

Are You Hearing Everything You Could?



Assistive Listening Technology
and a Telecoil are
Keys to Better Hearing

Hearing Loss Association of America
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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 the person's hearing instrument.

Hear Better in Public Places

Assistive listening systems and devices bridge the gap between you and the sound source by eliminating the effects of distance, background noise and reverberation. An ALS is the gateway through which people with hearing loss access sound from a public address system. But in order to easily connect to a sound source or ALS, it is imperative that your instruments (hearing aid, cochlear implant, bone conductive device) be equipped with a telecoil.

Ask Your Hearing Health Care Provider About Telecoils

Telecoils expand the usefulness of hearing instruments, especially in environments where it is typically challenging to hear clearly. A telecoil (or t-coil), is a small copper wire that is available on most hearing aids, most 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 or an ALD. (Note: An assistive listening system usually is for many people whereas an assistive listening device is for one-to-one.)

Hearing instruments with a telecoil can have a dramatic impact on your ability to hear clearly on the telephone, in meetings, when attending a lecture, in a place of worship, at the theater, in a noisy restaurant, while navigating airports, bus and train stations and other challenging environments. When telecoils are used together with assistive listening systems and devices they can make a noticeable difference in your life. They allow sound to be transmitted directly from the source to your hearing instrument, eliminating most of the background noise.

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

Telecoils are available in most hearing aid models—an estimated 70%—and most cochlear implants. However, make sure to ask your hearing care provider to confirm that the hearing instrument you are purchasing has a telecoil and that it is programmed and activated.

No Hearing Aid or Telecoil? No Problem!

Most people who do not wear hearing aids or whose hearing aids do not have a telecoil can still use assistive listening systems with a receiver and headphones. You can also use a telecoil-equipped personal amplifier or special telecoil-equipped earbuds with a smartphone.

The Americans with Disabilities Act (ADA) requires employers, state and local governments, businesses and nonprofit organizations to 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 who use hearing instruments, hearing instruments but no telecoil, or without hearing instruments. Hearing loops, Frequency Modulation (FM) and Infrared (IR) systems all are capable of meeting this mandate.



WilliamsAV Pocketalker (above) and OTOjOY's LoopBuds (below) are examples of assistive listening devices that can help reduce background noise in louder environments.



Assistive Listening Systems

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 instruments and cochlear implants or a telecoil-enabled device such as a streamer or LoopBuds.

Hearing 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 activating the hearing instrument telecoil program the user receives sound directly to their hearing instrument.

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

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 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 instruments, neckloops eliminate the need for headphones.

FM or RF (radio frequency) assistive listening systems use a low-power FM frequency radio signal to wirelessly transmit sound 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 instruments, 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?

Assistive listening devices include any device, except hearing instruments, that help a person with hearing loss communicate more effectively through direct sound amplification. ALDs that provide audio amplification are usually used one-to-one and can be wired or wireless. They consist of a microphone, transmitter, and receiver. People can connect directly via their hearing instrument or use a receiver with headphones or a neckloop.

Using Bluetooth with Your Hearing Device

Today, Bluetooth is frequently used to connect one device to another, like a cellphone to a hearing instrument. A new version of Bluetooth technology called LE Audio will soon be available. Bluetooth LE Audio has several new features, including the ability to broadcast audio to multiple devices at the same time. When this Bluetooth version becomes integrated into hearing instruments, it should provide for more seamless access to audio on any device or in any venue that implements it.

The availability and use of Bluetooth LE Audio in venues, in consumer devices like computers and cellphones, and in hearing aids and cochlear implants will happen gradually over the next several years. The eventual goal is for Bluetooth LE Audio and its broadcast capability to be used everywhere, including internationally. However, it could be years before some people upgrade their hearing instruments, a necessary step before they can connect to the new Bluetooth LE Audio technology. Bluetooth LE Audio is expected to coexist with traditional assistive listening technology, that is, hearing loops, FM and IR, for the foreseeable future.

What Can I Do to Hear Better in Noise?

People with hearing loss typically find it challenging to hear when they are in environments where there is background noise and they are more than a few feet away from the speaker. Examples of when you might use an ALD are communicating with a child at a large family gathering or in a restaurant or car. One of the simplest ways to hear better in these situations is to use an ALD like a personal amplifier or a remote microphone.

A personal amplifier is a wireline, handheld device. One speaks into the microphone and the listener hears the speaker's voice using a neckloop or headphones.

Hearing loop, FM, and IR technologies can also be scaled for personal or home use. Some examples are connecting a TV to a home hearing loop, using a wireless FM personal listening device for large family dinners, or connecting IR headphones to a TV.



Tips

- When purchasing a hearing aid don't assume it automatically comes with a telecoil or even that 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.
- An estimated 70% 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 as well as your cellphone.
- Access to public places for individuals with disabilities is required by the ADA, state and civil rights laws. If you think an assistive listening system or device or auxiliary aid or service would benefit you on the job or in your classroom, you should find out the process from that entity for requesting a reasonable accommodation on the job or for auxiliary aids and services (in public settings).
- Advocate for assistive listening systems and devices in venues within your community, such as city council chambers, community centers, classrooms and places of worship. 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 foremost organization representing people with hearing loss. The mission of HLAA is to open the world of communication to people with hearing loss through information, education, support, and advocacy. HLAA holds annual conventions, organizes Walk4Hearing events in cities across the country, publishes *Hearing Life* magazine, provides online learning and support webinars, advocates for the rights of people with hearing loss, and has a network of chapters and state organizations across the country.

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