



Are You Hearing Everything You Could?

Hearing Assistive Technology
and a Telecoil Might Be the
Key to Better Hearing



Hearing assistive technology (HAT) can dramatically improve the lives of people with hearing loss. HAT, also referred to as an assistive listening system (ALS) or assistive listening device (ALD), bridges the gap between you and the sound source by eliminating the effects of distance, background noise, and reverberation. They can bypass challenging acoustics by sending sound directly to a user's ears.

Hear Better in Public Places

An ALS is the gateway through which people with hearing loss access sound being transmitted through a public address or sound system. But in order to easily connect to an ALS it is imperative that your hearing device is equipped with a telecoil.

Ask Your Hearing Care Provider About Telecoils

Telecoils expand the usefulness of hearing aids and cochlear implants, especially in environments where it is typically challenging to hear clearly. A telecoil (or t-coil), is a small copper wire that is an option on most hearing aids, all cochlear implant processors, and some audio streamers. T-coils are an essential component for anyone wishing to easily and directly access an assistive listening system.

Hearing devices with a telecoil can have a dramatic impact on your ability to hear clearly on the telephone, in meetings, a noisy restaurant, at the theater, while navigating airports, bus and train stations, and other challenging environments. When your telecoil is used together with any type of hearing assistive technology it can make a noticeable difference in your life. This pairing of technology allows sound to be transmitted directly from the source to your hearing device, eliminating most of the background noise.

Many hearing aids and cochlear implants available today come with a t-coil already installed. However, make sure to ask your hearing care provider to confirm that the hearing device you are purchasing has a telecoil and that it is programmed and activated.



No Hearing Aid or Telecoil? No Problem!

People who do not wear hearing aids or whose hearing aids do not have a telecoil can still have communication access by using a hearing loop, FM or infrared (IR) system in conjunction with a receiver and headphones. You can also use a telecoil-equipped personal amplifier or special telecoil-equipped earbuds and a smartphone.

In addition, the Americans with Disabilities Act (ADA) requires that state and local governments along with businesses and nonprofit organizations that serve the public provide equally effective communication access for people with communication disabilities as those without a disability. All assistive listening systems are required to be accessible by people with hearing aids, with hearing aids but no telecoil, and without hearing aids. Hearing loops, FM and IR systems all meet this mandate.

If you struggle to hear but don't yet have a hearing aid or cochlear implant, an assistive listening system can still help.



Phonak's Roger Pen (left) and Williams Sound, LLC's Pocketalker (right) are examples of assistive listening devices that can help reduce background noise in louder environments by sending sound directly to your ears through your hearing aids, cochlear implants or a neckloop with headphones.

Hearing Loops—Hearing loops, or induction loops, consist of a copper wire placed around a room which is connected to a public address or sound system. An electromagnetic field is created that connects to a telecoil in hearing aids, cochlear implants or telecoil-enabled receivers.

Loops are the most user-friendly of the assistive listening options and the first choice for many users. Hearing loops are simple, discreet and effective. By simply switching the device to the telecoil program the user receives sound directly.

People who do not have hearing aids or who do not have access to telecoils in their hearing aids or streamer need to use a hearing loop receiver and headphones to connect to the system.

Infrared—Infrared (IR) systems work like a TV remote control. A transmitter sends speech or music from a public address or sound system to an IR receiver using invisible infrared light waves. This technology is line of sight and cannot be used outdoors during the daytime due to being affected by light. Because IR signals are sent and received in a straight line, users are encouraged to sit as centrally as possible; those sitting in balconies or other areas with with a poor line of sight might experience interference or receive no sound signal at all.

Anyone who uses an IR system needs a receiver and either headphones or a neckloop. For those who have telecoils in their hearing aids and cochlear implants, neckloops eliminate the need for headphones.

FM—FM systems, or radio frequency assistive listening systems, are a wireless low-power FM frequency radio transmission from a sound system to a receiver. An advantage of this system over an infrared system is that it is not affected by direct sunlight. FM systems are frequently used by students with hearing loss in the classroom.

Everyone using the FM system needs a receiver and either headphones or neckloop. For those who have telecoil-equipped hearing aids and cochlear implants, neckloops eliminate the need for headphones.



This universal symbol lets you know there is a hearing loop installed in the room or venue.

What Is an Assistive Listening Device?

An assistive listening device (ALD) expands the functionality of hearing aids and cochlear implants by helping separate the sounds you want to hear from background noise, and by enabling you to hear when the speaker is more than a few feet away.

An ALD consists of a microphone placed at the source of the sound, a transmitter to send the signal, a receiver to intercept the signal, and any one of several different listening attachments to send sound from the receiver to the user's device.

The speaker uses the microphone to transmit the sound to the user's ear, thus reducing the degrading effects of noise and distance on speech intelligibility. An example of how you might use an ALD is communicating with your grandchild at a large family gathering. Your grandchild speaks into the microphone and the sound is transmitted to your hearing device reducing competing noise so you can understand them more clearly.

Using Bluetooth with Your Hearing Device

Bluetooth is a relatively short-range wireless technology frequently used to connect cell phones, televisions, computers, tablets and, more recently, hearing aids and cochlear implants. Bluetooth technology in hearing devices is sometimes proprietary, that is, designed for a specific brand and/or model of the device. While this technology is evolving, it is still generally not suited for long-range transmission in a large venue such as an auditorium or theater.

What Can I Do to Hear Better in Noise?

People with hearing loss typically find that environments with a lot of background noise are the most challenging to hear in. One of the simplest ways to help hear better in these situations is to use a personal amplifier. A personal amplifier is a single unit with jacks for a microphone and a listening attachment, and volume control. These devices help reduce the effects of background noise when you are close to the speaker, such as in a car or restaurant.

There are also ways to hear better in noise when the speaker is more than a few feet away. FM, IR and hearing loop systems transmit sound over longer distances, such as a student hearing a teacher who is speaking from the front of the classroom. All of these systems can be scaled for use in both smaller (i.e., home) and larger (i.e., auditoriums) environments.



Tips

- When purchasing a hearing aid don't assume it will automatically come with a telecoil or even if one will be recommended by your provider. Also, if a telecoil is present don't assume it has been programmed to suit your individual needs.
- Approximately 71 percent of all hearing aids dispensed in the United States today have telecoils, yet few consumers are told about them and know how to use them. You can use the HLAA Consumer Checklist when purchasing a hearing aid (available for download at hearingloss.org or ordered in hard copy from the HLAA Online Store) to assist you in making a purchase decision. In addition to other helpful information, the checklist includes asking about telecoils. Some states have laws that require audiologists and hearing instrument specialists to tell consumers about telecoils when purchasing hearing aids.
- Be sure to check with your audiologist or hearing instrument specialist to ensure that the settings for your telecoil are maximized for use with assistive listening devices.
- Access to public places for individuals with disabilities is required by the Americans with Disabilities Act. If you think an assistive listening device would benefit you on the job or in your classroom, you should find out the process from that facility for requesting a reasonable accommodation (in private settings) or for auxiliary aids and services (in public settings).
- Advocate for assistive listening devices and systems at places you regularly attend, such as place of worship, classroom, community center. Encourage the venue to advertise that they have these available so others can take advantage of them as well.

Get more information and support from your local HLAA Chapter!

Chapters are a place to meet others who are just like you right in your own community. For more information and to find an HLAA Chapter near you go to hearingloss.org.

About the Hearing Loss Association of America

The Hearing Loss Association of America (HLAA) is the nation's leading organization representing the 48 million Americans with hearing loss. HLAA publishes the bimonthly magazine, *Hearing Life*, holds annual conventions, produces the Walk4Hearing, offers training courses and online learning, holds monthly webinars and advocates for the rights of people with hearing loss. The national support network includes the Washington, D.C. area office and more than 150 state organizations and local chapters across the country.

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