



## DUBLIN UP FOR THE POPE

*Two years ago, Sound Design Ireland invested in a small modular line array inventory from French manufacturer NEXO. This summer, SDI more than quadrupled that system to provide full production audio for the sold-out stadium show for the Pope in Dublin. TPI talks to John Vickers about the joys of scalability.*

He is the biggest draw on the planet when it comes to audience numbers, so the Supreme Pontiff Pope Francis could expect a full house when he arrived at Croke Park Stadium in Dublin for the Festival of Families. This was no dreary Sunday morning mass: it was a dazzlingly colourful and dynamic concert extravaganza, featuring everyone who is anyone in Irish entertainment and a cast of 2,000 performers and flag-bearers. As large-scale production goes, it was the biggest public celebration in Ireland since, well, the last time the Pope was there.

82,500 people from all the Catholic corners of the world rolled into the iconic Croke Park, the largest stadium in the country and one of the widest in the world. The Festival of Families is the culmination of the World

Meeting of Families, which is held every 3 years in cities around the world, most recently in Philadelphia, an event at which 6 women went into labour – clear evidence of a miracle or mere statistical coincidence?

Sorry, I digress. This was a prestigious win for the city of Dublin, even as controversy swirls around the role of the Catholic Church in Irish life. The roll-call of performers included the country's biggest stars, including Daniel O'Donnell, Patrick Bergin, Moya Brennan from Clannad, the nimble-footed Riverdance, and the Orchestra of Ireland, and was closed by the legendary tenor Andrea Bocelli.

As the Tyrone Productions team marshalled a cast of cardinals and priests, sopranos and ceilidh bands, Riverdancers and schoolchildren,



John Vickers and his Sound Design crew huddled in their mix tent on the stadium floor, looking ever so slightly amazed at what they'd pulled off... and for whom.

Sound Design was founded 21 years ago, and, in recent years, has established a solid reputation as audio rental providers with expert chops, specialising in sound design for glamorous TV spectacles such as *Dancing with Stars* and *The Voice of Ireland*. Hooking up with French loudspeaker manufacturer NEXO marked a step change for the company, first through its appointment as the distributor in Eire, and then, in 2016, with the purchase of an inventory of the NEXO modular line array, STM Series.

Since it launched its flagship STM modular system, NEXO has focussed its marketing on the unique scalability aspect, which encourages system owners to pool resources, creating the large inventories needed for big events and tours without giving their own bank manager a heart attack. The Festival of Families in Dublin was a perfect illustration of this philosophy, with Sound Design sub-hiring the necessary additional hardware from Belgium (VDB PA, sending its rigs direct from the Pukkelpop festival), the UK (Sound of Music) and France (NEXO's own touring demo system).

On the day, Croke Park stadium resembled a NEXO loudspeaker warehouse. A tall PA for an ultra-wide stage was flanked by long side arrays, with 4 delay towers punctuating the stadium floor like exclamation marks. 175 cabinets were in play for the main PA and delays, not counting NEXO's line monitors and GEO M10 sidefills on stage and a quantity of the perennially popular PS Series point-source boxes doing the odd jobs.

Incrementally, more than 150 NEXO GEO S12-ST line array cabinets are

spread throughout the stadium's overhang roof, permanently installed this summer as part of a major upgrade to the stadium's technical facilities. In fact, the installation deadline was brought forward by stadium owners the Gaelic Athletics Association specifically to handle the Papal visit. No doubt beaming with pride, Pope Francis became the first to benefit fully from Croke Park's new ability to tie event PA into the stadium's fixed PA, using the GEO S12 system to provide coverage for all the uppermost tiers of the stadium.

"This is a rare privilege for any manufacturer," commented NEXO's Field Support Manager Val Gilbert, "to bring in an event PA and be able to tie it into a house system of our own design." One of the first visitors to the mix tent was Croke Park's resident engineer. Kevin O'Dwyer has seen all the biggest live music productions come and go. "Taylor Swift, Rolling Stones, Michael Bubl : my compliments go to Sound Design because this system, to my mind, performs better than all the others. It sounds extremely natural, not at all amplified, and the coverage is extraordinarily good."

Having handled Ireland's centenary celebrations in Croke Park 2 years ago, John Vickers was well-placed to make his bid for the big event. "We knew we had the expertise to handle it, and the nature of STM's scalability meant that we could assemble the system necessary. NEXO has set up an effective network of STM users, which makes it easy to cross-hire speakers and amps: funnily enough, the logistics headache lies in all the small bits such as flyware and motors needed to operate the large-format configuration.

"We knew that STM was the ideal system for this event at this location.



*Pope Francis enjoyed a warm welcome from the Dublin crowd.*

We were confident that it would sound outstanding. And with NEXO on the final shortlist for permanent installation, it was a great opportunity to align the brand in the live environment with the fixed install. The company gave us superb support, including sending three fine engineers from its field support division for the duration of the event.”

Vickers was closely involved in the creative process, but the production practicalities were another matter altogether. “Our set-up window shrank from 3 days to just over 1 day, so we were under a lot of pressure.” Croke Park is situated in a highly residential neighbourhood, permitting just 5 concerts in the stadium every year. The Festival of Families was the 6th show of 2018, taking place under a special license from the Irish Government. “Evening noise restrictions meant that we had just half an hour to tune the system. As well as running the groundstacked subs in cardioid mode, the colouration from the rear of the STM arrays is a lot less than other systems, so noise levels were substantially lower and we were allowed to run it during the day. The propagation test people just said, ‘keep going: have a nice day!’”

Vickers himself took desk duty for the show, mixing speeches, MCs and the Pope’s address on his Yamaha RIVAGE PM7 digital console. Music was mixed by right-hand man Paul Keegan, with Paul Moore and JC Campbell on monitors.

“As long-term Yamaha users, we knew how well suited RIVAGE PM7 would be to an event where both music and speech were equally important. Plus, of course, I was fully confident in the reliability of Yamaha consoles.”

The signal routing backbone for the entire show was run from the RIVAGE PM7. Every input and output coming to and from FOH was routed through a Yamaha TWINLANE network, working seamlessly with Dante, using RPi0622 and Rio3224-D I/O racks. This provided up to 400 channels between stage and FOH, with incredibly low latency at a native 96khz, 32-bit sampling rate.

With an orchestra, choirs, playback and numerous microphones to accommodate, it was a complex show. The music was submixed before being routed to the RIVAGE PM7 for the final mix. One of the major challenges facing Vickers was ensuring that all speech at the event was crystal clear, with the Rupert Neve 5045 Primary Source Enhancer plug-in playing a key role, maximising gain before feedback and preventing any unwanted squeals.

“The Pope’s microphone was the most critical input of the whole show and his main speech was to be given from this catwalk, in front of the main PA,” said Hans Metger, Support Engineer from Yamaha Commercial Audio. “Managing this aspect of the system

## MODULARITY RULES

The modularity principle of NEXO’s STM Series line array makes use of 4 loudspeaker elements that can be configured to cover any application. In a large-format system, each full-range M46 main module is paired with the B112 bass enclosure. At Croke Park, the left and right arrays each featured 18 sets of this combination, finished off by 3x STM M28 downfill modules. Subbass was provided by L-R arrays of 15x S118 modules, with an additional 28 x S118’s groundstacked in 2 blocks in front of the stage, running in cardioid mode to reduce the level of subbass on stage. M28 cabinets placed on top of the S118’s provided frontfill for the VIP area. Side arrays used 18 x M28 ‘omnipurpose’ modules. Each side, 7 x NEXO Universal Amp Racks, each containing 2 NXAMP4x4 amplifiers, powered the system. Four delay towers placed on the stadium pitch, approximately 80m apart, each carried 12 x M28 cabinets, powered by a single NUAR.

“Sound Design’s system inventory is made up of STM M28 and S118, cabinets which can be paired for a complete all-purpose system,” explained Val Gilbert of NEXO. “Because they know how to fly STM, and know how it should sound, it’s easy for them to add in the M46 and B112 elements and scale up to a perfectly integrated large-format system.”

## UNSUNG HEROES

Working to cruelly tight schedules, Sound Design’s system engineers Andrew McGrain and Adam Jackson were joined by 3 NEXO specialists, Val Gilbert, Nicholas Poitrenaud and Robin Shamsnejad. Since Gilbert joined the company in 2013, NEXO’s Engineering Support Division has grown tenfold, a reflection of our times, as manufacturers meet expectations of ever greater levels of service and support to its customers. Poitrenaud works virtually full-time on NEXO’s free international seminar and training programme, while Shamsnejad manages NEXO’s busy demo systems. “These guys went way beyond the call of duty,” commented John Vickers. “They are expert in their field, and they have great confidence in their product. My only regret is that our timetable didn’t allow me to take them for a well-earned pint of Guinness!”



FOH Engineer Paul Keegan and Sound Designer Ireland's John Vickers; L - R: Adam Johnston, John Vickers, Paul Keegan, Val Gilbert (NEXO), Nichola Poitrenaud (NEXO), Robin Shamsnejad (NEXO), Andrew McGrane.

was crucial and the Primary Source Enhancer helped us to do just that. Using it alongside a well-designed sound system goes a long way when you are trying to squeeze out every last bit of gain. Due to the high profile nature of this show, any extra peace of mind also went a long way!"

Stage wedges were NEXO 45°N-12 line monitors, custom clad in what can only be described as blue stockings by Riverdance's dressmaker, in an effort to make them vanish visually against a blue stage set. Radio techs Sinead Conlan and Alannah Hayes looked after 60 channels of radio mics, all Sennheiser 2000 and 3000 Series.

Under the leadership of Tyrone Productions, the event was put together

by Ireland's best creative brains; Music Director David Brophy arranged and conducted a powerful musical score, Production Services Ireland supplied the show lighting, under the direction of LD Peter Canning, and another French connection, Cosmos, delivered spectacular graphic backdrops over 3 primary screens on stage. The show was broadcast through Ireland live on RTE, and distributed to worldwide media to an audience of around 2 million.

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