



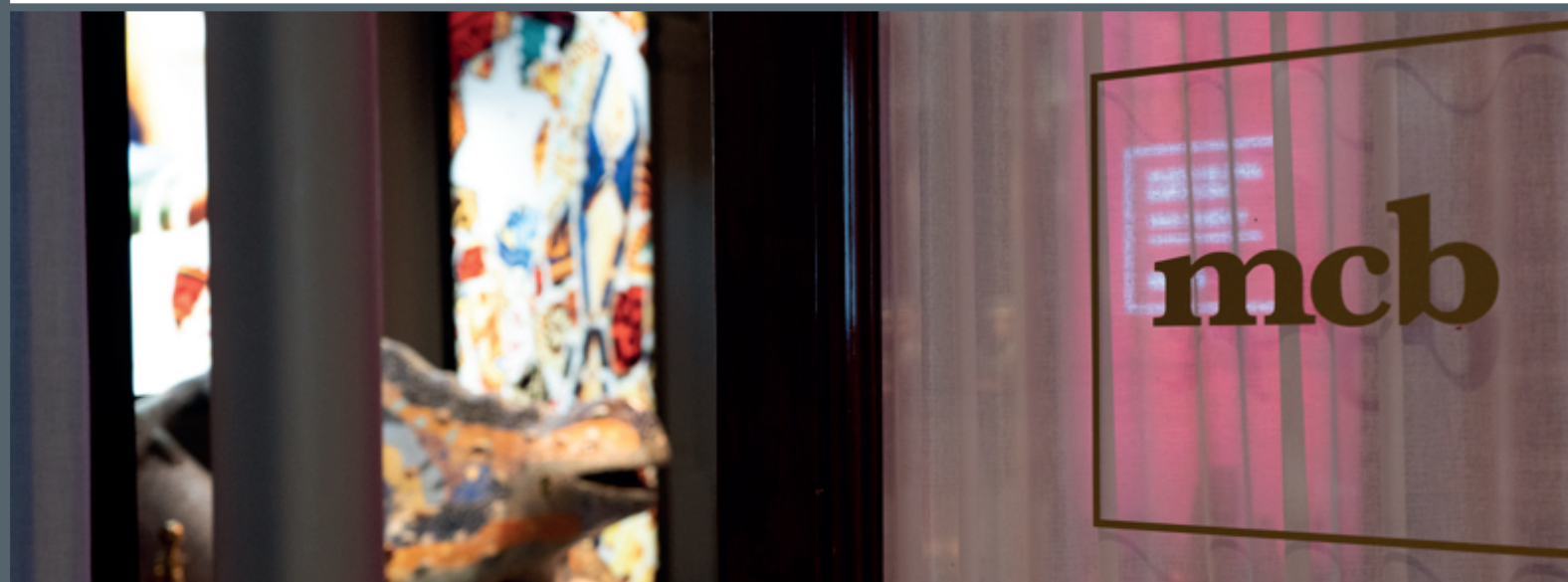
Wax Museum, Barcelona



1. Installation Requirements

Right in the heart of Barcelona city, in what was once the original Barcelona Bank building built back in 1867, the newly renovated Barcelona Wax Museum reopens its doors transformed into a 21st century museum without losing its signature architecture and history.

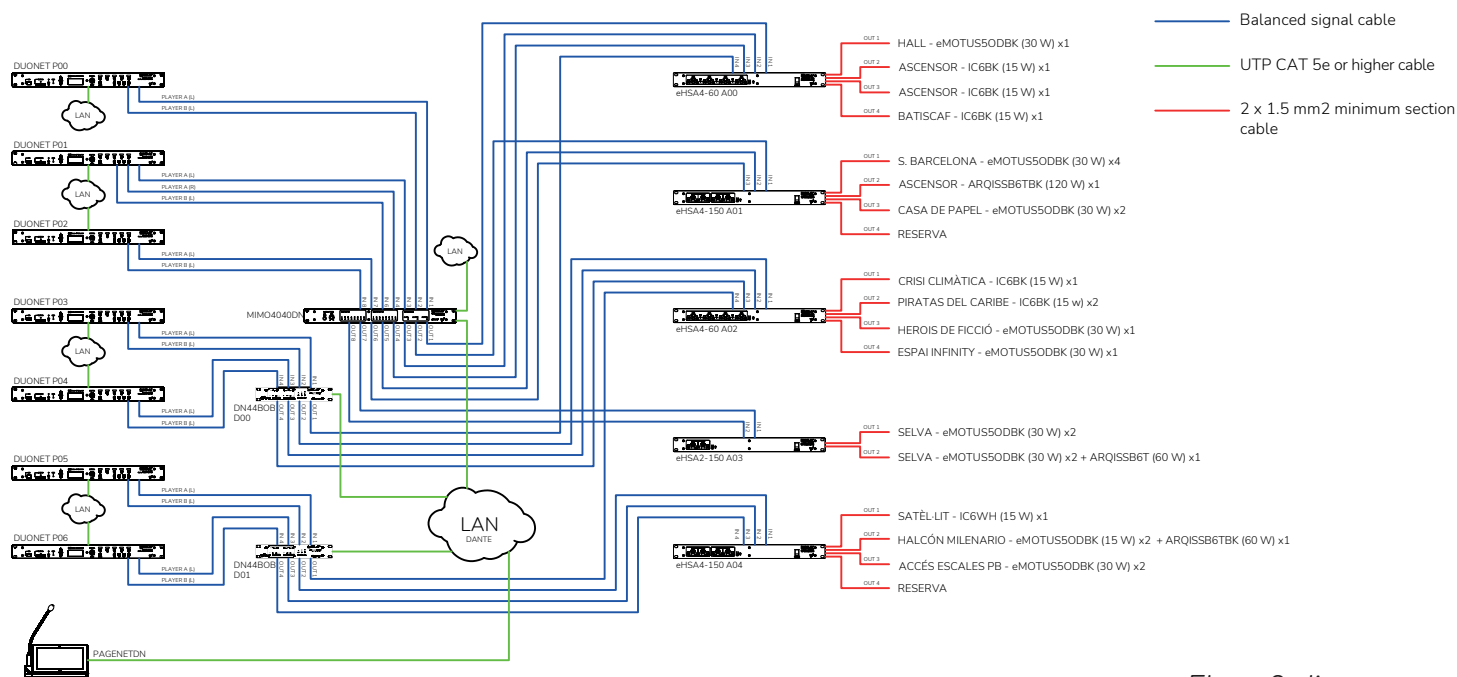
New technologies, relatable scenography and more than 120 wax figures stand together while being distributed across the 3 floors and 28 different zones. The museum hopes to receive around 200,000 visits per year!



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Ecler's projects department, along with Pascual Design architecture studio collaborated in this great challenge. Additionally, the expertise of different companies of the AV sector like Lafarga & Herranz, Block Audiovisuals and Metro Electrónica was also decisive in completing the project.

Some of the project requirements that were requested were reliability, automated AV processes, full project control via customised panels, and of course, full audio and video content synchronization throughout some of the halls. Furthermore, the need of a full compatibility between Ecler's systems and Crestron's current management system to control the entire museum (lighting, audio and video) was a determinant for the success of this project.



Floor 0 diagram

2. Adopted solution

The solution Ecler developed included both an analogue and digital audio installation including DANTE™ audio over IP. Using the MIMO4040DN matrix as the brain to distribute the audio signals independently across the museum's 28 different zones.




Aside from the matrix, seven DN44BOB digital interfaces are distributed across the three levels and work as analogue-to-digital audio converters. Everything is being managed by EclerNet Manager software.

This solution represented an important reduction of cabling costs with the added advantage of adjusting the system using any network access point or even via the Wi-Fi connection.

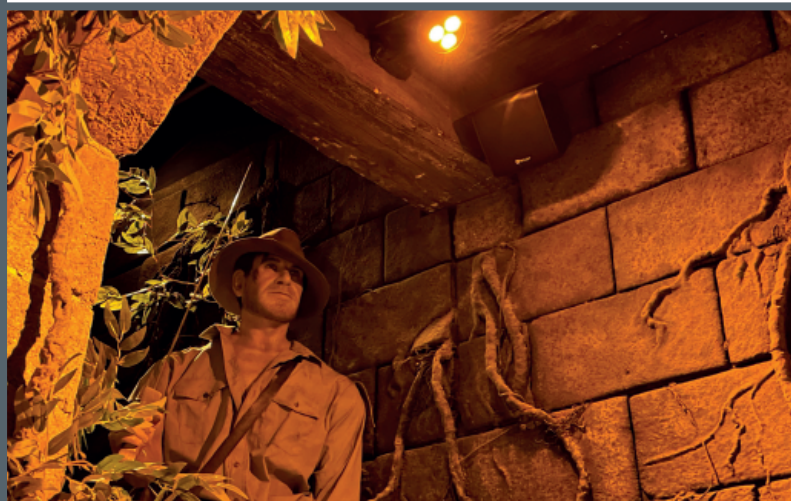
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3. Implementation

In the main level control room, the team installed the major rack, including the MIMO4040DN and seven DUO-NET Players as dual sound sources connected to the network and managed via EclerNet Manager.

Out of the seven players, three are connected to the matrix's analogue inputs while the other four remaining players are connected to the DN44BOB via Ethernet and send the digital signal (DANTE™) to the matrix.

In order to power the 27 loudspeakers distributed across the main floor, there are five eHSA high impedance Series of amplifiers, working with 16 independent signal lines.



The PAGENETDN paging console located inside the main control room is capable not only of sending public address messages, but also monitoring all the matrix's output levels and player's information thanks to the 10" touch display.

Additionally, the team created a password-protected panel that allows to modify all the zones volume levels, and is accessible from the PAGENETDN or from any smart device using Ecler UCP v2 app.



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On the first floor, the installed rack includes five DUO-NET Players, three DN44BOB interfaces, three eHSA series of amplifiers and a digital loudspeaker manager ALMA24, providing audio signals to the eight different zones across this floor.



There is an area dedicated to music and events on this floor, which includes a main stage that requires a higher sound pressure level. To achieve this, the museum installed an Ecler LABI1 PA system featuring four 300 W AES LABI1-C100i columns powered by two LABI1-SB18p subwoofers.



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On the second floor, the installed rack includes three new DUO-NET Players, two DN44BOB interfaces connected through the network, and two eHSA high-impedance series of amplifiers, providing audio signals to the eight different zones across the last floor.

4. Loudspeakers

This project has a total of eighty-two loudspeakers installed across the three museum floors, highlighting the thirty-seven eMOTUS50D models in black color that perfectly blends with the décor.

The versatility, world-renowned sound quality and installing capabilities of the eMOTUS series, were determinant factors for the museum managers to choose them.

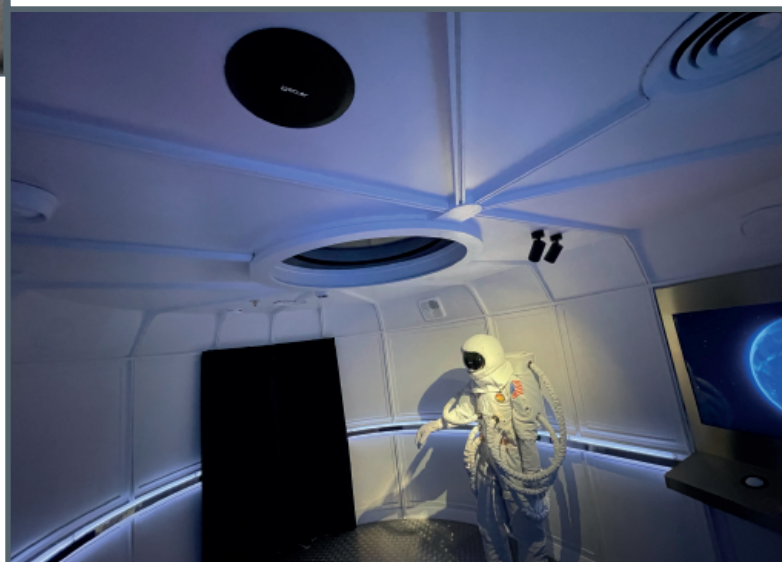


In the areas of the museum where there are lightning rails, the TRAIL series loudspeakers became the perfect solution, having multiple installation possibilities and a complimentary lamp style look.

Along with the TRAIL series the team chose the compact subwoofer ARQISSB6T as reinforcement in the areas that needed it.

The two-way IC6 loudspeakers were installed in those areas that allowed for ceiling integration.

All the installed loudspeakers have the option of operating in high or low impedance, featuring a power selector with different power options. In this project, with the exception of the LABi1 PA systems, all the speakers work in a 100V lines.



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Installed products:

15 DUO-NET Player Dual Audio Players
 7 DN44BOB Digital Audio Interfaces
 1 MIMO4040DN Digital Matrix
 1 ALMA24 Digital Speaker Manager
 3 eHSA4-60 High Impedance Amplifiers
 1 eHSA2-150 High Impedance Amplifier

4 eHSA4-150 High Impedance Amplifiers
 2 eHSA4-250 High Impedance Amplifiers
 4 LABI1-C100i Column Loudspeakers
 2 LABI1-SB18p Powered Subwoofers
 37 eMOTUS50D Cabinet Loudspeakers
 12 ARQISSB6T Compact Subwoofers
 13 TRAIL103 Lamp Style Loudspeakers
 10 IC6 Ceiling Loudspeakers

Ecler has been manufacturing professional audiovisual solutions for more than 50 years. In the last 10 years, it has participated in more than 100.000 projects in retail, hospitality, education, corporate, leisure, sports & wellness and houses of worship vertical markets.

If you want know about them, check: <https://www.ecler.com/avsolutions.html>

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