



Schouwburg Almere

THE WIRED THEATRE OF THE FUTURE



Loudspeakers for the MCR system are concealed behind the balconies' metallic fronts

One of the most recent MCR projects undertaken by TeamProjects and TM Audio is an installation at the brand-new Schouwburg Almere multi-theatre complex near Amsterdam, to a technical specification by Cees Wagenaar of consultants Theater Advies BV. This beautiful complex of three theatres, designed by Kazuyo Sejima and Ryue Nishizawa of the Japanese architectural firm SANAA, sits alongside the Weerwater lake in the Kunstlinie Cultural Centre in the new city of Almere.

The MCR system is installed in the main auditorium, a rectangular room with high tiers, faced with polished aluminium, on three sides. Its standard reverb time (RT) is a low 1.1 seconds, which can be increased using mechanical flaps to add extra volume to the room, bringing the natural RT up to 1.5 seconds. However, to give the room a perfect acoustic for symphonic and choral music, an even longer RT was required, and the MCR system was added to achieve that result.



MCR IN ACTION ALMERE



View from behind the proscenium arch, showing one of the XLNT Bassbeam subwoofers and a Martin line array cluster



TM Audio installed a main proscenium arch sound reinforcement system, part of which is mounted on a lighting bridge (because of the 16 metre width of the stage) that can be raised and lowered on hoists, allowing the trim height of the PA to be adjusted to suit the physical design of each production. The entire bridge and PA system can also be raised completely out of sight above the proscenium arch if required.

This repositioning of the PA from night to night would also create potential problems in terms of loudspeaker angles and seat coverage, so Wagenaar devised a solution in which the TeamProjects engineers wrote custom beam steering software to run on Peavey's MediaMatrix Nion hardware platform, providing full EQ and delay control over each individual loudspeaker cabinet.

The software automatically adjusts the DSP settings for each cabinet according to the PA trim height selected, in 1-metre steps and in real time.

The main system itself consists of eight Martin W8LM line array cabinets per side, with Martin 5-15 subwoofer cabinets on the bridge, powered by Martin Audio MA4.2 amplifiers and controlled by a Yamaha MC7L console. A pair of XLNT Bassbeam controlled dispersion sub-bass cabinets is also mounted either side of the proscenium arch.

“TeamProjects software, developed in conjunction with Cees Wagenaar, controls both the MCR system and beam steering of the main proscenium arch PA system”

MCR IN ACTION ALMERE



“38 individual MCR loudspeaker, microphone and DSP channels provide variable natural reverb”

MCR IN ACTION

The MCR system is similar in concept to that of the Kursaal Ostende. There are 38 individual loudspeaker channels, each with its own microphone and DSP channel. The speakers are completely hidden behind slats in the balcony fronts' metallic décor, positioned some two metres apart, and behind grilles in the rear balconies' ceilings.

They can also be switched to provide surround sound, under-balcony delay feeds and a voice system – and the various modes can even be combined simultaneously.

Ultra-low noise Shure MX391 and Easyflex microphones are used to pick up the room's natural ambience which is then re-amplified channels and fed back into the room via the

loudspeaker matrix. Power for the MCR system is provided by Crest CM2208 8-channel amplifiers, while three Peavey Nion 6 devices, running TeamProjects software, form the MCR processing engine.

All in all, a versatile, value for money and exceptionally flexible solution for a venue that's already part of a truly multi-purpose future.



TeamProjects Almere project manager Reinier Bruijns (above, left) with acoustic consultant Cees Wagenaar of Theater Advies

Sub bass on the moveable lighting bridge (left)

PHOTOS: MIKE LETHBY