

Assistive Listening Devices: Solutions for Common Communication Obstacles

Have You Ever Had Difficulty Hearing or Understanding Speech:

- in meetings?
- in places of worship?
- in theaters or movies?
- in restaurants?
- with shopping transactions such as at a pharmacy or bank?
- in public places such as airports or municipal buildings?

In those situations, an assistive listening device can help.

- **What Is an Assistive Listening Device?** Assistive listening devices (ALDs) expand the functionality of hearing aids and cochlear implants by helping you 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.

The speaker talks into a microphone and the speech are sent straight to your ear, thus avoiding the degrading effects of noise and distance on speech intelligibility. It's really that simple.

An assistive listening device consists of a microphone to collect sound, a transmitter to send the signal across a distance, a receiver to intercept the signal, and any one of several different listening attachments to send the sound from the receiver to the user's ear, hearing aid, or cochlear implant.

- **When Hearing Aids or Cochlear Implants Aren't Enough**

Hearing aids and cochlear implants can work wonders to improve speech understanding. Still, there are some situations that may be problematic such as listening in groups, hearing in noisy backgrounds, hearing a speaker who is more than a few feet away, and hearing in poor acoustical environments. In these situations, turning up the volume can result in turning up the background noise that you don't want to hear.

- **What Can I Do to Hear Better in Noise?** One of the simplest ways is to use a personal amplifier. It is a single unit with jacks for a microphone, a listening attachment, and a volume control. These can come in handy when you are close to the speaker to cut out background noise, such as in a car or a restaurant.



There are also ways to hear better when the speaker is more than a few feet away. FM, infrared, and induction or hearing loop systems use radio waves, light waves, or magnetic fields respectively to transmit the sound you want to hear from a speaker some distance from your receiver (for example, from a teacher at the front of a room to the student sitting in class). You turn up the volume to a comfortable level for you. Each of these systems has options for small, personal/home use or large area amplification, like in a theater or auditorium.

- **Are There Any Options Built into Hearing Aids?** There are options that are integrated into many behind-the-ear hearing aids and cochlear implants. These systems come with a separate microphone that you can give to the speaker and the sound will be sent directly to your hearing aid or cochlear implant. These are convenient but are more expensive than purchasing separate units.
- **What About Bluetooth™ Devices?** More hearing aids are equipped to allow for gateway devices that enable digital audio streaming from Bluetooth devices to the hearing aid or cochlear implant. If you enjoy Bluetooth-enabled audio devices, such as cell phones, TVs, or computers, you will probably want to check this out.

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For more information on audiology and hearing loss, visit www.HowsYourHearing.org.

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- **Do I Have to Wear Headphones?** Not necessarily. If your hearing aid or cochlear implant has a telecoil, you will be able to use a neckloop plugged into the headphone jack. A telecoil (or t-coil) is a small, inexpensive copper coil in most hearing aids and is built into newer cochlear implant processors. The neckloop is an insulated loop of wire worn around the neck that transmits the information to the hearing aid telecoil through a magnetic field. Many people enjoy using neckloops because they can listen with both ears without wearing headphones while still enjoying the full benefit of their hearing aid amplification settings.

There is an additional benefit of telecoils. If you are using an induction loop system, the only receiver you will need is your telecoil in your hearing aid or cochlear implant. An induction or hearing loop system gives off a magnetic field, eliminating the need for any receiver other than your telecoil. Using a telecoil and hearing loop together is seamless, cost-effective, unobtrusive, and wireless. You don't have to obtain extra equipment.

If you don't use hearing aids or cochlear implants, you can use these ALDs with headphones or earbuds. Even if you use hearing aids you may be able to use headphones or earbuds. However, you may prefer to take the hearing aids out when using headphones because of feedback problems.



Artwork courtesy of NIDCD and David Myers.

▪ Tips

- If you are new to using a telecoil, be sure to check with your audiologist to ensure that the settings on it 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 institution for requesting a reasonable accommodation (in private settings) or for auxiliary aids and services (in public settings).
- Advocate for assistive listening devices at places you regularly attend (e.g., place of worship, classroom, community center). Encourage the venue to advertise that they have assistive devices so that others can learn of their benefit.

▪ Useful Links

- www.HowsYourHearing.org
American Academy of Audiology
- www.HearingLoss.org
Hearing Loss Association of America
- www.HearingLoop.org
Nonprofit informational website on hearing loops

This fact sheet is produced as part of "Get in the Hearing Loop," a national educational campaign to increase awareness about assistive listening technologies, especially hearing loops and telecoils, that are available to people with hearing loss. The project is a collaborative public awareness campaign developed by the American Academy of Audiology and the Hearing Loss Association of America (HLAA).