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A Hearing Aid That Cuts Out All the Clatter

By JOHN TIERNEY

After he lost much of his hearing last year at age 57, the composer Richard Einhorn despaired of ever really enjoying a concert or musical again. Even using special headsets supplied by the Metropolitan Opera and Broadway theaters, he found himself frustrated by the sound quality, static and interference.

Then, in June, he went to the Kennedy Center in Washington, where his “Voices of Light” oratorio had once been performed with the National Symphony Orchestra, for a performance of the musical “Wicked.”

There were no special headphones. This time, the words and music were transmitted to a wireless receiver in Mr. Einhorn’s hearing aid using a technology that is just starting to make its way into public places in America: a hearing loop.

“There I was at ‘Wicked’ weeping uncontrollably — and I don’t even like musicals,” he said. “For the first time since I lost most of my hearing, live music was perfectly clear, perfectly clean and incredibly rich.”

His reaction is a common one. The technology, which has been widely adopted in Northern Europe, has the potential to transform the lives of tens of millions of Americans, according to national advocacy groups. As loops are installed in stores, banks, museums, subway stations and other public spaces, people who have felt excluded are suddenly back in the conversation.

A hearing loop, typically installed on the floor around the periphery of a room, is a thin strand of copper wire radiating electromagnetic signals that can be picked up by a tiny receiver already built into most hearing aids and cochlear implants. When the receiver is turned on, the hearing aid receives only the sounds coming directly from a microphone, not the background cacophony.

“It’s the equivalent of a wheelchair ramp for people who used to be socially isolated because of

their hearing loss,” said [David G. Myers](#), a professor of psychology at [Hope College](#) in Holland, Mich., who is hard of hearing. “I used to detest my hearing aids, but now that they serve this second purpose, I love the way they’ve enriched my life.”

After his first encounter with a hearing loop at an abbey in Scotland, where he was shocked to suddenly be able to understand every word of a service, Dr. Myers installed a loop in his own home and successfully [campaigned to have loops installed](#) at hundreds of places in Michigan, including the Grand Rapids airport and the basketball arena at Michigan State University.

“One of the beauties of this simple technology is that it serves me everywhere from my office to my home TV room to nearly all the worship places and public auditoriums of my community,” Dr. Myers said.

The Midwest has been in the vanguard, but New York is starting to catch up. Loops have been installed at the ticket windows of Yankee Stadium and Citi Field, at the Apple store in SoHo and at exhibits and information kiosks at Ellis Island, the [Metropolitan Museum of Art](#) and the [American Museum of Natural History](#).

Even in that infamous black hole of acoustics — the New York subway system — loops are being placed in about 500 fare booths, in what will be the largest installation in the United States.

“This isn’t just about disability rights — it’s about good customer service,” said Janice Schacter Lintz, the head of the Hearing Access Program, a group in New York promoting the loops.

“The baby boomers turn 65 this year,” Ms. Schacter Lintz said, noting that more than 30 percent of people over 65 have hearing loss. “That’s a big group of customers who won’t go to museums or theaters or restaurants where they can’t hear. Put in a loop, and they can hear clearly without any of the bother or embarrassment of wearing a special headset.”

The basic technology, called an induction loop, has been around for decades as a means of relaying signals from a telephone to a tiny receiver called a [telecoil](#), or t-coil, that can be attached to a hearing aid. As telecoils became standard parts of hearing aids in Britain and Scandinavia, they were also used to receive signals from loops connected to microphones in halls, stores, taxicabs and a host of other places.

People in the United States have been slower to adopt the technology because telecoils were traditionally sold as an optional accessory, at an extra cost of about \$50, instead of being included automatically with a hearing aid. But today telecoils are built into two-thirds of the hearing aids on

the market as well as in all cochlear implants, so there is a growing number of people able to benefit from loops.

Hearing loop systems are more complicated to install than the assistive-hearing systems commonly used in theaters and churches, which beam infrared or FM signals to special headsets or neck loops that must be borrowed from the hall. Installing a loop in an auditorium typically costs \$10 to \$25 per seat, an initial investment that discourages some facility managers. But advocates for the loops argue that the cost per user is lower over the long run.

“The joke among my friends is that the loop system sounds too good to be true, but it is,” said Christine Klessig, a retired lawyer living near Stevens Point in central Wisconsin. “Before they installed a loop at the public library, I had to sit in the front row at lectures and try to lip-read because I missed so many words. Now I sit wherever I want and hear everything.”

The [Hearing Loss Association of America](#), the largest group representing people with hearing problems, has joined with the [American Academy of Audiology](#) in a campaign to [make loops more common](#) in the United States. The technology is a cost-efficient way to provide benefits that even the most expensive hearing aids cannot deliver, said [Patricia Kricos](#), an audiologist at the University of Florida and a past president of the American Academy of Audiology.

“Audiologists have always had a lot of faith in new high-tech hearing aids and cochlear implants, which are wonderful, but we’re coming to realize that these work primarily in relatively quiet places without a lot of reverberation and noise,” Dr. Kricos said. “In many settings, like a train station, they can’t give you the crystal-clear clarity that you can get from a hearing loop.”

In the pre-loop days at Dr. Myers’s church in Michigan, the assistive-hearing headsets were rarely used by more than a single person at any service. Other worshipers were dissuaded by the inconvenience and embarrassment, he said. Shortly after the loop was installed, 10 people told him they were using it, and the number has been growing as more people get hearing aids that work with the system.

“If we build it, they will come,” Dr. Myers said. “I see no reason why what’s happened here in West Michigan can’t happen across America.”

This article has been revised to reflect the following correction:

Correction: October 26, 2011

An article on Monday about hearing loop technology, which eliminates background noise for wearers of hearing aids, misstated the name of an oratorio by the composer Richard Einhorn, who lost most of his hearing at age 57. It is “Voices of Light,” not “Voice of Light.”