CASE STUDIES

Auditoriums

Unite Your Audience
The Martin Audio Experience
At Martin Audio we believe that uniting audiences with exciting sound creates shared memories that sear into the consciousness delivering more successful tours, events and repeatedly packed venues.

We achieve this by an obsessive attention to detail on the professional sound system’s acoustic performance, frequently challenging convention and involving a sophisticated mix of design, research, mathematical modelling and software engineering, to deliver dynamic, full-frequency sound right across the audience.

With over forty years of live sound and installation expertise to our name, Martin Audio offers a wide range of premium professional loudspeakers so customers can be assured of selecting the right system for their chosen application, whether it’s a small scale installation or a festival for over 150,000 people.

Auditoriums

Auditoriums, by their very nature rely upon a rich variety of usage and the importance of intelligible speech and music that envelops the audience, front to back, is critical to their success. Martin Audio has utilised a range of systems to deliver this experience around the world.
A fixture in Washington DC live entertainment since the Second World War, George Washington University's Lisner Auditorium has hosted an eclectic mix of performers from Ingrid Bergman to Pink Floyd, along with leading world music artists, local opera and symphony companies and celebrated political dignitaries over the years.

But without a significant upgrade for many years, the university recently decided to overhaul the venerable auditorium with special emphasis on the sound systems in a bid to make the venue more competitive in terms of attracting high-profile talent. Selecting Martin Audio’s new MLA Compact system was a natural choice because its technology is definitely state-of-the-art.

The 1500-seat venue was the perfect size for the system, with eight MLA Compacts per side with a centre array of six DSX subs under the stage.

Since the upgrade, Lisner has presented a series of popular and well-attended world music concerts by artists such as the Brazilian singer-songwriter Gilberto Gil and Acoustic Africa, as well as the sold-out debate between Fox’s Bill O’Reilly and the Daily Show’s Jon Stewart.

Eric Annis, Production Manager and Technical Director for Lisner, was enthusiastic about the new MLA Compact, “We think it’s fantastic and so do all the users who have come in since the installation. We’ve had several televised events in a row and maintaining the sightlines within the auditorium is wonderful. The shows have run the gamut from loud electrical music to a single mic bluegrass band, and the MLA Compact system has proved to be equally articulate and clear.”
The multicultural Congress Center has provided the Czech city of Zlin with a new purpose built facility.

Designed by famous architect Eva Jiricna — the contract to design and install the audio at the Congress Center Zlin was undertaken by INTON SRO. They had little hesitation in recommending a Martin Audio line array solution for the 837-seat Great Hall, knowing that its versatility would make it suitable for all purposes — whether the Hall was configured for concerts (full capacity), congress (768 seats) or in ballroom layout (for 400). Forming the second zone is a Martin Audio O-Line Micro Line Array system — reinforced by ceiling speakers for conference purposes.

Two separate Martin Audio line array systems were detailed, with eight W8LMI and a WMX sub (biamped) installed each side as a main PA system, and a further eight LE1200S' provided for stage monitoring. Forming the second zone is a Martin Audio O-Line Micro Line Array system, eight modules per side — reinforced by ceiling speakers for conference purposes.

INTON SRO’s MD, Jiri Strupl, said, “We chose Martin Audio for two reasons: firstly to meet Eva Jiricna’s design requirements, and secondly to offer a different approach when used in conference mode; normally, concealed ceiling speakers would be used, but in view of the inherently long reverberation time within the building the use of delayed O-Lines would ensure intelligibility right to the back rows of the balcony.”
Belfast MAC, Ireland’s latest arts venue, recently installed Martin Audio.

The 350-seat main auditorium on the ground floor is an adaptable, modern theatre space with tiered, retractable seating, while upstairs on the first floor, the 120 seat studio theatre offers flexibility for both seated and standing audiences and is ideal for press launches and networking events.

Installed by Rea Sound, Martin Audio’s Irish distributors, Martin Audio’s W3 arrayable three-way compact trapezoid system was chosen as best fit for purpose, for both the main auditorium (Downstairs at the Mac) and the smaller studio (Upstairs).

The main space also has two balcony levels and here the design allowed the speaker cabinets to be positioned on vertical grids to provide exceptional sound coverage and clarity.

Purpose designed for theatre, each enclosure measures just 28in high. Yet with its high SPL capability it delivers the clarity required for both speech and music applications. “The W3 is a fantastic sound system and perfect for the requirement,” assesses Rea Sound’s Roger McMullan.

The original design called for four W3’s on each side – however, the client later changed this (to great effect) deploying three W3’s on each side, along with a Martin Audio AQ10.

The system is powered by the Martin Audio MA range of amplifiers located in the dedicated amp rack. These provide separate channel feeds to each of the house PA speakers as well as the infills and effects speakers, which include three Martin Audio AQ10’s plus four ‘floating’ Martin Audio Blackline F10+ and two F12+. Custom patch panels allow for the effects speakers to be positioned according to their requirement for the production at hand since the space is designed for multi-functional use and signals need to be routed to speaker locations throughout the venue.

The upstairs PA system also utilises the Martin Audio W3 cabinets flown from the grid horizontally.
The Congress Palace (Ciudad de Oviedo), which opened in 2012 in the heart of Spain’s Asturian capital, has already become a new symbol for its spectacular architecture. Designed by Valencia-born architect Santiago Calatrava, this visually stunning 2000-seat auditorium has complex geometry with high reverberation time. The choice of sound system was therefore critical — and after an extensive study of electro-acoustic systems the decision was taken to specify an O-Line® micro array system from Martin Audio.

According to Marc Rovira, product manager at Adagio Pro, the Martin Audio distributor in Spain, in order to achieve optimum intelligibility given these challenging conditions, it was logical to propose a system with a large coverage control pattern, especially in the vertical plane. Thus two hangs of 24 O-Line elements, with a 2.82m drop, have been flown on either side of the stage.

As well as providing the acoustic quality and coverage necessary, it also speaks volumes to O-Line’s discreet design that perfectly suited the Congress Palace.
One of the UK’s most important gothic buildings commissioned a new audio infrastructure to extend its functionality within the precincts of Bristol University.

With its two balconies, The Great Hall of the Wills Memorial Building can seat up to 900 people for plenary lectures and 270 for banqueting. Hosting a vast range of functions and events, including Christmas carols, organ recitals, graduation day ceremonies, VIP and academic lectures — as well as third party rental providing an additional revenue stream, it therefore required a versatile sound system.

The entire integration at Wills Memorial Building was undertaken by locally-based contractors, Sounds Commercial, and was constructed around two 24-box hangs of Martin Audio’s O-Line micro line array.

O-Line is a versatile, micro line array designed for installation in a wide variety of architectural environments. Its modular approach and scalability extend its use from foreground applications to sound reinforcement in large acoustic spaces. Intelligent software enables an array to be configured to deliver sound precisely over any vertical angle to fit the venue profile, without spilling onto surfaces where sound is not required. Additionally, elimination of high-frequency side lobes gives O-Line the advantage over currently available DSP-steered columns, making it suitable for high quality music reproduction as well as speech in large reverberant spaces.

Perfect criteria then for a high vaulted space such The Great Hall, surrounded as it is by the academic teaching spaces of Bristol University.

“What we were looking for was clarity, evenness of coverage and directivity because it’s all teaching space around here and so containment was important; there were also the aesthetic concerns. We just fed the system with a CD and radio mics — it sounded stunning, whilst looking discreet and so passed the test with us, and the people from the university”, said Sounds Commercial’s project manager, Blake Gifford.

A biamped solution was recommended, with the entire system run from Martin Audio’s four-channel MA6.8Q. By splitting the system into biamp mode Sounds Commercial were able to provide increased punch at the back — with 3dB boost for the top eight boxes, firing at the balcony. Given the high directivity of the line array no delay system was necessary.

In addition to O-Line, two Martin AQ28’s face back from the stage pillars to provide performance monitoring, while a further pair of AQ6’s provide booth monitoring up in the control room.

“We have been fortunate in that there hasn’t been any kind of acoustic treatment necessary,” summarise the Sounds Commercial project team. “In fact very little processing has been necessary.”
CASE STUDIES

Products Featured

O-Line
Micro-line array
martin-audio.com/products/oline

Blackline F10+
Compact two-way passive system
martin-audio.com/products/F10Plus

Blackline F12+
Compact two-way passive system
martin-audio.com/products/F12Plus

MLA Compact
Multi-cellular Loudspeaker
martin-audio.com/products/series/mla-systems

AQ10
Compact, full-range system
www.martin-audio.com/products/AQ10

DSX
Multi-cellular Loudspeaker Sub-bass
martin-audio.com/products/series/mla-systems

MA6.8Q
High power amplifier

AQ28
Two-way passive reflex with dual bass drivers

AQ6
Ultra-compact, full-range system

W8LMI
Three-way, compact line array element
martin-audio.com/products/W8LMI

LE1200S
Active/passive, low profile, high power, differential
dispersion stage monitor
martin-audio.com/products/LE1200S/

W3
Arrayable three-way compact trapezoid system

This is just a small selection from a wealth of examples from around the world that you can find out more about by visiting www.martin-audio.com