

Hear Your Best With Telecoils and Auracast

Juliëtte Sterkens, AuD

Consumer Advocate

TEDx Speaker

****Hear Your Best with Telecoils And Auracast****

You're invited to an informative morning session with Dr. Juliette Sterkens, who will explain why assistive listening technology is essential, even for users of the latest hearing aids and cochlear implants. She'll cover how the Americans with Disabilities Act (ADA) can support your hearing needs and provide ready-to-use templates for making effective requests—no need to start from scratch. Learn how telecoils and Auracast Broadcast Audio can improve your hearing experience now and, in the future, how to get your audiologist or hearing care provider involved (with helpful handouts you can share), and how to use Google Maps to find or advocate for hearing access. (Tip: Download the app in advance for a better experience.)

Juliëtte Sterkens, AuD

Consumer Advocate

TEDx Speaker

- Licensed logopedist/SLP - Netherlands (1979-1981)
- Retired from 29+ years in my private practice in Oshkosh (2012)
- HLAA Hearing Loop & Consumer Advocate (2012 – present)
- Frequent guest lecturer at AuD programs

Professional Awards

UW-Oshkosh - Distinguished Alumnus Award 2015

Arizona School of Health Sciences - Humanitarian of the Year 2013

Academy of Doctors of Audiology - Leo Doerfler Award 2013

Wisconsin Audiologist of the Year 2011

Larry Mauldin Award 2011

American Academy of Audiology - President



TED^x
Oshkosh
950.000+ views!

Disclosure:

I receive a consulting fee from the
Hearing Loss Association of America

**Thanks to a grant from the
David & Carol Myers Foundation**





Outline

- Why is there a need for hearing access?
- BT LE Audio – Auracast, used as an ALS
- Current Assistive Listening Systems
- Future Proof Yourself
- Resources

Hearing Aid Research Lab (HARL) at U of Memphis, TN
tried to find evidence that **premium** yields better
performance compared to **basic** technology.

(Single-blinded study n=45)

Findings:

No significant difference between
basic and premium hearing aids
on a range of self-report measures

(Measures that could be assumed to differentiate
between the two technology levels)

Basic = prescription hearing aids that include many (D-mic, noise suppression, FB management, less adaptive features and Bluetooth), but not all the advanced features

Premium = prescription hearing aids that include “advanced features” as described by the MFR

The HARL researchers concluded:

“It could be reasonably asserted that the **patient’s perspective** is the gold standard for hearing aid effectiveness.

While the acoustical processing provided by premium features can potentially improve scores on tests conducted in contrived conditions in a lab, or on specific items on a questionnaire, **this does not ensure noteworthy benefit when the hearing aid is used in real-world challenges faced by the patient.”**

The HARL researchers concluded (continued):

If evidence suggests the patient cannot detect that premium features yield improvements over *basic* features in daily life, what's the responsibility of the provider in recommending hearing aid technology level?"

The HARL researchers made **two** recommendations

1. That further studies be done with a larger sample size
2. That **self-report measures were preferable to laboratory tests**

It is my opinion, the hearing industry wants you to believe it's all about the hearing aid technology

And, yes, **technology level** makes *some* difference to some users*

- ❖ Premium: Sound of own voice
- ❖ Premium: Ability to hear one-on-one
- ❖ Premium: Slightly better in small groups

But...**NO difference*** between Basic and Premium instruments in

- ❖ large groups or restaurant/cafe situations

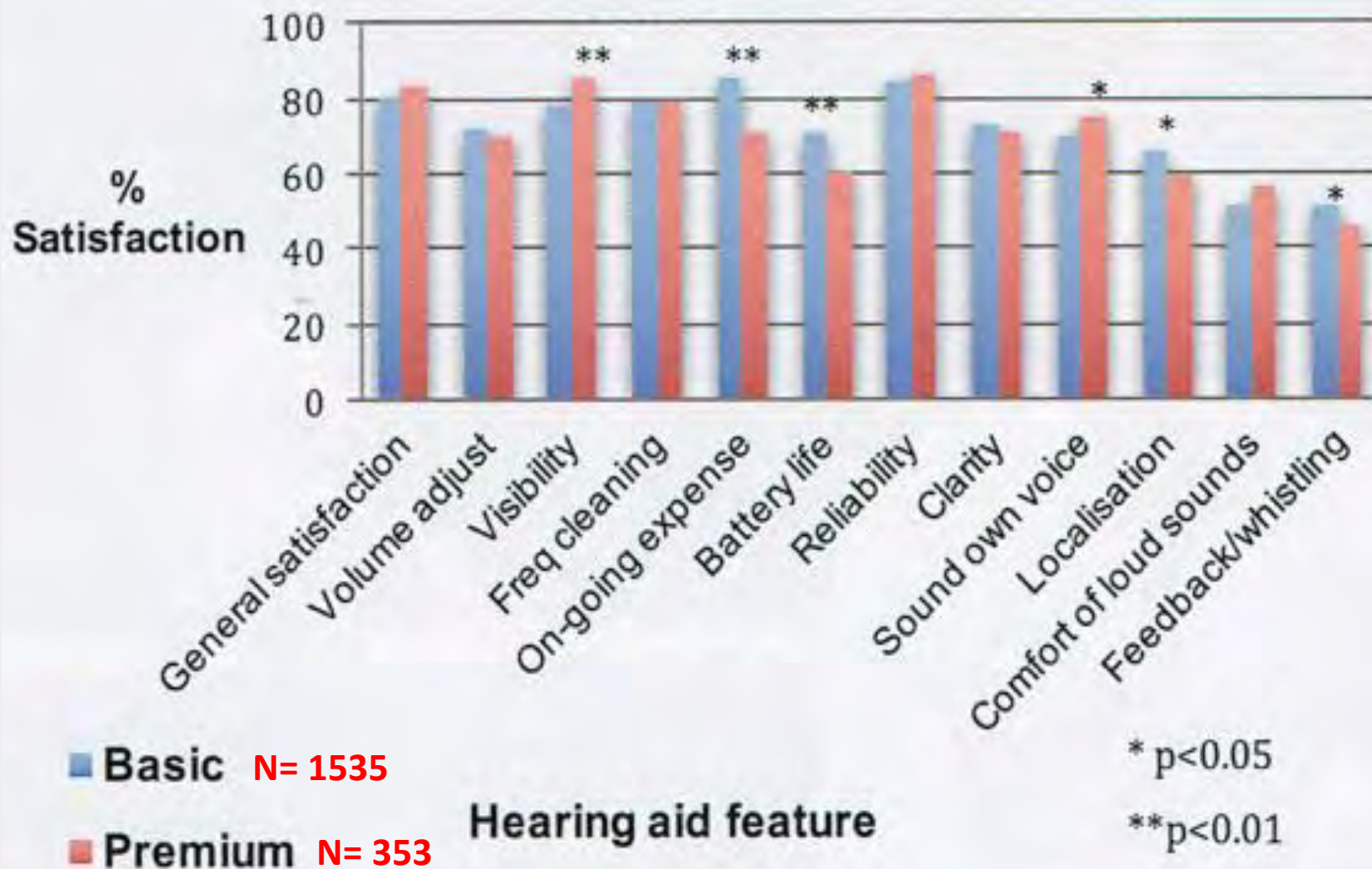
And surprisingly:

- ❖ Basic: The **ability to localize is better with basic** than with premium instruments

* Susan Clutterbuck, AuD (2017) – presentation at EUHA

<https://c-cluster-110.uploads.documents.cimpress.io/v1/uploads/790455d0-24dd-4ec6-87bc-2fa9a215d023~110/original?tenant=vbu-digital>

Satisfaction with various hearing aid features for Basic and Premium technology



PACA = Personal Assessment of Communication Abilities

Name:

Date:

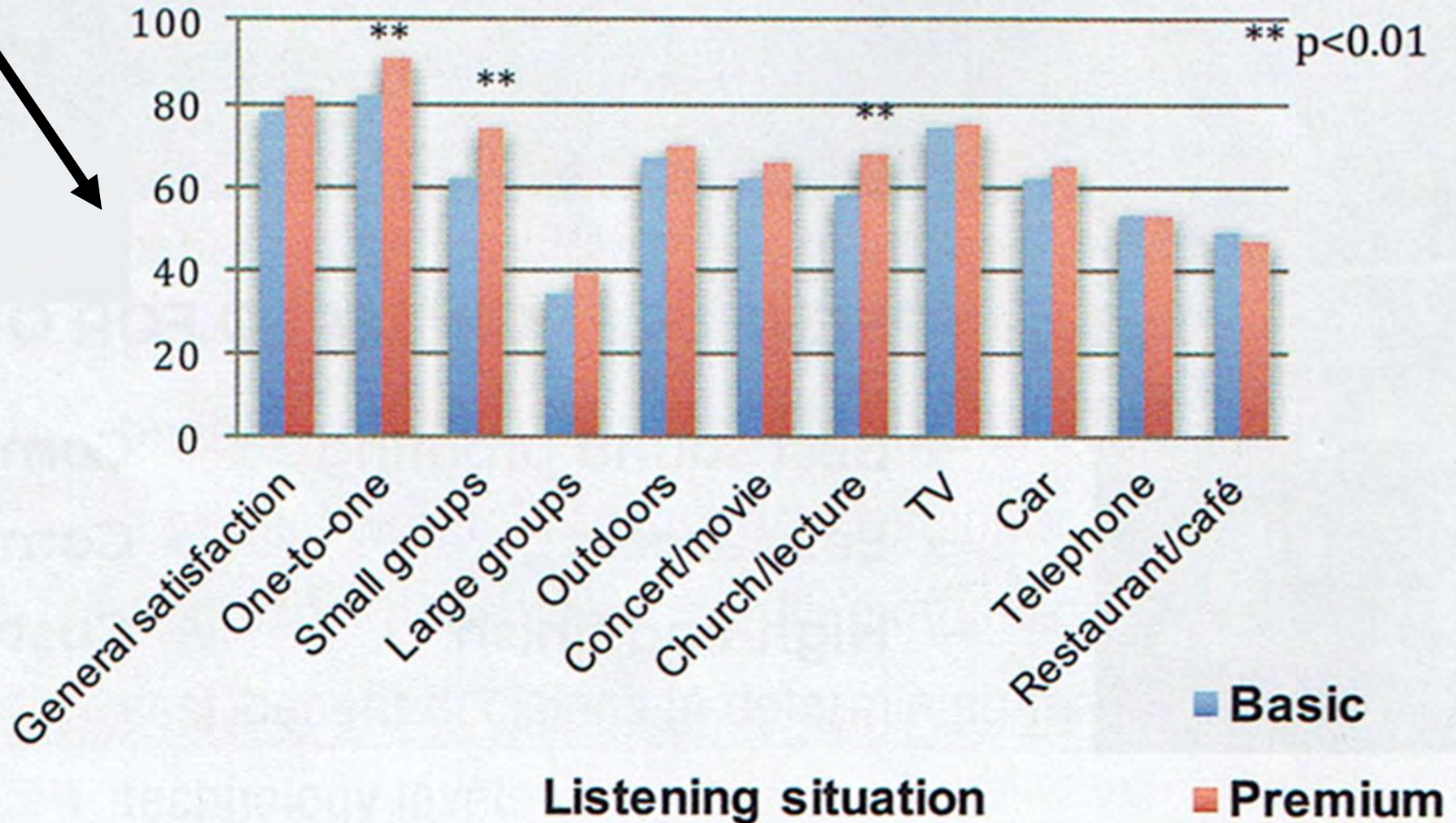
How much difficulty does your friend/relative have hearing in the following situations?

	No difficulty	Slight difficulty	Moderate difficulty	Quite a lot of difficulty	Very much difficulty	Not relevant
One to one conversation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Conversation in small groups	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Conversation in large groups	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Outdoors	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Concert/movie	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Place of worship/lectures	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Watching TV	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
In a car	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Workplace	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Telephone	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
- Landline	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
- Mobile	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Restaurant/café	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other (specify)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>



Patient satisfaction with hearing improvement across 11 different listening situations for Basic and Premium technology

% Satisfaction



What matters to users?

Listening Situations

Multiple Environmental Listening Utility (MELU)

- One-on-one conversation
- Conversation in small groups
- Conversation in large group
- Concert / Movie
- Watching TV
- In the Car
- Workplace (School)
- Telephone (Landline or Mobile)
- Restaurant / Café

Users are asked regarding the level of difficulty they experience:

- No difficulty
- Slight difficulty
- Moderate difficulty
- Quite a lot of difficulty
- Very much difficulty
- Not relevant

Hearing aid success is **highly correlated** with the ability to successfully use hearing aids in a variety of listening situations (MELU)

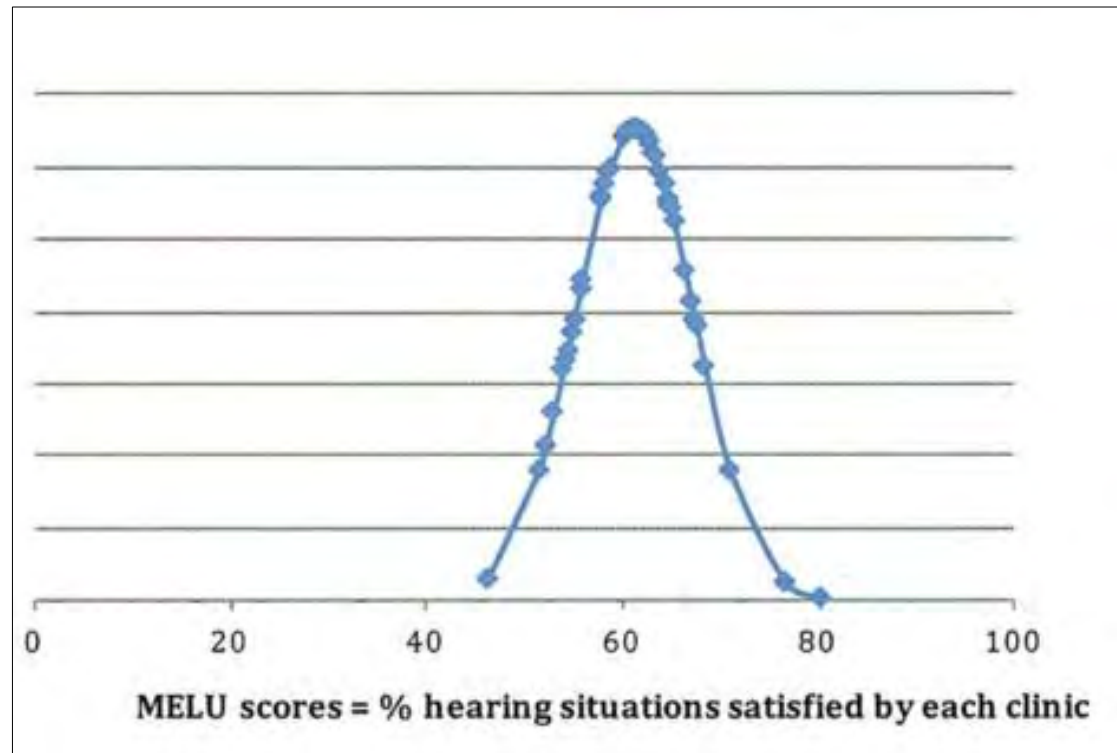
What Matters more: the Hearing Aid or the Provider?

- Evidence suggests outcome is less related to characteristics of the client (age, degree of loss, etc) *or* the technology level ***but more related to the provider***

❖ Top 10 clinics:
MELU 62.7-83.2%

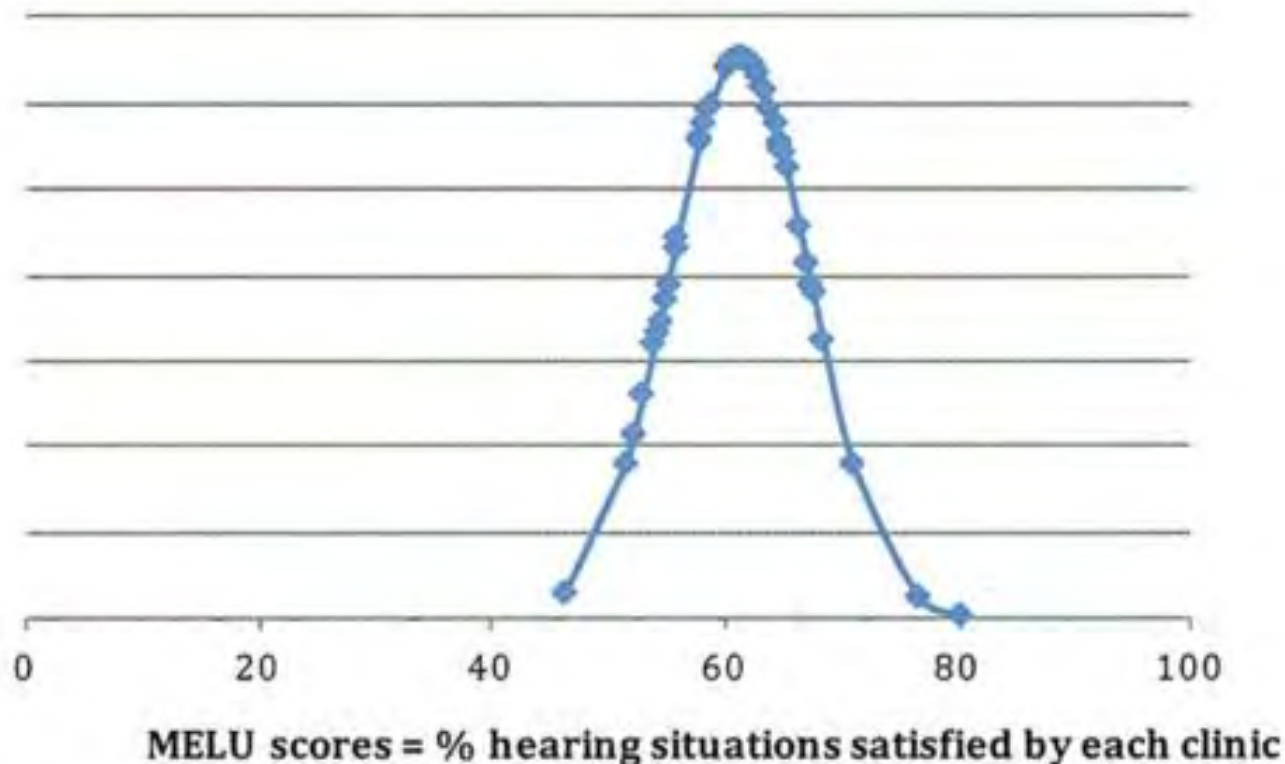
❖ Bottom 10 clinics:
MELU 37.4-59.8%

1. Clutterbuck, Sue Audiology World News EUHA Special 2017
2. Kochkin, S et al Impact of the Hearing Professional Hearing Review 2010



Why many HA users need more than hearing aids (or CI's) alone

- Even users who obtain the highest levels of satisfaction do not obtain 100% - they average 62.7-83.2%



What improves aided outcomes?

Providers who follow **Best Practices**

page 1

- Evaluation/examination of the ear and the patient's (pt) history
- Reliable and valid measures of the patient's hearing loss
- Select the right technology for pt – incl. Tcoil & accessories
- Assess the pt's hopes and establish realistic expectations
- Quality control tests of hearing aids ***before fitting***, using a hearing aid analyzer
- Determine gain and output prescriptions and verify objectively **via real-ear measurement** (REM) using a probe microphone

What improves aided outcomes?

Providers who follow **Best Practices**

Page 2

- Fine-tune hearing aids with software based on patient input and previous UCL measures
- Validate treatment with hearing aids is effective – compare pre- and post-measures using questionnaires and tests in booth
- Provide counseling & aural rehab relative to the patient's specific needs, including
 - Care and maintenance of the hearing aids,
 - Instruction on hearing aid features – via apps or pushbutton.
 - Provide information in writing how to use programs and telecoil

If Providers don't Follow Best Practices, Outcomes suffer

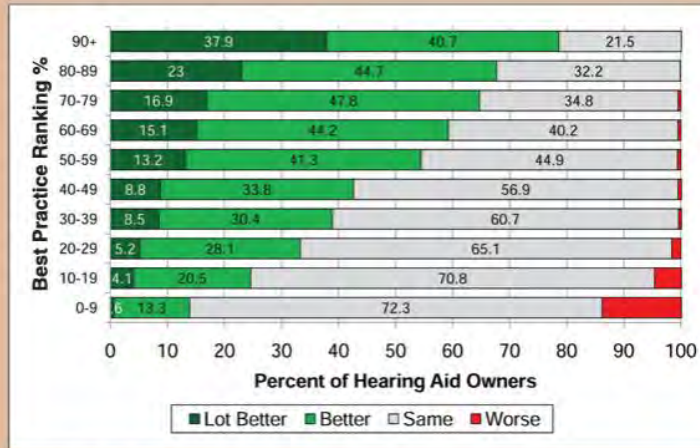


Figure 7. Quality of life changes attributed to hearing aids by hearing aid owners, segmented by composite best practices ranking scored in percentiles (n=1,808 for hearing aids LE 4 years of age)

Hearing handicap improvement never reaches 100%

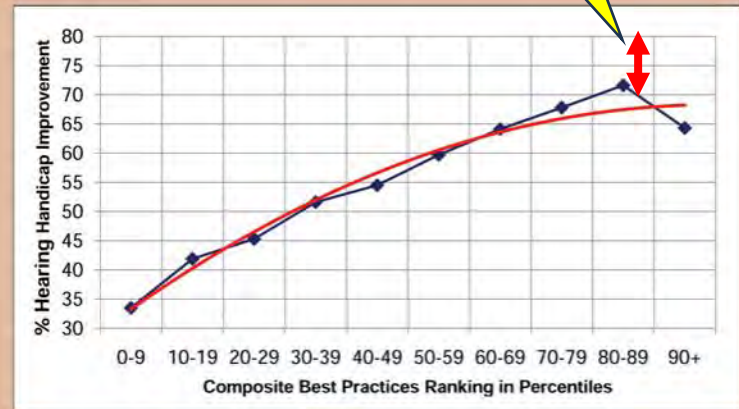


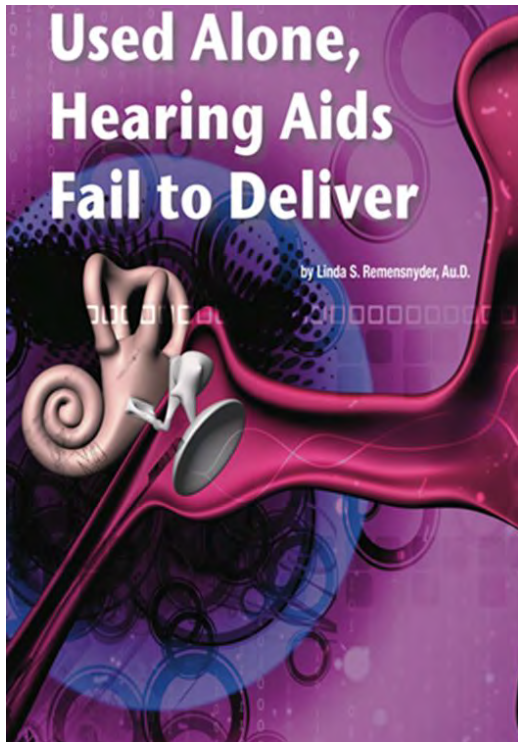
Figure 8. Hearing handicap improvement (%) segmented by composite best practices ranking scored in percentiles; (n=1,688 for hearing aids LE 4 years of age)

US data by Sergei Kochkin, PhD

www.betterhearing.org/HIA/document-server/?cfp=/HIA/assets/File/public/marketrak/Marketrak-VIII_Patients-report-improved-quality-of-life-with-hearing-aid-usage.pdf

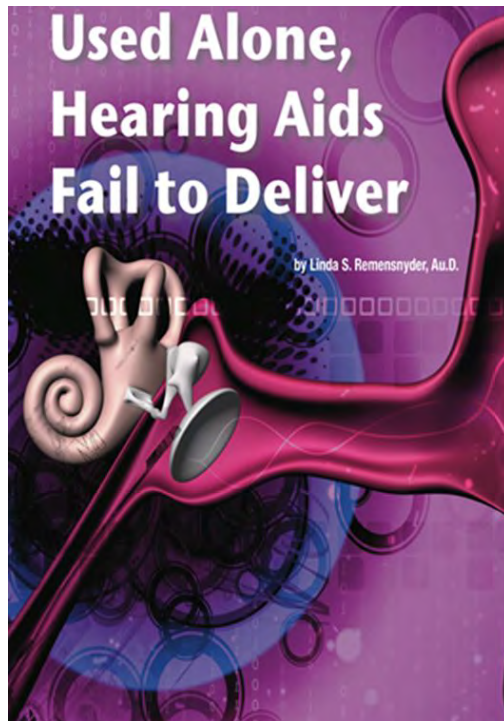
Most hearing aid and CI users need add'l assistance...to hear their best

*****Especially if they use occluding earmolds or CIs***



- Do not restore hearing to normal
- Have a limited effective microphone range
- Make all sounds louder

Used Alone, Hearing Aids Aren't Enough



Up next: overcoming these limitations

- **In personal situations**
- **In public situations**

[www.centerforhearingaccess.org/
hearing-aid-limitations/](http://www.centerforhearingaccess.org/hearing-aid-limitations/)

For situations that are important to you – Personal situation tools



Clip-on Microphone

Table Microphone



Multi-functional Microphone



Surveys show hearing TV is important



Options for TV if you own 2 different hearing devices



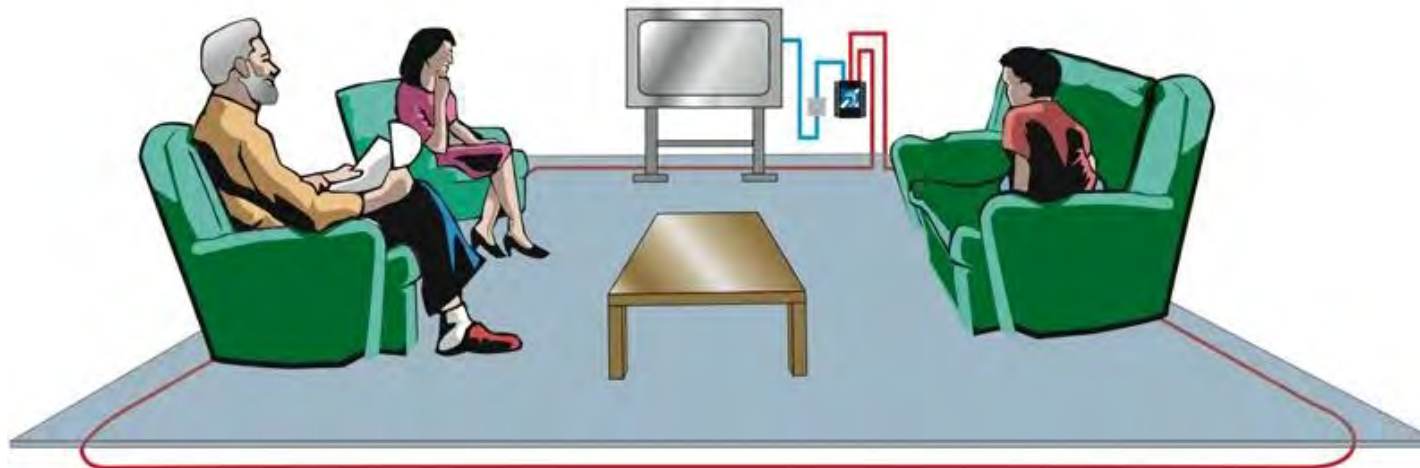
Serene TV
Speaker
(Portable)



TV Sound Bar
(Portable)



TV hearing
loop



For Public situations

Let's Explore Public Options

Current Public Assistive Listening Systems

- FM
- Infrared
- Loops
- WiFi (very rare)
- (Soon) Auracast ALS

Types of situations

- Concert / Movie halls
- Place of Worship
- Workplace
- School auditorium
- Public lecture hall
- Museums
- Airports
- ???

Auracast Broadcast Can Be Used In Two Different Ways

1. Auracast broadcast audio for **Audio Sharing** (no live sound).
 - *Examples:* Sports bar TVs and personal sharing audio. Audio sharing transmits from one smartphone or laptop computer to multiple Auracast compatible wireless earbuds, with friends and family.
2. Auracast broadcast audio used as part of an **Assistive Listening System** (ALS) (live sound).
 - *Examples:* theaters, lectures, and meetings. Auracast broadcast audio has the potential to form the basis of an assistive listening system, but it is unknown if and when various systems will be compliant with disability regulations.

*The full technical name is “**Auracast Broadcast Audio used as part of an Assistive Listening System (ALS)**” and is simply identified as **Auracast ALS** in this presentation

Auracast ALS



- There is *potential* to improve public listening
- Less \$\$\$ to install - although microphones are costly, and their placement will require AV expertise
- Auracast transmitters will be easier to install than HLs
- ***Should*** work with different brand HA's & CI's
- Should also work with consumer wireless earbuds JBL, Sennheiser, Samsung – and, hopefully soon, **Apple iPods**
- What makes Auracast so unique is that Consumers will (soon) own these mass-produced Auracast receivers



Auracast may be here, *but...*

- It is early days
Very few Auracast transmitters exist on the market today
- It will take time to become established – estimates range from 3-to-5 to *10 years*
- For most, it will mean purchasing new hearing aids/CIs
- Will – likely – require the purchase of new cell phones
- If a “one push on the hearing aid” button solution is not invented, Auracast may be too techie to handle for some
- Practical – real-world - studies are needed

What's still needed for Auracast ALS to be available and usable?



- **International Standard**

The International Electrotechnical Commission (IEC) 60118-17 is yet to publish guidelines for Auracast like they have done for hearing loops. These guidelines are slated to be released in **December 2027 and will** finalize guidelines regarding latency limits, sound quality, connectivity requirements, and more.

- **Dedicated Auracast ALS stream** option from Auracast transmitters – *not yet developed*

Consumers need unique ALS sound mix w/ enhanced SNR – in large venues, this is not simply plug & play

- **Direct-to-hearing instrument connections are strongly preferred** (w/o handshake device) – *not yet developed*. Not known if M + A capability will be standard. Users need to be able to quickly switch back and forth between M, A or, a mix of M+A (M=microphone, A=Auracast) – like current “M + Telecoil” setting

- **Third-Party verification**

Practical, reputable third-party studies that include people with hearing loss (PWHL) need to confirm all transmitters, receivers, and hearing instruments* can work together so that *any* Auracast transmitter – regardless of brand or manufacturer can be used with *any* hearing aid receiver.

- **End-to-end latency needs verification**

Must be acceptable for ALS users; as a rule of thumb (currently under review), it should be less than ~30-40ms. This includes microphones, sound systems or audio-visual equipment, Auracast transmission, smartphones or receivers, and hearing instruments.*

- **Educated User Base**

Be informed by the MFR[†] and educated by their audiologist^{††}

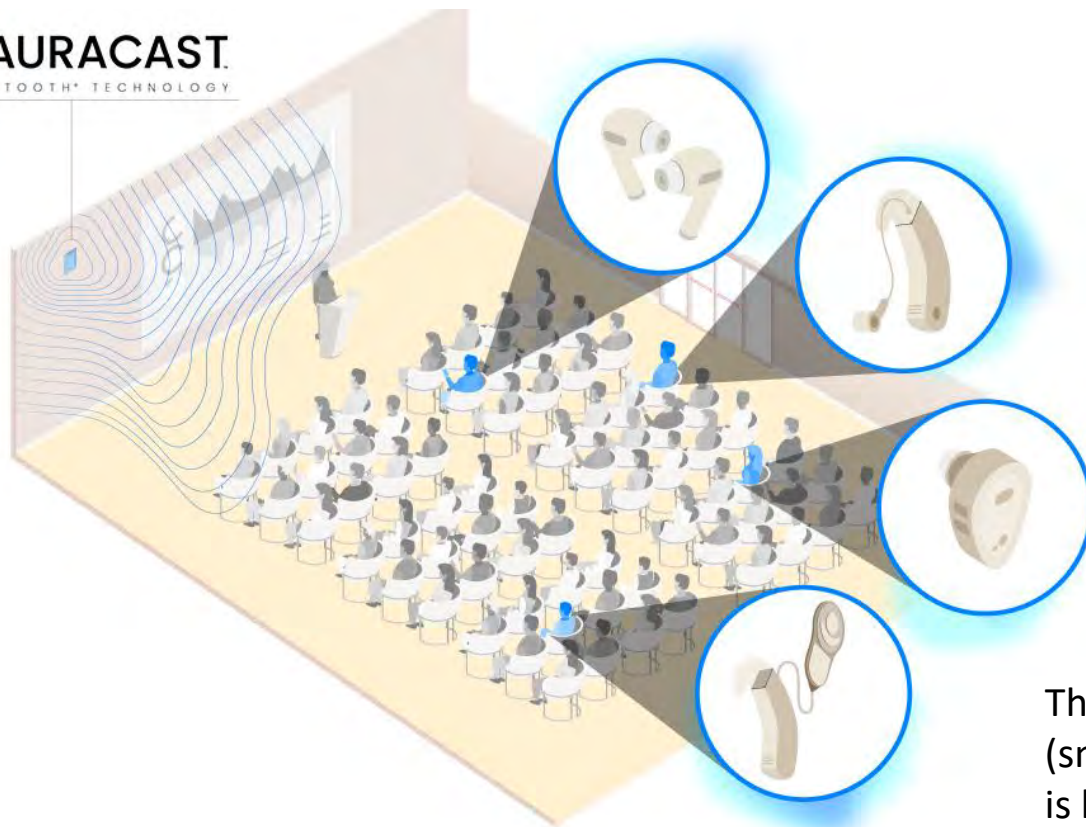
*Hearing aids (prescription or OTC), cochlear implants, and bone conductive devices.

† Information on telecoil and Auracast ALS benefits be explained in the user-instruction guide provided by the hearing instrument manufacturer.

††As per EN15927 “Services offered by hearing professionals,” the practitioner will demonstrate the telecoil (and a future Auracast ALS).

The ideal scenario with Auracast

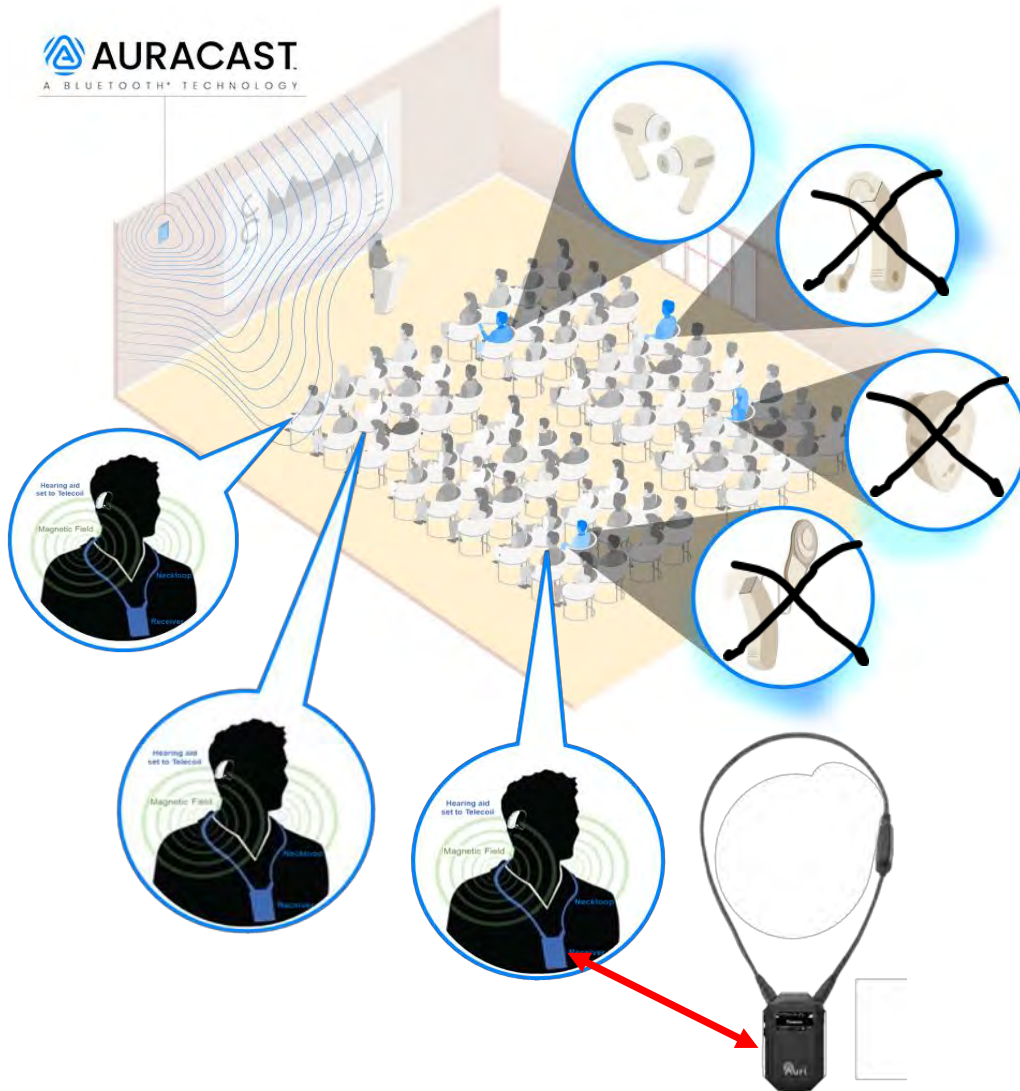
 **AURACAST.**
A BLUETOOTH® TECHNOLOGY



The need for an intermediary device (smartphone, smartwatch, remote, etc.) is highly likely.

Without an intermediary device, there will be no **direct** connection between the hearing instrument and Auracast Broadcast Audio.

Most likely Auracast ALS scenario for the **foreseeable Future**




If most hearing aids or CIs are currently incompatible with Auracast, **everybody** must borrow a receiver from the venue.

Auracast will then initially function as an FM system requiring most users to borrow an Auracast receiver with headphones or a neckloop.

**Auracast receiver:
use with telecoils & neckloop**

Sydney Opera House Introduces Auracast™, Transforming Hearing Accessibility in a World-First for a Cultural Institution


 The Hearing Review

Sydney Opera House Now Offering Auracast for Live Performances

Summary: The Sydney Opera House has become the first cultural institution to implement Auracast broadcast audio.

2 weeks ago

 **HEARING**
HEALTH & TECHNOLOGY MATTERS
Get HHTM Weekly,
subscribe email

 Samsung Newsroom

New technology transforms assisted listening experience for live performance, with Samsung

Samsung was thrilled to support the Sydney Opera House, making live performances more accessible.

4 days ago





The Sydney Morning Herald

Sydney Opera House uses Auracast Bluetooth technology to help hearing-impaired patrons in world first

World-first Bluetooth technology at the Sydney Opera House has opened up a world of new experiences for hearing-impaired patrons.



(March 18, 2025)





The Sydney Morning Herald

Sydney Opera House uses Auracast Bluetooth technology to help hearing-impaired patrons in world first

World-first Bluetooth technology at the Sydney Opera House has opened up a world of new experiences for hearing-impaired patrons.



(March 19, 2025)





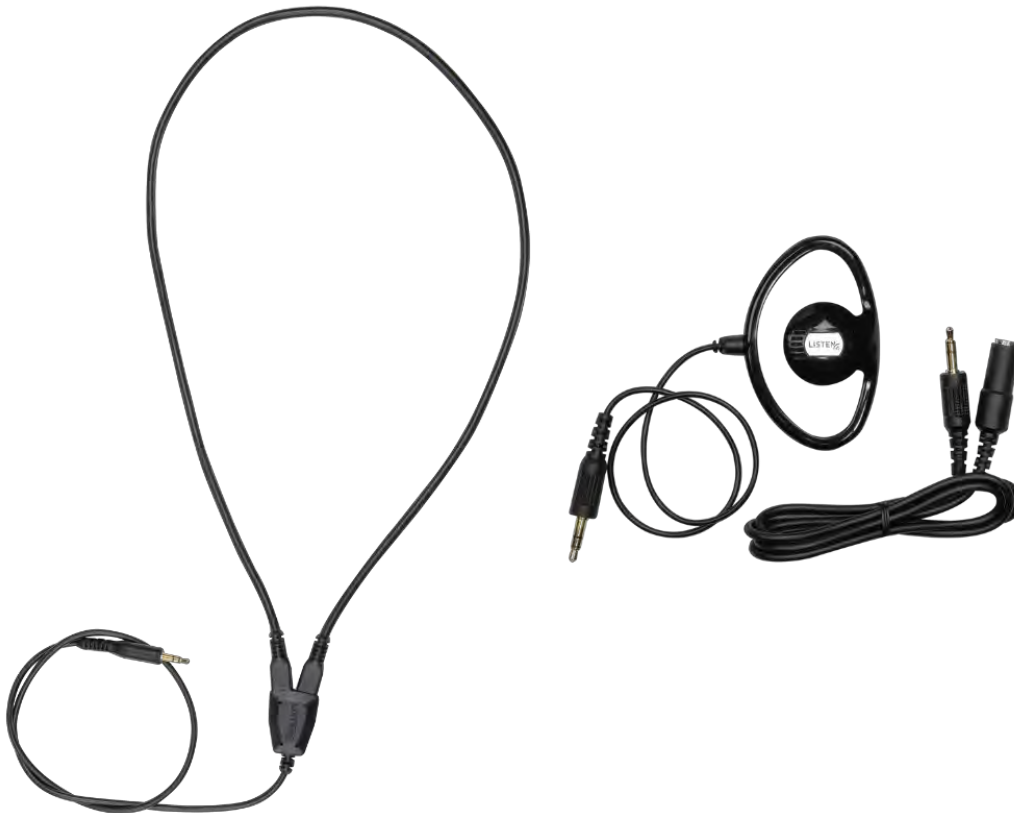
The Sydney Morning Herald

Sydney Opera House uses Auracast Bluetooth technology to help hearing-impaired patrons in world first

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(March 18, 2025)



HEARING ASSISTANCE
RECEIVERS AVAILABLE
UPON REQUEST OR
JOIN WITH YOUR OWN
AURACAST™ ENABLED
DEVICE



Powered by Ampetronic and Listen Technologies

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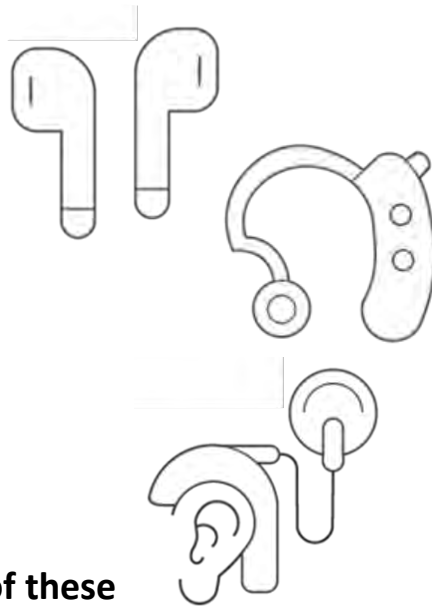
How to connect to Auracast™ with compatible instruments

Auracast

A new way to connect to PA (sound) systems

Option A

- Hearing instruments **WITH** Auracast*
- Use your smartphone or borrowed intermediary device to select the Auracast stream
- Switch to the Auracast stream in your hearing device



One of these



A smartphone app

How to connect to Auracast™ with incompatible instruments

Auracast

If your hearing aids are *not* Auracast compatible but include Telecoils

You can STILL benefit

Ask for an Auracast listener with a neckloop



 AURACAST
A BLUETOOTH® TECHNOLOGY

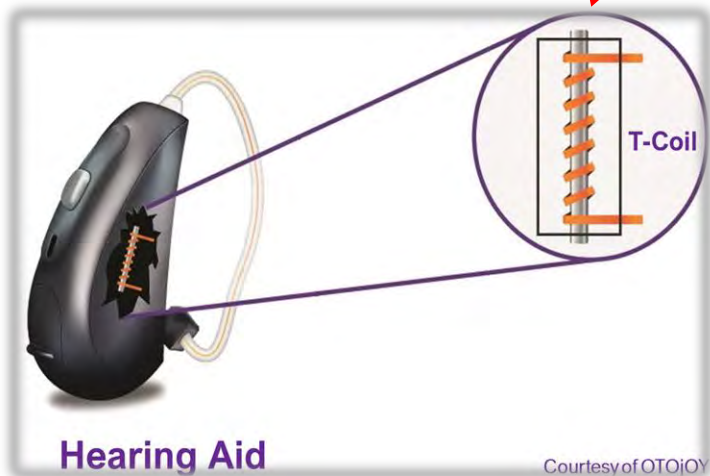


WILLIAMSAV



If Auracast ALS can be used w/ neckloops, access to a Telecoil *is essential*

Telecoil or T-Coil



Consumer Organizations have been pleading for inclusion of Telecoils since 2009

Center for Hearing Access
— at The Sound Institute

U.S. Declaration
ADA-Access-Ready Hearing Instruments
Auracast™ and Telecoils



We declare that as people with hearing loss:
We have the right to hear, anywhere in the world, today and in the future, using public or private assistive listening systems.
We must have hearing instruments* that connect directly and easily via both Auracast and telecoils to assistive listening systems. Only these are "ADA-Access-Ready" hearing instruments.

The criticism
To ensure access for all, it is critical that both Auracast and telecoils be included in hearing instruments for at least the next decade and beyond. We aim to ensure that people with hearing loss can benefit from both current and emerging technologies to guarantee equal access to communication for everyone, for years to come.

Both technologies are crucial in ensuring high-quality American with Disabilities Act (ADA)-accessible audio environments for individuals with hearing loss in public and private spaces. Combining both technologies gives every person with hearing loss the option to access existing ADA-compliant hearing systems (hearing loops, FM/DM, and infrared systems) or the capability to access the emerging Auracast wireless audio technology. This ensures hearing and universal access in the United States and across the globe.

Since 2009, national and international groups have written multiple declarations about the criticality of including BOTH telecoils and Auracast. This declaration marks that essential new technology.

The purpose of this document

- To save hours and thousands of dollars in traveling instrument users' time because of decisions by others, "Noting about us without us."
- To help guide future changes to assistive listening systems.
- To help guide the inclusion of emerging technologies, such as Auracast.
- To have a comprehensive declaration for the United States. <https://nationaldeclaration.org/statements>

Distribution: cochlear implant, hearing aid, and AUA manufacturers; professional national organizations for audiologists and hearing instrument specialists; advocates; and others.

www.nationaldeclaration.org

Page 1

EFHOH
EUROPEAN FEDERATION OF HARD OF HEARING PEOPLE

on Statement on Auracast and Telecoils

Call for balanced approach

The European Federation of Hard of Hearing People (EFHOH) is committed to advocating accessible assistive listening technologies that ensure full participation in public and for people with hearing loss. With the development of new technologies such as "A", we are observing worrying suggestions that hearing loops, and Telecoils side access to them are no longer needed as new systems are going to replace EFHOH calls for a balanced approach that integrates promotion of both to maintain accessibility across various settings.

EFHOH calls on hearing aids and Cochlear Implants manufacturers to maintain of telecoils in their devices for foreseeable future. Telecoils are an essential access to hearing loops and other assistive listening systems currently in use by hearing people. Removing telecoils too early risks cutting off access to proven and reliable technologies like Auracast™ are fully integrated and reliable, strongly advocates for the continued inclusion of telecoils in hearing aids and implants for at least the next decade to ensure access for all.

EFHOH offers advanced Bluetooth connectivity, allowing hearing aid users to stream audio from multiple sources, enhancing flexibility in both public and private spaces. Despite these innovations, Telecoil remains an essential accessibility feature for many, offering clear, reliable sound in public spaces relying on hearing loops. Both solutions will allow hard of hearing people to use their existing hearing aids which meet their needs and personal preferences, ensuring flexibility and access.

This aligns with the principles outlined in the [Budapest Declaration](#), presented at the 2022 World Congress of International Federation of Hard of Hearing People which emphasizes the need for Telecoils to remain in use alongside Auracast™. Telecoil technology is universally available and fully functional. EFHOH fully endorses the Budapest Declaration and continues to call for telecoils to be included in hearing aids and cochlear implants during this transitional period.

HARD OF HEARING PEOPLE

sinosz
Siketek és Nagyothallók Országos Szövetsége

Budapest Declaration – IFHOH World Congress 2022

Auracast – New Bluetooth Technology: Implications for Hard of Hearing Persons

At the 2022 IFHOH World Congress in Budapest Hungary, IFHOH praises the Bluetooth SIG for its work with the European Hearing Instrument Manufacturers Association (EHIMA) toward creating a wireless universal technology, known as Auracast, that promises to assist hard of hearing individuals to hear better in venues where their hearing aids and cochlear implants are insufficient to function.

It is understood that the Auracast concept may offer several useful and innovative features currently unavailable to the hearing aid user, such as the ability to transmit different languages, captions, audio descriptions, better quality of sound, and even stereo listening. IFHOH will be glad to help make Auracast a success. Until it becomes widely available and proves its promises to the satisfaction of all concerned, it is important that the globally used and proven systems of Hearing Loops, FM, IR + Telecoils, not be dismissed. As a new technology, Auracast will take time to become stable, reliable, and easy enough to use for potential users. Therefore, it is important to have both Telecoil and Auracast technologies in hearing aids and cochlear implants, until most hard of hearing users will feel they can rely on the new Auracast technology.

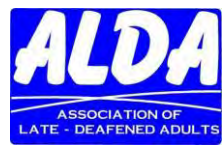
The Telecoil is the key element that enables all types of systems to work for Hard of Hearing persons. IFHOH recommends that manufacturers of hearing aids and cochlear implants continue to integrate Telecoils in their products. Telecoils need to come with clear user instructions, and with clear information and training to the hearing health professionals.

IFHOH foresees a world where FM, IR and hearing loop systems (including those found in taxis, ticket counters, airports, theatres etc.) will function for the foreseeable future alongside Auracast systems. Therefore, all assistive listening systems, hearing aids, and cochlear implants need to be A+T (Auracast + Telecoil) compatible.

Avi Blau - President of IFHOH
Dr. Adam Kosa - President of SINOSZ

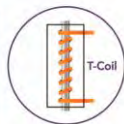
International Federation of Hard of Hearing People (IFHOH)
IFHOH is an international, non-governmental organization, which represents the interests of more than 466 million hard of hearing people worldwide. Email: info@ifhoh.org Website: www.ifhoh.org

The National Association of the Deaf and Hard of Hearing in Hungary (SINOSZ)
A member of IFHOH - Works to promote the social integration of deaf and hard of hearing people in Hungary. Website: www.sinosz.hu



“ADA-Access-Ready” Instruments include both Telecoil (T) ***and*** Auracast (A)

- **Best if both technologies (T&A) are embedded inside the HA/CI** *not* merely offered in an accessory device.
- **Direct-to-hearing instrument connections still needed**
Best if **no intermediary device** is required, at least for connection to the dedicated assistive listening stream.



Find the ADA Access Ready hearing aids list on www.CenterforHearingAccess.org

Demand them from your providers

Center for
Hearing Access
at The Shedd Institute

"ADA-Access-Ready" Hearing Instruments List

Empowered

We unequivocally advocate for the manufacturing and fitting of "ADA-Access-Ready" hearing instruments that connect to ADA assistive listening systems via telecoil (hearing loops, FM, and infrared), and in the future, potentially Auracast™ technologies. These fully "ADA-Access-Ready" hearing instruments will require:

1. Both telecoil and Auracast connectivity embedded in the hearing instruments, and not merely offered in an accessory device.
2. Direct-to-hearing instrument connections for both telecoils and Auracast. No intermediary device required, at least for connection to the dedicated assistive listening stream.



Auracast™ Broadcast Audio used as part of an Assistive Listening System (ALS) is a future option for facilities. To date, there are no sites that have installed this technology.

- [What is needed for Auracast streamed ALS to be available and usable](#) (2 pages)
- [Assistive Listening Systems Quick Guide](#) (1 page) Easily compare 5 ALS

The hearing device brands and models listed below come equipped with a telecoil, and some have added Auracast capability. Instruments that have a telecoil in an accessory are not included because they are one more thing to remember, charge, and troubleshoot – as well as adding complexity and barriers for individuals with limited dexterity, limited cognitive abilities, or limited tech familiarity.

The Center for Hearing Access does not endorse any device. For hearing aid reviews, visit [HearingTracker](#) or another reputable review website. For cochlear implant comparison, visit [Cochlear Implant Help](#) or [American Cochlear Implant \(ACT\) Alliance](#). Please email revisions and additions to the Center for Hearing Access.

"ADA-Access-Ready" Hearing Instruments [telecoils]

ADA-compatible devices: Telecoils create connectivity to ADA-compliant assistive listening systems (hearing loops, FM, infrared), now and years into the future.

Hearing Aids

- Audicus, Omni 2
- Lexie Lumen, OTC
- Miracle-Ear, CONNECT™ BTE SP 13 EV
- Oticon, Real, miniRITE R, miniRITE T, miniBTE R, miniBTE T
- Philips, HearLink 9040 (included); ITC, ITE HS, ITE FS (option)
- Phonak, Naída L-SP and L-UP; Audeo L-RT
- ReSound ENZO Q, LigoTM
- Signia, TruHearing, Horizon IX, RIC 7AX
- Starkey, S Series RIC; Genesis AI RIC RT, Evolve BTE/RIC

www.CenterForHearingAccess.org

Center for
Hearing Access
at The Shedd Institute

"ADA-Access-Ready" Hearing Instruments List

Cochlear Implants

- Advanced Bionics
- Cochlear, N7
- Med-El, Sonnet 2

"ADA-Access-Ready" Hearing Instruments [Auracast and telecoils]

Future need: In the future, if you decide to purchase new hearing instruments, consider adding Auracast in addition to your telecoil. These brands currently offer models with Auracast-ready or -enabled capability.

Hearing Aids

- Beltone, Serene SERx64-DRW
- Jabra Enhance 20 RIE 62
- Oticon, Intent
- Phillips, Hearlink 9050
- ReSound, Nexia, disposable battery
- Rexton, Reach optional telecoil
- Signia, TX
- Starkey, Edge AI: RIC RT & CROS, ITE R

Cochlear Implants

- Cochlear, N8

Reviewed by Juliette Sterkens, AuD

Center for the Center for Hearing Access

In 2024, the nonprofit Center for Hearing Access is a national advocacy and education organization of The John G. Shedd Institute in Eugene, OR. We champion and educate users, sites, lists, and hearing instrument specialists about all ADA-compliant assistive listening systems and strategies to increase access to theaters, libraries, conferences, government offices, places of worship, and other public and private spaces. Effective hearing access can be gained for people with hearing loss to maintain community engagement.

v1, Rev. 1/25/25

www.CenterForHearingAccess.org

A Push for Hearing Devices That Are 'ADA-Access-Ready'

By Wynne Wyman

I am a patient with long-term progressive hearing loss, using a cochlear implant and a hearing aid. It took 20 years for me to learn about assistive listening systems, which started my individual advocacy and over the years, evolved into my current role at the Center for Hearing Access, a national advocacy and education nonprofit.

In my routine conversations with other users of hearing devices and patients with hearing loss, I have found that the vast majority are abysmally unaware they have the right and option to best receive clearly in public and

Using a Hearing Loop

If you have hearing instruments **WITH** a telecoil:

Switch on the telecoil program.

Enter program



If you have hearing instruments **WITHOUT** a telecoil, or if you are **WITHOUT** hearing instruments:

Borrow a hearing loop receiver and headphones from the facility.

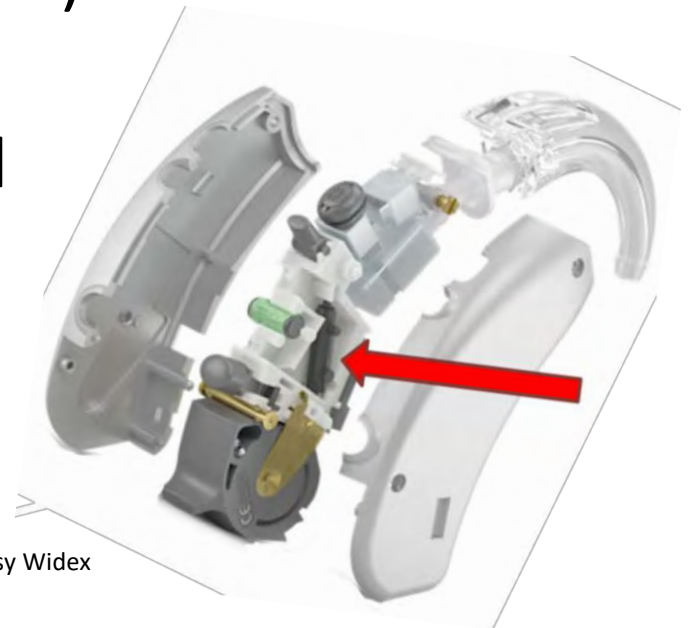
Optional: Bring your own wired headphones or earbuds.



The Telecoil

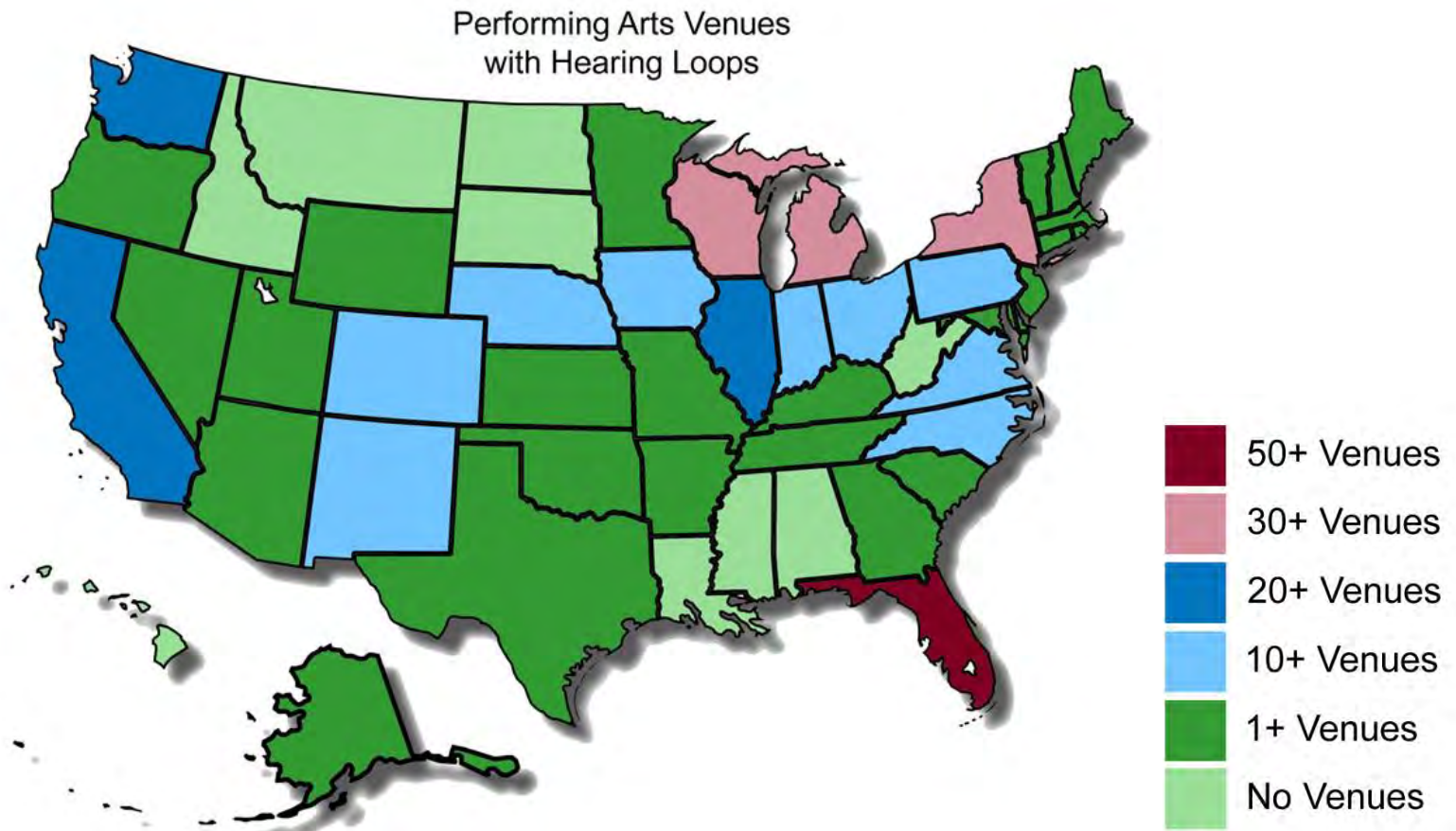
A fabulous transducer for many reasons...

- Offers a wireless connection to hearing loops
- T Coils + Neckloops (RF, FM, IR)
- Energy Efficient
- When properly programmed sound GREAT
- Useful the world over!!!



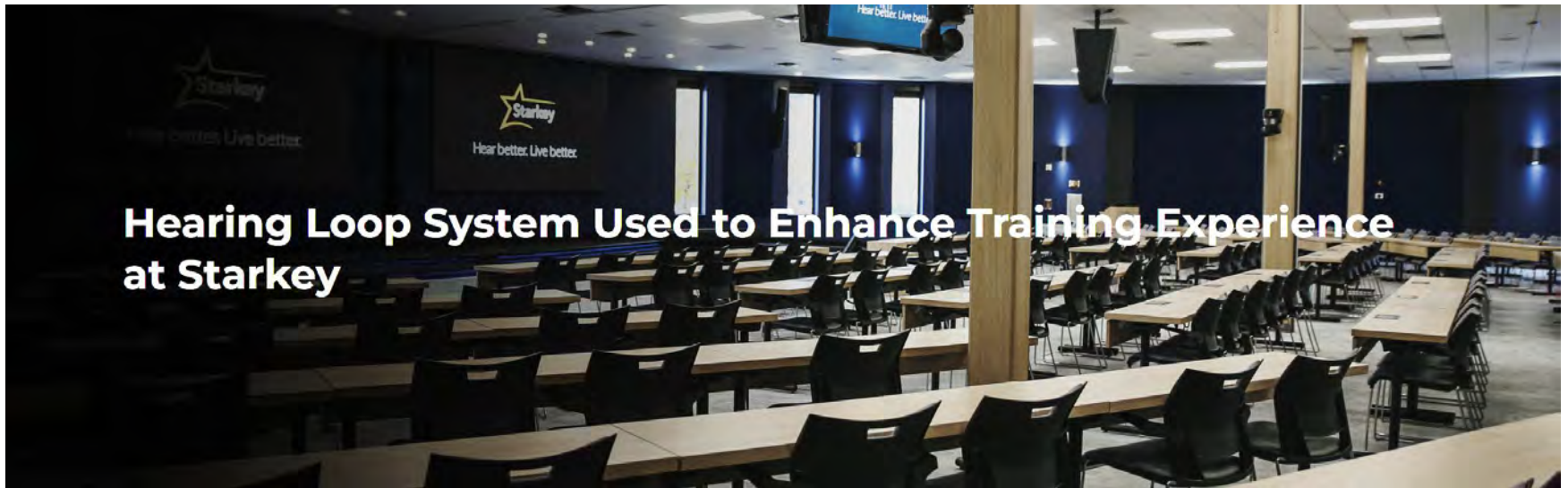
Courtesy Widex

In the US – More Theaters are using Hearing Loops



Over 440 looped theaters: www.centerforhearingaccess.org/uploads/LoopedLiveVenues.pdf

Even large MFRs offer Hearing Loops in their facilities (Starkey HQ, Oticon in NJ)



Where to find Hearing Loops?

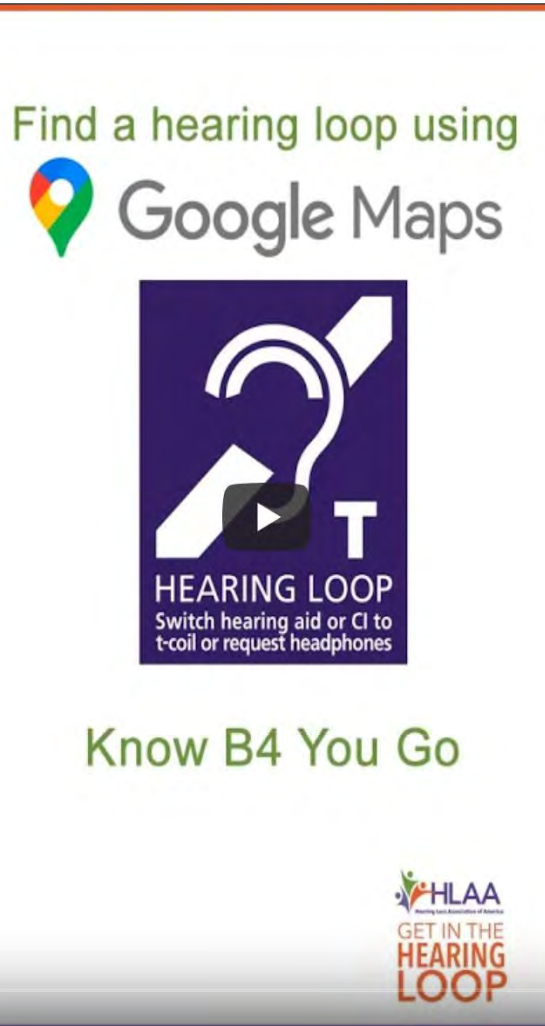
www.centerforhearingaccess.org



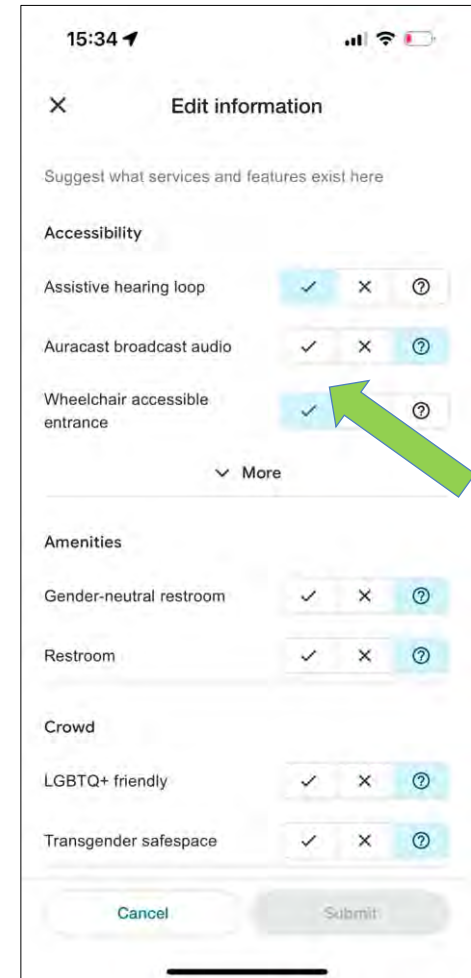
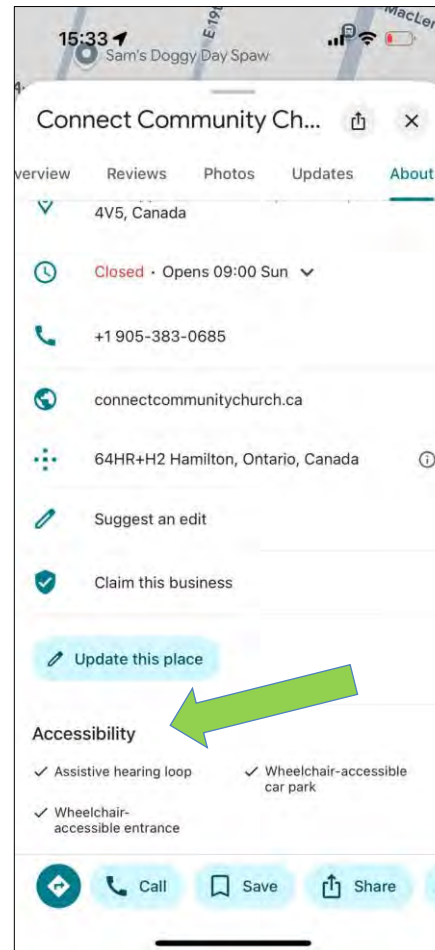
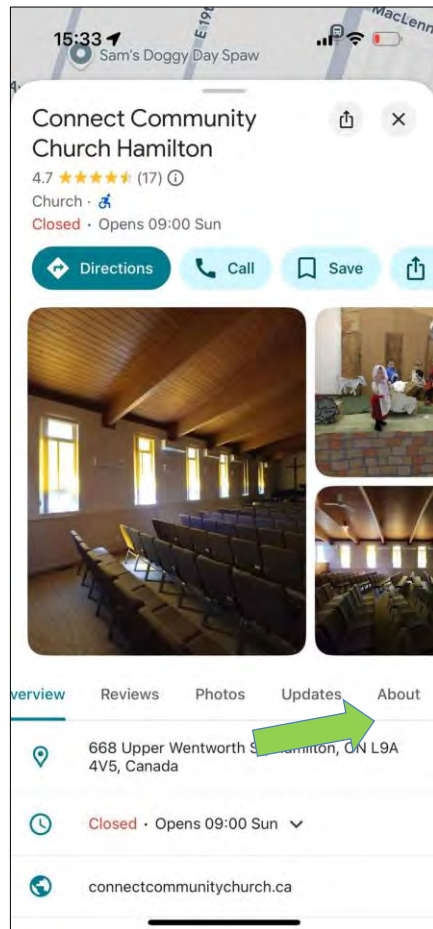
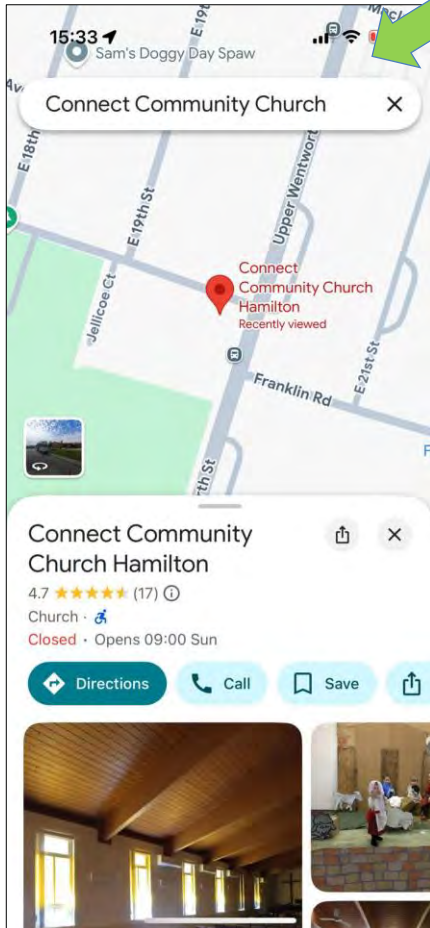
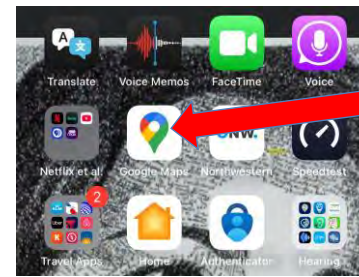
Use the
Google Maps app

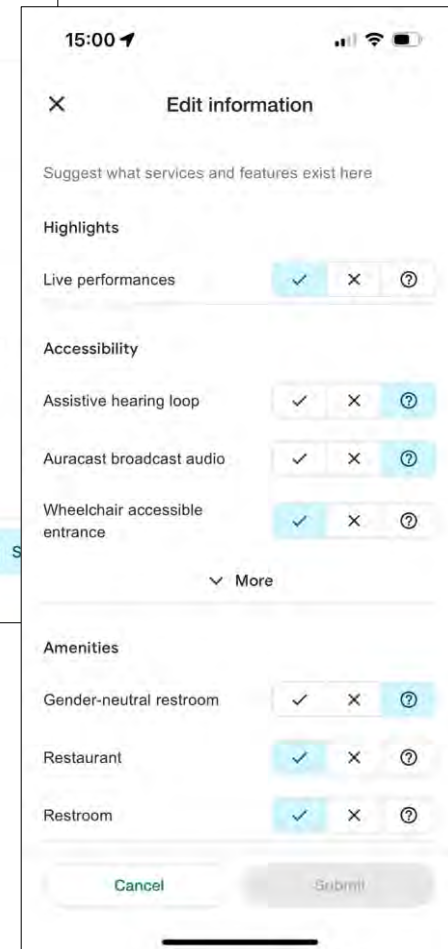
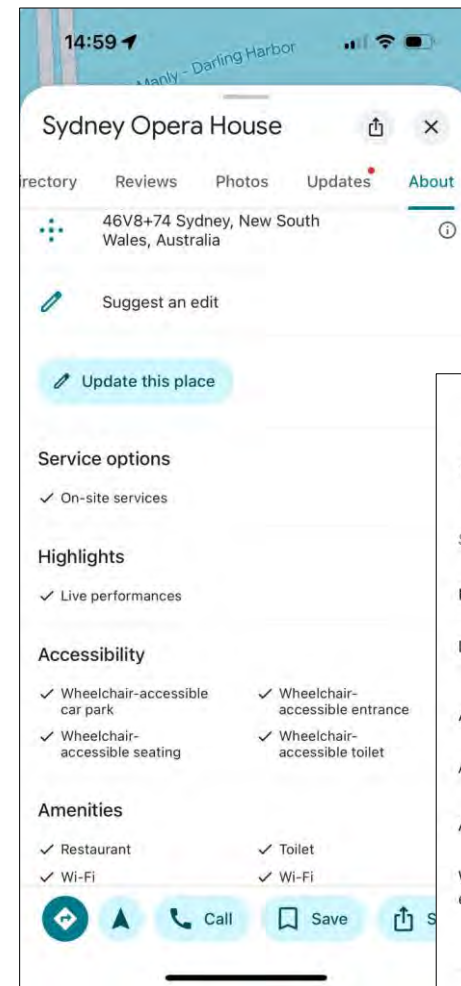
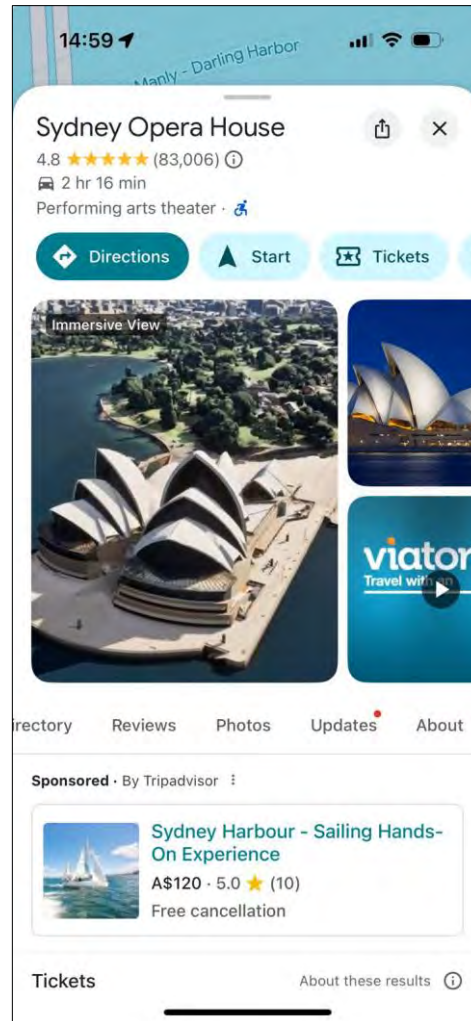
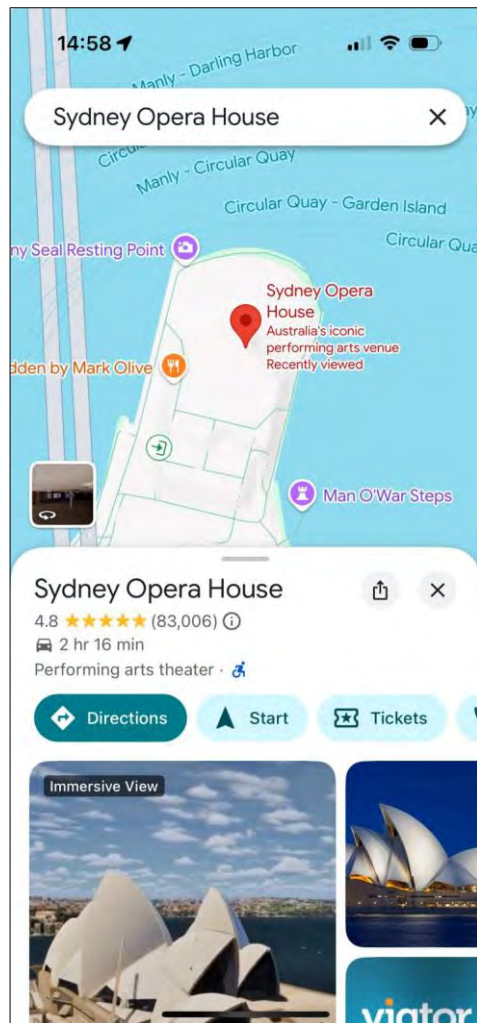
[www.centerforhearingaccess.org/
uploads/google-maps-now-
includes-hearing-loops](http://www.centerforhearingaccess.org/uploads/google-maps-now-includes-hearing-loops)

- <https://www.youtube.com/watch?v=5iZT7eJKeg8>



Open the Google Maps app



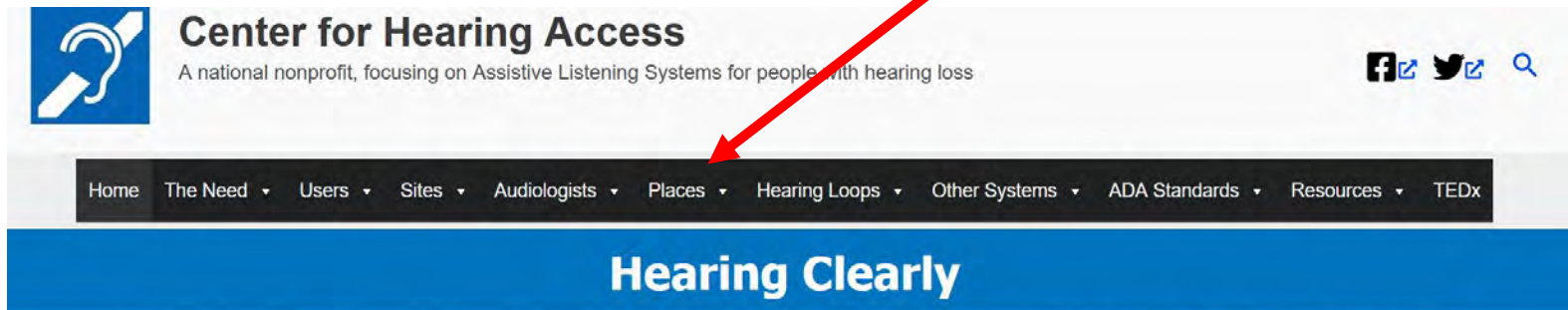


Templates - Consumer Inquiries about Assistive Listening

- Type of language to use
- Ask your audiologist or HIS for telecoils
- Thank you after using an ALS
- Inquiries about assistive listening availability
Type of system, need for neckloop
- 2nd inquiry – reply to nonsense response or ASL offer
- Advocate for system – new project or remodeling
- Request accommodations at meetings, or a job
- Info for facilities


<https://centerforhearingaccess.org/templates/>

Traveling? Find Hearing Looped locations in the USA & Canada under “Places”



Assistive listening systems clarify sound by eliminating the negative effects of distance, noise, and reverberation.

Assistive Listening Systems Quick Guide

	Hearing Loop	FM	Infrared (IR)	Wi-Fi	Auracast as ALS*
People with hearing loss					
Easy to use, with one push button on hearing aids or cochlear implants	✓				Yet to be solved
User needs no extra equipment from facility	✓ [†]				Extremely few hearing aid users have Auracast; receivers required for foreseeable future and for those without devices
Does not need a smartphone or app	✓	✓	✓	If receivers provided	If receivers provided
Minimal latency (end-to-end sound delay)	✓	✓	✓		Latency varies depending on transmitter model, settings, and receiving device. Typically > 30 ms
Meets ADA standard 	✓	✓	✓		Under investigation
Hearing instruments can connect using built-in telecoils (systems are required to be hearing-aid compatible)	✓	✓ ^{††}	✓ ^{††}		When used with receiver and neckloop; needed for foreseeable future
Installed in facilities, in 30+ countries	✓	✓	✓	Limited	Extremely few but should increase over next 5-7 years

* Auracast streamed assistive listening is an emerging technology. The full technical name is "Auracast™ Broadcast Audio used as part of an Assistive Listening System (ALS)." It can be installed alongside an existing ALS. See [Auracast Streamed ALS](#) (webpage) for more information.

† For ADA-Access hearing instruments with telecoil-enabled hearing instruments (hearing aids, cochlear implants, and bone conductive devices). A list of [hearing instruments](#) (3 pages, pdf), with telecoils and Auracast, is available.

†† When used with a neckloop.

Assistive Listening Systems Make a Big Difference

Sue B.

Spouse of a hearing
loop user.

Oshkosh WI

Thank you Juliette, The TV hearing loop has made such a difference for my husband. Now when I miss a word or sentence in a show, I ask him what was said and he usually always hears what I missed. Great difference for me, too, volume is normal again!

Subject: Your TED talk changed my husband's world
Size: 83 KB

Thank you for priceless info you generously made available to wide audiences devices that make seemingly weak hearing aids gain effectiveness!!! My husband very expensive and carefully adjusted...

User quote

"Assistive communication technologies have given me my life back.

Hearing aids alone do not allow me to adequately and safely live in the hearing world."

Frazier, S. et. al. Committee for Communication Access in America.
Survey Sheds Light on Why Many People with Hearing Loss
Don't Use Assistive Communication Technology January 2024.

Sr. R, bilateral
hearing aid user
Oshkosh WI

"If people in church only knew how much better loops make us hear, they would have them installed. I stopped attending at St. R's because I just cannot hear the sermon."

~~Telecoils or Auracast?~~

Future Proof Yourself!

Telecoils *and* Auracast?

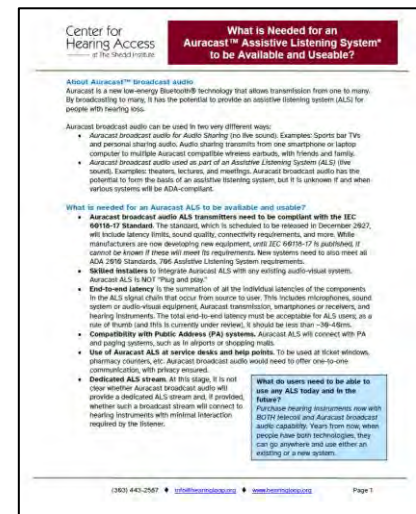
For Hearing Access (next 5-10 years) ***users need both***

- Own hearing aids with telecoils? You're all set – in places with Auracast – demand neckloop receivers
- In the market for new hearing aids/CIs? Get new ones that are Auracast-ready *and* include built-in Telecoil
Demand demonstration on how to use BOTH
- Looking to replace your Cochlear Implant(s)?
Verify they are Auracast ready *and* include a T-coil
- Looking to replace your smartphone? Make sure it is BT LE Audio / Auracast compatible
- Don't need HA's yet? Obtain Auracast earbuds

Thank you for your attention!

Resources

[What is needed for an Auracast ALS to be available and usable](#)
Center for Hearing Access (2 pages, pdf)



- **Center for Hearing Access** www.CenterforHearingAccess.org
 - Champions and educates communities about ADA-compliant assistive listening systems and other strategies to increase access to theaters, conferences, libraries, government offices, courtrooms, and other public and private spaces.
 - Provides advocacy materials, ADA information, a speaker's bureau, videos, templates for users and owners/operators, accessibility language for websites, articles, audiology resources, vendor lists, etc.
- **Hearing Loss Association of America (HLAA)** www.hearingloss.org
 - Provides information, education, support, and advocacy for users.
 - Hearing Loop toolkit. Hearing Assistive Technologies. Free newsletter.
- **Articles, papers, and video**
 - Juliëtte Sterkens, TEDx talk. [What you don't know about hearing aids](#) March 2024.
 - Kauffman, T. Hearing Review. [How 'Public Access Ready' Hearing Aids Could Offer a Competitive Edge](#) March 2024.
 - European Standard EN 15927:2010 (E) *Services offered by hearing aid professionals*
 - www.HearingTracker.com Sterkens, **Auracast is Here! Now What? (this week)**
 - Sterkens, Whyman - www.canadianaudiologist.ca/helping-people-hear-anywhere-with-telecoils-and-auracast/