

LIGHT & SOUND INTERNATIONAL • MARCH 2019  
ENTERTAINMENT • PRESENTATION • INSTALLATION

**IN THIS ISSUE:**

**Touring: Chvrches**  
Live at Victoria Warehouse

**Tech Focus: Robe's T1 Profile**  
The new LED profile reviewed

**Review: ISE**  
Highlights from Amsterdam

The logo for Light & Sound International (LSI) is displayed in a stylized, bold font. The letters 'L' and 'S' are white with blue and green accents, while the 'I' is solid blue. The logo is set against a white circular background that overlaps with a larger green circle.

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TECH: SONY'S DWT-B03R REVIEWED • PROFILE: MICHAEL BRENNAN - AND MUCH MORE...

plasma media

# A tonne of possibilities

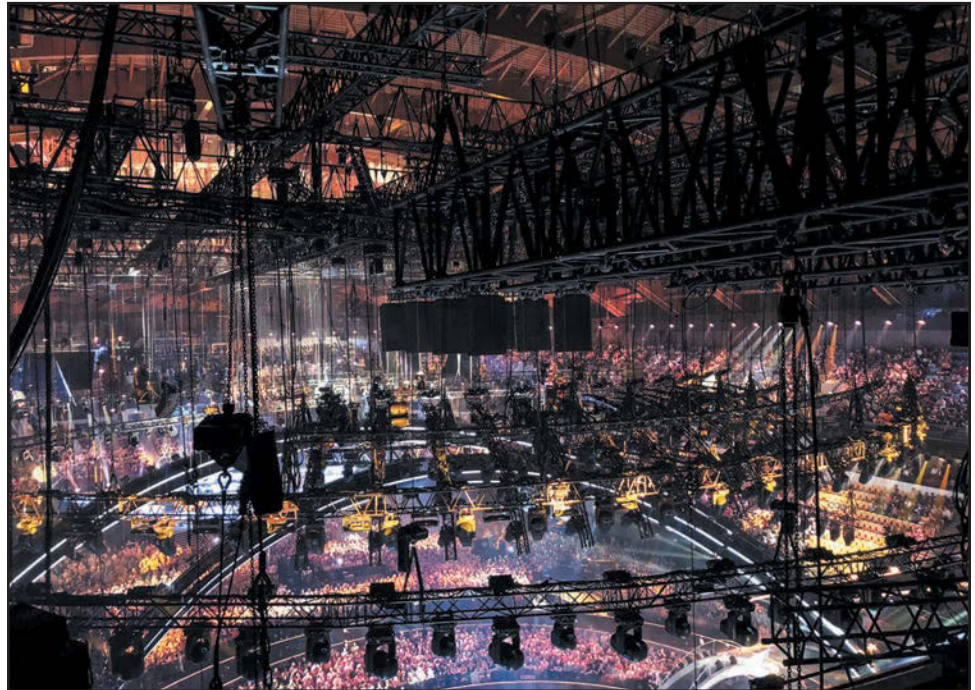
Kate Lyon meets the team behind load-monitoring specialist BroadWeigh . . .

**[UK]** Opportunity and innovation are the cornerstone of any new business - one is pretty much useless without the other. Never has this been more true than in the case of Exeter-based load monitoring specialist BroadWeigh. The brand was established in 2010 by Mantracourt Electronics - a name unfamiliar to most in the entertainment sector but world-class in industrial sensing. Mantracourt has spent the last 45 years designing and innovating electronics and software for globally-renowned OEMs who deliver sensing solutions into all manner of industrial sectors.

"It was the eureka moment of a young electronics design engineer working on the latest wireless telemetry system release at Mantracourt that really kick-started the BroadWeigh brand," explains Kelly Voysey, sales and marketing manager for Mantracourt. "He was also a part-time rigger in the local area and quickly saw how the new wireless system could simply and succinctly deliver realtime information on rigging loads. His thinking was that, if he could save time during installs and see data from multiple rigging points without a complicated set-up, then this was a tool others needed to know about, too."

And so, the idea of producing a 'ready-to-go' wireless shackle with associated accessories and software tailored to the entertainment professional took root and, following a development and market-testing period, BroadWeigh was born.

While wireless technology was not new at the time, Mantracourt had succeeded in developing an innovative system which operated in a much simpler but more powerful way to others on the market. "One of our earliest adopters was the National Theatre in London, who began using the shackle to understand loads on a fire curtain. They liked it and feedback from other users was positive so we took the step of approaching some of the



leading entertainment technology distributors in the UK," says Voysey.

A.C. Entertainment Technologies (AC-ET) was one of the first distribution companies that BroadWeigh approached. Rigging sales manager at AC-ET, Matt Millward, explains: "Immediately, we knew that this was a brand we wanted in our rigging portfolio. We could see straight away how the BroadWeigh system cut through the complexities of existing wireless systems on the market. The difference was that it was intended to be a far more accessible platform, both from a financial perspective and a technical one."

As market response to the brand grew, BroadWeigh ploughed its efforts into expanding the brand's geographic market, establishing distributors in Europe and the US. Fast-forward nearly a decade, and BroadWeigh is now represented in 15 countries across the globe, with this number still increasing. Customers now span a sizeable part of the entertainment industry - large arena and stadium concerts and world tours, car shows, Eurovision, trade shows, auto shows and conventions and



← Facing page, from top: BroadWeigh's load cell shackles were used at Eurovision 2018

The company's Tom Lilly and Kelly Voysey

A 4.75 tonne BroadWeigh shackle in use at the Canadian Auto Show 2017

→ The BroadWeigh arsenal - from wireless and Bluetooth load shackles to data logging software and flight cases



circus performing schools are just some examples of where and how BroadWeigh's wireless kit is used.

Mantracourt is based in the UK but has a trading company in the US, so as a brand BroadWeigh sits within the company structure. "Currently, we are planning for a BroadWeigh inventory to be held in North America to support our talented team of distributors who represent us day-to-day, face-to-face," says Voysey.

Michael Sorowka is MD

of Paradigm Rigging, one of BroadWeigh's representatives in North America. He comments: "BroadWeigh has played a huge role in the entertainment rigging market over here in recent years. This is evident in the number of productions trusting their shows with the brand. As more and more productions are requiring the technology, and rental houses are growing rental stock, it is only solidifying BroadWeigh as a leader in the field."

"Health and safety legislation has developed a lot in the last 20

years," says Tom Lilly, application engineer at BroadWeigh. "From LOLER in 1998 to CDM in 2015, there has been more suggestion that load monitoring is necessary. In terms of load cells, the technology has been around for a long time, but has only in recent years been suitable for complex entertainment rigging. Before that, if you wanted a load cell, you were pretty limited. As a rigger myself, the first time I used a load cell was to weigh a Harrier jump jet before it was flown from a crane in

London! Nowadays, you can have systems with many load cells all reporting back to one place. This was further improved with wireless technology, saving time and allowing monitoring in multiple places without the hassle of cables. In the last 20 years, rigging systems have become more complex and harder to ensure that the loads are distributed as calculated. A couple of bumps here and there on a motor can make a big difference if you are close to the limit."

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## LS-Core

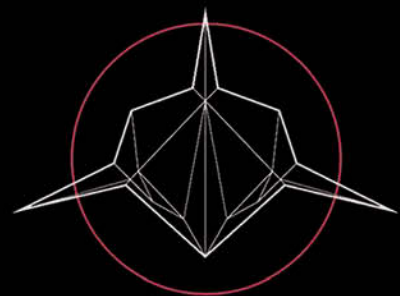


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↑ BroadWeigh wireless load cells and the BW-LOG100 software were used to monitor the loads during The Killers' *Wonderful Wonderful* tour

In what is becoming an increasingly competitive market, those behind BroadWeigh know they can't afford to rest on their laurels. "We are constantly working with our partners to make BroadWeigh more useful and accessible," explains Voysey. "In the last 12 months

alone, we have introduced several new and improved products. The Advanced Handheld allows multiple cells to be named summed and/or individually monitored. The TwistLink - our most recent offering - ensures that the pin, bobbin, nut and Rclip do not need to be disassembled to attach to a shackle, and there's so much more to come."

An exciting prospect is the new BroadWeigh Blue module, set to launch this year. This will be a Bluetooth load shackle module - an entry level version of the 3.25t shackle with

a Bluetooth output that can be read on a tablet or smartphone running the associated app. This is being aimed at smaller venues as a lower cost way into the world of load monitoring.

"We don't just see ourselves as confined to measuring loads," adds Lilly. "We already have a wind speed sensor and we are always listening to our customers and product partners and looking at other avenues to explore. There are other ways that forces can act on structures, and we are always interested in new ideas. We'll always be primarily a load monitoring brand, but our purpose is to look for ways of making riggers' (and other entertainment professionals') lives easier."

What does he mean by that? "I think that augmented reality, or something very similar, will have a role to play in load monitoring at some point in the future. The ability to look at a load cell and the reading being displayed on your AR glasses would be very handy."

Sorowka is just as

enthusiastic: "I feel like we are still at the tip of the iceberg with what we can expect to see with load cells across the industry. On a product standpoint, I would envision more fleet management features to keep up with larger and larger load cell systems, as well as quicker and more powerful software to match. With load cells being increasingly seen as a commonplace versus speciality addition, I wouldn't be surprised to see load cells mandatory on every point on a flown rigging system as time goes on."

"I think the next decade will see a lot more load cells in use around the world," agrees Lilly. "And I think that we, the entertainment industry, will have a much better understanding of how loads work in complex structures. It would be nice to think that, by then, overloads and the associated failures - although rare at present - would be completely eliminated. I guess we just have to watch this space!"

➔ [www.broadweigh.com](http://www.broadweigh.com)

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