

UNIQUE CEILING SYSTEM IN IDAHO HIGH SCHOOL FEATURES PUBLIC ADDRESS SPEAKERS THAT ARE HEARD BUT NOT SEEN

Flat Speaker Panels Look Just Like Traditional Ceiling Panels; Provide Improved Aesthetics as well as More Uniform Coverage

Contrary to an old adage about being seen, but not heard, school officials at the Meridian Joint School District in Idaho preferred that the hundreds of speakers located throughout their new high school be heard, but not seen.

As a result, they decided to install a unique ceiling system in which the speakers are flat panels that look like traditional acoustical ceiling panels and are placed in the grid system just like ordinary ceiling panels.

The decision has resulted in a ceiling that is more visually pleasing and a public address/paging system that is faster and easier to install and service and has more uniform coverage throughout the facility than conventional cone-type speakers.

Flat Speaker Panels Replaced Cone Speakers

Located in Boise, Idaho, the Meridian Joint School District recently completed construction of Mountain View High School. Opened in August, 2003, it is one of the largest high schools in the state in terms of size (200,000 square feet) and enrollment (1,800 students).

One of the more unique features of the two-story school is a sound system that provides public address announcements, paging, security alerts and bells by way of speakers that are “invisible” because they blend in with the overall ceiling.

According to Alan Donnelly, a design consultant with Aatronics, the Boise-based systems integration company responsible for the design, installation and service of the sound system in the school, the original specifications called for the installation of conventional 8-inch-round cone speakers.

However, after examining the benefits of a new sound system from Armstrong called i-ceilings® that features 2'x 2' flat speakers, Donnelly recommended a change to the new speakers, which was accepted by the school district and its architectural firm, Hummel Architects, PLC. A total of 343 i-ceilings speaker panels were then installed in place of cone speakers throughout the school, including classrooms, corridors, cafeterias and the “Commons” area.



More than 300 Armstrong i-ceilings® speaker panels provide public address announcements, paging, security alerts and bells at Mountain View High School.

Flat Speaker Panels Faster to Install, Service

The i-ceilings “Essentials” series of speakers were chosen for use in the school. Specifically designed to provide economical paging and background music in a variety of applications, the speakers include built-in 25-volt connections, which are required for the intercom systems used in most educational facilities.

“The use of i-ceilings added a little more cost in terms of materials, but saved quite a bit in terms of installation,” Donnelly explains. “With conventional cone speakers, we have to remove a ceiling tile, cut a hole in it, and then assemble four components to secure it to the tile. This is in addition to the wiring connections. With i-ceilings speaker panels, we simply make two connections on the back of the panel, tap it at the required wattage and lay it in the ceiling grid like a normal ceiling panel.”



case study

According to Donnelly, the i-ceilings speaker panels are about 20 percent faster to install than conventional cone speakers. Rick Halsteen, the Aatronics project manager on the Mountain View job, notes that they are also faster to service.

"The serviceability benefit is great, far better than cone speakers," he states. "For example, after the school opened and was occupied by students and teachers, we went back to re-balance the system to meet everyone's needs, and were able to complete the job in one afternoon because the process is so easy. All we had to do was pop the panel up, make the change, and set it back in the grid. It would have taken much longer with standard cone speakers."

Speaker Panels Look Like Ceiling Panels

From an aesthetic point of view, i-ceilings speaker panels look just like standard acoustical ceiling panels and coordinate with many popular Armstrong ceiling patterns. As a result, they blend in with the ceiling, making the space more visually pleasing.

According to Ed Daniels, an associate architect with Hummel Architects in Boise, this is an important feature. "The combination of HVAC registers, lighting fixtures, fire sprinklers and speakers can often clutter up a ceiling," he states. "The ability to eliminate one piece of equipment from that mix, such as speaker grills, helps improve the overall look of the ceiling."

Two different Armstrong acoustical ceilings were used at Mountain View, both of which coordinate with the speaker panels. Fine Fissured ceiling panels, which feature a medium textured look, were used in the classrooms and corridors, while Dune™ ceiling panels, which have a more upscale, fine textured visual, were used in the cafeteria, lobbies and Commons area of the school.

Donnelly notes that the ability of the speaker panels to blend in with the ceiling is evidenced by the numerous people touring the facility who hear pages and ask where the speakers are.

Flat Speakers Provide More Uniform Coverage

He also notes that because the speaker panel's flat design radiates sound downward in an omni-directional pattern, it provides more uniform coverage than cone speakers. "It provides a nice, even coverage throughout the space," he says. "This results in a softer paging 'feel' compared to more focused conventional types of speakers."

Donnelly is also impressed with the speakers' sound performance. "It's not unusual for a few hundred students to be present in the Commons area at any given time. Yet, paging and bells can easily be heard over the noise of the crowd."

Architect Daniels agrees. "Both we and the school district are quite pleased with the acoustic performance of the system," he states. "We especially like the fact that the sound is much more widely dispersed compared to the speakers that would traditionally be installed in an application like this."

Daniels also notes that this was his first experience with i-ceilings Sound Systems. And, based on that experience, would use the system again. "We're totally satisfied with the system, and would definitely recommend it in future projects."