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Meeting ADA Compliance for the Hearing Impaired

Despite a rise in hearing loss in children, many schools remain unaware of the ADA requirements for the installation of assistive listening devices.



If schools do not have the appropriate listening devices available, they can incur expensive fines.

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Jeff Elliott · May 28, 2015

The 2010 Americans with Disabilities Act (ADA) mandates that an assistive listening system be provided for use in any space where audible communication is integral. Assistive listening systems transmit and amplify sound to help those with hearing loss.

While it may sound like ADA refers to large spaces like school auditoriums, gymnasiums and cafeteria, the most common type of assembly area in a K-12 school is actually the classroom.

According to the act, you must have at least two hearing-aid compatible receivers in all newly constructed or altered spaces. The number of devices required increases based



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on the seating capacity of the space. This is rarely enforced in schools. Many educators, and even the AV contractors that install such systems, are unaware of this aspect of ADA.

As a result, these systems are often not specified or installed.

“When we think ADA requirements, we think about wheelchair access,” says Cory Schaeffer, co-founder of [Listen Technologies](#), a 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 to be an issue that primarily affects the elderly. However, an estimated 12.5% of children and adolescents aged 6–19 years (approximately 5.2 million) have suffered permanent damage to their hearing from excessive exposure to noise.

“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, digital video players and other Smart Devices.

“We are seeing a rise in hearing loss with school age children for the first time ever,” Schaeffer says. “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.”

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 and 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 classrooms 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,”

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D'Agostino says.

The Products

Although his company has no exclusive agreement with any specific manufacturer, D'Agostino often specifies a bundled speaker/assistive listening system from OWI Incorporated. The offering is the result of a partnership between OWI and Listen Technologies to reduce complexity and simplify installation. OWI, a manufacturer of advanced audio equipment, offers ceiling and wall-mounted speakers for schools that have several key advantages when used in conjunction with assistive listening systems.

The speaker has its own built-in amplifier and is designed to provide the necessary power to the assistive listening system through the connection, eliminating the need for an additional power source. The ceiling speaker, the AMP-ER2S6, is also Energy Star compliant.

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The assistive listening system hardware includes the OWI-KSTM-LT-84 Transmitter-Radiator from Listen Technologies, 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. This bundled package allows D'Agostino's clients the option of specifying 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.

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

Regardless of the technology or systems 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.



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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.”

Jeff Elliott is a Torrance, Calif.-based technical writer. He has researched and written about industrial technologies and issues for the past 20 years.

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