PEL Services Ltd has given a proud team performance at Celtic Park, by providing Celtic Football Club with a top-level Bosch Praesideo Public Address and Voice Alarm (PA/VA) system, all achieved expertly, without disrupting the day to day activities of the stadium and hospitality suite.

Celtic FC is, of course, the top football club in Scotland and its stadium, Celtic Park in Glasgow, regularly hosts big European occasions to a maximum capacity crowd of 60,000. The stadium not only hosts match events, but also daily activities in the hospitality suite.

Replacing the crucial safety systems therefore had to avoid disruption, by taking advantage of the limited down time between football seasons.

Initially PEL conducted acoustic measurements (crowd noise levels) during a capacity-crowd UCL match; this identified that crowd noise sound pressure level (SPL) can consistently reach 99dB (A) for at least 10% of the measured period and can reach 112-115dB (A) during goal celebration!

TECHNOLOGY & FLEXIBILITY

Phase One & Two have now been completed with Phase One covering the main former analogue PA/VA system, replaced by PEL with a Bosch Praesideo digital amplification and Netmax DSP control system for back of house, combined with an Electro Voice (EV) speaker system processed by BSS BLU series DSP devices, it was possible to control the audio for the main stadium bowl area with great accuracy and ease.

Due to the overall scale of the stadium, all components are connected on a Dante network.

PEL designs installs Bosch PA/VA system & DANTE networked match-day sound system at world-famous Celtic Park stadium
The Dante network allows all main equipment to pass audio over the existing Celtic IT network, with infrastructure monitored locally by Celtic and remotely by the PEL team.

Phase one work has already improved sound output quality, despite the outstanding need to address speaker types and configuration in Phase three. Phase Two has been completed with interim installation of the match-day system for pre-and-post-match entertainment.

DESIGN & PLANNING
In the design process, looking at a venue layout which has grown and developed successively in recent years, PEL’s experts identified and advised the Stadium Management on additional opportunities to enhance the visitor experience, as a by-product of essential works.

Careful planning in three phases also allows some efficient spreading of the capital expenditure budget implications.

ENERGY-SAVING
The new racks not only increase power and quality of signal, they are more compact, more reliable and have power-saving characteristics which will save Celtic FC considerable energy expenditure.

PEL’S STADIUM EXPERIENCE
PEL Services has considerable experience in providing sound solutions for stadiums, having worked with Aston Villa FC on its Holte Stand and Scotstoun Stadium, Glasgow, which played a major role in the Commonwealth Games in 2014 and whose owners recommended PEL to Celtic FC.

David Howell of Celtic Football Club said:
“We have been delighted to work with PEL on a project which we feel has brought great benefits to the Club and our supporters.”

For over 35 years PEL Services Ltd has been designing, supplying, installing and maintaining sound, fire, security & audio visual solutions.

PEL’s Technical Director, Vic Swain also commented: "A Stadium presents particular challenges in achieving intelligible sound, both for safety and spectator experience. It’s great to achieve both of these for Celtic supporters."

For more information, please visit www.pel.co.uk message PEL on info@pel.co.uk or talk to our knowledgeable engineers 8am-5pm on 0333 123 2100.