

POLAR

Kings of the Hill



Hill 16 is an open-air terrace at one end of the 82,300 capacity Croke Park in Dublin, Europe's third-largest stadium. Synonymous with the Dublin fans, the Hill is steeped in history and is considered an icon of Irish sport. Although Croke Park's primary use is for Gaelic football and hurling, the venue is regularly used to host major international music concerts. Recent years have seen appearances by The Rolling Stones, Taylor Swift, U2 and Bruce Springsteen. The technology that supports the operation of a modern multi-use stadium such as Croke Park must be of the highest quality. Audio plays a key role in the day to day operation of the venue and its management team recently undertook an overhaul of the stadium's audio provision, including that of the famous old Hill, which it considered to be outdated and requiring constant maintenance.

Leading consultancy Vanguardia were appointed as consultants to the project and approached POLAR Business Development Manager Adam Brown to bid for the use of Renkus Heinz speakers to replace the ageing system on the Hill 16 open-air terrace, as well as the courtyard area adjacent to the rear of that section.

Hill 16 presented a unique challenge in comparison to the rest of the stadium. The covered areas at Croke Park offered a relatively straightforward setting, with sufficient mounting points to enable the required coverage and containment to be obtained with few issues. At Hill 16, the open-air nature of the terrace specifically restricted the possible speaker locations to existing angled pillars located at intervals above the terrace. As a result, audio provision, which was to deliver announcements, background music and safety alerts, needed to cover the whole area, whilst not disturbing the stadium's neighbours in the external environment. Audio steering capability was therefore crucial but so was the need to deliver high enough SPL to reach all of the 10,000 spectators in the open-air section. The right balance was essential.

As a result of their powerful and sophisticated digital beam-steering performance, Renkus Heinz speakers were shortlisted against several other competitor products and Darren Stratford, Head of Technical Support for POLAR Integrated Solutions supported Vanguardia with the creation of EASE plots to ensure that the required SPLs were adhered to for every public position. 2D and 3D drawings were also supplied along with recommendations for mounting options for the existing pillars. POLAR worked closely with Vanguardia and integrator Mongey Communications with regard to connections, failover and fault-finding, to integrate into the stadium's control and monitoring software, which was created by Staffordshire-based specialist Audomation.

Case Study: Kings of the Hill

After careful consideration and research, Vanguardia put forward the Renkus Heinz solution, deeming it to be demonstrably the best system for the requirements of the project. The Renkus Heinz steerable line arrays would deliver sufficient power and even coverage across the terrace, whilst avoiding the external environment and would also seamlessly blend into their supporting pillars.

Mongey Communications installed 6 x Renkus Heinz IC Live Dual columns and 3 x IC Live single columns. All the speakers were weather-resistant and custom-coloured with stainless steel grilles. Once installed, POLAR Integrated Solutions engineers Darren Stratford (Head of Technical Support) and Jason Spooner visited the site to commission the system, steering the beams and configuring the integration into the audio network. To ensure that all the monitoring and fault-reporting requirements of the overall system were available, Renkus Heinz created new versions of firmware and APIs.

For Darren Stratford Head of Technical Support at POLAR Integrated Solutions, this was the first time he'd been involved in utilising Renkus-Heinz speakers on such a large scale project:

“The Hill 16 section of Croke Park was an interesting project to be part of due to both its size and the requirement for pinpoint clarity in an outdoor environment for PA/VA purposes. The scope of the requirements seemed to be a perfect fit for the ICL-F-DUAL-RD columns. We needed to be able to maintain excellent speech intelligibility as well as providing even coverage at high SPL across the entirety of the area.”

Renkus-Heinz's flagship beam-steering technology proved beyond doubt to be an excellent choice. Sound was focussed across the entirety of the 10,000 capacity outdoor area of the stadium in such a way that it was able to reach levels of 102dB(A) at 30 metres away from the columns, whilst maintaining coverage that sat well within the +/- 3dB(A) uniformity requirements for that area. Darren Stratford continues:

“The IC-Live range was able to achieve the aims seemingly effortlessly, whilst still maintaining an outstandingly impressive fullness and clarity at these kind of SPLs without sounding remotely overdriven. It's even more impressive once you take a moment to listen to the overall quality of output the system can produce and get your head around the fact that the biggest drivers in that entire system are only 6.5”!”

