Martin Audio Wavefront Precision for Liverpool Cathedral

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Iconic Concerts, a brand of New Vision Events, brings live music to incredible locations in the UK, pairing globally renowned artists with awe-inspiring settings. This summer, the series included two weekends of concerts at Liverpool Cathedral, the largest cathedral in the UK. The first featured artists Gabrielle and James Morrison, whilst the second hosted Tunde, Boney M, and Marti Pellow.

Providing the sound in the cavernous venue were dBS Solutions, who deployed a carefully considered combination of Martin Audio's Wavefront Precision line arrays alongside a distributed system of Martin Audio FlexPoint enclosures. "We've worked with New Vision Events to provide full audio and lighting production for these events in Liverpool Cathedral for the last two years," says James Roberts of dBS Solutions. "We've also worked in other historic spaces such as Chester Cathedral and St Albans Cathedral." This familiarity with such venues has been crucial given the monumental acoustic challenge. "I'm from Liverpool personally and the Cathedral is pretty infamous for having a 13-second natural reverb," Roberts notes. "Deploying the right PA is obviously critical to having a successful show."

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Roberts identifies low-end control and ensuring the audience is listening to direct sound as crucial to success in the venue. “Low-end is one of the things that can really get out of control in those spaces,” he explains. “And then it's about getting as much of the audience as possible close to a source. So they're hearing the source from the speaker, not a reflection. We're using lots of delay speakers down the room, which gives us the advantage that each source doesn't need to be as loud, so we're not exciting the space as much.” The specific solution begins with a pair of main hangs, each comprising six Martin Audio WPS line array elements flown on six-metre PA towers on either side of the stage. “Those six-metre towers mean we can get the PA up high and aimed right down into the audience,” Roberts adds.



The WPS elements are powered in one-box resolution from Martin Audio’s iKON amplifiers, ensuring the most granular array optimisation for the highest degree of control. “Doing it in one-box resolution is a huge benefit," Roberts confirms. "Even with a shorter array of only six boxes, it gives more gradual control, achieving consistency of level from the front of that array to about 55 metres back.”

Beneath the arrays, a total of six Martin Audio SXCF118 subwoofers have been deployed in left-right stacks. Their inherent cardioid design aids that vital low-end control, whilst Martin Audio FlexPoint FP8 enclosures act as front fills. For the delay system, dBS turned to Martin Audio FlexPoint 12 (FP12) enclosures. These were deployed every six metres down the room, with four per side.

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Further down the nave, the space opens up into a larger dome area. “It's not possible for us to cover that with a small point-source box, so we deployed another SXCF118 cardioid subwoofer with four Martin Audio WPM elements,” he says. “One of the enhancements this year was to elevate those rear WPM delays higher than last year to get that steeper downward angle into the audience.” On stage, while in-ear monitors were encouraged to keep stage volume down, a package of Martin Audio XE300 wedges provided foldback when required.

Martin Audio’s DISPLAY 3 prediction software was instrumental in the design phase. “We obviously drew in the Hard Avoid areas for the main roof space because that's where we wanted to steer the sound away from, keeping it down into the audience,” Roberts explains. The results matched the predictions perfectly. “All the angles were suggested in DISPLAY 3. We flew it out, had a listen, and didn't have to make any tweaks. I think it nailed it straight away.” “I think it's a really musical box,” Roberts reflects. “I mixed the Tunde concert myself. I find personally with Martin Audio systems I can hear the small mix changes I make so transparently - if I take the guitar and just push it a little bit, you can hear that straight away.”

Clear communication with the visiting engineers before the event ensured smooth operations in the venue. “We were working with the engineers to say, 'Look, this is a challenging space,' explaining why there might not be 12 boxes of large format line array. Everyone was really understanding of that, and I think everyone was happy with the results. The system did everything that everyone needed it to do.”

“We've got very used to working with the events team at the Cathedral and have become one of their preferred suppliers. For anything they get asked about internally, we're recommended as the team who can come in; they really like how we approach things,” he concludes. “Every time we are trying to improve what we're doing within the budget and time constraints. Ultimately, the client was really happy.”

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