# Martin Audio Wavefront Precision for Cardiff Students' Union




Cardiff Students' Union is set to welcome students for the new academic year with major audio upgrades across two of its flagship venues: The Great Hall and Y Plas. Both spaces now feature Martin Audio Wavefront Precision line array systems, supplied and installed by SWG Events. "The Great Hall is an academy-sized touring venue," describes Joe Bailey, Head of Projects and Rental at SWG events. "Several different promoters put tours through there - it's a major part of Cardiff's live music scene."

For the past three years, the Great Hall has utilised a Martin Audio WPS system. Ahead of this academic year, SWG have now upgraded the primary arrays to Martin Audio's larger-format WPC Wavefront Precision Compact, configured as 6 per side hangs. Whilst the cabinet count of the main arrays remains unchanged, the bi-amplified WPC brings multiple advantages. "The WPC gives us much more power and control," Bailey notes. "WPC offers even more granular control, delivering a noticeable difference in terms of output, headroom, and consistency".

"The Great Hall features a large balcony and rear bulkhead. Using WPC, we can precisely direct sound beneath the balcony while using non-audience areas and



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Hard Avoid on the rear wall to control coverage and manage room reflections effectively," he adds. Outfill is handled by newly installed Martin Audio FlexPoint FP15 enclosures, chosen to provide the headroom required to match the new arrays. The sub-woofer set-up retains the existing eight Martin Audio SX218 subwoofers, deployed in a broadside array. A distinct feature of the setup is the versatility required across the calendar. "It's a full touring venue," explains Bailey. "But during the day it can host all kinds of student group events and for that reason we configured the system with an adaptable touring infrastructure rather than a fixed installation."



Upstairs, Y Plas operates primarily as a nightclub venue for student club events, as well as smaller capacity live music. Similarly multi-purpose - during daytime hours as an area for coursework and coffee, as well as hosting society events.

The venue had previously been equipped with a legacy Martin Audio W8LM system. This has been replaced with the Martin Audio WPS system rotated out of the Great Hall, introducing the technological advantages of Wavefront Precision to the space. "As well as the noticeable sonic upgrade, moving to Wavefront Precision and Martin Audio iKON amplifiers allows us to use snapshots in a multi-purpose space," states Bailey. "We have dedicated presets for club nights, live music events and other events to achieve the best results for each format."



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The upgrade also addressed issues with the venue's low-frequency management. Its older horn-loaded long-throw sub-woofers were decommissioned in favour of front-loaded Martin Audio WS218X units drawn from SWG's existing rental inventory. "Switching to Martin Audio's front-loaded dual 18-inch subs gives much more control. The ability to use the subs in a cardioid configuration as left and right or broadside is completely new in that space, which helps immensely." Bailey explains. "We've been able to improve the low frequency coverage where it was needed but also reduce it in surrounding parts of the building, something noticed by staff almost immediately." he adds.

SWG also re-engineered the under-balcony audio. The previous fill arrangement was replaced with Martin Audio Blackline X12 enclosures, orientated in a single, coherent direction. Predictive modelling was carried out using Martin Audio's DISPLAY3 software. "We already had the 3D model for the Great Hall, so we remodelled the WPC arrays in there with the FlexPoint outfills." says Bailey. "DISPLAY also served as a tool to demonstrate to the client why the upgrade from WPS to WPC checked all the boxes in terms of output and coverage. In Y Plas, we had previously deployed WPS for a one-off event, so already having the 3D environment helped us redesign the entire system including the new cardioid sub configurations and under balcony fills."

Feedback from touring FOH engineers has been overwhelmingly positive. One such example comes from Christian Sherwin (FOH, The Reytons), who following a recent show praised his experience with the Martin Audio Wavefront Precision system: "This was my first experience mixing on the system, and I was genuinely impressed. It was really enjoyable to mix on. I was able to keep my EQs largely flat and get a great result, with a sound that was punchy, detailed, and very present.

"It really suited The Reytons' intense, in-your-face sound. Having that combination of weight and clarity was ideal. The low end delivered a huge amount of impact, allowing the kick and bass to really drive the mix, while the mid-range remained clear and present enough for the guitars and vocals to soar. It gave the band the exact power and energy they need without losing definition."

The new deployment marks three years of SWG Events as Cardiff Students' Union's preferred audio partner, covering complete audio infrastructure across three spaces, alongside the provision of house mixing and system engineers for each production. "When we came on board as their audio supplier, our main goal was to work in parallel to raise the profile of the venue," Bailey concludes. "Their outreach is growing and the venue is expanding. Given one of the USPs of Wavefront Precision is scalability, we knew three years ago that Martin Audio Wavefront Precision solutions we would deliver a major upgrade in audience experience, while ensuring the venue is ideally equipped for the future."

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