



## An exhibition of invisible sound

In the heart of Guimaraes, an historical city of Northern Portugal, surrounded by traditional buildings and homes resides a brand new architectural oddity of this area. With its modular structure, clean, crisp lines and minimal interior the Plataforma das Artes (Platform of Arts and Creativity) provides a blank canvas for artistic, cultural and social-economic activity. In an environment such as this, all elements require careful consideration, not least the audio system. Big, bulky, cumbersome speakers in full view will spoil any well thought out, well designed area. Step forward Amina Technologies.

An Amina installation partner in Portugal was tasked with hiding fire detectors, intrusion detectors, lighting projectors and loudspeakers. Large rooms with acoustically challenging architecture make up the majority of the exhibition spaces within the Plataforma das Artes.

Amina LFiT Invisible Loudspeakers were promptly specified due to their wide dispersion, impeccable clarity and, of course, their completely invisible nature. The dispersive nature of Amina DML (Distributed Mode Loudspeaker) products allows a significant reduction in the number of speakers required to fill a large area compared to that of a conventional cone loudspeaker. A single, large exhibition area would have required at least 8 cone loudspeakers, however by using Amina loudspeakers that number is reduced to only 2. This saves on both cost and time, retaining the overall coverage which multiple cone loudspeakers produce but with increased clarity and zero visual interference.

One of the biggest challenges for the installer was how to control the excessive reverberation in the larger spaces. The solution was to use a special acoustically absorbent plaster finish on all the surfaces. Tests were carried out to ensure that a thinner layer of plaster could be applied to the speaker surface. The tests were successful and the reverberation has been greatly reduced allowing the speakers to perform perfectly.

Unlike a regular cone loudspeaker, which has a more directional output, the Amina speaker creates sound using a vibrating flat panel, much like a violin or indeed any sound created naturally. This produces a more widely dispersed sound reaching every corner of these architecturally irregular rooms.

So impressive was this building that it was chosen by architects and architecture lovers alike to win the DETAIL Prize 2012 for most impressive project of the year and Amina are very proud to have been a significant part of this.

The need for a completely invisible loudspeaker system in this project was an essential requirement which had to be of the highest standard. Amina Technologies and their invisible loudspeakers were recommended and specified, resulting in a stunningly modern interior to last the 21st Century and beyond.

This truly was an exhibition of invisible sound!



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...Stunning, modern interiors. Totally invisible sound...