



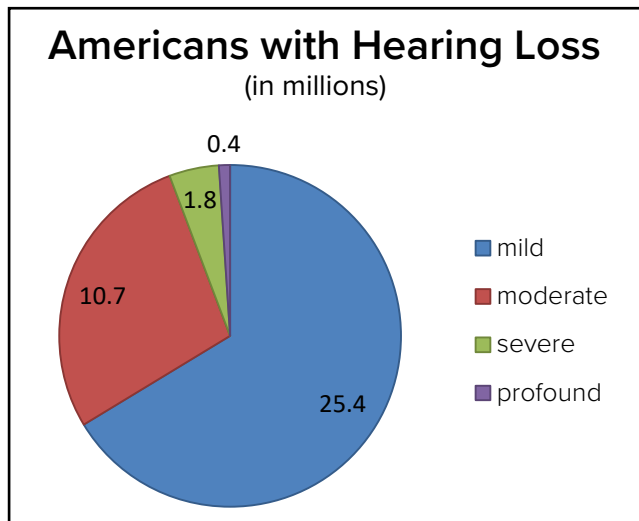
ASSISTIVE LISTENING SYSTEMS AND THE AMERICANS WITH DISABILITIES ACT

What Makes Hearing Hard?

Around 23% of Americans over the age of 12 have hearing loss. By 2030, 44 million Americans age 65+ Americans will experience hearing loss by 2030.

Hearing damage is also occurring at younger ages. Listening to loud music with ear buds, and going to loud concerts all plays a part in the contribution of noise-induced hearing loss.

There are different levels of hearing loss, from mild hearing loss (where only a few decibels of sound are not heard) to profound (where the majority of sound is not heard).



But hearing loss does not just mean losing the ability to hear certain sounds. There is a difference between the ability to hear and intelligibility – the ability to understand what you hear.

Intelligibility can be affected by:

- Poor Room Acoustics
- Background Noise
- Distance from the Sound Source

Hearing Assistance

Intelligibility can be improved by using assistive listening systems (ALS). An ALS is a sound amplifying device that can bring sounds closer to a listener, such as by broadcasting sound from a stage to a headset.

Many people are unaware of these devices, but 67% of those surveyed say they would use some form of hearing assistance if it was provided.

Hearing assistance devices are required to be provided in many public venues according to the Americans with Disabilities Act (ADA).

The ADA

The Americans with Disabilities Act (ADA) provides protections to individuals with disabilities in many areas, including public accommodation and commercial facilities. The ADA incorporates the Americans with Disabilities Guidelines developed by the United States Access Board (a federal agency committed to accessible design).

The ADA ensures that a building (and any services provided there) are equally accessible to everyone, including those with hearing loss.

Who Must Be Compliant?

If audible communication is important to the use of the space, an ALS must be provided. ALS are **not** required where audio amplification is not provided, unless the area is a courtroom. ADA-compliant ALS are required when there is:

- Public use of the facility
- Use of an installed P.A. system
- Speech or sound is integral to the use of the space
- New facilities or a building are constructed
- Major retrofit, or renovation of more than 65% of a venue

Hearing assistance is required to be available in any of a ADA-compliant building's assembly areas.

Assembly Areas

An assembly area is defined as any part of building or facility that is used for the purpose of entertainment, education, civic gatherings, or similar purposes. An assistive listening systems (ALS) must be provided in each assembly area where sound is important.

Specific assembly areas that require ALS include, but are not limited to: classrooms, public meeting rooms, legislative chambers, auditoriums, theatres, concert halls, amphitheatres, stadiums, grandstands, or convention centers.



Signs informing patrons of ALS availability are also required in each assembly area, unless there is a ticket office or ticket windows. If there are, signs can be displayed at each ticket office or ticket window.

Note: The ADA does not cover private clubs and entities that are operated and controlled by religious organizations. However, many houses of worship make ALS available to their congregants, not as a matter of law but as a service, and club facilities used by other organizations must provide ALS for meetings and performances.

ALS Technologies

Several forms of assistive listening systems (ALS) can be used to improve someone's understanding of audio and meet ADA standards. ALS are categorized by their mode of transmission.

There are several types of wireless systems:

- FM Transmission Systems



- Infrared Systems



- Induction Loop Systems



- Digital Communication Systems



Each system has different advantages and disadvantages that determine which system is best for a given application. Selecting or specifying an effective ALS for a large or complex venue requires assistance from a professional sound engineer.

For example, an FM system may be better than an infrared system in open-air venues, since infrared signals are less effective in sunlight.

For help deciding which system will work best for a certain project, Williams Sound offers a product picker on our website.

Users of the ALS listen to the audio through receivers. Receivers may output to a pair of headphones or earbuds, or to the user's hearing aid.

T-Coil Enabled Receivers



Many hearing aids are telecoil (t-coil) enabled, allowing sound to be transmitted directly to the hearing aid. Receivers that are hearing-aid compatible will broadcast to the t-coil in hearing aids through a neckloop.

Number of Receivers

The number of receivers required in each assembly area is determined by the venue's size:

Seating capacity of assembly area	Min.#of required receivers	Min.# of hearing-aid compatible receivers
50 or less	2	2
51 to 200	2, plus 1 per 25 seats over 50 seats*	2
201 to 500	2, plus 1 per 25 seats over 50 seats*	1 per 4 receivers*
501 to 1000	20, plus 1 per 33 seats over 500 seats*	1 per 4 receivers*
1001 to 2000	35, plus 1 per 50 seats over 1000 seats*	1 per 4 receivers*
2001+	55 plus 1 per 100 seats over 2000 seats*	1 per 4 receivers*
<i>Rules differ in California.</i>		<i>*or fraction thereof.</i>

At least 25% of receivers provided (but no fewer than two) must be hearing-aid compatible.

If all seats are served by an induction loop ALS, the minimum number of hearing-aid compatible receivers are not required to be provided because a loop can broadcast directly to a hearing aid.

If a building contains more than one assembly area owned by one management, the total number of required receivers can be calculated according to the total number of seats in the assembly areas of the building.

For help calculating the amount of receivers needed for a specific project, Williams Sound offers an ADA Calculator on our website.

Complaints

An individual can file a complaint when a business is not ADA compliant. When that happens, the Department of Justice (DOJ) is contacted and will notify the venue owner of non-compliance. The DOJ will allow an amount of time for the business to become compliant. If the venue doesn't comply, a lawsuit may be filed in a Federal Court.

Why Williams Sound?

Williams Sound has been helping companies with their assistive listening needs since 1976.

- We have a variety of product offerings to meet the unique demands of each venue.
- We offer technical design implementation support.
- We create innovative products that are competitively priced.
- Many of our products are made in the USA.

To learn more about our ALS products, and for tools such as an ADA required receiver calculator, visit williamssound.com.

If you need help meeting your ADA requirements, contact us today by calling 800-843-3544 (US) or 1-952-943-2252 (international).



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