



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

According to the [National Center for Health Statistics](#)ⁱ 1 in 6 (40 million) American adults report at least “a little trouble hearing.” According to a 2011 report based on audiometric testing of Americans 12 and older in the [National Health and Nutritional Examination Surveys](#) (NHANES), 30 million Americans have at least a 25 dB hearing loss in both ears and 48 million in one or both ears. About 1 in 4—some [8.4 million](#)ⁱⁱ—have hearing aids, a number that would surely increase if the functionality of hearing aids could be expanded as wireless hearing assist receivers?

2. *Why are hearing loops needed? Don't hearing aids enable hearing?*

Today's digital hearing aids effectively enhance hearing in conversational settings. Yet for many people with hearing loss the sound becomes unclear when auditorium or TV speakers are at a distance, with competing sound, or when room acoustics reverberate sound. A hearing loop magnetically transfers the microphone or TV sound signal to hearing aids and cochlear implants equipped with a “telecoil.” Users thus hear clear, pure sound customized for their hearing loss without interference of ambient noise.

3. *How many hearing aids have the telecoil (t-coil) receptor for receiving hearing loop input?*

From its survey of hearing professionals, the *Hearing Journal* (April 2009) reported that 58% of hearing aid fittings included a telecoil, an increase from 37% in 2001. In its 2009/2010 reviews of hearing aid models, the *Hearing Review Products* reported that 126 (69%) of 183 hearing aid models—including all 38 in-the-ear models and 29 of 30 conventional behind-the-ear models—come with telecoils. In 2017, reports Stephen Frazier, *Consumer's Guide to Hearing Aids* data indicate that 71% of all hearing aids could be fitted with telecoils, as could 83% of models larger than the miniaturized completely-in-the-canal aid. Moreover, the greater people's need for hearing assistance, the more likely they are to have hearing aids with telecoils—as did 84 percent of Hearing Loss Association of America members in one survey. All new cochlear implants now come standard with a telecoil.

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

Yes, all forms of assistive listening, including hearing loops, come with portable receivers and headsets (though most such units sit in closets unused.) Smartphone users can access the hearing loop signals via [Loopbuds](#), telecoil enabled earphones and a free iOS app (Android in development.)

5. *What does a hearing loop cost?*

Costs range from \$200 to \$300 for self-installed home TV room loops up to several thousand dollars for professional installation in an average-sized auditorium or worship space. Most churches can install a hearing loop for little or no more than the cost of one pair of high end hearing aids, though a large facility with embedded metal will be more expensive. Auditorium installations cost somewhat more than do assistive listening systems that require checking out a receiver and headset. But the cost per user is typically less (because many more people will use assistive listening that is hearing aid compatible). Moreover, hearing loops offer long-term savings from purchasing and maintaining batteries in fewer portable listening units. For the user, the telecoil cost is nominal and typically does not add to the hearing aid price.

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

Generally, not. Nonflat computer monitors, old fluorescent lighting, and some old dimmer switches generate interference, as do some cars and all airplanes. But the experience in hundreds of West Michigan venues and thousands of Scandinavian and British venues is that interference-free installation is nearly always possible.

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

Like electronic computers, magnetic induction loop technology began more than 70 years ago, and now is in newly developed forms (with new amplifier and telecoil technologies, and new computer-modeled designs for complex installations) and with increasing applications.

8. *Don't newer connective technologies work better?*

New wireless technologies, that utilize Wi-Fi and proprietary Bluetooth transmission, do some helpful things, such as enable binaural phone and TV listening. Current Wi-Fi & Bluetooth technologies while helpful in sports bars and exercise venues are not an assistive listening answer (it requires significant battery power, has limited range and most importantly, causes latency delays that negatively impact speech intelligibility.) An alternative future assistive listening solution—one that, like hearing loops, is hearing aid compatible—will need similarly to a) be inexpensive (essentially no cost to the consumer), b) be capable of covering a wide area, c) drain little battery power (telecoils require no power), d) be uni-versally accessible, e) be sufficiently miniaturized that the receiver can fit in nearly all hearing aids and f) do so with very limited throughput delays.

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

Yes, with a professional so called “phased array” design that controls sound spillover.

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

A hearing aid compatible loop system delivers sound that's customized by one's hearing aids for one's own ears. It requires no fuss with extra equipment. And rather than plugging one's ears, it allows use of a mic + telecoil (M/T) setting, enabling one to hear the room conversation or one's phone ringing. In public settings, their main advantage is that, when not hearing well, people need only activate their telecoils. There's no need to get up, seek out, and wear conspicuous equipment (which few people with hearing loss take the initiative to do). Additionally, the sound is contained in one's ear, without bothering others nearby. There is no need to juggle between headsets and hearing aids (during, say, a worship service). And there are no hygienic concerns about putting in or on one's ear what has been around others' ears.

11. *Can hearing loops work in transient venues such as airports, at ticket windows, or at drive-ups?*

Indeed, which is why New York City Transit Authority is installing hearing loops at 488 subway information booths. In such venues, where checkout equipment is not realistic, the only possible assistive listening device is one's own hearing aid or cochlear implant.

12. *Aren't Britain's thousands of loop systems in transient venues sometimes not working?*

Action on Hearing Loss (formerly Royal National Institute for Deaf People) did find that a number of the loops in shops and other transient venues were not working. Their response was not to discount hearing assistance in such venues, but rather to undertake an awareness campaign to see that the devices are turned on and operating, much as wheelchair ramps need to be kept open. *Any* assistive listening will not work unless turned on. When properly installed and periodically checked, hearing loops require little or no maintenance to work reliably.

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

A variety of established European and mostly new American manufacturers are designing and marketing hearing loop amplifiers for a wide variety of installations, from home TV rooms to taxi back seats and ticket windows to cathedrals. See www.hearingloop.org/vendors.htm.

14. *Do hearing loops meet the 2010 ADA standards for Accessible Design?*

Hearing loop systems are by design compatible with all hearing aids and cochlear implants equipped with a T-coil. (See [2010 Standards for Accessible Design](#))

dgm, Feb 2018

i <http://www.cdc.gov/nchs/data/databriefs/db214.pdf>

ii http://www.hearingreview.com/issues/articles/2009-10_01.asp