

# The Telecoil

## Connecting Directly to Sound

A telecoil can make a dramatic difference in your ability to hear clearly and understand dialogue.



- Even with the today's technology, hearing aids and cochlear implants can't separate the sounds you want to hear from background noises, or pick up all the sounds from a distance, such as in a performance hall or place of worship.

With a telecoil you can expand the functionality of your hearing aid or cochlear implant. A telecoil in a hearing aid functions as a wireless antenna that links into a sound system and delivers customized sound to the listener.

- **What is a telecoil?**

A telecoil is a small copper coil that is an option on most hearing aids and is built into cochlear implant processors. They are also known as t-coils and were originally used to boost the magnetic signals from the telephone handset. The telecoil is activated by a t-switch on the hearing aid or cochlear implant. All

landline and some cell phones are designed by law to be used with a telecoil. The telecoil can make a noticeable difference in your life when you combine it with hearing assistive technology. This pairing of technology bridges the physical space between you and the sound source. Hearing assistive technology connects the listener directly to the sound source while most background noise is eliminated.

- The telecoil, a small copper coil, is located inside the hearing aid.



Artwork courtesy of NIDCD and David Myers.

- **When would you use a telecoil?**

Increasing the volume on your hearing aid or cochlear implant won't necessarily increase the clarity of what you hear. Hearing assistive technology combined with a telecoil can improve your understanding of dialogue at work, in a meeting, in the classroom, theaters, places of worship, tour buses, and other places. Some people use telecoils at home with the TV while keeping the TV volume low for the comfort of others.

Many public places are equipped with hearing assistive technology. With the implementation of the Americans with Disabilities Act of 1990, hearing assistive technology is increasingly available in public places.

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For more information on audiology and hearing loss, visit [www.HowsYourHearing.org](http://www.HowsYourHearing.org).



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### What is hearing assistive technology? (HAT)

There are three types of wireless hearing assistive technology discussed here:

- The **hearing loop** is a wire that circles a room and is connected to the sound system. The loop transmits the sound



- The electro-magnetic signal is then picked up by the telecoil in the hearing aid or cochlear implant. To use a hearing loop, one easily flips the t-switch on the hearing aid or cochlear implant. No additional receiver or equipment is needed. Using a telecoil and hearing loop together is seamless, cost-effective, unobtrusive, and you don't have to seek out and obtain special equipment. The presence of a hearing loop is often indicated by the symbol above.
- An **infrared system** uses invisible light beams to carry sound from the source to a personal receiver. (The sound source must be in the line of sight.) Different types of attachments may

be connected to the personal receiver such as a neckloop or a behind-the-ear silhouette inductor. The telecoil then picks up sound from the receiver via the attachment.

- An **FM system** works similarly, but sound is conveyed through radio waves to a personal receiver.

### What other uses are there for telecoils?

Telecoils can improve hearing on hearing-aid-compatible phones and can be used with neckloops to replace headphones. A neckloop is similar to a hearing loop, except that it is worn around the neck and can be plugged into other audio devices (such as an MP3 player, computer, or FM or infrared receivers) to transmit the audio signal directly to the hearing aid telecoil, bypassing the need for headphones.

### How do you get a telecoil?

Ask your audiologist to include a telecoil in the next hearing aid you buy and make sure to ask for advice on how to use it. A telecoil may add a small amount to the cost

of your hearing aid but the benefits far outweigh the cost. Many models and styles of hearing aids and all cochlear implants can be fitted with telecoils. Telecoils can sometimes be added to your current hearing aid but it will cost less if you include it in your original purchase.

*Note: Automatic telecoils are available but work only with telephones, not hearing loops, so ask your audiologist to include a manually-operated telecoil in your hearing aid and ask for advice on how to use it.*

### Useful Links

- [www.HowsYourHearing.org](http://www.HowsYourHearing.org)  
American Academy of Audiology
- [www.HearingLoss.org](http://www.HearingLoss.org)  
Hearing Loss Association of America
- [www.HearingLoop.org](http://www.HearingLoop.org)  
Nonprofit informational Web site on hearing loops

*This fact sheet was 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).*