

# Acoustic improvement project in the Barcelona Auditorium - AIA

22/02/2024

The intervention to improve Hall 1 of the Auditorium of Barcelona, was born from the integration of the architecture of Rafael Moneo's project, with the need to improve the acoustics of the hall to the needs of musicians, orchestra conductors, bands and spectators.

Based on the previous study conducted by Kahle Acoustics, which defines a series of actions to be carried out to improve the acoustics of the space, AIA designed a series of elements that dialogue with the architecture of the existing space. We study the geometries that Moneo designed and maintain the existing structure of the space, with a proposal that is fully integrated at a chromatic, material and lighting level. Thus, we managed to improve the acoustic comfort of the room, with an intervention that we wanted to go virtually unnoticed and be completely absorbed within the whole.

The solution foresees the incorporation of reflector panels on both sides of the stage, as well as on the first and second tier of the audience. These panels, made of the same wood as the rest of the space, dialogue with the geometries of the audience balconies. On the ceiling of the stage, a series of curved reflective panels are added, also made of the same wood as the interior set, which, with a motorized system, can be adjusted to the acoustic needs of the hall at any given moment. On the balcony of the organ niche, a series of mobile wooden micro-perforated acoustic absorption panels will improve the acoustics of the back of the stage. The intervention is completed with a row of benches for the orchestra as an acoustic treatment, individual wooden lifting boxes for the instruments and three rows of micro-perforated wooden sound-absorbing panels for the front faces of the heart balcony.

