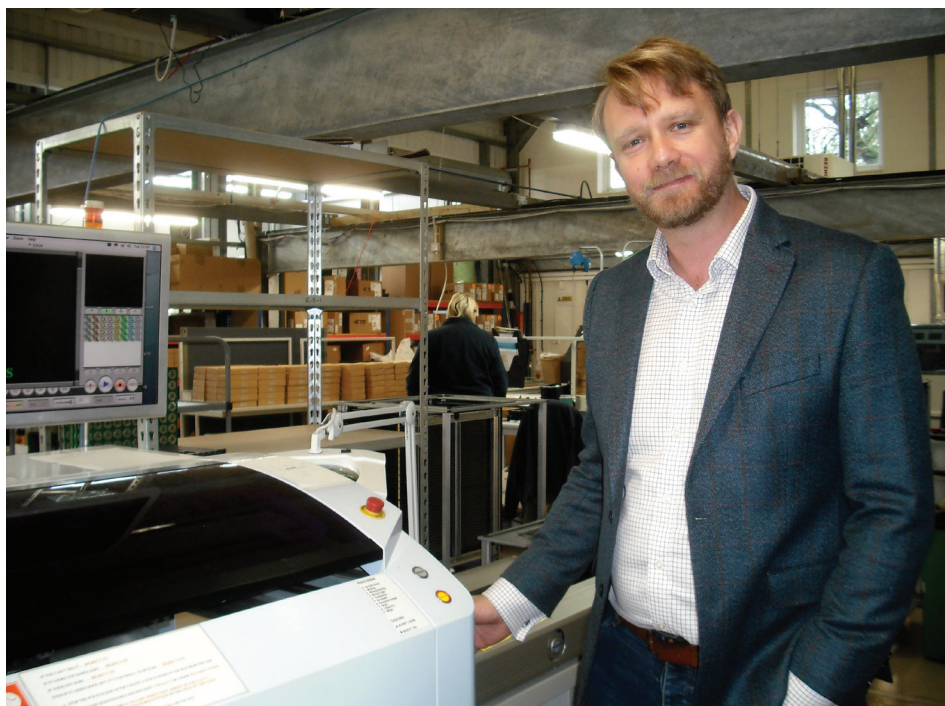


Broadweigh from Mantracourt

John Offord visits the home of the Devon based leading industry sensor provider

A 15-minute drive from Exeter St David's station brings you to the headquarters of Mantracourt Electronics Limited, deep in the east Devon countryside. My mission was to learn more about their Broadweigh brand, a double award winner in the 2019 entertainment technology industry roll-call. Mantracourt is a world leader in high precision measurement electronics, but there is nothing about their location that indicates they have a team of over 40 dedicated to the design, production and delivery of their various product lines.

Since 1974 they have been supplying innovative hardware and software solutions to a wide variety of industry sectors including the lifting and crane markets, construction and process weighing. As a key technology supplier to leading OEM's over 40 years, they pride themselves on exceptional reliability, performance and support. The craftily created Broadweigh brand name covers products designed and dedicated for use in our industry, and they are all manufactured, calibrated and tested in-house, here at Farringdon near Exeter. Robert Wilmington-Badcock, who is Mantracourt's managing director, gave me some more detailed background. "Mantracourt has been going for a little more than forty-five years now, and what we specialise in is signal conditioners for many different kinds of electronic sensors, principally for the industrial



Mantracourt's Managing Director, Robert Wilmington-Badcock.

world. Broadweigh came about following development of a line of products that were used in different applications for cranes, oil rigs, tugs, and all kinds of heavy engineering applications using our wireless telemetry systems.

"At the time, we had an employee who had a real passion for the entertainment industry and didn't believe that any of the industrial companies were producing

a product that was tailored to the needs of the entertainment sector. So although a lot of our customers are in the industrial world, at the time none of them were prepared to partner with us or saw the merit of trying to tailor a product specifically for entertainment. We therefore decided to do it ourselves – this was around seven years ago."

At this point Robert showed me a load link, typical of what the industrial world would use, to show the technology and the way load shackles work. As a load is applied the structure of the whole



Kelly Voysey, Marketing Manager, with 2019 awards for the Broadweigh Bluetooth system.



Broadweigh Bluetooth 3.25 tonne Load Shackle.



Broadweigh Bluetooth App for iOS and Android

thing is deformed and this is what the measurement electronics measure. "We design and manufacture everything here on site," continued Robert. "All our products are developed by our engineering team here. This team manage all aspects of the design cycle from product research through to production engineering. We invest a huge amount in research and development and always continue to develop and expand our products. Hence we recently brought to market a Bluetooth shackle and App for use on smart phones. This shackle was designed particularly for theatre and smaller applications such as trade shows, etc."

Quality is built into the heart of Mantracourt and Broadweigh which

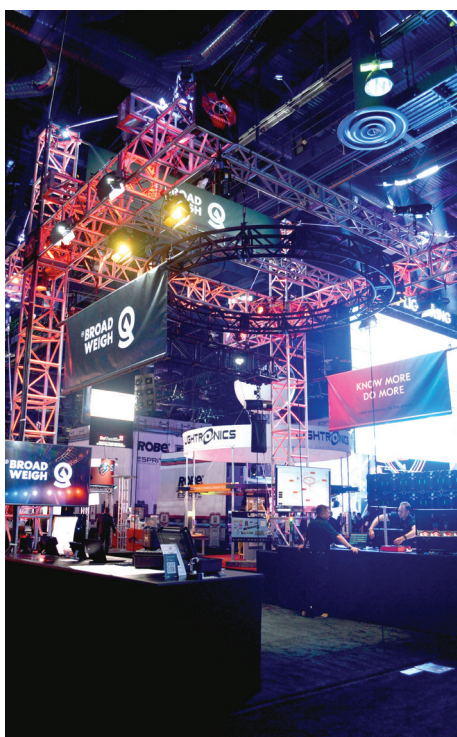


The Surface Mount Line in Mantracourt's factory. This machine places up to 26,000 components per hour.

was clear as Robert showed me around the factory facilities. He explained how the company invests in automated machinery which enables them to produce highly repeatable electronics. There are several test stations where each and every product undergoes an acceptance test. The manufacturing process has been honed over many years of experience.

Broadweigh products have now been widely used across our industry, and a look at the company's website shows the

wide span of their use and deployment. From big stadium tours by the likes of Adele and Shaun Mendes and festivals like Glastonbury and the Ottawa Blues, to big conference and exhibition events like the New York Auto Show and in more corporate environments like the Radisson Blue Hotel in Stockholm. Broadweigh Bluetooth has been making its own headlines as the perfect tool for smaller events like trade shows and is perfect for theatres. In fact, David Evans, head of production at National Theatre



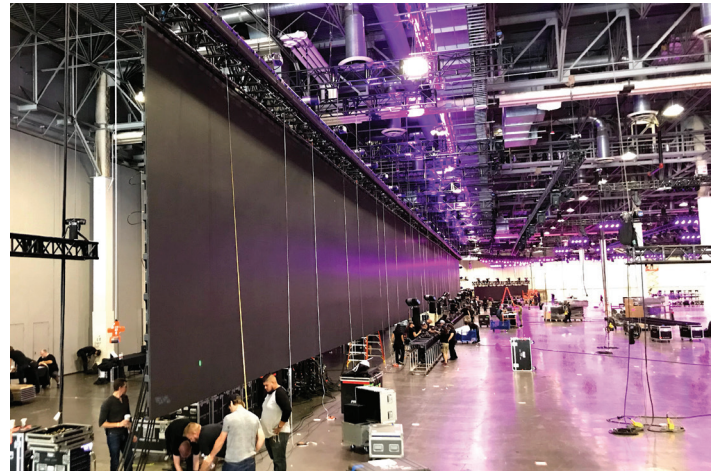
The Broadweigh booth at LDi 2019 and Best Debating Product Staging & Rigging.



Broadweigh's sales executive Elliot Van Laere holding a Bluetooth Shackle with accompanying app.



*The 1975 tour where Broadweigh systems are currently being used.
photo: The Fifth Estate.*



*Load monitoring on a 400ft video wall in Las Vegas.
photo: Cassidyrig.*

Wales and chairman of the Production Managers Forum has waxed lyrical about their benefits: "I am sure that we have all flown items that we thought weighed one thing but turned out to need many more weights in the cradle. Simply adding up the combined weights of what we are flying and then adding something for the cable is not exact. With these things we can now accurately know the weight of what we are lifting and that strikes me as something that we should do. Set construction companies do it, rental companies do it and now we can do it. If we can weigh it, we should weigh it."

Broadweigh duly won the Widget of the Year Award at the 2019 ABTT Theatre Show 2019 for its Bluetooth system. The judges comments were recorded as follows: "As a quick way to provide monitoring of small rigs, the Broadweigh load cell shackle – in conjunction with a Bluetooth connected device running the Broadweigh App – is exceptionally useful for those touring shows that require up to 12 points of rigging. The App also sums selected load cells to enable a maximum load to be identified. Use of the product will greatly speed up prep days." It also won the coveted LDI Best Debuting Product in the Staging and Rigging category in November.

2020 will mark the year that a series of bold product developments will be released and continue to be developed upon. "We have a clear ethos to continuously improve our products, to specifically develop for the entertainment industry and listen carefully to users feedback," said Robert. "We have to understand exactly what tools are needed to do the job on a tour or in a venue."

"In short, we are committed to continually improving the features and tools within our systems and because we design and manufacture the entire system, we can do this like no-one else. The demands in rigging are very challenging and Broadweigh can do the job."



Tom Halliday, Electronics Engineer; Brett James, Engineering Manager; Matt Nicholas, Product Design Manager.



*Bluetooth load cells were in use on the Ford booth at New York Auto Show 2019.
photo: Paradigm Rigging.*