

# Installation

INTERNATIONAL AUDIO, VIDEO AND LIGHTING INTEGRATION

March 2013

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Houses of worship - tech for spreading the word **p17**



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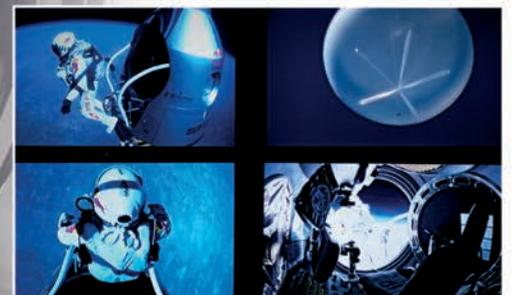
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### WHEN IT REALLY MATTERS...

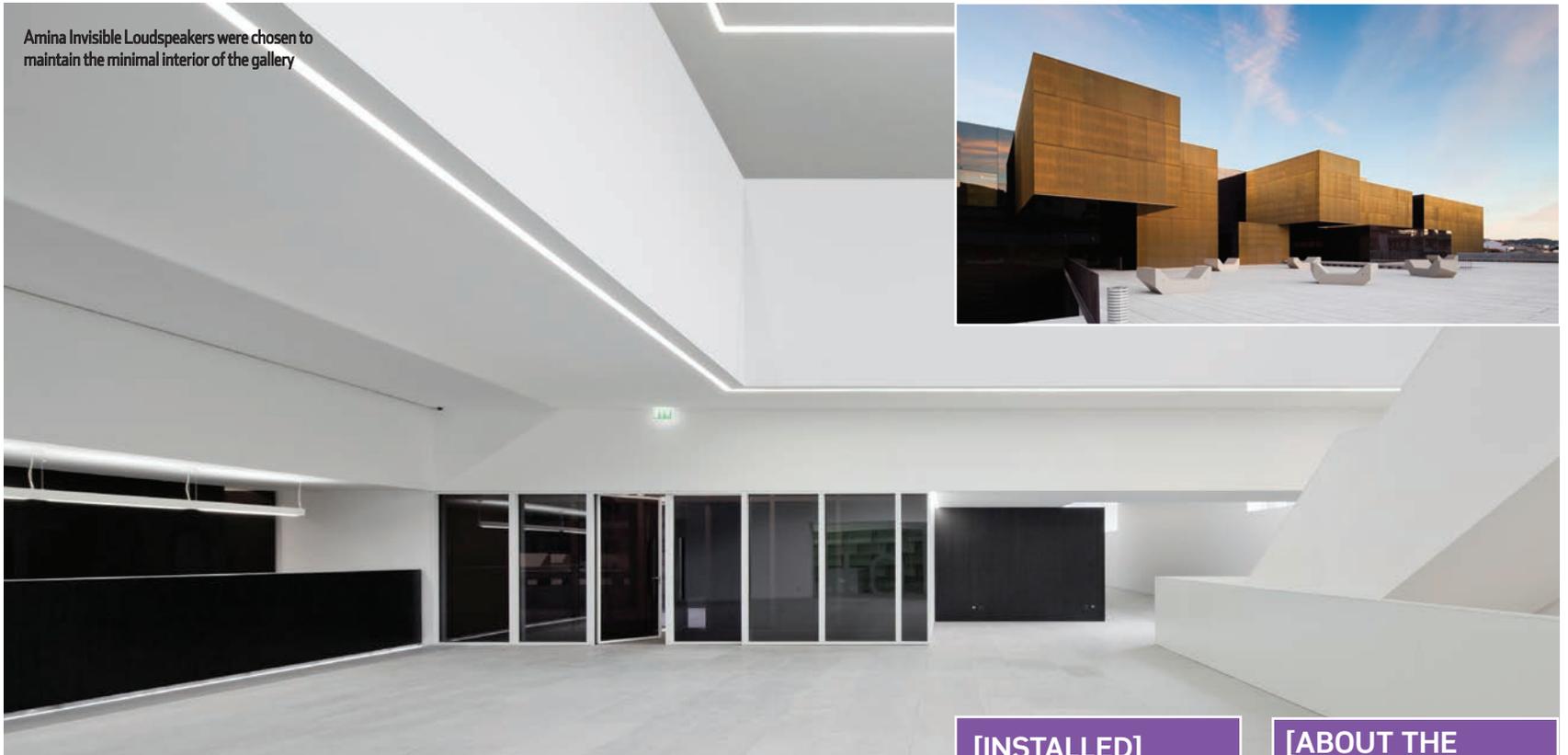
Real-Time Networks for Video, Audio, Data and Communications



PORTUGAL

# An artful install

A discreet audio system was needed to maintain the sleek, minimalist design of a new modern art gallery, writes **Joanne Ruddock**



Amina Invisible Loudspeakers were chosen to maintain the minimal interior of the gallery

IN THE HEART of Guimarães, 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.

During the initial design phase of this impressive project, VMC Systems of Portugal was invited on board. The first aspect of the interior the company noticed was the huge expanse of space present in most rooms which needed to be filled with clear sound – all while maintaining the modernist aesthetic. Big, bulky, cumbersome speakers in full view would spoil this well thought-out, well-designed area.

Amina's Invisible Loudspeakers proved to be the solution. As one of the UK-based manufacturer's established installation partners, VMC Systems has specified Amina's

loudspeakers on many high-end projects and its knowledge of the product's performance and attributes proved to be very useful in this case.

## OUT OF SIGHT

In addition to loudspeakers, VMC was tasked with hiding fire detectors, intrusion detectors and lighting projectors. Large rooms with acoustically challenging architecture make up the majority of the exhibition spaces within the Plataforma das Artes. Amina LFiT Invisible Loudspeakers were specified due to their wide dispersion, clarity and, of course, their ability to be completely hidden from view.

The dispersive nature of Amina's DML (Distributed Mode Loudspeaker) product allows a significant reduction in the number of speakers required to fill a large area compared with that of a conventional cone loudspeaker: a single large exhibition area that would have required at least eight cone speakers uses just two Amina speakers. This saves on both cost and time,

retaining the overall coverage that multiple cone loudspeakers produce but with increased clarity and zero visual interference.

## FINISHING TOUCH

One of the biggest challenges for VMC was how to control excessive reverberation in the larger spaces. The solution was to use an acoustically absorbent plaster finish on all the surfaces. Tests were carried out to ensure that a thinner layer could be sprayed onto the LFiT panel surface so as to comply with Amina's installation requirement. The tests were successful, the reverberation has been greatly reduced and the speakers can perform as they should.

The Amina LFiTs are used to provide background music and voice announcements, as well as to reinforce the dedicated voice alarm system (they are not compliant for use as the sole voice alarm speaker in such projects).

Unlike a regular cone loudspeaker, which has a more directional output, the Amina speaker creates sound

## [INSTALLED]

- AUDIO  
Amina LFiT Invisible Loudspeakers

by vibrating a panel – in much the same way as a violin, for example. This produces a more widely dispersed sound, reaching every corner of architecturally irregular rooms through use of boundary reflections in a positive way keeping sound pressure gradients to a minimum – just like many musical instruments.

"Amina is delighted to have provided a key infrastructure component, delivering an entirely invisible sound source within this prestigious building, allowing the design team to create the ultimate minimalist modern space offering maximum flexibility for users," says Richard Newlove, MD of Amina.

"It was a very challenging project as all of the elements normally present in a room had to be placed invisibly – fire detectors, intrusion detectors and lighting projectors had to be hidden," says Rui Mendes, director,

## [ABOUT THE INSTALLER]

- VMC began its commercial activity about 30 years ago in the area of trade instruments and professional audio equipment

- It has since expanded its portfolio to cover audio, video, CCTV, home automation, electrical installations, security and climate control

- Based in Guimarães, Portugal, VMC has 19 employees

- Recent projects include Hospital Privado Guimarães, IKEA store Matosinhos and buildings at the Edificio Universo, Santiago

VMC Systems. "The architects wanted super clean spaces with nothing cluttering the walls and ceilings. The result is wonderful; the end customer as well as the entire team of architects is delighted." ■

[www.amina.co.uk](http://www.amina.co.uk)  
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loudspeakers**



For modern, minimalist designs in both commercial and residential premises,  
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T: +44 1480 354390 / E: [inspired@amina.co.uk](mailto:inspired@amina.co.uk) / W: [amina.co.uk](http://amina.co.uk)

A recent Amina installation: Platform of Arts and Creativity, Portugal