

The Official Newsletter of HLAA-PA

Support and Advocacy since 2001 for Pennsylvanians with Hearing Loss

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HearSay Articles

HLAA-PA welcomes articles of interest to the hearing loss community for publication in HearSay, as well as suggestions for topics. Send e-mail to editor@hlaa-pa.org

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Opinions expressed in HearSay are those of the authors. Mention of goods and services in articles and advertisements does not mean HLAA-PA endorsement, nor does absence suggest disapproval. To reach readers of HearSay, contact
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Nancy's Message

by Nancy Kingsley, *HLAA-PA State Director*

The COVID-19 pandemic promoted a switch to more online connections, including those with educational offerings. I recently took a course from edX, a massive open online course (MOOC) provider created by Harvard and MIT. Auditing edX courses, which are captioned, is free; there is only a charge if credit is desired. In addition to traditional college classes, a number of personal development courses are included:

- Becoming a Resilient Person--The Science of Stress Management
- Communication Skills for Dialoguing Across Difference
- Critical Thinking & Problem Solving
- Dog Behavior: Problems and Solutions (This one is for dog development!)
- Introduction to Personal Financial Planning
- Life with Diabetes
- Psychology of Personal Growth
- Reinvent Yourself: Unleash Your Creativity
- The Science of Happiness
- The Science of Weight Loss: Dispelling Diet Myths
- The Science and Practice of Yoga
- Success: Practical Thinking Skills
- Staying Fit
- Take Your Medicine: How to Be a Savvy Consumer

Previously, I took a course with Coursera, another MOOC provider that offers captions and free audit access. Its offerings include:

- A Life of Happiness and Fulfillment
- De-Mystifying Mindfulness
- Everyday Parenting: The ABCs of Child Rearing
- Hearing Loss
- Hearing Loss in Children
- Managing Emotions in Times of Uncertainty & Stress
- Psychological First Aid
- Resilience Skills in a Time of Uncertainty
- The Science of Well-Being
- The Truth About Cats and Dogs

Both MOOCs also offer courses in standard fields like business, computer science, engineering, health, humanities, and social sciences. For more information, go to edX.org and coursera.org.

State Happenings **by Carolyn Meyer, *Outreach Coordinator***

As the world around us is changing with new guidelines from science, we see positive “happenings” all around us as a welcoming sign. Though platforms as Zoom and Google Meet will surely stay with us in the long term, we can now take part in any activities to enhance our lives.

NATIONAL NEWS: HLAA CONVENTION

The convention will again be a virtual event this year. Join us June 24-26 to learn the latest about hearing health, communication access and the technologies and strategies that help people with hearing loss live well. On June 24 at 3 p.m. ET, the convention kicks off with keynote speaker Federal Communications Commission Acting Chairwoman Jessica Rosenworcel. This three-day event includes a research symposium on “Hearing Care For All”, and robust workshops on advances in hearing aids, accessibility through mobile devices, hearing access in the workplace and more. This year we have a new and improved virtual event platform, “Showcare”, where participants can create a profile to chat with other attendees, view the live workshops and interact with exhibitors. If you have hearing loss, know someone who does, are a hearing health care professional, or are part of the HLAA network of chapters and associations, this is an event you will not want to miss. The cost is \$35.00 per person until June 15.

For the HLAA Virtual Convention schedule and information please visit hearingloss.org/programs-events/convention/.

STATE NEWS: THE WALK4HEARING OCTOBER 17

Exciting News from Ronnie Adler. "We are happy to announce that the PA Walk4Hearing will be in-person at the Navy Yard on Sunday October 17, 2021. Everyone is welcome to join us—Team Captains, walkers, volunteers, sponsors, alliances, and the entire community. This is a great way to support one another and know we are not alone. It will be rain or shine. Check the website walk4hearing.org

Any questions, contact Ronnie Adler radler@hearingloss.org

THE JOE MEYER MEMORIAL GRANT AWARD 2020

HAAA-PA is happy to announce the winner of this award presented to Susan Farrell. It qualifies for 2020 as the award was not given in 2020 . Sue mentions that she will use it toward a purchase of hearing aids as her previous ones no longer work for her. She has a profound loss. She expressed that this will help her with the challenges she has faced with her hearing loss. She is most grateful for the \$500.00 award. Sue was a former member of the Philadelphia Center City chapter. She now lives in the suburbs. We hope we will see her at the Philadelphia Chapter 1 (suburban-northeast) meetings in Huntingdon Valley when schedules return to normal in the fall this year.

The 2021 award winner has not been announced as this newsletter goes online. If you or anyone you know might be eligible there is still time. Go to the state website for the application hlaa-pa.org . For questions contact Carolyn Meyer meyer@hlaa-pa.org

The T-coil Today and Tomorrow

by Don Groff

Several recently introduced hearing aid and cochlear implant models have no provision for a telecoil (T-coil), raising alarms among hearing loop proponents. This prompts a discussion of the status of this important type of hearing assistance.

First, a bit of review: The essential function of a hearing assistance system is to improve understanding of speech by reducing the effects of reverberation and background noise. This is usually done by picking up the desired sound at its source, transmitting it to the listeners, and delivering it to them. In fact, the telephone is such a system.

The listener in question probably will have a hearing aid. Delivering that sound to it could be done via its microphone, but that might not reduce the reverberation and background noise that may be present. Some hearing aids may allow a wire connection for sound input (DAI; direct audio input), but this is not common.

The T-coil, a tiny coil with many turns of wire, can provide the sound input as an alternative to the microphone. The T-coil responds to magnetic signals that carry the sound. The microphone may or may not be turned down or off when the T-coil is in use. This technology has been in use since the 1930s.

The magnetic signal for the T-coil may come from a hearing loop, a wire that encircles the area occupied by the listeners. There are various other names for the hearing loop: induction loop, audio loop, audio frequency induction loop, etc. The loop is driven by an audio signal, the same as that fed to the loudspeakers.

The magnetic signal may also come from a neckloop, a small-scale, personal version of the room loop, driven by a small receiver of some sort, typically the size of a deck of cards. That receiver may be used with an FM or infrared (IR) transmission system.

“T-coil” stands for “telephone coil,” and it has long been used to pick up telephone conversations. The telephone handset generates a magnetic signal as a part of the process of generating sound. In fact, your T-coil will pick up the sound of almost all headphones, just like a room loop or a neckloop.

Loop systems have been widely used in Europe for decades but less so in North America, where many hearing aid providers do little to promote their use. In recent years, HLAA and other organizations have made significant progress in promoting loop systems, so it is disappointing to see any downturn in T-coil availability. It is claimed that two thirds of hearing aids sold today have T-coils; this figure probably applies to behind-the-ear types. A brief online review of hearing aid types and features finds that the T-coil is often not mentioned. Sometimes it is present but not enabled or even mentioned by the hearing aid provider.

Most new hearing aid designs incorporate a streaming system, Bluetooth or a close equivalent, and it may be claimed that this makes the T-coil obsolete. Streaming can work very well, but it is essentially a one-to-one connection from a smartphone to a hearing aid or from a TV streaming device. A pairing step is also required, so that you hear your own phone and not your neighbor’s.

With a loop system, an unlimited number of listeners only need to activate their T-coil to hear clearly. This simply is not the case with current streaming systems. But one only needs to think of the enormous capability packed into current smartphones to believe that digital technology can provide a better way. It seems obvious that the functionality of the T-coil could be provided digitally, if the will to do so were present. It may already be so, in fact.

Top Members of the European Hearing Instrument Manufacturers Association (EHIMA) produce up to 90% of all hearing instruments made worldwide. EHIMA is working on standards for wireless hearing devices, and their website ehima.com offers a paper “Towards a Wireless Interface for Hearing Instruments.” Their goal is a universal connectivity standard rather than the multiple proprietary standards that now exist with manufacturers. This standard is sometimes referred to as WI-HI (Wireless Interface for Hearing Instruments).

You can download and read the entire paper, but briefly, the capabilities foreseen in it are exciting. There is a focus on simplicity – the basic receiving function can be turned on by pressing a button on the hearing device, much like a current T-coil, with no accessory device involved. But with a control device, probably like today’s smartphone, many options become possible, such as choosing an alternate language, selecting the proper source in multiplex locations, and enabling emergency communications. The currently available functions, e.g., mobile phone connection, would be included. It should be noted that the smartphone would be a control device, not a part of the communication link.

Some loop system shortcomings, rarely mentioned by loop advocates, would be overcome by WI-HI. These include magnetic interference by electrical devices, and

wiring and signal level variation resulting from your location in the loop and the orientation of your device. With WI-HI, signal level should be totally determined by your device settings. Moreover, installation of this system will be much simpler, not requiring the disruption of running a continuous length of wire around the listeners' space.

There is at least one digital system available that has some of the desired characteristics. It transmits on Wi-Fi to multiple listeners on a smartphone app or to a dedicated receiver. That still leaves the question of delivering the received sound to the listener. A smartphone might stream to the hearing device, but a separate receiver will require a headset or the equivalent.

The WI-HI system will clearly take a considerable time to become a reality. Once standards are established, the transmitting hardware must be developed, and hearing devices will need to have the functions introduced. It may be that adequate computing power may already be available for hearing devices, and the newly developed Low Energy (LE) Bluetooth mode may have low enough power consumption and processing delay (latency) to work. TV streamers already available provide confirmation of this. Time-frame estimates are notoriously hard to make, but one may hope to see WI-HI become a reality in a decade.

In the meantime, loop and T-coil systems will continue to provide essential hearing assistance and then will probably coexist with WI-HI for a considerable period of time. The loop and T-coil era will probably last at least a century, and the technology will continue to be the best solution for hearing assistance to multiple listeners for years.

More Max Your Mikes

by Chris Doig

In addition to hearing aids and cochlear implants, there are other types of hearing assistive devices that can help people with hearing loss to understand speech better. Many can be used in one-on-one or group conversations like family dinners or meetings. Common assistive devices include body-worn personal amplifiers, induction loop systems, and FM systems. There are also remote microphones that are hearing instrument specific, as well as Phonak Roger microphones that work with most brands of hearing instruments.

These assistive devices rely on microphones that are designed to pick up sounds close to the source and deliver them directly to our ears. This compensates for the degrading effects that occur when sound travels through the air, and it can be a very effective way to improve speech intelligibility. Assistive devices can be especially useful in environments that are noisy; when people are speaking from a distance; or in a room with poor acoustics. Each audio environment can present different challenges.

This article will explain how to optimize microphone directionality on certain assistive devices to make them more effective in a specific environment. It will also provide an overview of Phonak Roger microphones.

First, some basics. Two factors determine where a microphone gathers sound: the type of directionality that the microphone is using and the pickup distance of the microphone. Microphone directionality comes in several forms. A microphone can pick up sounds either in a single direction (directional) or in all directions (omni-directional). When there is more than one microphone in a device, they can focus its pickup area toward a particular sound source (array/beamformer). Some microphone arrangements incorporate more than one type of directionality within the device. Some allow you to choose the pickup direction, either by tapping the device or by selecting the pickup area on a phone app.

The microphone pickup distance can be a fixed distance, or it can vary. This distance can range from 8 inches or so on a typical remote or lapel microphone to 15 feet or so for some microphones in ideal conditions. With some microphones, the pickup distance can be configured to vary based on the sound levels in the vicinity. Some devices allow the user to manually change the microphone's pickup distance.

Microphones can be located internally within an assistive device or they can, in some cases, be plugged into a device with a microphone jack. This allows for flexibility, as different microphones can be swapped out to target a specific environment. The process of changing microphones can increase the pickup range of the device or can change the microphone directionality. This can be useful at times because it helps us to focus on the people that we want to hear. Examples of devices that contain a microphone jack are body-worn personal amplifiers, traditional FM systems, and induction loop receivers.

The Williams Pocketalker 2.0 is an example of a body-worn personal amplifier that comes with both an internal microphone and an external microphone jack. Here are some examples of situations where a different microphone may be useful. If you are in a loud restaurant with one other person, a lapel mike could be plugged into its microphone jack and clipped to the collar of the person that you are trying to hear. (This device comes with a mike and a long cord that can be used as a lapel microphone.) Adding a lapel microphone can improve speech understanding, because having the mike closer to the speaker's mouth makes it possible to overcome more of the background noise.

Another situation where a different microphone might be more effective is being with a group of people who are at some distance, such as a teacher speaking to students. In this case, a super directional mike with a good pickup distance (also called a shotgun microphone) can be used. This type of microphone is a directional mike that points toward the people that you want to understand. Attaching an array mike to a loop system can also work well in a small classroom or small office. This type of mike covers a larger area and focuses its pickup only toward the people who are speaking.

The cost of devices in this category is generally in the \$100 - \$300 range. For more information on using various types of microphones with personal amplifiers or loop systems, see hearinglosshelp.com.

Some of the equipment mentioned uses wired connections and can be somewhat bulky. Most hearing instrument manufacturers make wireless remote or

partner mikes specifically for their hearing instruments. These microphones are more compact and are portable. Many of these devices offer several different types of directionality within the device. Omnidirectional mikes can be useful in small group situations, especially at tables, by being placed central to the group. These are usually more effective in quieter environments. Some of these remote microphones can focus in one direction at distances up to 15 feet and can be used in many situations, such as when standing and facing people. The downside is that many of them are hearing instrument specific and limited to one microphone in use at a time. These devices are typically sold by hearing health care providers.

In 2013, Phonak introduced the Roger Pen, Roger Clip-on Mic, and a multi-talker network in which Roger microphones can be wirelessly connected to each other to form a network of devices (microphones and receivers). These devices can be used simultaneously, allowing for up to 10 mikes with unlimited receivers with some types of microphones and up to 35 microphones and unlimited receivers with other types. Even though 10 microphones can be used, normally only 2 or 3 lanyard mikes can work well in social settings. In small groups, multiple mikes worn by each speaker can be very effective.

The Roger receivers are either small devices that are attached to hearing aids or streamer devices or they are a neck-worn receiver (Roger MyLink) that interfaces with the T-coil program in hearing instruments.

The Roger Pen and Roger Easy Pens are versatile devices that include three types of microphone directionality in one device. They offer a short-range directional mike (lanyard mode), which is like a lapel mike, and a longer-range directional mike (pointing mode), which is like a super-directional mike. They also have omnidirectional mike capability (conference mode), which can be used in group settings. When the Pen is placed horizontally on a table, for instance, it picks up voices omnidirectionally, and this can be effective at a restaurant or dinner table.

The Roger Clip-on Mic is like a lapel mike. Several of these can be worn by people when a network of microphones has been created. This is ideal at a small family dinner or restaurant with three or four people.

In 2018, technology advanced further, allowing for multibeam technology. The Roger Select was introduced as a microphone designed for tables, such as in restaurants. It can focus its pickup area toward a sound source, or you can manually select a pickup direction. This was an improvement on omnidirectional microphones, as it will generally pick up sounds in a smaller area. The Select also has a lanyard mode, which provides a short-range directional microphone. In addition, the Select can be used in a network of other Roger microphones. It does not have a pointing type microphone. The Roger On microphone, expected in June 2021, will offer multibeam capability and directional or pointing mode capability.

Phonak also offers a Roger Table Mic II, which can be used at conferences or larger offices, as well as several microphones that can be used in classroom or meeting situations. The classroom microphones are the Roger Touchscreen Mic and the Roger Pass-around. The Touchscreen Mic has a pointing (directional), and small group (omnidirectional) features as well as the ability to be worn on a lanyard

as a lapel-type mike. It also offers some advanced features that improve network versatility.

The latest Phonak hearing instruments (Phonak Marvel and Paradise) require a Roger receiver install process for Roger microphone use. Either a hearing health care provider installs Roger X receiver(s) that are serial number 1744 or greater (champagne versus silver color) into the hearing aids using a Roger Installer device, or a Roger iN microphone is used to install the receivers (activate the license). An iN microphone includes the microphone and two receivers. The iN versions are available for a Roger Pen, Roger Select, and Roger Table Mic II. More information can be found at Rogerpedia.

The Phonak microphones are available through hearing health care providers. Some devices are also available online at Hearing Direct (<https://us.hearingdirect.com>), and many can also be purchased on eBay. There are several versions available for many of the devices. With its wide range of devices and technical sophistication, the cost range of the Roger family of devices is a good deal higher than the simpler systems described above.

In this article we have explored several ways to use microphone directionality to increase the functionality of various types of assistive devices. By switching microphones with certain kinds of equipment, we can use the equipment in a variety of ways. We have also looked at many of the Phonak Roger devices and examined some of ways that they may be used. Hearing loss is not a one-solution-fits all issue—what works for some people may not work for others. But technology is constantly improving, and these improvements can make a difference!

ChesCo College Scholarship

by Judy Shugarts

In recognizing the need to encourage post-secondary education among the high school population with hearing loss, our chapter is awarding the 5th Annual Mortimer Bauer Memorial Scholarship Award to Jennifer Castillo for her award-winning essay and a life spent learning how to speak up for herself and advocating for people with hearing loss.

Jennifer was born deaf and received her first cochlear implant (CI) when she was seven and just recently received her second CI. Over the course of her childhood, she worked hard participating in speech therapy and auditory training and in the process became a trilingual deaf student who speaks Spanish, English, English Sign Language and American Sign Language (ASL). Her success in overcoming all these obstacles and learning to be independent from an early age has led her to teach an ASL Club, captain Track & Field and work two jobs while attaining a 3.8 GPA at Downingtown East High School. She will attend Rochester Institute of Technology and major in Diagnostic Medical Sonography.

Jennifer will receive her award and certificate in the mail and open them during a virtual Zoom ceremony that will be held on June 16th.

HAAA is the nation's largest consumer advocacy organization for people with hearing loss and provides information, education, support, and advocacy to enable those with hearing loss to live full and productive lives. We hope to resume regular meetings the 2nd Wednesday of the month, September through June, from 7-8:30 at Christ Community Church, 1190 Phoenixville Pike, West Chester. The meetings are open to the community and supported by CART and Hearing Loop System. For more information about the HAAA-Chester County Chapter, see our website at www.hearinglosschesco.com, email us at hlaachesco@gmail.com or check us out on Facebook at: HAAA Chester County www.facebook.com/hearinglosschesco/.

About HAAA and its State Office, HAAA-PA

The Hearing Loss Association of America (HAAA), founded in 1979, is the nation's foremost membership and advocacy organization for people with hearing loss. HAAA opens the world of communication to people with hearing loss by providing information, education, support and advocacy. The national support network includes the Washington, DC area office, 14 state organizations, and 200 local chapters. HAAA is a 501(c)3 non-profit organization.

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HAAA-PA is the all-volunteer state office of Hearing Loss Association of America. We were established in 2001 to carry out the mission of HAAA for Pennsylvanians with hearing loss, their families and friends.

VOLUNTEERS NEEDED!!

Assist the HAAA-PA State Director by serving on the Advisory Council or one of its committees. The Council meets periodically at locations convenient to its membership. But committees conduct most of their business by e-mail and occasionally meet in various parts of the state. If you think you would like to serve on the council or any of its committees, please contact one of the state leaders listed here:

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Link to online version: tiny.cc/HearSay20212

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