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ALS Systems for ADA Compliance

What schools need to know to meet ADA requirements for students with hearing loss.

By Joe Martinez

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In a fact little known and rarely enforced in school renovation and construction, the Americans with Disabilities Act (ADA) of 2010 mandates "each assembly area, where audible communications are integral to the use of the space, an assistive listening system (ALS) shall be provided." An ALS transmits and amplifies sound to help those with hearing loss.

While this may sound like it only applies to larger areas, such as school auditoriums,

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gymnasiums and cafeterias, the most common type of "assembly area" in K-12 schools is the classroom.

According to the ADA, which went into full effect March 15, 2012, no fewer than two hearing aid-compatible receivers are required in all newly constructed or altered spaces. The number of devices required increases based on the seating capacity.

Lack of Awareness

Unfortunately, many schools, and even the AV contractors that install such systems, are not always aware of this aspect of the ADA. As a result, these systems are often not specified or installed.

"When we think ADA requirements, we think about is wheelchair access," says Cory Schaeffer, co-founder of Listen Technologies, a leading manufacturer of Assistive Listening products. "However, compared to 1.4% of the population in a wheelchair, 17% have hearing loss [based on the World Health Organization's definition]."

According to Schaeffer, one of the reasons that awareness is so low is because many people consider hearing loss an issue that primarily affects older people.

However, an estimated 12.5% of children and adolescents ages 6-19 (approximately 5.2 million) have suffered permanent damage to their hearing from excessive exposure to noise.

This type of "noise-induced" hearing loss is on the rise in this age group. The increase is often attributed to the constant use of ear buds or noise-canceling headphones used to listen to personal music and digital video players and other Smart Devices.

"We are seeing a rise in hearing loss with school age children for the first time ever," says Schaeffer. "At 85 decibels or louder, kids begin to get permanent hearing loss. "This is a real problem because when children have this type of hearing loss, it cannot be medically or surgically corrected."

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Assistive Listening Technology



Hearing loss can have a tremendous impact on a child's education. According to information on the CDC web site, "even a small amount of hearing loss can have profound, negative effects on speech, language comprehension, communication, classroom learning, and social development."

Fortunately, there are solutions already on the market that are designed to facilitate the specification and installation of assistive listening technology.

According to Marc D'Agostino a national AV / Technology / Security consultant with D'Agostino & Associates, the hardware available is not specifically designed to integrate with this type of technology so installations can be unwieldy and overly complex. The majority of the projects D'Agostino & Associates creates are bid specification documents for classroom and larger assembly areas in K-12 schools.

"For schools, the goal is to incorporate technology that meets the ADA requirements while minimizing the hardware, space and installation requirements while staying within the budget," says D'Agostino.

Although his company has no exclusive agreement with any specific manufacturer, D'Agostino often specifies a bundled speaker/assistive listening system from OWI Incorporated and Listen Technologies to reduce complexity and simplify installation.

The speakers already have the built-in line out required to interface with an Assisted Listening System using a simple, three-wire connection. The speakers have a built-in amplifier and require no separate power source. The ALS includes a transmitter-radiator as well as the required receivers. The receivers are designed to interface with the telecoil built into the majority of hearing aids and cochlear implants.

Another key selling point of this bundled package is the option to specify infrared (IR). Most schools opt for RF (radio frequency) for wireless because it costs less and is more readily available. However, RF covers wide areas and this can cause signal interference with nearby classrooms. A student, for example, may pick up what the teacher next door is saying or hear a movie that is playing nearby. IR-based systems, on the other hand, transmit signals through direct line-of-sight only. This means that IR signals in one classroom will not interfere with the signal next door even if they are the same frequency.

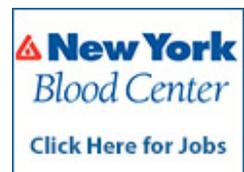
School Emergencies

With school security at top of mind in Connecticut (his company is located not far from Sandy Hook Elementary) and across the nation, D'Agostino says the speaker can serve double-duty and eliminate the need for a separate, dedicated PA speaker.

To ensure that emergency announcements can be made even if electrical power is lost, PA systems are typically hard-wired to a dedicated speaker in each classroom used for only that purpose. The system is connected to an uninterruptible power supply (UPS battery backup) and a generator that turn on automatically during a power outage.

Because the speakers are built with a multi-coil speaker and priority override features, they can serve double-duty and eliminate the need for the separate PA speaker. In the event of power loss, the speaker will still function.

"With priority override, if an emergency announcement, or even a general announcement, comes through the public address system, it cuts out all the local classroom sound on the speakers instantly," says D'Agostino. "This means we can eliminate the dedicated classroom public address speakers and just connect directly to the speakers from the head-end. So we're putting half of the speakers in the classrooms now," he adds.



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Compliance Incentives for Schools

Regardless of the technology or systems are installed, there are many incentives for schools to stay current with the ADA requirements for the hearing impaired in its classrooms and larger assembly areas.

Schools that fail to comply may receive complaints, which can now be filed online with the Department of Justice. In addition to remedying the situation, schools can incur fines from \$55,000 to \$150,000.

Ultimately, though, this is really about children and the quality of education they receive.

"As parents we want our kids to do well at school because we want them to have the best opportunities in life," says Listen Technologies' Schaeffer. She adds that schools also benefit by way of better test scores, which are often tied to funding.

"The ADA requirements provide K-12 students that have hearing loss with the same advantages and opportunities as everyone else. It's a win-win-win for the child, parents and the school."

Joe Martinez is vice president and head of technology at OWI. OWI manufactures advanced audio equipment, offers ceiling and wall-mounted speakers for schools that have several key advantages when used in conjunction with assistive listening systems. For more information, call 310-515-1900 or visit their website at www.owi-inc.com

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