

RESEARCH AND TECHNOLOGY

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Anyone who has used the drive-through lane of a fast food restaurant knows how garbled the voice coming from the speakers can sound. Did they repeat your order correctly? How much is the total? Much like Charlie Brown listening to adults in the cartoon, you can hear the noise but can't guite make out the words.

If you have hearing loss, many of the world's speaker systems may often sound just as distorted, especially in noisy rooms or in large spaces with poor acoustics. Even if special earphones are available, who wants to check out, wear and return the bulky equipment? It's no wonder those devices aren't used very much.

The good news is that magnetic hearing loops, also known as induction loops, can help you to hear more clearly and succinctly in stores, banks, museums, churches, subways, auditoriums, airports and other public places. Using simple technology that transmits sound wirelessly directly into most modern hearing aids and cochlear implants, hearing loops are already bringing clearer hearing to millions of people across Europe, in some pockets within the U.S., as well as scattered locations throughout the world. For example, a popular cinema chain in New Zealand proudly promotes the fact that it has hearing loops in all of its theatres, while loops have been installed at GO Transit counters at Union Station in Toronto.

The wire that is changing the world

A hearing loop is a thin strand of copper wire, typically installed on the floor around the perimeter of a room. It sends sound signals directly from a public address or audio system to the tiny telecoil (T-coil) receiver that is already installed in most digital hearing aids and cochlear implants.

The wearer hears only the sounds coming directly from the microphone. Frustrating background noise is eliminated. The T-coil, also used to enhance telephone listening, basically transforms hearing aids into personal loudspeakers, delivering sound customized for the user's hearing loss.

Proponents equate hearing loops to wheelchair ramps because they make the world more accessible for people who are socially isolated because of their hearing loss. T-coils have been in hearing aids for nearly half a century. But programming and activating the sensor became much easier with the advent of digital hearing aids. As a result, the technology is finally growing in popularity. Mandated in the United Kingdom

and also used throughout Norway, Sweden, Denmark, Sweden and the Netherlands, hearing loops are now generally available everywhere from post office ticket windows to places of worship and the back seats of taxis.

In the U.S., where hearing loops are still less common, a national task force formed by the American Academy of Audiology and the Hearing Loss Association of America, is working to educate consumers and audiologists about the technology. The task force's goal is to encourage loop installation in more public venues. One recent success was the announcement that the New York City Transit Authority is installing hearing loops at 488 subway information booths.

Audiologist and hearing loop advocate Juliette Sterkens compares the initiative to the widespread availability of other high-tech forms of wireless communication, "How good is your laptop unless there is Wi-Fi everywhere?" she asks. "This technology opens more of the world to people with hearing loss. It should be just as prevalent."

Loops dramatically improve hearing accuracy

Rosemary Smith, PhD, RN, who wears Widex FUSION hearing aids, is dean of the large College of Nursing at the University of Wisconsin, Oshkosh. Her profession demands that she use the best hearing technology available. "Any and all assistive listening devices are imperative to my performance, accuracy in what I hear and ultimately quality outcomes from my work," she explains.

"Frequently in large rooms without hearing loop technology, I must sit very close to the speaker and read lips. Most sound from a typical microphone is muffled or garbled. Hearing loop technology at professional meetings has made a major difference for me in terms of clear delivery of sounds and words. I am confident of what I hear, and can more readily participate in discussions."

Juliette Sterkens comments that Rosemary's experience is typical of her patients. "Not being able to hear in large



T-coils are useful in large public places such as train stations.

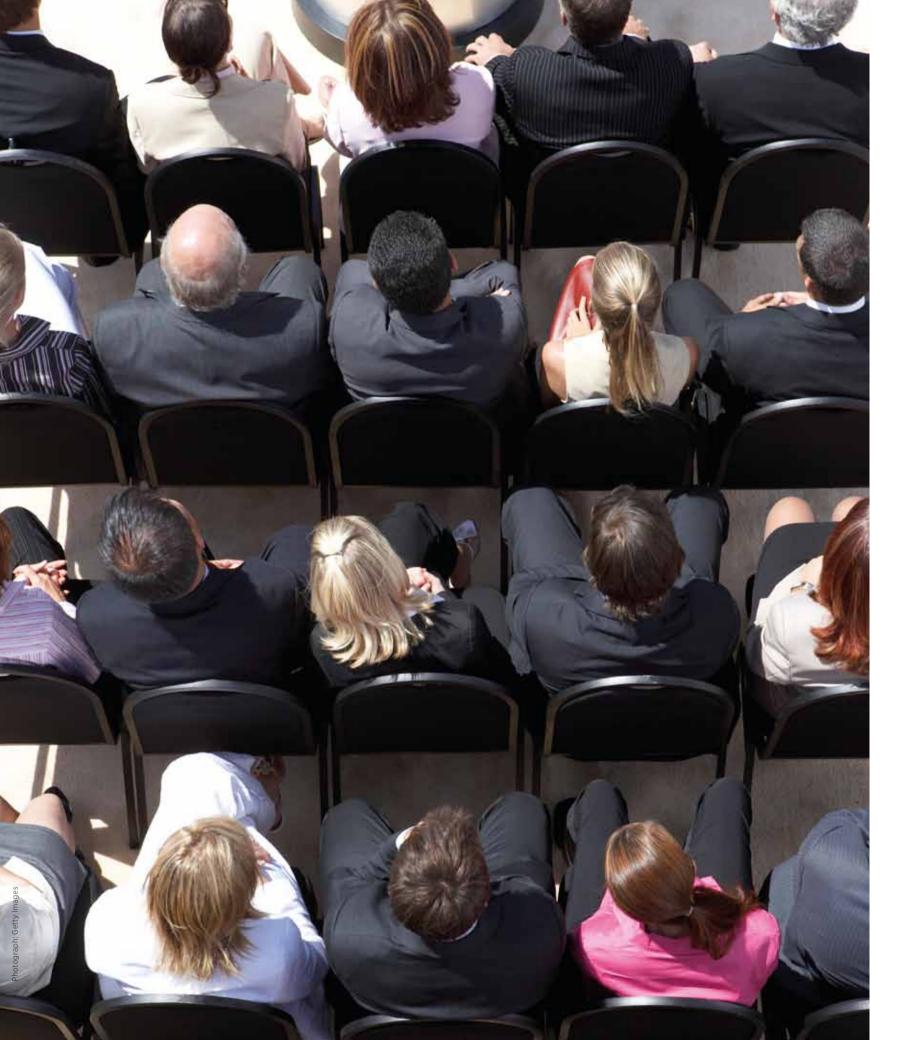
meeting rooms or at church, for example, gets worse as we get older. While today's digital hearing devices are great at enhancing hearing in conversational settings, the change in speech processing is not something we can fix with hearing aids alone. Hearing loops make hearing devices better, through technology that is simple to use, universal and in many cases easy to install."

Juliette works to popularize hearing loop technology through her audiology practice in Oshkosh, Wisconsin, and educates audiologists across the U.S. about this technology. "The results are amazing," she says. "My patients often report that with the hearing loops, they can suddenly hear better than the normal hearing person sitting next to them!" She adds that, "They are also surprised to find out that a T-coil has been in their hearing aids all along, and that all it needed was activating!"

An improvement in quality of life

When you're in a venue equipped with a hearing loop, and you are wearing an aid equipped with a T-coil, all you need to do is flip a switch from microphone (M) to telecoil (T). Several hearing aids also offer simultaneous settings (MT). T-coils require no power, so you don't need to worry about using up your batteries faster. And you no longer have to move closer

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to the speaker, wear conspicuous equipment or give up on understanding. All you need is to activate your T-coils to bring the sound directly into your ears.

"We talk about making America a better place for our aging population to live. We want people to stay connected. This is how people can continue to go to lectures ... to their granddaughter's wedding ... to the funeral of a dear friend ... and hear everything that is said into the microphone," says Juliette.

Rick Molinski, who also wears Widex FUSION hearing aids, almost gave up on going to church before discovering hearing loop technology. "I was getting very frustrated because I couldn't understand what the pastor was saying," he recalls. "With the loop, I can once again hear the songs and the sermon."

How to take advantage of hearing loop technology

If your hearing aid has a push button, chances are good that it has a built-in T-coil, but you'll want to call your audiologist to make sure. If the T-coil is not in your hearing aid itself, your audiologist can also tell you if it can be added to your hearing aid.

Today, an increasing number of audiologists sell hearing loops. The larger loops meant for bigger venues must meet certain quality standards, and should be installed by qualified audio or electrical engineers. Most venues can install one of these larger hearing loops for no more cost than a single pair of high-end hearing aids.

Hearing loops are available wherever you see the blue hearing loop logo. Look for the ear symbol with the diagonal bar and the letter T.

"People who can't hear will stop going to lectures, to school, to church. We can't let that happen," says Dr. Sterkens. "This blue logo needs to be as pervasive as the universal handicapped logo and restroom logos."

For additional information about hearing loops, visit www.hearingloop.org

DEX: HIGH PERFORMANCE WIRELESS LISTENING AT HOME AND ON THE MOVE

Using breakthrough WidexLink digital wireless transmission technology, DEX assistive listening devices allow you to connect your hearing aids to your TV or mobile phone, much like hearing loops connect them with PA systems. DEX devices make it easier to hear in challenging listening situations such as watching television, listening to music or using a mobile phone.

M-DEX: If you wear Widex Passion or CIC [Completely-in-Canal] hearing aids, they may not have built-in T-coils due to their small size. The M-DEX features an integrated T-coil, which allows you to take full advantage of loop technology. It is designed to reproduce phone conversations directly into your hearing aid and is compatible with most mobile phones. People also really enjoy the M-DEX's "Room Off" feature, which lets you temporarily turn off your hearing aids' microphones so that you only hear the phone conversation.

TV-DEX: Yes, it is possible to hear a TV program without blasting the volume uncomfortably high for others in the room. TV-DEX is like having a hearing loop installed in your living room. You'll get high quality audio streaming directly into your hearing aids. Just connect a stereo audio cable to the audio input port on the back of the TV-DEX base and the audio output of the TV. While TV-DEX works best when you wear the remote around your neck (that way, you can move around the room and get excellent TV audio), you'll still get good results if the remote is within three feet of your hearing aid. And here's a fabulous feature: If you get a phone call while watching your favorite program, and both your M-DEX and TV-DEX are within range, your TV-DEX will disengage while the M-DEX rings in your ears. When you hang up from the call, TV-DEX will automatically re-engage so that you can resume watching TV.

RC-DEX: This is a stylish and intuitive remote control that uses wireless technology to manage your hearing aids' volume and programs. As features are activated, verbal or tone cues let you know. An LED indicator on the remote control also shows when it is activated.

You can learn more about DEX technology and features by visiting widexusa.com or widex.ca