

# New immersive audio system at iconic Sheffield theatre 'The Crucible'

d&b Soundscape.



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Sheffield Theatres

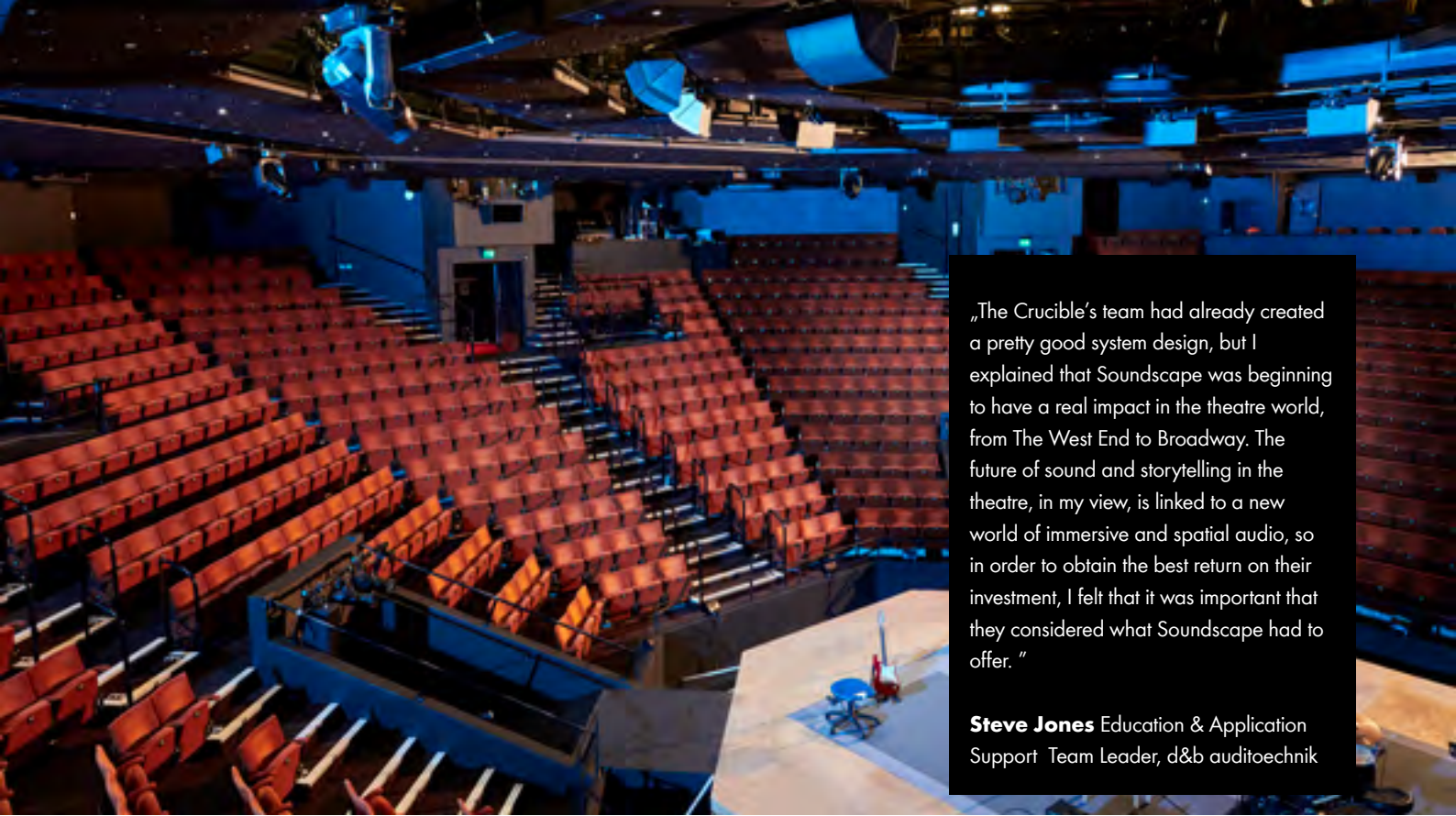
The Crucible, Sheffield’s world famous theatre, has wowed audiences for half a century. Having recently celebrated fifty years of groundbreaking theatre-making in Sheffield, the Crucible is part of Sheffield Theatres, alongside the Lyceum and Studio. With its distinctive stage and a reputation for unforgettable productions, audience members enjoy a fantastic variety of events each year. Thousands of actors have performed at the iconic venue - from new talent to famous faces - but it’s not only those actors who have enjoyed their big breaks at The Crucible, with the venue also hosting snooker’s highest profile competition, the World Snooker Championships, on an annual basis.

Built in 1971 and refurbished between 2007 and late 2009, the Crucible is a Grade II listed building. Its 980 seats are located on three sides of its versatile thrust stage, with no audience member further than 22m away from the performance.

Always seeking to enhance the experience of its audience, and having been awarded capital grant funding from Arts Council England, the theatre’s management team were able to upgrade its audio system, with the aim of helping its creative team to push artistic boundaries as far as possible. Sheffield Theatres specified a d&b audiotechnik system on the basis of their previous experience with the brand at The Lyceum Theatre, and elected to embrace the new and immersive d&b Soundscape technology.

John Bates, Operations Director for Sheffield Theatres explains:

“Our existing system was very old. It was capable but had its limitations, with the result that we regularly had to hire a lot of equipment to support some of our productions, such as large musicals. d&b was chosen as a named supplier based on the system installed at the Lyceum in 2014. We couldn’t have been happier with the quality, while the support d&b



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**Steve Jones** Education & Application Support Team Leader, d&b audioteknik

had given us throughout the design period and beyond was first-rate - they are a fantastic company to work with. After close consultation, it was clear that the incredible Soundscape technology would add so many possibilities for sound design at the Crucible.”

A competitive tendering process followed, with Bradford-based specialist Pro Audio Systems (PAS) appointed to carry out the installation. PAS had been responsible for installing the successful d&b project at The Lyceum, and has since become a recognised Installation Partner of the German manufacturer. Bates continues:

“Pro Audio Systems had delivered excellent service at The Lyceum. Their project management team was very efficient, communicated well, and their installation staff were highly professional and always prepared to go the extra mile. They were the logical choice to take care of the installation.”

The Crucible’s technical team worked closely with Steve Jones of d&b on the system design. Jones had also worked on the design at the Lyceum and having seen the initial proposals for the Crucible, was the first to suggest that Soundscape could deliver significant benefits to

such a creative hotbed, as he explains:

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The Crucible’s stage and seating is based on an octagonal design built around 45°. In total there are 72 amplifier channels and



loudspeakers catering for the Soundscape system. d&b's revolutionary audio system processor, the DS100 Signal Engine sits at the heart of the system, allowing for the individual placement and movement of up to 64 sound objects. A variety of loudspeakers from across the d&b range were deployed to meet the coverage requirements.

9 flown clusters of 2x ALi90 augmented array loudspeakers form the main reinforcement from the stage. As well as providing the very highest audio quality, it was a requirement that the units were as small as possible in order to avoid obstructing lighting and camera angles during the Snooker World Championships. 12x E5 ( 5" point source, 2-way compact coaxial) act as front-fills in an arc around the thrust-stage, with a total of 14x 8S (8" point source, 2-way compact coaxial) deployed as delays in a wider arc. A further arc of 12x 8S act as surrounds at the outer edge of the auditorium. On occasions when the theatre reduces its capacity for specific events, a curtain is drawn around the seating behind the arc of delay speakers, with 10x 8S deployed on this line as surrounds.

A cross-based L/R system located at the proscenium takes care of upstage action and effects, and comprises 2x Y10P (2 x 8" point, source 2-way, wide dispersion) with 2x 10S as out-fills. This cross-based system also acts as a simple L/R setup for productions that choose not to use Soundscape. 2x 21S subwoofers complete the overall picture.

In addition to the Soundscape system, there were several updates to the infrastructure of the general audio system. The analogue audio tie lines have been implemented into the Dante network via Ferrofisch A32, allowing patching to be made via Dante controller. To cater for visiting shows that choose not to use the Soundscape system, a combination of Powersoft Quattrocanali and d&b amplifiers have been installed. These are wired into the speaker patch-bay, allowing any of the 32 amplifier channels to be patched across a number of speaker outlets around the venue. A new LAN network for Dante was installed, with four connection points at Sound Control and a sub-stage. Netgear's brand new M4250 AV specific switches were installed within each rack, with independent primary and secondary



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networks, to ensure a stable and redundant network.

Once PAS had been appointed, Project Manager Jake Brown worked in close collaboration with Nick Greenhill, Sheffield Theatres Head of Sound, to fine-tune the system specification, making suggestions and recommendations directed towards enhancing and improving system connectivity. According to Brown, the biggest challenge faced by the installation team was to fit all the new loudspeaker lines into the existing containment:

“There were 23 existing lines being repurposed from the speaker patch to fixed points for the Soundscape system, as well as the large number of additional speaker lines. To relieve capacity problems, a marshalling box was installed outside the rack room to bring back the existing lines, with new trunking installed in a straight line from this point to the new rack at the back of the room. Paul Ramsden, one of our lead technicians did a great job working in a very tight space at the back of the racks, ensuring that the wiring standards to which we aspire were fully achieved. It's worth noting that after our earlier work at The Lyceum, the theatre adopted our rack wiring standards as a benchmark for future work.”

The installation was completed on time and on budget, much to the satisfaction of John Bates:

“The process ran smoothly from start to finish. Pro Audio Systems expertly managed some COVID-related procurement concerns connected with ancillary equipment, and d&b’s delivery was spot on time.”

Peter Butler, Business Development Director at PAS reflects on a very successful project:

“The job at the Crucible underscored all the reasons for our appointment as an official d&b Installation Partner, clearly demonstrating the natural fit our businesses have with one another. A very tight schedule meant that we faced a number of logistical challenges, but the job proceeded smoothly and efficiently from start to finish in a spirit of real cooperation. All parties involved - our team, the theatre’s technicians and d&b, contributed to an outcome that has been described in glowing terms by everyone who has heard the system.”

John Bates has the last word:

“Having experienced the system in use, I have no hesitation in saying that it’s the best audio experience I’ve ever had. No matter where you are in the auditorium the sound is incredibly clear - it actually gave me goosebumps the first time I heard it!”



**> System: Ali90, 21S-SUB, Yi10P, 10S, 8S, E5 and DS100, DS10, 40D and 10D**

