



## **A BAKER'S DOZEN FREQUENTLY ASKED QUESTIONS ABOUT HEARING LOOPS**

### **1. How many Americans live with hearing loss?**

According to the National Institute on Deafness and Other Communication Disorders, there are more than 36 million Americans with hearing loss, 10 percent of the U.S. Population.<sup>1</sup> Additionally, a study lead by Johns Hopkins researchers estimates that 1 in 5 Americans 12 and older, some 48 million people, has a hearing loss, while 1 in 8 Americans has a hearing loss in both ears.<sup>2</sup>

### **2. Why are hearing loops needed? Don't hearing aids and cochlear implants enable hearing?**

Today's digital hearing aids effectively enhance hearing in conversational settings. Yet, for many people with hearing loss, the sound becomes inaudible and unclear when live speakers or recorded broadcasts are at a distance, there is room noise, and when room acoustics cause reverberation of sound. A hearing loop electromagnetically transfers sound signals directly to hearing aids and cochlear implants equipped with a telecoil (t-coil) receiver. This loop is like "binoculars for the ears".

### **3. How many hearing aids have the telecoil necessary to receive hearing loop input?**

Of the 452 models of hearing aids listed from all major manufacturers, the 2014 edition of *Consumer's Guide to Hearing Aids*, 323 (71.5 percent) were noted as having telecoils. If the 51 completely-in-the-canal aids are not included, the percentage increases to 80.5 percent. In a recent survey, 84 percent of HLAA members reported having t-coils in their hearing aids. All new cochlear implant models now have t-coils. The Guide can be found at [hearingloss.org](http://hearingloss.org).

### **4. Can hearing loops serve those without telecoils or without hearing aids or cochlear implants?**

Yes, like other forms of assistive listening systems, hearing loops come with portable receivers and headsets for those who do not have telecoil-equipped hearing aids.

### **5. What does a hearing loop cost?**

Costs range from \$100-\$300 for self-installed home TV hearing loops up to several thousand dollars for professional installation in an auditorium or worship space. Cost

<sup>1</sup> Johns Hopkins Medicine. *One in Five Americans Has Hearing Loss*.

[Hopkinsmedicine.org/news/media/releases/one\\_in\\_five\\_americans\\_has\\_hearing\\_loss](http://Hopkinsmedicine.org/news/media/releases/one_in_five_americans_has_hearing_loss)

<sup>2</sup> Lin, Frank.; Niparko, John.; Ferruci, Luigi. Hearing Loss Prevalence in the United States. *Archives of Internal Medicine* 171(20): 1851-2, 2011

considerations must factor in the size of the space and building design of designated venue to be looped. There is no cost to the user with telecoil-equipped hearing aids.

**6. *Hearing loops harness magnetic energy. So, is magnetic interference problematic?***

There are *two concepts* to consider: 1) Magnetic interference caused by the room loop itself; 2) Stray electromagnetic interference (EMI) in the room caused by other sources that can interfere with the use of telecoils worn by the listeners.

Hearing loops emit a magnetic field which can create potential for interference with electronic equipment. However, if the loop is installed correctly (meeting international standards (IEC 60118-4) this will be avoided. Stray EMI is caused by old (non-flat) computer monitors, old fluorescent lighting, old dimmer switches, transformers, and motors. This EMI has the potential to adversely affect the ability of the telecoil receiver to receive a good signal from the loop. It can cause distortion that will be heard when the telecoil is active. (This can also happen using a telecoil with a hearing-aid-compatible phone.) Interference-free installation is nearly always possible if done correctly and adhering to standards.

**7. *Isn't this decades old technology?***

Like electronic computers, magnetic induction loop technology began more than half a century ago. However, it enjoys a new form with new amplifier technology and new computer-modeled designs for complex installations.

**8. *Don't newer connective technologies work better for listening in large areas?***

New wireless technologies, including Bluetooth<sup>®</sup>, do some helpful things such as enable binaural phone listening, wireless reception of home media (TV, tablets, MP3, etc.). It can also be used with wireless microphones to hear one or more companions at home, in the workplace, and while traveling. It is very portable. However, it is expensive, is limited to a 30 foot range, and will not allow you to couple (connect) to a large area listening system such as a loop, FM or IR system. For that you need a telecoil inside the hearing aid or cochlear implant. This circuit does not add any cost to the hearing aid or cochlear implant and provides an easy and discrete way to hear via a loop system. The user simply activates the telecoil on the hearing aid or cochlear implant and walks into the looped room and begins to hear.

**9. *Can hearing loops be used in adjacent rooms?***

Yes, with professional design that controls sound spillover.

**10. *Are there advantages to using hearing loops for home TV listening and in public settings?***

A hearing aid or cochlear implant compatible loop system delivers sound that is customized to individual listener needs. Listeners with properly activated and programmed (by the audiologist) features in their hearing aid or cochlear implant will enjoy *two* ways of listening with the loop: Telecoil (T) only position or Microphone plus Telecoil (M+T). Telecoil only is desired when the listener wants to hear only what is coming through the loop and not the outside world. M+T becomes important when the

listener wants to hear his or her companions or other important sounds such as a doorbell or a phone ringing. It also allows the listener to hear and monitor his or her own voice. This is especially important for people with more severe hearing loss. The main advantage to using a hearing loop system is that all the listener needs to do is activate the telecoil. There is no extra equipment required.

**11. *Can hearing loops work in transient venues such as airports, ticket windows and drive-up order stations? How do you know if the venue is looped?***

The New York City Transit Authority, for example, has installed hearing loops at 488 subway information booths. Again, all the listener needs to do is switch the hearing aid or cochlear implant to the telecoil mode. The hearing loop logo that displays the blue ear symbol along with the wording "Hearing Loop in Operation" should be posted and in clear sight for the listener to be alerted that the booth is equipped to be used with instrument telecoils.

**12. *What if the loop does not seem to be working?***

Like any technology, systems require periodic checking. If properly installed and checked, hearing loops require little or no maintenance to work reliably. The listener also needs to periodically check that the t-coil function on the hearing aid or cochlear implant is operating efficiently and programmed according to user needs.

**13. *Who makes hearing loops and where can they be purchased?***

A variety of American and European manufacturers are designing and marketing hearing loop amplifiers for a wide variety of installations in the home, workplace, theater, house of worship, transportation, health care, and education settings.