



Serpentine Sackler Gallery © 2013 Luke Hayes

SERPENTINE SACKLER GALLERY



LONDON, UK
EUROPE/MIDDLE EAST/AFRICA

Housed in a former 9th Century gunpowder store known as The Magazine, located in Kensington Gardens, just a few minutes walk from the Serpentine Gallery is a contemporary art space, which has been named the Serpentine Sackler Gallery. The name expresses a gesture of gratitude towards Dr Mortimer and Theresa Sackler, who made the project possible thanks to their generous donation - the largest single gift received by the Serpentine Gallery in its 41-year history.

The new 900 sq metre Grade II listed building fuses together historic, architectural charm from The Magazine and a smooth, clean, minimalist design courtesy of Zaha Hadid Architects, while renowned engineering consultancy, Arup provided engineering design services for the newest addition to the gallery's collection of buildings. Arup's Project Director, Ed Clark said: "The project presented a number of key challenges for the sensitive restoration of the existing building and the design of the new extension. We are all immensely proud of our contribution to this fantastic new addition to the Serpentine Gallery's portfolio of buildings."

Due to the simplistic design - which included the restoration of The Magazine building as a free-standing pavilion within the new space - the audio and lighting systems were required to be discreet to avoid interfering with the aesthetics. Ed decided that a fully invisible audio system would be the best solution for the space, so made contact with Cambridgeshire-based Amina Technologies and together with Applications Manager, Matt Holland, devised an audio system that was capable of catering for public address, audio content for art

exhibitions, voice re-enforcement for presentations and background / foreground music during events.

"From the outset it was essential that the speaker system provided full range sound, i.e. bass response below 100Hz," explained Matt. "This is the natural limit of the majority of Amina's invisible range - hence we also manufacture highly discrete subwoofers - however we had not long begun shipping our newest invisible model the AIW750E.

"The AIW750E is the flagship Amina invisible loudspeaker and as such produces the widest bandwidth and highest power handling of the Evolution Series range. By using two separate vibrational panels per speaker fed via an external crossover-cum-protection circuit, the AIW750E operates from 50Hz - 20KHz along with the Amina trademark ultra-wide dispersion and ability to integrate sympathetically with an interior's acoustically reflective surfaces. This was music to Arup's ears, so it was quickly selected as the ideal speaker solution for the gallery spaces," continued Matt. A total of 11 Amina Technologies AIW750E loudspeakers were specified for the new gallery. RG Jones, the company that was responsible for system integration, installed the loudspeakers in the ceiling, five metres apart. The AIW750E loudspeakers were fitted in conjunction with Amina Technologies BackboxCV345 back boxes, which significantly reduce sound bleed into the ceiling cavity. For additional performance enhancement, the plasterboard ceiling was designed and structured to complement the loudspeakers. Matt explained further: "Ceiling set-out design was undertaken to ensure that unwanted mechanical vibrations were stopped, one method used was to fix plasterboard sheets to the supporting frame with a higher than usual number of fixing screws. Once correctly fitted to




the plasterboard a 2mm standard plaster skim was applied to the ceiling, concealing the speakers. The AIW750E is engineered for optimal performance once a 2mm plaster skim is applied to its flat vibrational panel surface and delivers 87dB / one metre / 2.83Vrms sensitivity.”

As well as the invisible in-wall loudspeakers from Amina Technologies, K-array KZ10 micro line arrays - that are capable of a 92dB continuous output - were also installed in the twin vaulted powder rooms, which lie at the heart of the gallery. Powering the entire audio system are four Lab.gruppen E8:2 amplifiers, while loudspeaker management is handled by QSC Q-Sys integrated

audio system. The latter comprises a QSC a Core 250i processor - which features centralised processing architecture utilising Intel processing and is equipped with standard gigabit Ethernet hardware and protocols for audio transport and control - together with a QSC TSC-8 touch panel mounted in a bespoke paging station with a gooseneck announcement microphone.

“Arup had suggested the QSC Q-Sys on the list of possible equipment choices, and although we have tended to use other systems for audio management in the past, we had heard a lot about Q-Sys and became very keen to learn more about what it could do,” explained Jake Miller, who headed up the RG Jones ▶



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team.

The QSC Q-Sys system allows the audio playback within the gallery to be split into six zones, which can easily be switched on or off by the QSC TSC-8 touch panel, making for a hugely flexible system. It also enables the possibility for a radio microphone to be connected for sound reinforcement purposes that is utilised for exhibition guide commentary or visiting artist speeches. A mini-jack input on the custom paging station also allows the connection of an iPod or other audio source for exhibitions that require continuous audio backing or atmospheres. "I was interested in using the virtual paging in Q-Sys Manager to create the multiple zones and DSP front end on the paging station, and that proved very easy to do. I also like the QLAN concept of having audio and control capability available on the same standard network cable," continued Jake.

Injecting a new lease of life into an old building is often a joyous accomplishment for all parties involved and this definitely seems to be the case with the Serpentine Sackler Gallery. Jake concluded: "The QSC Core 250i's onboard DSP was also very useful in allowing us to get the best possible sound out of the K-array and Amina loudspeakers; the KZ10's in particular, due to their very compact dimensions. Obviously, in an installation like this, the aesthetics of the system are key; you don't want lots of equipment visible everywhere, so the speakers had to be very tiny, but that can have a knock-on effect on the sound. This system now sounds great." 

TECHNICAL INFORMATION

SOUND

11 x Amina Technologies AIW750E invisible loudspeaker; K-array KZ10 micro line arrays; 4 x Lab.gruppen E8:2 amplifier; 1 x QSC a Core 250i processor; 1 x QSC TSC-8 touch panel

www.serpentinegalleries.org

FRANÇAIS

« The Magazine », une ancienne poudrière datant de 1805, située dans les jardins de Kensington, à quelques minutes à pied de la galerie Serpentine, abrite aujourd'hui un espace d'art contemporain appelé la « Galerie Serpentine Sackler ». Son design minimaliste fut gracieusement offert par le cabinet Zaha Hadid Architects, tandis que le groupe d'ingénierie de renom Arup a fourni les services de conception technique. Des systèmes de sonorisation et d'éclairage discrets étaient nécessaires pour ne pas interférer avec l'esthétique du lieu. Le directeur de projet d'Arup, Ed Clark, décida qu'un système audio totalement invisible serait la meilleure solution pour l'espace, alors il contacta la société Amina Technologies basée à Cambridgeshire. Celle-ci a équipé la nouvelle galerie de 11 enceintes Amina Technologies AIW750E, installées par RG Jones. En plus des enceintes murales invisibles, des colonnes de micro K-array ont également été demandées. Quatre amplificateurs Lab.gruppen E8:2 alimentent l'ensemble du système audio, tandis que les enceintes sont gérées par un système audio intégré QSC Q-Sys. Offrir un bain de jouvence à un vieux bâtiment est souvent une tâche réjouissante pour toutes les parties impliquées, et cela semble certainement avoir été le cas pour la galerie d'art Serpentine Sackler.

DEUTSCH

In einem ehemaligen Schießpulver-Depot aus dem Jahre 1805, bekannt unter dem Namen The Magazine, in Kensington Gardens, nur wenige Gehminuten von der Serpentine Gallery entfernt, befindet sich ein Ausstellungsbereich für zeitgenössische Kunst namens Serpentine Sackler Gallery. Das minimalistische Design wurde von Zaha Hadid Architects gesponsert, während das bekannte Ingenieurunternehmen Arup die Engineering-Design-Services bereitstellte. Von den Audio- und Beleuchtungssystemen wurde erwartet, dass sie diskret sind, um die Ästhetik nicht zu stören. Der Projektleiter von Arup, Ed Clark, entschied sich für ein komplett unsichtbares Audiosystem als beste Lösung für den Bereich und setzte sich dafür mit dem Unternehmen Amina Technologies aus Cambridgeshire in Verbindung. Das Unternehmen stellte 11 Amina Technologies AIW750E Lautsprecher für die neue Galerie bereit, die durch RG Jones installiert wurden. So wie auch für die sichtbaren, in die Mauer eingebauten Lautsprecher entschied man sich ebenfalls für K-array KZ10 Mikro-Line-Arrays. Das gesamte Audiosystem wird über vier Lab.gruppen E8:2 Verstärker betrieben, während die Lautsprecher über das integrierte QSC Q-Sys Audiosystem verwaltet werden. Ein altes Gebäude wieder in Schuss zu bringen ist oftmals für alle Beteiligten eine erfreuliche Angelegenheit und für die Serpentine Sackler Gallery scheint dies eindeutig der Fall zu sein.

ITALIANO

Situato nei pressi di Kensington Gardens in un' ex armeria del 1805 conosciuta come The Magazine, a pochi minuti a piedi dalla Serpentine Gallery, si trova uno spazio d'arte contemporanea che è stato nominato il Serpentine Sackler Gallery. Il design minimalista è stato gentilmente fornito da Zaha Hadid Architects, mentre la rinomata società di consulenza ingegneristica Arup si è occupata dei servizi di progettazione tecnica. Sono stati richiesti dei sistemi audio-luci discreti per evitare di interferire con l'aspetto estetico dell'edificio. Il capo progetto della Arup, Ed Clark, mettendosi in contatto con Amina Technologies che ha sede nella zona di Cambridge, ha deciso che un sistema audio completamente invisibile sarebbe stato la soluzione migliore per lo spazio. La società ha fornito 11 altoparlanti AIW750E della Amina Technologies per la nuova galleria, che sono stati installati da RG Jones. Così come gli invisibili altoparlanti a muro, sono stati fissati anche gli array micro line K-array KZ10. A potenziare l'intero sistema audio ci sono quattro amplificatori Lab.gruppen E8 : 2, mentre gli altoparlanti sono guidati dal sistema audio integrato QSC – Q-Sys. Dare nuova vita ad un vecchio edificio è spesso un risultato felice per tutte le parti coinvolte e questo sembra decisamente essere il caso della Serpentine Sackler Gallery.

ESPAÑOL

Emplazado en lo que fuera un depósito de pólvora en 1805, conocido como The Magazine, y ubicado en Kensington Gardens, a solo unos pasos de la Serpentine Gallery, es un espacio de arte contemporáneo, al que se le dio el nombre de Serpentine Sackler Gallery. El diseño minimalista fue suministrado por cortesía de Zaha Hadid Architects, mientras que la reconocida consultora de ingeniería, Arup, prestó los servicios de diseño de ingeniería. Se requería que los sistemas de audio e iluminación fueran discretos para evitar interferir con la estética. El Director de Proyecto de Arup, Ed Clark, decidió que un sistema de audio completamente invisible sería la mejor solución para el espacio. Entonces se contactó con Amina Technologies, con base en Cambridgeshire. La empresa proveyó 11 altoparlantes AIW750E de Amina Technologies para la nueva galería, que fueron instalados por RG Jones. Así como los altoparlantes invisibles incrustados en la pared, también se especificaron micro cajas acústicas K-array KZ10. El sistema de audio completo está potenciado por cuatro amplificadores Lab.gruppen E8:2, a la vez que el manejo de los altoparlantes está a cargo del sistema integrado de audio de QSC Q-Sys. El inyectar un nuevo aliento de vida en un antiguo edificio, habitualmente, es un feliz logro para todas las partes involucradas y definitivamente este parece ser el caso de la Serpentine Sackler Gallery.