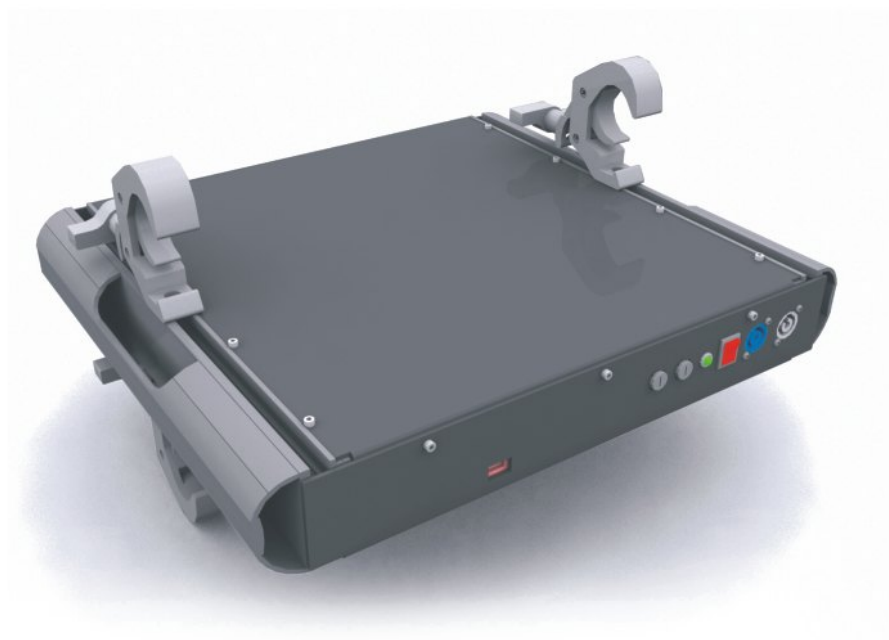
'I've worked as a Lighting Designer for many years lighting shows for the RSC and other leading theatre companies. I've always been frustrated by the limitations of traditional lighting solutions and am delighted that the RSC has designed this revolutionary new product which will open up more flexible creative choices.'

Tim Mitchell, Lighting Designer for the RSC's 2008 production of *Hamlet*.

### **Innovation Award**

RSC Lightlock won the Gold Award for Innovation at the PLASA 08 Exhibition in London.





## Technical details

The unit measures approximately 515.60mm (20.3") wide x 429.70mm (16.9") deep x 76.20mm (3") high.

The RSC Lightlock draws a maximum of 150 watts.  
RSC Lightlock weighs 14kg (31lb).

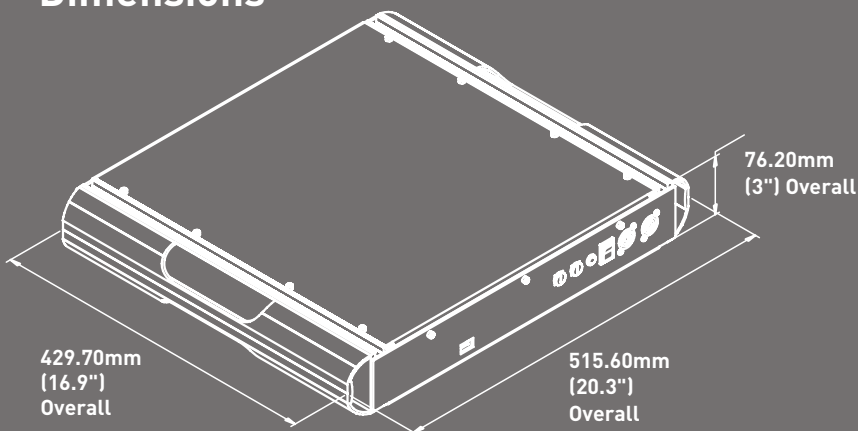
As You Like It  
Photos by Ellie Kurttz

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**RSC LIGHTLOCK**

## Dimensions



Clamps as shown optional

## The RSC Lightlock Story

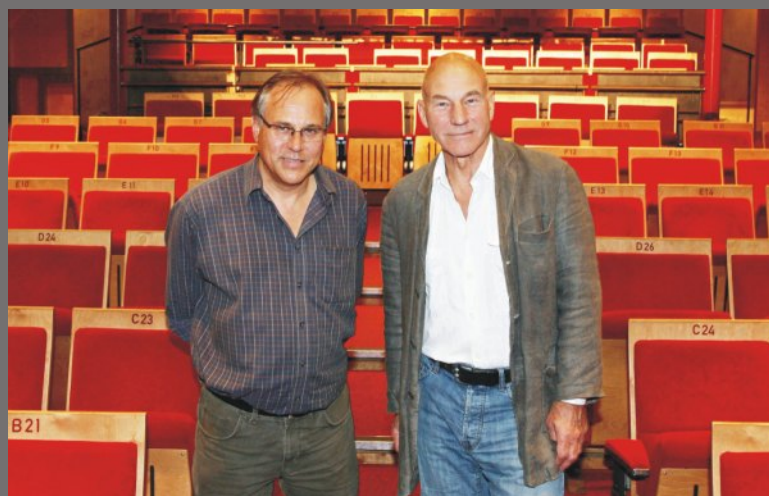
When the Royal Shakespeare Company began planning the £112 million (\$200million) refurbishment its Head of Lighting, Vince Herbert, saw a unique opportunity to transform the way that theatre lighting rigs were assembled. Here Vince talks about how necessity brought about the invention of the RSC Lightlock.

“I started working on this concept when we were working on the refurbishment of the Royal Exchange Theatre in Manchester several years ago. The idea was to put moving lights onto television pantographs so that we could vary the angle of the lighting within cues and make them much easier to maintain.

“When we started talking about the RSC’s auditorium designs for the new Royal Shakespeare Theatre in Stratford-upon-Avon, Flip Tanner (the Technical Project Co-coordinator) asked me what I really wanted the rig to look like and what we should do with it. I had never forgotten the modular cluster lighting idea, and this was the ideal time to put it into place. It was also driven by health and safety because in the future we won’t be climbing up to the lights; the lights will be coming down to us.

“However there is a huge drawback with a small modular single or cluster moving light hang: they swing! I did an experiment in The Courtyard Theatre to test just how much it would swing and it was way more than expected. I realized at this point that I would need to find or design something that would stop the swing. I assumed that this problem must have already been solved, and when I found it hadn’t I realized that it was up to me! In the name of research I spent some time on a swing in a park in Stratford-upon-Avon. The idea I had was that if you could start yourself swinging by moving your legs, you could stop yourself by moving your legs in the other direction. I must have looked crazy testing out my theory. However, it worked! An equal and opposite amount of energy: simple physics.”

From this point Vince developed the RSC Lightlock device. The prototype was exhibited publicly for the first time at PLASA 08, winning a Gold Award for Innovation and attracting interest from a number of manufacturers as well as designers and end users. The contract to develop, manufacture and sell Lightlock was eventually awarded to Total Solutions Group and U.S. strategic partner Total Structures Inc. on the grounds of experience, geography and not least of all both companies commitment to innovation and safety.



Lightlock inventor Vince Herbert pictured with Patrick Stewart at The Courtyard Theatre in Stratford-upon-Avon

## FAQs

- **How does it work?**  
The RSC Lightlock works by accelerating and decelerating a balanced mass or weight at the appropriate moment of the swing cycle of a moving structure.
- **Will the RSC Lightlock stabilize a truss or pipe when one or more automated fixtures are moving?**  
Yes
- **How many moving fixtures can be moving in unison before one RSC Lightlock becomes ineffective?**  
The RSC Lightlock will remain effective for as many moving fixtures as you require, however it will take slightly longer for the structure to come to rest, so instead of stopping the swing instantly it may take a second or two.
- **Will RSC Lightlock correct oscillations produced by wind?**  
No, not at the moment - in its current design the RSC Lightlock will only correct oscillations produced by something that is attached to the structure. That is to say, the RSC Lightlock cannot dampen movement caused by an external force pushing the structure. However watch this space as developments are on going....
- **Is RSC Lightlock affected by heat emitting from moving fixtures?**  
No.
- **Does it need data?**  
No.
- **Does it need a secondary safety device?**  
As with all devices rigged at height, the RSC Lightlock requires a safety bond. The RSC Lightlock also has an added internal electronic safety device that prevents it from being rigged the wrong way up.
- **Does it require any specialist rigging?**  
No.
- **Can I tour RSC Lightlock's into different countries with different voltages?**  
Yes, there is a voltage selector with settings for 110 or 230 volts single phase.
- **Does it require calibration?**  
The RSC Lightlock self-calibrates every time you power-up; this usually takes about 1.5 seconds.
- **What power does it use?**  
The RSC Lightlock runs at a maximum of 150 watts.
- **Do you need a different size RSC Lightlock for larger or smaller items?**  
No, the standard RSC Lightlock will serve most applications, but for larger items RSC Lightlocks can be added together to work in unison with each other.
- **How do I rig the RSC Lightlock?**  
The RSC Lightlock has an integrated track for ½" or M12 fixings that can be rigged with standard clamps and couplers or direct mount plates.



**TOTAL**  
STRUCTURES

### UK Office

Total Solutions Group Ltd. Kingston Industrial Estate,  
81-86 Glover Street, Birmingham B9 4EN  
Tel: + 44 (0) 121 772 5234 Fax: + 44 (0) 121 772 5231  
E-mail: [info@trussing.com](mailto:info@trussing.com)  
Web: [www.trussing.com](http://www.trussing.com)

### USA Office

Total Structures Inc. 1696 Walter Street,  
Ventura, CA 93003, USA  
Tel: (805) 676 3322 Fax: (805) 676 1616  
E-mail: [sales@totalstructures.com](mailto:sales@totalstructures.com)  
Web: [www.totalstructures.com](http://www.totalstructures.com)

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