

December 2<sup>nd</sup>, 2014

Honorable Mayor and Councilmembers:

Re: Installation of Induction Looping Systems in public facilities for hearing-impaired people

Being hearing impaired, I like to bring to your attention a concern that is affecting those similarly situated with me – the need for sound proofing and Induction Looping in public facilities so that we can **fulfill our civic duties and live our life fully**.

Hearing loss is simply a **barrier to effective communication** in daily life. It is associated with anxiety, depression, and loss of social life for individuals to live with.

Unlike other conspicuous disabilities, it is an **invisible and silent** disability that can seriously impact the overall health, well-being and safety. The ALD's and personal gadgets are not sufficient in public facilities.

Our communities are more aware of mobility challenges, which are visible, but less aware of invisible hearing disabilities. We **provide ramp and elevator** access for those in wheelchairs, the **hearing-loop access** is needed for those with hearing aids. In both cases, removal of barriers increases accessibility for people with disabilities.

Citing a few more statistics:

- There are about 50 million Americans who live with the daily challenges of hearing loss issues. The number will double by the year 2030.
- The hearing loss is affecting people all across our society: of all ages, races, & economic backgrounds: 1 in 7 adults; 1 in 5 teenagers; 3 in 5 returning veterans.
- The health care concern about hearing-loss is alarming. The hearing-loss seriously impacts ones overall health, well-being and safety that leads to isolation, anxiety & depression.
- There are many causes: age-related, genetics, noise-induced, infection, traumas & toxic-induced hearing loss. These people **stay isolated**; avoid activities that others enjoy. They are afraid to reveal in case it jeopardizes their job or **they bluff** about being able to hear well.

The **Induction Looping system**-a state of the art technology, is more than fifty years old; it's one such system installed **at several public places** in the United States that is helping overcome a few of the barriers to communication. These systems **transmit amplified sounds wirelessly** direct from the sound source to those wearing hearing aids. And, such looping eliminates the problems of background noise, reverberation that helps understand communication.

The **loop** transmits the sound electromagnetically from microphones directly to hearing aids and cochlear implants that are equipped with a tiny copper **telecoil** wire. The background noise is diminished and looping technology allows one and all to hear well. A **hearing loop** is a copper wire looped around the periphery of a counter or under the footboard of a room, and connected to the sound system with an amplifier

**Telecoils** work somewhat like Wi-Fi for hearing aids, enabling them to serve as customized, wireless loudspeakers. It is an old technology, but is more effective and convenient than other systems that broadcast FM or infrared signals to headphones because no extra equipment is necessary. Those who don't wear hearing aids are unaffected and unaware of the transmission.

*Here in this part of the town, the city of Cerritos has already installed looping systems at its Council Chamber and in seven rooms of its Senior Center. In fact, now more than 17 cities in California have looped their council chambers.*

*The city of Cerritos worked with several **with several vendors** to accomplish its installation in the facilities. Though it took a while but the city persisted with this outstanding program **to improve the quality of life** for the residents. No doubt, the city claims the laurels being the finalist for National League of Cities 2010 award.*

**About Funding:** The city receives annually CDBG and HOME grants from US Dept. of Housing. A few cities have been using similar funds that qualify for community enhancement projects. This project qualifies under this category for "Creating decent living environments by removing existing barriers to help improve accessibility to persons with disability in accordance with ADA.

**In brief: it is about** providing equal opportunity to silent minority for participating in the political process. **It is about** providing the quality of life to the residents who lack accessibility

I have a few brochures from vendors about looping technology. However, I **do not promote any particular vendor**; the city should follow its own norms and procedures.

I hope this information will help proceed for the needs of hearing impaired citizens.

  
Ram Kakkar

18321 Jeffrey Ave

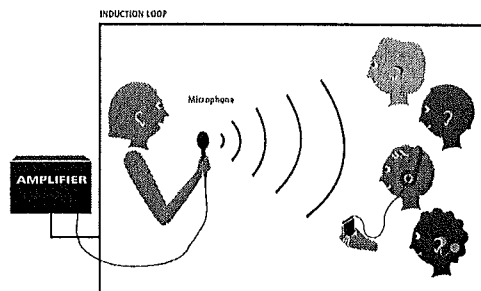
Cerritos, CA-90703

Email: [rkakkar@rocketmail.com](mailto:rkakkar@rocketmail.com)

PS:

- I volunteer with the Hearing Loss Association of America (**HLAA**) - a nonprofit organization that has a project this year of looping America. Most of the Europe is looped and several facilities in the United States have also been looped.
- The HLAA is neither selling any product nor sponsor any particular vendor. A few vendors give free estimates and demonstrate about the working of the system. They, on the local level, are responding to the needs of the 48 million people with hearing loss. Every organization can follow its own norms & procedures.
- The American with **the Disability Act of 1992 & ADA of 2008** include deaf and hard of hearing people as handicapped.
  
- **Looping systems** have been successfully installed in several facilities in California, in the United States and in several European countries; naming a few:
  - **Garden Grove**, the First Presbyterian Church; in **Redondo Beach**, the Riviera United Methodist Church, and in **Palos Verdes Estates**, the Neighborhood Church and St. John Fisher of Palos Verdes have all recently installed this technology for their congregations. **Now every devotee can hear crisp and clear sound with gratifying responses sometimes spoken with tears.**
  - The **U.S House of Representative's** main chamber was looped in 2004.
  - The **City of Cerritos** has looped its Council Chamber and several lecture rooms of its Senior Center.
  - **La-Palma City**, noted for being the smallest city in Orange County has installed looping system in its **Central Park Community Center:**
  - **Santa Rosa**, a vibrant city, has looped 1100 homes, offices, banks, theaters and pharmacies.
  - **The New York City** transit is installing hearing loops at 488 subway information booths.
  - **Oshkosh, Wis.,** now has **more than 40 hearing loops** including its 100-plus-year-old Grand Opera House, a funeral home, several retirement communities, a court room, and a new conference center at University of Wisconsin Oshkosh.
  - **Holland-Zeeland, MI** is largely looped. Its second largest airport in Grand Rapids now offers this technology throughout both its concourses, and in all gates.
  - Throughout the **United Kingdom** and across **Nordic Countries**, Inductive Looping provides millions of people with looping access for quality hearing experiences.
  - The following two local vendors provide free estimates and demonstrate about the working of the system. They have provided looping for several facilities. However, every organization should follow its own norms & procedures for selection:
    - The '**OTOJOY**' Hearing Loop                      [www.otojoy.com](http://www.otojoy.com)                      Phone; (865) 728-9114
    - **Hearing Now U.S.A.**                      [www.HearingNowUSA.com](http://www.HearingNowUSA.com)                      Phone; (855) 566-7669

## How Does the Hearing Loop Deliver Greater Sound Quality to More People? It's actually quite simple!



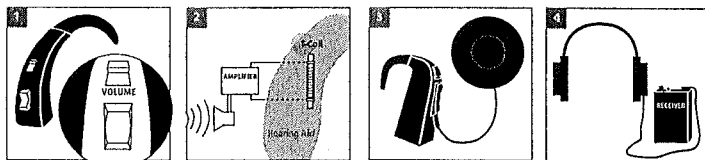
The sound source, such as a voice, TV, mixing console or other audio system, is captured using a microphone.

The microphone creates a sound signal that connects to an amplifier which passes the signal to the hearing loop.

The Hearing Loop (or Induction Loop) surrounds the area where the listening audience is located and carries the sound signal through the loop.

The sound signal is picked up by the Telecoil (or T-coil) enabled hearing aids, cochlear implants, or headsets with loop receivers worn by participants with hearing loss.

Each individual who uses cochlear implants or wears hearing aids equipped with a T coil can change a program and tailor the sound to eliminate background noise and enhance the full spectrum of sound for intelligibility. There is no need to check out a separate receiver.



**Hearing Aid**  
• Toggle to access the Telecoil  
(may be accessed with remote control)

**Internal Telecoil**  
• Telecoil inside hearing aids  
and inside cochlear implants

**Cochlear Implant**  
• Toggle to access the Telecoil  
(may be accessed with remote control)

**Headset with Receiver**  
• Allows wearer to hear clearly in  
a looped room without the use  
of a hearing aid.

The Hearing Loop is the **ONLY** system to send clear, pure sound directly to Hearing Aids & Cochlear Implants without added receivers.

Over the last 25 years Hearing Loops have become the preferred assistive listening solution in Scandinavia and the United Kingdom and are now becoming increasingly prevalent in the United States.

The Universal Symbol is displayed at venues with a Hearing Loop, prompting participants with hearing aids or cochlear implants to turn on their T-coils.

If participants with hearing loss don't have T-coil equipped hearing aids or cochlear implants, the Universal Symbol alerts them to request a headset.





**City Council Facilities with Induction Hearing Loops** (36)

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Alabama

Fairhope City Council Chamber

California

Alameda City Council Chambers

Cerritos City Council Chambers

Concord City Council

Goleta City Council Chambers

Half Moon Bay City Council

Lafayette City Council

Larkspur City Council

Milpitas City Council Chambers

Napa City Council Chambers

Orinda City Hall

Pleasant Hill City Council Chambers

San Leandro City Hall

San Ramon City Hall

Santa Rosa City Hall

Sausalito City Council Chambers

Walnut Creek City Hall

Woodside City Hall

Colorado

Fort Collins City Council Chambers

Florida

Apopka Congressional Hearing City Council

Gainesville City Council Chambers

Lakewood Ranch Town Hall

Community Development District Board Room,  
The Villages

Illinois

Lake Forest City Hall

Massachusetts

Boston Iannelle Chamber in City Hall

Michigan

Grand Haven City Council Chambers

Grand Rapids City Hall

Holland City Council Chambers

Oregon

Eugene City Hall

New York

North Hempstead Town Boardroom, Manhasset

New Mexico

Santa Fe

North Carolina

Wilmington City Hall

Washington State

Anacortes City Hall

Montesano City Council Chambers

Spokane County Commissioner's Boardroom

(17)

# LET'S LOOP America's WORSHIP CENTERS

By making assistive listening hearing aid compatible, churches are leading the way to doubled hearing aid functionality for people with hearing loss

*by David G. Myers*

**I**magine yourself as a person with hearing loss attending your place of worship. As you struggle to hear, which of these two hearing solutions would you prefer?

1. To take the initiative to get up, go locate, check out, wear, and return special equipment (often a conspicuous headset that is incompatible with your hearing aids)? Or,
2. To simply push a button that transforms your aids or cochlear implant into a wireless, in-the-ear loudspeaker that broadcasts sound customized to your own hearing loss?

Solution 1-the hearing aid incompatible solution-has been the prevalent assistive listening technology in America's worship places and theatres. Solution 2-the hearing aid compatible solution-has spread throughout the United Kingdom, across the Nordic countries, and now is being adopted in several states, including by several hundred Michigan churches.

The simple "hearing loop" technology takes a feed from a PA system and transmits it through a wire loop surrounding the worshipers. The loop projects a magnetic signal to an inexpensive "telecoil" receiver; now found in a growing number-60 percent-of new hearing aids (even more among people most

needing hearing assistance). The telecoil also serves as a receiver for magnetic signals transmitted by "hearing aid compatible phones," which include all landline phones and designated cell phones. (For any without suitably equipped hearing instruments, portable receivers and headsets are available.)

Thus when one worships at Westminster Abbey in London, or in virtually any church with a PA system in Holland or Grand Rapids, MI, all you need do when the preaching begins is to activate your hearing aid telecoils. Voila! A clear voice is now speaking from the center of your head!

This simple technology, which also enables a home TV to broadcast through one's hearing aids, is now being advocated by a growing number of hearing leaders. In 2010, the Hearing Loss Association of America ("the nation's voice for people with hearing loss") and the American Academy of Audiology (the world's largest association of hearing professionals) announced a joint "collaborative public education campaign 'Get in the Hearing Loop.'" The campaign aims "to enlighten and excite hearing aid users, as well as audiologists and other professionals who dispense hearing aids, about telecoils and hearing loops and their unique benefits." Hearing loops are coming to America.



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The move to making future assistive listening installations hearing aid compatible is gaining momentum:

- The California, Michigan, Wisconsin, and New Mexico hearing loss associations are now advocating hearing loops. "In all new and extensively remodeled buildings, wherever there is a public address system, a loop should be permanently installed," declared the California Hearing Loss Association. "When there is a loop, all a hard-of-hearing person has to do to be able to hear is click on the T-switches on their hearing aids."
- Local hearing loop initiatives are underway in Albuquerque, Tucson, Silicon Valley, central Wisconsin and elsewhere.
- Michigan's second largest airport, in Grand Rapids, now offers the technology throughout both its concourses and in all gate areas.
- A national service organization, Sertoma ("SERvice TO Mankind") announced in 2010 that it will be promoting the installation of hearing loops through its 540 clubs nationwide.
- Several new companies have begun manufacturing and marketing hearing loop equipment and training audio professionals in its installation (see [hearingloop.org/vendors.htm](http://hearingloop.org/vendors.htm)).
- New York City Transit, with a nudge from the Hearing Access Program and using federal stimulus monies, is installing hearing loops at 488 subway information booths.
- Scientific American reported on the move to hearing loops in its January, 2010 issue.
- The first international "Hearing Loops" conference, hosted in late 2009 by the European Federation of Hard of Hearing People ([www.efhoh.org](http://www.efhoh.org)) for attendees from 15 countries, adopted a resolution recommending that "Venues and service points where sound is broadcast shall offer assistive listening, such as induction loop systems designed to the IEC 60118-4:2006 standard, which broadcast sound directly to hearing aids and cochlear implants, enabling them to serve as customized, wireless loudspeakers (without the need for extra equipment)."

## FAQS ABOUT HEARING LOOPS

- Hearing loops harness magnetic energy. So is magnetic interference problematic?

Generally not. Old fluorescent lighting and some old dimmer switches generate interference. 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.

- Isn't this a decades-old technology?

Like electronic computers, magnetic induction loop technology began more than a half century 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.

- Will new wireless connective technologies work better?

New wireless technologies, including Bluetooth, do some helpful things, such as enable binaural phone listening. But Bluetooth is not an assistive listening answer (it requires significant battery power and has limited range). 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 universally accessible, and e) be sufficiently miniaturized that the receiver can fit in nearly all hearing aids.

- Can hearing loops be used in adjacent rooms?

Yes, with a professional design that controls sound spillover.

- Where can one find more information about equipment, installation, applications, and costs?

Visit the nonprofit information resource [www.hearingloop.org](http://www.hearingloop.org)

There are many advantages to hearing aid compatible loop systems. For example, many hearing aids now come with a mic + telecoil (M/T) setting that enables one to hear sound from nearby people singing or speaking while simultaneously receiving direct PA system input. Additionally, sound broadcast by one's own hearing instrument is contained in one's ear, without bothering others nearby. Moreover, there is no need to juggle between headsets and hearing aids (during, say, a worship service). There are no hygienic concerns about putting in or on one's ear what has been around others' ears. And most importantly, when not hearing well, people need only activate their telecoils. There's no need to get up, seek out, and wear conspicuous equipment (which, as TFWM readers have likely noticed, few people with hearing loss take the initiative to do).

Wisconsin audiologist Juliette Sterkens and her engineer husband Max Mayfield have recently installed hearing loops in 30 Wisconsin churches, with gratifying responses, sometimes spoken through tears. The following is a list of testimonials they have heard.

"What I experienced last Sunday was nothing short of a miracle. For the very first time in many, many years I was able to hear every single word said in church along with every note of music. I cannot express my thankfulness in words. It was truly one of my most memorable moments in my life and I felt 'normal.'"

"I took my mother to Mass. In her words, 'I could hear every word, and this is the first time that's happened in years.' She went on to say how much more she got out of the service and realized how much she had been missing."

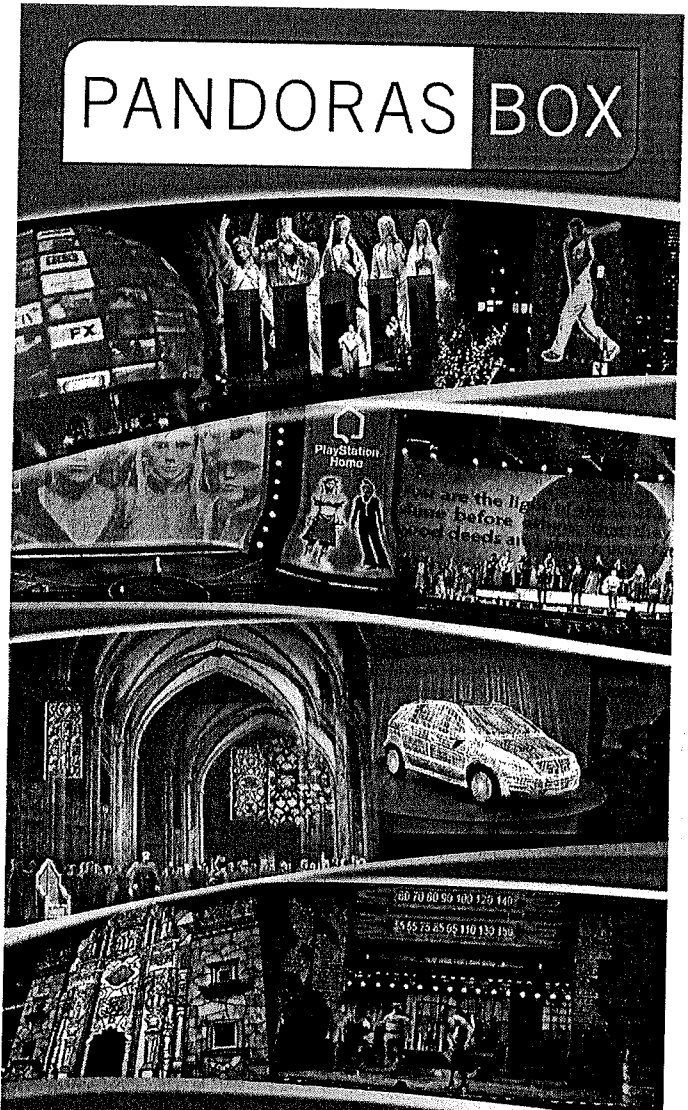
One skeptic from another state undertook due diligence to assess the suitability of a hearing loop for his own church:

"I can certainly attest to the spread of the loop system in Michigan. Before we installed our [church's] system I telephoned a number of facilities listed by a loop vendor as having installed such a system. I was amazed to discover that not a single installed site had anything but vociferous praise for the product! One would expect at least one naysayer in a group that large (22). But there was not a single one!"

As we approach a tipping point where hearing loops become the accepted user-friendly assistive listening technology, we can take satisfaction in knowing that churches are leading the culture. As they enable their people to better hear the word, worship centers are also enabling people to glimpse a future in which hearing instruments have doubled functionality- as not only microphone amplifiers, but also as customized, wireless loudspeakers. ♦


*Hope College social psychologist David G. Myers has written two dozen articles advocating the coming transformation in American assistive listening. He has also created hearingloop.org and authored 'A Quiet World: Living with Hearing Loss' (Yale University Press).*

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Effective October 2010, Michigan State University's Breslin Center arena added hearing loop coverage of 12,200 of its 14,759 seats (excluding bleachers) for basketball and special events.

# IN THE LOOP

Helping the growing population with hearing loss.

**BY DAVID G. MYERS, PhD, & JULIETTE STERKENS, AuD**

Momentum is accelerating toward a new world of assistive listening for Americans with hearing loss. We refer to the mushrooming support for induction loops (aka "hearing loops"), which transmit a magnetic signal to the telecoil (T-coil) receiver that now comes with most hearing aids and all new cochlear implants. With nothing more than a push of a button, the hearing instrument becomes a wireless loudspeaker.

## Becoming More Common

Until recently, hearing loops have been largely unknown in the US, though they are now in tens of thousands of British and Scandinavian venues, from home TV rooms, to the back seats of all London taxis, to public venues ranging from ticket windows to cathedrals. But consider these new developments:

- In September 2009, a first-ever International Hearing Loops Conference, convened by the European Federation of Hard of Hearing People for attendees from 15 countries, concluded with a resolution advocating hearing aid-compatible

assistive listening: assistive listening that, with no need for extra equipment, transmits wireless signals directly to most hearing aids and cochlear implants.

- In the Summer of 2010, the Hearing Loss Association of America ("the nation's voice for people with hearing loss," [www.hearingloss.org](http://www.hearingloss.org)) and the American Academy of Audiology (the world's largest association of hearing professionals, [www.audiology.org](http://www.audiology.org)) jointly launched a "Get in the Hearing Loop" initiative. The campaign's purpose is to encourage consumers,

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*Hope College social psychologist David G. Myers is the author of A Quiet World: Living with Hearing Loss (Yale University Press) and the creator of [www.hearingloop.org](http://www.hearingloop.org). Audiologist Juliette Sterkens has practiced in Oshkosh WI since 1983 and owns Fox Valley Hearing Loop with her husband, LeRoy "Max" Maxfield.*

audiologists and other hearing professionals to "get in the loop" for hearing assistive technology, with a primary focus on hearing loops and telecoils, in order to improve accessibility for the 36 million Americans with hearing loss. The campaign will culminate in the Second International Hearing Loop Conference in Washington DC (hosted by The Hearing Loss Association of America, June 18-20, 2011), where attendees will learn about the technology, installation techniques, the user perspective, the integration of loop technology with FM and infrared systems, and the status of hearing loop installations in the United States and elsewhere.

• Sertoma ("Service to Mankind," [www.sertoma.org](http://www.sertoma.org)), a national service organization with 540 clubs in local communities, has launched an effort to bring hearing loops to their communities across America.

## State & Local Initiatives

• State and local community initiatives, mostly spearheaded by organizations representing people with hearing loss, are popping up across America. A West Michigan initiative led to the looping of several hundred venues, including most worship facilities in Holland and Grand Rapids, and many public auditoriums and businesses.

Community initiatives are also promoting the technology in Wisconsin, Arizona, New Mexico, Rochester (NY) and Silicon Valley (hearingloop.org offers links to each). New York City Transit, with support from federal stimulus monies, is adding hearing loops to 488 subway information booths.

• Looped venues range from one person (via an individual neck loop) to home TV rooms to both concourses and all individual gate areas of Michigan's second largest airport to, as of October 2010, Michigan State University's Breslin Center arena for basketball and special events.

• In response to the growing consumer demand for hearing loops, several new American hearing loop companies have begun manufacturing or distributing equipment (see [hearingloop.org/vendors.htm](http://hearingloop.org/vendors.htm)). New develop-

ments in this decades-old technology now enable control of unwanted sound spillover to adjacent rooms and strong, equal coverage even in metal-laden modern facilities.

## Other Systems

Other assistive-listening systems are easier to install, at less cost. So why are the organizations that represent audiologists and people with hearing loss now urging sound engineering firms to install hearing loops? There are several big reasons:

• First, people with hearing loss *require more than just volume*. Hearing loss typically reduces the brain's ability to process auditory information. Even when fitted with state-of-the-art hearing instruments, persons with hearing loss still require signal-to-noise ratios of 15dB to 20dB in order to obtain reasonable levels of speech intelligibility.

At best, hearing aids can deliver an SNR improvement of 3dB to 6dB, which, therefore, is insufficient in places with reverberation and ambient

# EVOLUTION

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1998-2009

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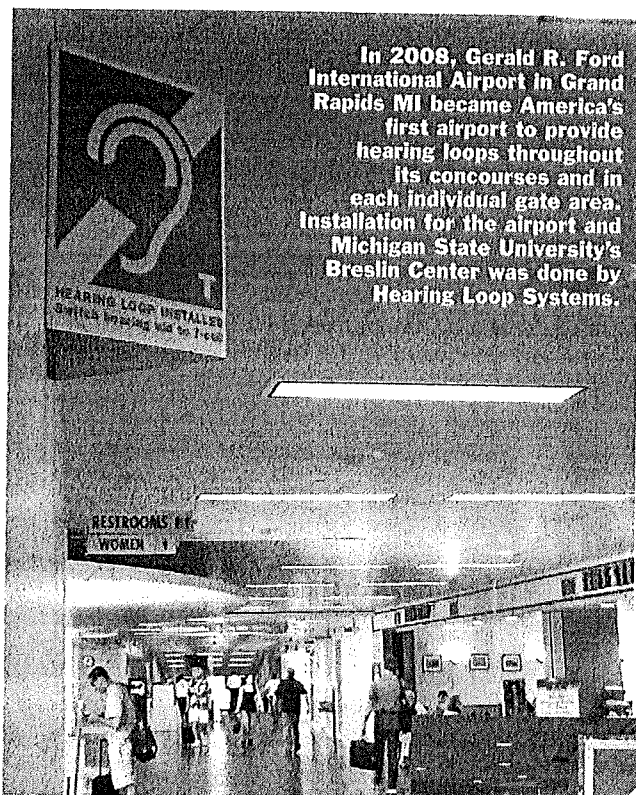
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noise. Hearing loops take the desired speech signal straight from the basic source (the microphone) and broadcast directly to the listener's hearing aid(s). The signal at the listener's ears is free from distance issues, reverberation and ambient noise interference.

- Second, hearing loops harness the technology of people's hearing instruments, thus often providing sharper sound. In contrast to a headset that provides the same generic audio to everyone, a hearing loop delivers *customized sound*: sound that is programmed in light of a specific individual's hearing loss. This way, two persons with greatly differing hearing loss (a low frequency versus a high frequency loss, for example) both will receive what they need through their individually programmed hearing aids.

### Added Benefit

An added benefit is that most hearing aids now allow for either a T-coil program only (where no background noise is heard by the listener) or a combined mic+telecoil (MT) program that allows nearby ambient sounds to be heard. When watching television through a



hearing loop, for example, listeners enjoy sound broadcast via their own hearing aids, while also being able to converse or hear the phone ring.

- A third reason is that people with hearing loss are *much more likely to use* listening assistance that is directly hearing aid-compatible. When people with hearing loss find themselves in situations where they are unable to hear a lecture, sermon or play, will they take the initiative to get up, locate, check out and wear a receiver and headset? They should, but they don't. Thus, most assistive-listening units in theaters, worship places and auditoriums sit unused.

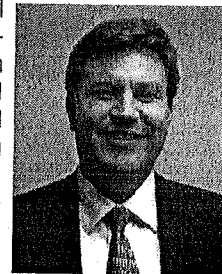
If, however, the listening assistance requires only the inconspicuous push of a button, people will do so gladly. This means that, often, despite a hear-

## Letter Of Recommendation

Greetings Fellow Clergy:

It is with pleasure that I write to you about my congregation's experience with installing and using a hearing loop.

Through April 2009, Martin Luther congregation in Oshkosh WI used an FM sound system for hearing assistance, with users wearing receivers and using headphones. With this system, we



had about three users, and they often were frustrated with the sound level not being acceptable or the batteries being worn out.

I'm sure that you are familiar with comments about not being able to hear. We also were receiving such comments, seemingly in increasing numbers. So we began to investigate better microphones, better speaker placement and hearing loops. We left the speakers alone, but I am now using a headset microphone, which helps greatly with our members' hearing. Then, after speaking with Juliette and Max [of Fox Valley Hearing Loop], we decided to put in a hearing loop, too. And after explaining to the congregation the benefits of a hearing loop, funds for installation came in within the week, both from people who needed hearing assistance and people who didn't.

Now, with the hearing loop, I estimate we have about 15 to 20 loop users. Because each person's hearing aid is tuned to his or her needs, the audio of our service comes through loud and clear for everyone. Also, the frustration is gone from those who struggled with the previous wireless system. Now we are looking into also looping our Bible classroom and adding passive classroom microphones so everyone can hear the discussion.

Wouldn't a hearing loop be worthwhile even if it only benefited one person? But we have many people to reach: the elderly who are hard of hearing; the member who has stopped coming to church because she can't hear; the child with a cochlear implant. What's more, we have the greatest message to share; we want people to hear the Word!

—Pastor Nathan R. Ericson  
Martin Luther Evangelical Lutheran Church,  
Oshkosh WI

ing loop's increased installation costs, the cost per user is less.

For these reasons, a growing number of full-service sound and communication firms has discovered a new business and service opportunity in providing this hearing aid-compatible assistive listening. "We have now installed four loop systems in churches," reported Steve Roth of Roth Electric Sound in Mt. Pleasant MI. "The users love them."

Skip Spackeen, of AV Innovations in Tucson AZ, has installed 20 loops, "from small rooms to a 450-seat theater." Some are simple perimeter loops around floors or in ceilings. Some are larger figure-8 loops placed in ceilings or cut into concrete or tile floors. Spackeen also offers FM systems with accessories, "but these typically seem to be underused once installed."

## Greater Excitement

Typically, when a venue installs a loop, there is greater excitement, Spackeen reported: "higher awareness, higher acceptance, perhaps greater appreciation." That also has been the experience of Dana Erickson at Commercial AV Systems in Onalaska WI, when worship center installations led to reports of "elated" worshipers.

Reflecting on his 25 years as a sound contractor, Todd Billin, President of Grand Rapids MI-based ASCOM, recalls his pleasure in attending the first worship service after each of his company's installations to confirm the results. After doing his first loop installation, "The congratulations and pats on the back turned into tears of pure joy from an elderly woman." For 15 years of attending services, she had experienced great difficulty hearing the message. "On this morning, she heard and understood every word that the pastor shared, all because a small coil located in her hearing aid received the signal that my company provided. This helped me envision a new calling for my company [a new ASCOM division, Hearing Loop Systems] to help many more people experience that woman's feeling."

"The interesting fact about hearing loop systems," added Mike Mair of

Lifeline Amplification Systems in Platteville WI, "is the number of venues you can place them in. We have talked to churches, auditoriums, banks, funeral homes, businesses, long-term care facilities and many other venues. It is a great 'add on sale' for Lifeline and a way to get our foot in the door in places where it has been difficult to get business."

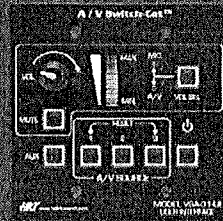
## Echoed Experience

The audio professionals' experience is echoed by hearing professionals who

have heard from patients delighted with hearing loops in their home TV rooms or in their community. As an experienced audiologist, co-author Juliette Sterkens wondered why hearing loops, which have been so beneficial to the hearing impaired in her native country (the Netherlands) since the 1970s, had never made it to the US, and tried for years to get clients to use FM technology in theaters and churches.

Although patients admitted to hearing better with these devices, they were

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reluctant to use them regularly due to the hassle of earphones and receivers. Over the years, Sterkens always kept hoping that improvements in hearing aids eventually would bring the desired hearing results. "In 2008, having been made aware of the growing number of hearing loops in western Michigan, I finally understood *why* hearing loops make so much sense audiologically: I realized that loops could also happen in Wisconsin if someone would just get it going. It soon dawned on me that I would have to be that person and I started the Fox Valley Hearing Loop Initiative.

"Thanks to my retired engineer husband, LeRoy 'Max' Maxfield, Fox Valley Hearing Loop has installed more than 35 loops in the last 20 months and the area will soon have more than 50 installations, including one at our newly remodeled 1888 Grand Opera House

**'Of all the AV installations we do, it's the induction loop that receives the most positive feedback.'**

**—Glenn Hall,  
Bestboy Audio, Avondale PA**

and our convention center."

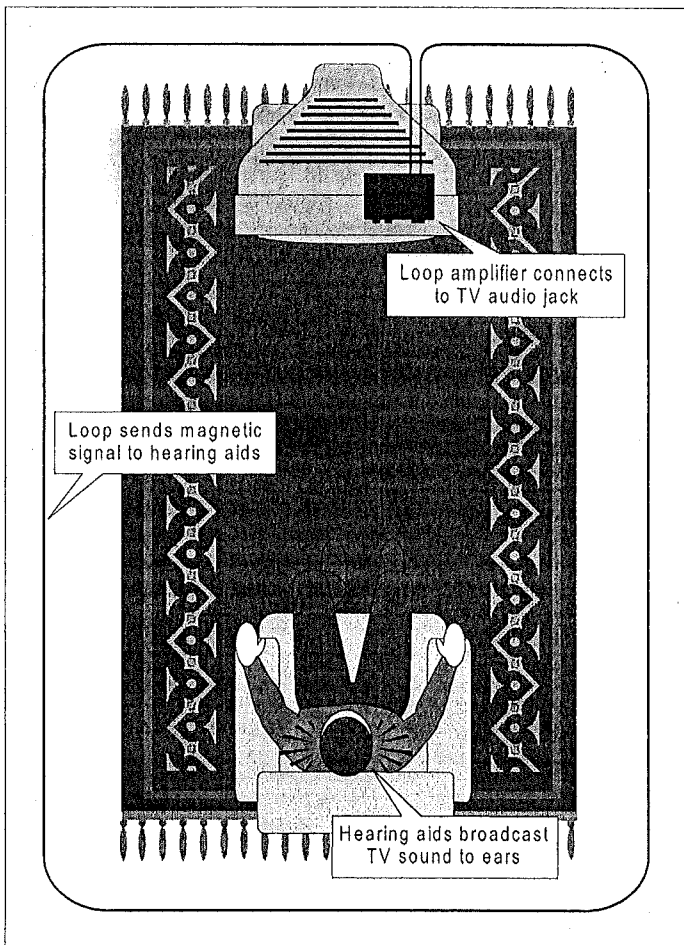
The results have been overwhelming: Clients are grateful, often admitting that they did not hear prior to a hearing loop installation. As one happy person reported, "I wore my hearing aid for the Easter Service and, to my

surprise, I heard every word the minister said. It sure made a difference to hear him instead of just sitting there wondering what he said."

## Teary Eyed

Sterkens added, "Family members approach me teary eyed, explaining how, once again, mom was able to hear in church: 'Thank you so much for helping people with hearing aids hear better. It made a big difference to my mother-in-law last month when she was able to hear every word at the confirmation service of our son.' Several ministers have embraced this technology almost as enthusiastically as I have, and invited me to speak at gatherings where I was asked to explain the benefits of hearing loops to parishioners, fellow clergy and church leadership committees.

"With the rapid spreading of hearing



**A room loop enables people, without wearing special equipment, to have the television broadcast by their hearing aids.**

## IR Systems

Installed infrared systems are another option for providing assistive listening for the hearing impaired in a multitude of applications. These systems provide high-quality stereo sound transmission in theaters, houses of worship, courtrooms, classrooms and more. Sennheiser first introduced professional infrared system solutions for assistive listening more than 30 years ago.

The benefits of an installed infrared system include ease of installation and design. For large-scale, multi-level theaters, EASE modeling data provides unparalleled predictable system coverage. The flexible system components offer facilities, large and small, the ability to support both assistive listening and visual description for easy ADA compliance. With user-friendly controls and universal operation, all listeners, regardless of whether they use a hearing aid, can benefit from installed systems. Furthermore, infrared technology allows for multiple systems to be used in a common building, without the need for any system coordination or signal spill-over control.

**—Vanessa Jensen,  
Sr. Product Specialist, Systems Integration  
Sennheiser Electronic Corp.**



Courtesy Sennheiser Electronic Corp.

**IR systems are also popular.**

loop acceptance, we now get weekly requests that our small business cannot handle. I have reached out to other AV companies, as well as to fellow audiologists and hearing professionals in Wisconsin and around the country. As a result, other communities now, too, are looking to start hearing loop initiatives. AV specialists benefit from contracting with local hearing care professionals to introduce hearing loop technology in their communities. These experiences have shown me the potential for positive synergy, almost a symbiotic relationship between AV and hearing care professionals."

One skeptic undertook due diligence before recommending a hearing loop for his church: "Before we installed our [church's] loop system, I telephoned a number of facilities listed by a loop vendor as having installed such a system. I was amazed to discover that not a single installed site had anything but vociferous praise for the product! One would expect at least one naysayer in a group that large [22], but there was not a single one!"

## Media Recognition

In 2010, various media began reporting on the movement to transform American assistive listening and to double hearing aid functionality. *Scientific American*, *Redbook* and trade magazines for hearing professionals and worship centers all have reported on hearing loops. So did the September 2010 *AARP Bulletin*, which went to 24 million homes. And so have regional newspapers, including the *Chicago Tribune* (in a front-page story), the *Charlotte Observer* and the *Arkansas Democrat Gazette*. NPR dedicated the lead segment of its July 2, 2010, *Talk of the Nation: Science Friday* to hearing loops, complete with audio examples (available at [hearingloop.org](http://hearingloop.org)) of a Grand Rapids airport announcement as heard with and without the airport's hearing loop.

To empathize, audio professionals might imagine themselves as someone with hearing loss. You are at a movie, in a worship center, listening to a lecture or standing at a ticket window, struggling to carve mean-

ing out of sound. Which of these hearing solutions would *you* prefer?

- to leave where you are to locate, check out, wear and return special equipment (often, either a conspicuous headset or earbuds that have been in others' ears)? Or,
- simply to activate your hearing instruments' telecoils, thereby transforming them into wireless, in-the-ear loudspeakers that broadcast sound customized to your own hearing needs?

Britain and Scandinavia now over-

whelmingly offer the second option. In America, leaders among those who represent people with hearing loss and the professionals who serve them are now advocating the same. As we approach a tipping point where new assistive listening will be mostly hearing aid-compatible, audio and hearing professionals are working together to double hearing instrument functionality. For those of us with hearing loss, such work exemplifies business at its best: doing good while doing well. ■

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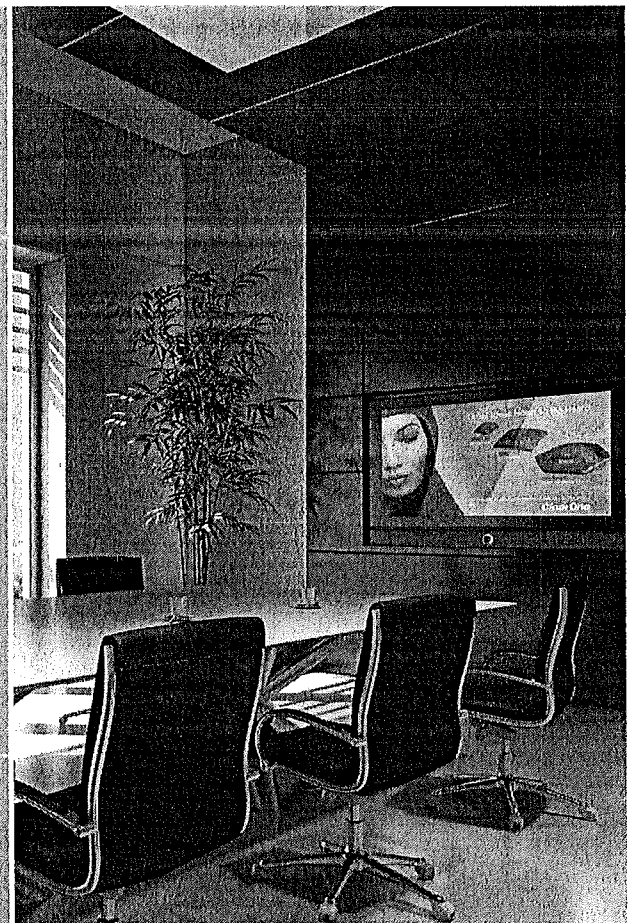
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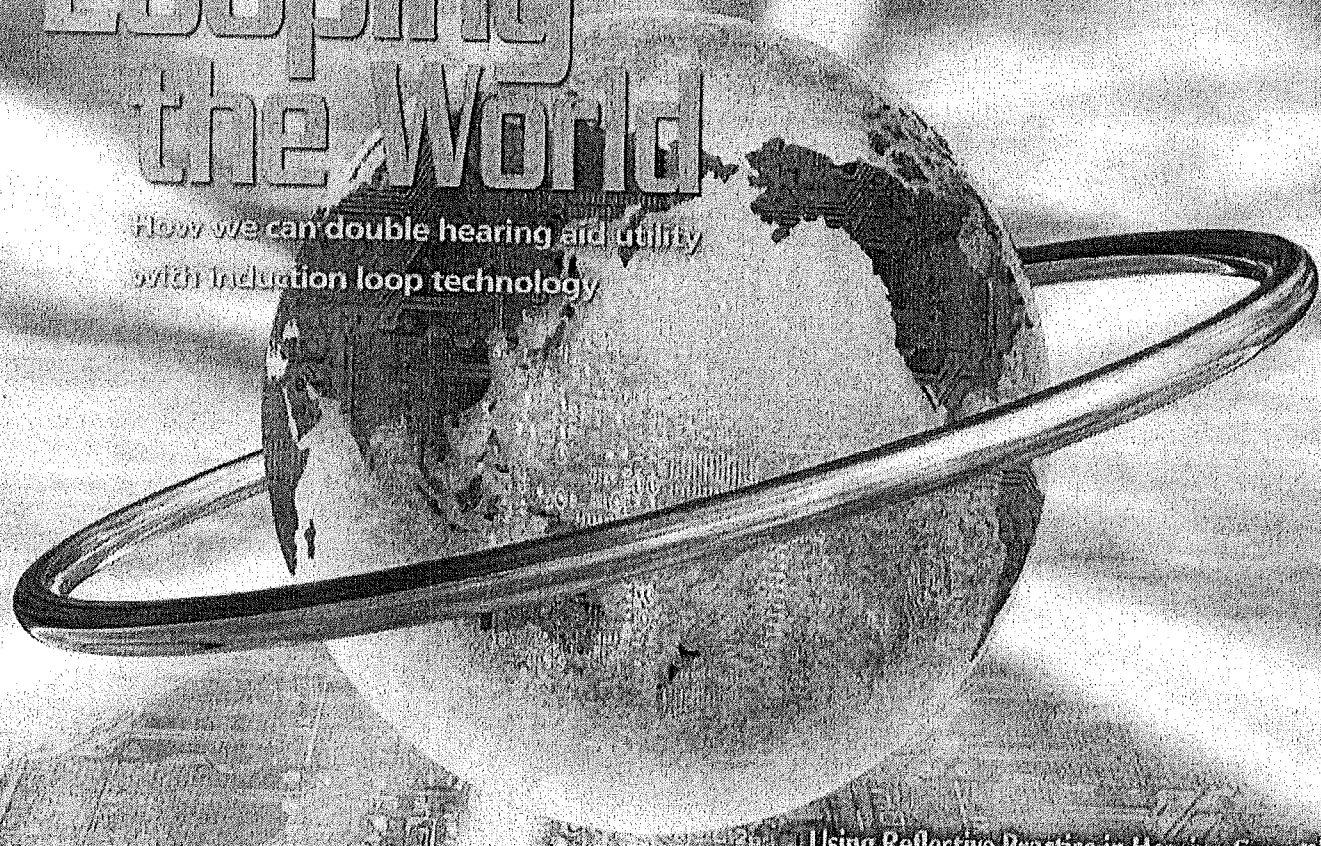
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Vol 17 No 2 February 2010

## Looping the World

How we can double hearing aid utility  
with induction loop technology



■ Using Reflective Practice in Hearing Care p20

■ A New Model for Tinnitus Treatment p26

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Advocacy

# Progress Toward the Looping of America—and Doubled Hearing Aid Functionality

## The time has come for universal induction-loop access in America

BY DAVID G. MYERS, PhD

For Americans with hearing loss, the inclusion of telecoils in all hearing aids and the looping of America would double hearing aid functionality, increase hearing aid sales and patient satisfaction, and, most importantly, enable those of us with hearing loss to hear in countless situations where we now experience uncertainty and stress.

Many of us 8.4 million Americans with hearing loss who own hearing aids feel grateful to the hearing care professionals who enable us to hear. Without your professional support, we would increasingly live in a quiet world, bereft of the communication that transfers information from one mind to another and that helps satisfy the human need to belong and connect.

As you, in turn, seek to understand our experience, imagine yourself as a person with significant hearing loss. While seated at the theater or at worship, or standing at a ticket window, you find yourself struggling to hear. Which of these hearing solutions would you prefer? Would you want:

- 1) To take the initiative to locate, check out, wear, and later return special equipment (often a receiver with a headset or earphones that are likely incompatible with your hearing aids), or
- 2) To push a hearing aid or cochlear implant button, turning your own hearing instrument into a wireless loudspeaker that broadcasts sound customized for your own ears?

Solution 1 is the only option at most venues in the United States. Solution 2 may be found throughout the United Kingdom, Nordic countries, and now West Michigan and increasingly more American locations.

In Britain, most cathedrals and churches with public address (PA) systems surround worshipers with a magnetic hearing loop that wirelessly transmits sound to hearing aids. The hearing aids need only have an inexpen-

sive telecoil sensor—which is now available on most aids and implants—that also transmits telephone conversation. If I worship at Westminster Abbey, the priest's echoing voice is indecipherable. But when I activate my hearing aid telecoils, a clear voice speaks from the center of my head.

Writing while in Norway, one acquaintance who hears with a cochlear implant e-mailed recently:

We were lucky enough to get tickets for Swan Lake at the new Oslo Opera House. I noticed that it had been looped for T-coil. I flipped the switch on my processor, and the sound came in beautifully... "All the churches have them," the organist at the Stavanger Cathedral told me yesterday... Sure enough, when I switched on the T-switch, the sound came in so clearly that I was sure I could have understood every word of the minister had she not been speaking Norwegian.

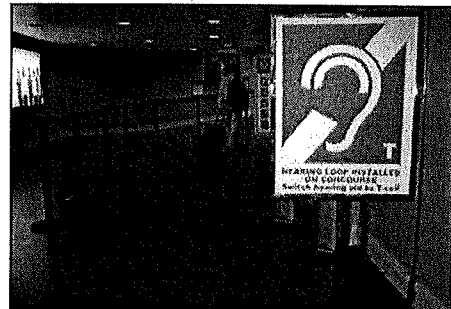


FIGURE 1. Sign announcing telecoil compatibility at the Grand Rapids Airport in Michigan.

In recent years, modern versions of this classic technology have also spread to smaller British venues—including 11,500 Post Office Ltd branches and thousands of ticket windows, bank teller stations, and tourist information counters. In London taxis, a dashboard microphone picks up the driver's voice and transmits it to a backseat hearing loop.



David G. Myers, PhD, (davidmyers.org) is a professor and social psychologist at Hope College in Holland, Mich, who has a hearing loss and is one of the nation's foremost advocates for making induction loops a universal technology. He is also the author of the book *A Quiet World: Living with Hearing Loss* (Yale University Press), and creator of hearingloop.org.



## Progress Toward the Looping of America

Thanks to a recent initiative, hundreds of West Michigan venues, including most churches and Grand Rapids' convention center and airport, now broadcast wireless sound to hearing aids. "Never in my audiology career has something so simple helped so many people at so little cost," reported Jerry Owens, AuD, the former owner of my city's largest audiology practice.

As one user explained after a hearing loop was activated in his place of worship, "The experience of actually hearing such clear sounds was thrilling and hard to describe. One has to experience the improvement. It seemed overwhelming."

This person's experience has been repeated over and over. One skeptic from another state undertook due diligence to assess the suitability of a hearing loop for his own church:

I can certainly attest to the spread of the loop system in Michigan. Before we installed our [church's] system I telephoned a number of facilities listed by a loop vendor as having installed such a system. I was amazed to discover that not a single installed site had anything but vociferous praise for the product! One would expect at least one naysayer in a group that large (22). But there was not a single one!

I understand. My hearing aids now serve me as customized wireless loudspeakers whether I'm watching the evening news in my looped home TV room, at worship in my church, or awaiting an airline boarding announcement at my home airport in Grand Rapids (Figure 1). Thanks to their doubled functionality, I now love the hearing aids I once barely tolerated.

I am comfortable with technology and could afford any of today's high-end wireless hearing technologies. I welcome near-field induction devices that directly connect hearing aids to phones and music players. Often in conjunction with telecoils, these devices offer another layer of higher assistive technology. Yet, I also appreciate why so many people, who often are older users, appreciate the low cost and simplicity (ie, no special equipment to master or take along) of telecoil-enabled assistive listening. Moreover, momentum is shifting toward hearing aid compatible assistive listening.

### Dispensing Professionals Using Hearing Loops in Their Practices

California audiologist Bill Diles provides home TV room loop installations—10 to 15 a month, in more than 1,600 homes

to date—with the purchase of new hearing aids. With hearing aids now also serving as customized loudspeakers, the result has been many happier customers, fewer returns of hearing aids, and many new word-of-mouth patient referrals. In a patient survey, Diles documented a huge increase in patient satisfaction not only with TV listening but also with their hearing aids. Diles notes that "Since the loop is a hearing aid compatible solution—as opposed to headphones, which are incompatible and compete with our core product—it gives patients one more reason to enjoy their hearing aids."

Other audiologists are similarly integrating hearing loops into their practices. Gyl Kasewurm, owner of a large southwest Michigan audiology practice, has initiated loop installations in her community and reports that "Due to the positive feedback we have received, we are now including loop systems at no additional charge with the purchase of new hearing aids!"

Michigan audiologist Peg Simon and her engineer-husband Terry Simon now own Wireless Hearing Solutions by inLOOP, which is conducting training seminars for hearing professionals nationwide—382 in 2009—on how to integrate hearing loops into their practices. Recognizing that most hearing professionals will want others to do the installations, Wireless Hearing Solutions also trained nearly 100 installers in 2009.

Wisconsin audiologist Juliette Sterkens and her engineer-husband LeRoy (Max) Maxfield have formed a company that is introducing hearing loops across their state. Sterkens is also reaching out to other hearing care professionals and audio firms, she is speaking to state and national meetings of audiologists and people with hearing loss, and blogging her experiences at [betterhearing.org/blog](http://betterhearing.org/blog) (see sidebar by Dr Sterkens).

University of Florida audiology professor Patricia Kricos, PhD, "enthusiastically supports" hearing loop initiatives, which she anticipates promoting during her upcoming year as American Academy of Audiology (AAA) president (see sidebar by Dr Kricos). And, in a first-ever joint educational initiative, the AAA and the Hearing Loss Association of America (HLAA) in early 2010

announced a collaborative project to educate hearing care professionals and consumers about telecoils and how to use hearing aids as wireless receivers with telephones and assistive devices. The initiative envisions online and hard copy presentations and articles, culminating in an international conference.

### Hearing Instrument Manufacturers Are Incorporating Telecoils

I'm periodically asked, "What percentage of today's new hearing aids come with telecoils to receive telephone and hearing loop magnetic signals?" A decade ago, 30% was the common estimate. Recently, two national surveys of hearing care professionals both reported 62%.<sup>1,2</sup> This increase is due partly to the surge in behind-the-ear (BTE) aids, most of which come with telecoils. People with significant hearing loss and the greatest need for hearing assistance usually wear BTEs, which explains why 84% of members in an HLA survey reported having hearing aids with telecoils.<sup>3</sup>

The hearing industry recognizes the value of these systems. Although not all new mini-BTE open-fit hearing aids come with telecoils, Widex A/S CEO Jan Tøpholm reports that his company has taken requests "to build t-coils into future small instruments very seriously, and we have already taken them into consideration in future designs." Another example is a new hearing instrument model, the Klik from Ear Technology Corporation, which actually offers two telecoils: one with optimum orientation for telephones and one for induction loop systems (although some experts argue that one telecoil, if given a sufficient vertical orientation, can effectively serve both functions). The March/April 2009 issue of *Hearing Review Products* offered a technology guide to in-the-ear (ITE) hearing aids marketed by a dozen companies (Audifon, Audina, Bernafon, Oticon, Phonak, ReSound, Rexton, Siemens, Sonic

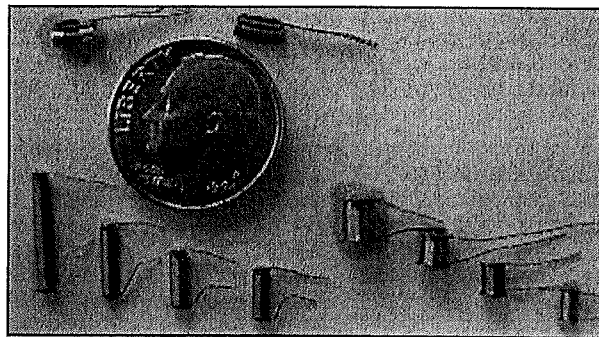


FIGURE 2. Size of telecoils. Photo courtesy of Tibbetts (now IntriCon Tibbetts).

Progress Toward the Looping of America

Innovations, Starkey, Unitron, and Widex).<sup>4</sup> Voila! All 35 ITE models (100%) are now available with telecoils. New cochlear implants are also coming with telecoils.

Happily, hearing loops can serve 100% of people, including those without telecoils or even without hearing aids. That's because loop systems, like other assistive listening systems, also come with portable receiver/headsets (though fewer folks, at the point of their need, take the initiative to get up, locate, wear, and return such equipment).

**National and Worldwide Hearing Loop Initiatives and Endorsements**

**US initiatives.** Consumer-led, grass-roots initiatives are spreading across the United States. Here are a few examples:

- Rochester, NY, was a pioneering city, with its many looped places of worship.
- Tucson's Adult Loss of Hearing Association ([www.alohaaz.org](http://www.alohaaz.org)) has led a successful "Let's Loop Tucson" initiative. Arizona's legislature has supported increased hearing aid functionality with a legislative bill, signed by the governor, requiring hearing care professionals to inform their patients about telecoils when purchasing hearing aids.
- Albuquerque's Hearing Loss Association ([abqshh.homestead.com](http://abqshh.homestead.com)) is promoting a "Let's Loop New Mexico" initiative.
- In California, the Hearing Loss

"For a number of years, I have followed David Myers' efforts to loop America and I have given numerous presentations at state and national levels to encourage my fellow audiologists to embrace the looping initiatives for which he has so ardently advocated. One of the major issues I plan to highlight during my year of leadership (July 1, 2010 through June 30, 2010) for the American Academy of Audiology will be the importance of accessibility for people with hearing loss. The Let's Loop America endeavor has accomplished so much to increase accessibility, and I look forward to helping reduce the barriers to access that many people with hearing loss experience on a daily basis." ▶



Patricia Kricos, PhD

—Patricia Kricos, PhD,  
President-elect of the  
American Academy of Audiology (AAA)

# Are we missing an incredible opportunity to help our patients hear—and to grow our industry?

By Juliette Sterkens, AuD



Juliette Sterkens, AuD

Having been in the hearing care field since 1976, I know how we all bend ourselves in pretzels daily trying to help our patients hear better through the use of hearing aids. As an audiologist, I also know that the directional microphone, though effective in near-field noisy situations, rarely helps those whose hearing deficit is complicated by auditory processing challenges or in reverberant places, such as places of worship and airports. People with hearing loss need a signal-to-noise improvement that cannot be obtained with even the highest-tech hearing aid. This is a physics and processing problem that no hearing aid can be expected to overcome.

In late 2008, after I heard Dave Myers speak, it dawned on me that hearing loops would greatly benefit my patients. So I started a small looping business (Fox Valley Hearing Loop) with my engineer-husband LeRoy "Max" Maxfield. First, we installed a demonstration loop with a flat-screen TV in my office waiting room. I then convinced a community foundation to help fund a loop at our local convention center that was being remodeled.

This modest success was followed by almost weekly speeches at Rotary, Kiwanis, and Lions clubs to create awareness for the difficulties my patients continue to experience even with their well-fitted hearing aids. I also approached patients, ministers, and several large churches, explaining loop benefits. Several loop installations followed and this has literally snowballed to more than 30 installations—and the referrals and requests for loop site visits keep coming in.

I have also reached out to audiologists, dispensers, ministers, HLAA groups, and audio companies across the state. This outreach has led to newspaper articles and invitations to speak to the state HLAA meeting, the Wisconsin Alliance of Hearing Professionals, and the Wisconsin Speech Language Audiology Association, and give workshops for ministers. Thanks to the support of people like Terry Simon (Wireless Hearing Solutions by inLOOP) and Richard McKinley (Contacta Inc), audio engineers and installers have been trained, and Wisconsin is now uniquely positioned to start a statewide "Loop Wisconsin" initiative.

It has been my experience that hearing loops offer patients significantly improved hearing and understanding, sometimes even in situations where normal-hearing people have difficulty. Using the T or MT program is easy: patients need only "push a button." The resulting hearing delights my patients, triggering previously unheard words of appreciation for their hearing aids. As one person who has a severe sensorineural hearing loss told us after she used the T-coils for the first time while worshiping in her newly looped reverberant church: "What I experienced last Sunday was nothing short of a miracle. For the very first time in many, many years, I was able to hear every single word said in church along with every note of music." Moreover, these happy patients have persuaded and referred several others who also want to hear better in church.

This is good news for the hearing industry: the greater the functionality of and satisfaction with hearing aids, the more likely people are to buy them. From a pure business perspective, this makes sense. Given hearing loops in home TV rooms and public places, we hearing care professionals can delight our customers with a low-cost, low-tech solution: a simple T-coil. What are we waiting for? No matter how many real-ear tests we do, what type of vents we drill, how many CEUs we obtain, how many customer surveys we do, or what kind of wonderful coffee and cookies we offer in our waiting rooms, if we don't make our patients hear well in church and other public places, they will not be totally happy!

I have witnessed patients speak in the front of the church with tears of happiness about how they can hear again with their hearing aid in a loop. That brings me back to my real reason I have become a loop advocate: I want to help my patients hear better! ▶

*Juliette Sterkens, AuD, is co-owner of Fox Valley Hearing Center in central Wisconsin, where she has practiced since 1983.*

Association of Silicon Valley ([www.hearinglosssv.org](http://www.hearinglosssv.org)) is advocating looping. Same for California's state Hearing Loss Association ([www.hearinglossca.org](http://www.hearinglossca.org)): "In all new and extensively remodeled buildings, wherever there is a public address system, a loop should be permanently installed... When there is a loop, all a hard-of-hearing person has to do to be able to hear is click on the T-switches on their hearing aids."

■ Michigan's Hearing Loss Association ([www.mi-shhh.org](http://www.mi-shhh.org)) advocates the functionality that hearing loops offer by recommending "that Michigan's public places, as defined by the *Americans with Disabilities Act* (ADA) ... and where sound is broadcast, install assistive listening systems that broadcast directly through hearing aids and cochlear implants."

■ Starting in the spring of 2010, the civic organization Sertoma (SERvice TO MAnkind, [www.sertoma.org](http://www.sertoma.org)) and its newly established Hearing Charities of America ([www.hearingcharities.org](http://www.hearingcharities.org)) will undertake a national hearing advocacy campaign. "A centerpiece of this Sound Investment campaign will be supporting local volunteers in our 540 clubs to advance the looping of America," reports Sertoma Executive Director Steven Murphy.

**Worldwide initiatives.** As mentioned earlier, hearing loops are in thousands of venues across the Nordic countries and the UK. The first international "Hearing Loops" conference, hosted in late 2009 by the European Federation of Hard of Hearing People ([www.efhoh.org](http://www.efhoh.org)) for attendees from 15 countries, adopted a resolution recommending that:

- 1) Hearing aid manufacturers, manufacturers of cochlear implants, physicians, audiologists, and hearing instrument specialists shall communicate the benefits of hearing aid/cochlear implant telecoil receivers for phone listening and assistive listening, and educate people who are hard of hearing accordingly.
- 2) Venues and service points where sound is broadcast shall offer assistive listening, such as induction loop systems designed to the IEC 60118-4:2006 standard, which broadcast sound directly to hearing aids and cochlear implants, enabling them to serve as customized, wireless loudspeakers (without the need for extra equipment).<sup>9</sup>

The HLAA has long supported hearing aid-compatible phones (which communicate interference-free sound to telecoils). It has declared that "It is the position of [HLAA] that telecoils be given the prominence they deserve as a valuable hearing aid feature that will allow the expanded use of assistive listening devices."<sup>6</sup> Britain's Royal National Institute for Deaf People (RNID) adds that "Induction loops are vital to ensure accessibility for hearing aid wearers," and offers suggestions for

## Hearing Loops in New York City

Thanks, in part, to the leadership of New York City's Hearing Access Program, hearing loops are found in more and more venues, including Ellis Island, Temple El-Emanuel (the world's largest Jewish house of worship), and the Chrysler Museum auditorium.

In September 2009, the city's Taxi and Limousine Commission, after a test period with 13 taxis, approved the voluntary installation of hearing loops in all of its licensed vehicles. If fully implemented over time, noted Janice Schacter, Hearing Access Program founder and chair, "No longer will a person who is hard of hearing have to worry that they will end up in NOHO when they wanted SOHO."



FIGURE 3. Wall Street train station.



FIGURE 4. NY Yankees ticket booth.

In early 2010, the New York City Transit Commission announced the installation of hearing loops in 488 subway information booths. This initiative, financed with federal stimulus monies, promises to make assistance more accessible, noted Schacter, whose initiative helped introduce the concept to transit officials. As Barbara Bryan, a hard-of-hearing New Yorker, reported after experiencing this wireless assistive listening in a test installation at the Wall Street booth, "It is a beautiful experience to go to such a booth and be able to hear so well and so clearly! It is really rather amazing when one is accustomed in such situations to catching only a low percentage of what is being said."

The Hearing Access Program is also working to introduce hearing loops to other transient venues, such as at some Yankee Stadium ticket windows, in selected HSBC banks, and at National Park video presentations. Some museums, including the Kentucky Derby Museum and the Dayton Aviation Center, have also added hearing loops. ▶—DGM

installing and checking them.

Responding to these developments, *Scientific American* published a news article in its January 2010 issue and online,<sup>7</sup> explaining hearing loops and their growing adoption.

### Hearing Loop Vendors on the Increase

If hearing aid-compatible assistive listening is to become widely available, there must be manufacturers producing and selling the needed equipment, and trained audio engineering firms to install it outside of simple home installations. In response to the growing consumer demand for hearing loops and to the increased use of telecoils, audio entrepreneurs are indeed offering new lines of loop equipment and training local audio engineers.

The equipment vendors include longtime providers Ampetronic, a British company whose products are marketed in the United States by Assistive Audio, and American manufacturer Oval Window Audio. Newer entrants into the American market include Univox products produced by Swedish manufacturer Bo Edin, and British products made by Echo@MegaLoop and Vivid Acoustics. Seeing opportunity, three new American companies are now manufacturing loop systems: Contacta Inc (in partnership with UK manufacturer Contacta), LoopAmerica, and inLOOP. Pan-Oston, the leading supplier of grocery-store checkout equip-

ment, is introducing a loop device (Shop Hear) for installation "at the service desk, check-in counter, customer service desk, in-store pharmacy, or anywhere people need to hear your message."

Although audio engineering firms remain largely unaware of the benefits of loop systems, some are discovering what Ascom President Todd Billin explains:

What we did not consider was the influence consumers could make on this technology. When individuals with hearing loss had a chance to experience the hearing loops or talk to someone who had, the demand for both hearing aids with telecoils and loop systems increased dramatically. After installing our first loop system and seeing the reaction from the individuals with hearing loss, we immediately shifted our sales focus to loop systems.

### Looking to the Future

Transforming assistive listening, with something approximating wi-fi for hearing aids, addresses two huge problems with America's currently predominant assistive listening systems, which require special equipment:

1) The equipment seldom gets used—"about once per month per theater," a manager at my community's biggest theater complex told me. (People with hearing loss almost universally hesitate to assert themselves and make a fuss.) Our West Michigan experience is that, when venues install hearing loops, many more people benefit. At my church, the one

person using our old technology quickly multiplied to 10 known people using the invisible hearing loop.

2) Special checkout equipment is not feasible in transient venues, such as pharmacy counters, airports, and ticket booths. That reality was appreciated by Hearing Access Program Chair Janice Schacter when suggesting the possibility of hearing loops for New York City taxis, limousines, and subway information booths—a dream that is now becoming a reality (see sidebar).

Better Hearing Institute (BHI) Director Sergei Kochkin notes that only about 1 in 4 Americans with hearing loss have hearing aids.<sup>8</sup> He notes that the surest way to decrease the stigma of hearing aids and to increase their use (making them for the ears as routine as glasses for the eyes) is to increase their functionality: "Clearly, the utility of hearing aids must be improved if we are to achieve wider-scale acceptance of hearing aids as a solution to hearing loss."<sup>9</sup> Kochkin envisions a future with "miniaturized internal wireless receivers in every hearing aid." He also has quantitatively shown that increasing the utility of hearing aids will result in more hearing aid sales, positive recommendations, and brand loyalty from hearing aid users.

To fulfill Kochkin's vision with wide applicability, such technology needs to be inexpensive, miniaturized (able to fit in small hearing aids), demand little or no battery power, and cover large areas with a universally received signal. Today's hearing loops and telecoils are all these things,

which explains their widespread adoption in the Nordic countries and the UK.

For Americans with hearing loss, the inclusion of telecoils in all hearing aids and the looping of America would double hearing aid functionality, increase hearing aid sales and patient satisfaction, and, most importantly, enable those of us with hearing loss to hear—in countless situations where we now experience uncertainty and stress. ▀

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"Progress Toward the Looping of America—and Doubled Hearing Aid Functionality"  
*The Hearing Review*, February 2010; Volume 17, Number 2: Pages 10, 12, 14, 16 & 17.