



# A sound education in invisibility

When leading independent educational establishment, Cheltenham College, wanted a new sound system for their dining hall which was also used for a variety of events, the vision was simple, outperform everything before... and be completely invisible!

## Two problems that led to an unusual solution

In order to create the system the college required, two major problems had to be overcome. Firstly, the building was acoustically challenging. Secondly, how do you conceal loudspeakers in 150 year old wood panelling? Amazingly the solid oak wall panelling proved the solution not a problem. Using Amina invisible loudspeakers, the wood panelling was turned into the sound source!

## Turning the Victorian wood panelling into a loud speaker

Winning customer buy-in was very important, especially amongst the on-site carpentry staff who would be preparing the backs of the oak panels to house loudspeakers. This done, the position for the speakers in the room was selected, the appropriate panels were then removed and the template of the speaker scribed out on the back of each.

The wood was then machined away from the back of the oak panel to accept the speaker whilst leaving a 2mm thickness of the original material behind the panel face intact. This was a highly skilful task considering the age and condition of the panelling.

The Amina loudspeaker was then glued into this routed out area with specialist wood adhesive and pressure applied to ensure a good bond. Once the speaker adhesive had set the panels were wired up and reinstated, and the system was ready to go.

## Flexibility even at low volumes

The system set-up provides the flexibility the college needed. The sound produced sweeps evenly throughout the room even at low to moderate volumes giving ambient, high quality coverage without being intrusive.

The hall was acoustically split into 4 zones to enable the same content to be played at different sound levels across the area. For example, the sound volume can be tailored to be quieter in the refreshments area than on the dance floor.

The original 19th century panelling quite literally provided the invisibility cloak for a 21st century audio solution. This thus allowed a uniquely character filled building to be used in a very modern commercial way.

