

Under construction



In this project a 19th century farmhouse is rebuilt and converted into a music school. Located in L'Hospitalet, the building has a total area of 579m² consisting of ground, first floor and two additions (one on each side).

The project involved paying special attention to acoustic and spatial needs that this kind of building requires. The programme is based on a clear, simple and functional design. The movement through the building is designed to be fluid and adapted to accommodate disabled people.

The "colour scale" adds rhythm and a sequence of space within the building.

The programme consists of two music theory rooms, seven practice rooms and an auditorium

Acoustics

The idea is to avoid noise disturbance between the different areas of the building. Because of this, the theory rooms and practice rooms are located on different floors. One typical problem in those kinds of buildings is the "funneling" of sound towards the bathroom area. To avoid this problem the bathrooms are located in one of the additions which are separated by the original stone wall.

Practice rooms insulation:

The main idea is to create these rooms as "floating boxes". This is achieved by using a series of layers including: sound damper (agglomerated polyurethane), floor heating, rockwood insulation, plasterboard and parquet floor.

Auditorium:

The space was long and narrow producing bad acoustic properties, especially bad reverberation time. To remedy this we designed an "ortophonic" ceiling composed of three large floating acoustic reflecting panels. To eliminate unwanted floating echo, we installed sound absorbing wooden wall panels in a zig zag pattern.

In the designated music rooms, the reverberation time must be 2 seconds or less. The acoustic values were checked against the "Higini Arau formula" which includes the following:

Volume= 312.83m³

Seating Area= 26m²

$312.83 / 26 = 7.361 \times T_{mid} = 1.63s$

We achieved a reverberation time of 1.63 secs.

[About](#) |  [Print Version](#) | [Sitemap](#)

[Login](#)

