

Welcome to our workshop



Hearing Loop Track Sponsored By:



An overview of the looping movement inspired
by



Speakers:

Anne Pope – Chair, Get in the Hearing Loop Task Force

Stephen Frazier - Hearing Loss Support Specialist

Juliëtte Sterkens - Doctor of Audiology

Hearing Loop Track Sponsored By:



The GITHL Task Force

Barbara Kelley, HLAA Executive Director

Anne Pope, Committee Chair

Toni Barrient

Jerry Bergman

JoAnne DeVries

Richard Einhorn

Peggy Ellertsen

Steve Frazier

Lise Hamlin

Karen MacLennan

David Myers

Cheri Perazzoli

Ellen Semel

Juliette Sterkens

Hearing Loop Track Sponsored By:



The GITHL Task Force

Barbara Kelley, HLAA Executive Director

Anne Pope, Committee Chair

Toni Barrient

Jerry Bergman

JoAnne DeVries

Richard Einhorn

Peggy Ellertsen

Steve Frazier

Lise Hamlin

Karen MacLennan

David Myers

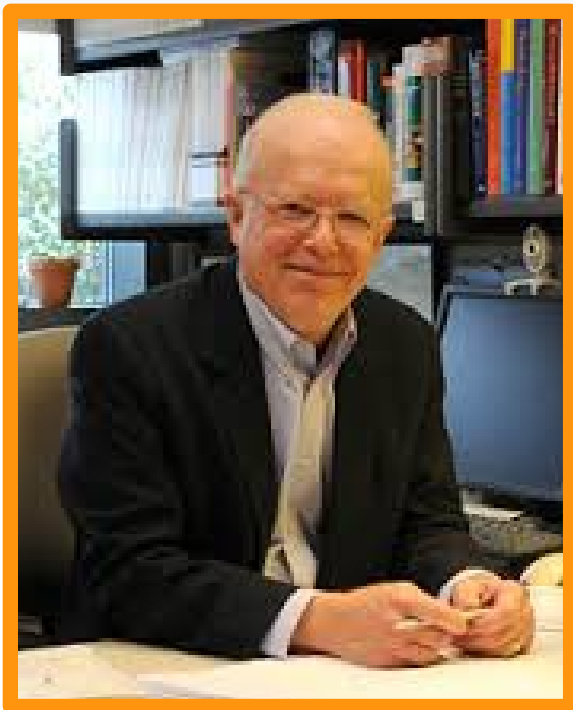
Cheri Perazzoli

Ellen Semel

Juliette Sterkens

Hearing Loop Track Sponsored By:





Prof. David G. Myers

Professor of psychology at Hope College in Holland, Michigan.

Author of 17 books, including popular textbooks entitled *Psychology*, *Exploring Psychology*, *Social Psychology* and of books dealing with such issues as scientific psychology, Christian faith and hearing loss.

<http://www.davidmyers.org>

Hearing Loop Track Sponsored By:

LISTEN
TECHNOLOGIES

Hearing Loss Association of America **HLAA**
2017
CONVENTION
JUNE 22-25 | SALT LAKE CITY, UTAH

Stephen Frazier - Hearing Loss Support Specialist



Juliette Sterkens - Doctor of Audiology



Hearing Loop Track Sponsored By:



Get in the Hearing Loop

What, Why, How

Hearing Loss Background

Limitations of Hearing Aids

Basics of Sound

Large Venue Assistive Listening Systems

Hearing Loop Basics

Hearing Loops in Real Life

Starting a Looping Campaign

Hearing Loop Track Sponsored By:



If you're hard of hearing, you're not alone.



Hearing Loop Track Sponsored By:



Hearing loss affects everyone

48 million people have hearing loss* and the number is growing
Hearing loss is one of the most common conditions present at birth

16% of school age children have hearing loss

1 in 5 U.S. teens have hearing loss

1 in 6 baby boomers has hearing loss

Hearing loss is the third most common condition in people over 65
BUT, 65% of the people with hearing loss are younger than 65

Hearing Loop Track Sponsored By:



* *National Institute on Deafness and
Other Communication Disorders*



Hearing aids and cochlear implants are simply that, an AID.



Unlike eyeglasses, they cannot restore hearing to "normal" or even almost "normal".

Hearing Loop Track Sponsored By:

LISTEN
TECHNOLOGIES

Hearing Loss
Association
of America **HLAA**
2017
CONVENTION
JUNE 22-25 | SALT LAKE CITY, UTAH

Hearing aids are most effective in 1 on 1 settings



Good directional mics have an effective hearing range of six feet or less.*

Hearing Loop Track Sponsored By:



**Etymotic Research 2000a*



Beyond 6 feet, audibility depends first on signal strength

Higher frequency sounds have less strength than low pitched sounds,
will not carry as far.*

Consonants are higher frequency: *stile, dial, tile* can all sound the
same at a distance.

Most HoH have high frequency hearing loss.

Hearing Loop Track Sponsored By:



**Source - Dave Menicucci - Sandia National Labs*



Many factors impact your ability to hear in spaces such as this room

Background (ambient) noise
Reverberation (echos)
Distance from speaker
Signal to noise ratio

Hearing Loop Track Sponsored By:





When hearing aids or a CI
just can't cut the mustard,
you may need the help of an

ASSISTIVE LISTENING SYSTEM

ALS for short

Hearing Loop Track Sponsored By:



Large venue assistive listening systems

- ✓ RF - radio frequency aka FM - **Requires borrowing headset**
- ✓ Infra Red - **Requires borrowing a headset**
- ✓ AFILS - audio frequency induction loop system
No headset needed for many users with telecoils

Hearing Loop Track Sponsored By:



Large venue assistive listening systems

A newcomer...

WiFi Audio or Streaming Audio

Can utilize cell phones and “streams” sound to hearing aids but latency (delay or echo effect) with loudspeakers a problem.

Not (in my opinion) ready for prime time...

Hearing Loop Track Sponsored By:



✓ Infrared

IR systems use modulated invisible light to transmit sound.

Transmitters wired into PA system and mounted throughout the room.

Signal is "line of sight", can be obstructed by posts, heads.

Insures privacy as signal will not pass through walls.

Signal accessed by using a "receiver" and a headset (or neck loop).

Hearing Loop Track Sponsored By:



✓ RF (FM)- radio frequency

RF systems use invisible radio waves to transmit sound.

Transmitters wired into PA system broadcasts signal.

Signal will carry several hundred feet or more.

Multiple channels available allowing multiple languages.

No privacy as signal will pass through walls.

Signal accessed by using a "receiver" and a headset (or a neckloop).

Unless user owns one (**not likely**) - must borrow and return a receiver.

Hearing Loop Track Sponsored By:



RF and IR systems don't get used

- ☹️ **Spokane, WA has 12 hearing aid incompatible assistive listening units in their city council chambers. In the last dozen+ years, one of them has been checked out every couple of years.** *Source: Douglas Christensen, Audio Loop Solutions, Inc.*
- ☹️ **The Unitarian Church in Los Alamos, NM is considering giving up their RF system. Since installing a loop, nobody is using the RF.** *Source: Jim Ogle -Los Alamos Labs*
- ☹️ **The Albuquerque city council owns a portable RF system for their committee meeting room. When requested, they couldn't even find it.**

Hearing Loop Track Sponsored By:



RF and IR systems don't get used

- ☹️ Don't know you need an ALS until event begins and it's too late then
- ☹️ Need to borrow or own a receiver and headset
- 😊 Or, if you're lucky, a neck loop and neck loop receiver.

Hearing Loop Track Sponsored By:



RF and IR systems don't get used

- ☹️ Study found less than 10% of HoH borrow a receiver while
- 😊 55% of those same people use a loop if it's present.

Hearing Loop Track Sponsored By:



* SOURCE: CCA^{nm} ALS Survey



Users prefer hearing loops

HoH six times more likely to use
a hearing loop system than FM or IR *

85% of HoH recommend a loop system as
their first choice if a new system is to be installed *

Hearing Loop Track Sponsored By:



* SOURCE: CCAm ALS Survey



Loop use increases satisfaction

Survey results of his clients by California audiologist Bill Diles

When asked if their satisfaction with the hearing aids was “high” when watching TV:

5% with hearing aids only responded yes

65% of those with telecoils and a loop said yes

When asked if the satisfaction with their hearing aids in general was “high”

5% of those without telecoils said yes - 55% of those with telecoils said yes

Hearing Loop Track Sponsored By:





What's a Telecoil? (sometimes called a T-coil)

USA: available in over 71%* of hearing aids available from providers.

In nearly all behind-the-ear (BTE) aids except smallest

In most in-the-ear (ITE) aids

In a few completely-in-the-canal (CIC) aids

85% of HLAA members have and use telecoils

UK in 90% of aids, including those from National Health Service

Hearing Loop Track Sponsored By:

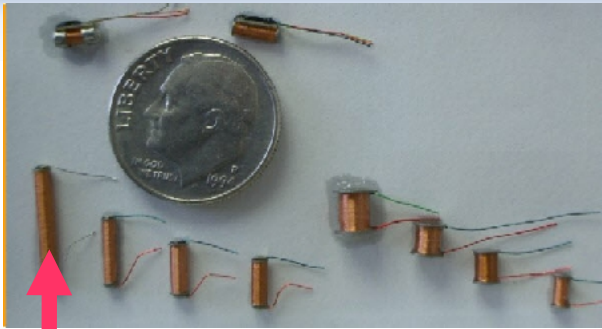


*Source: *Consumer's Guide to Hearing Aids 2016*



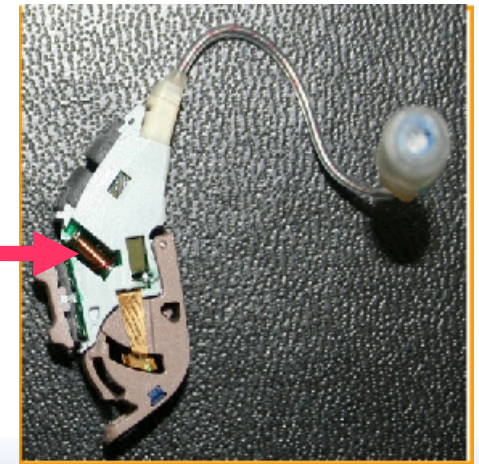
What's a Telecoil ?

Positioning very important to successful operation.



Telecoils come in a variety of sizes and shapes.

A telecoil fitted into a standard behind the ear hearing aid.



Hearing Loop Track Sponsored By:

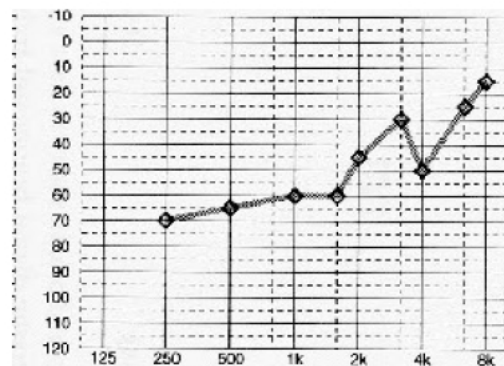
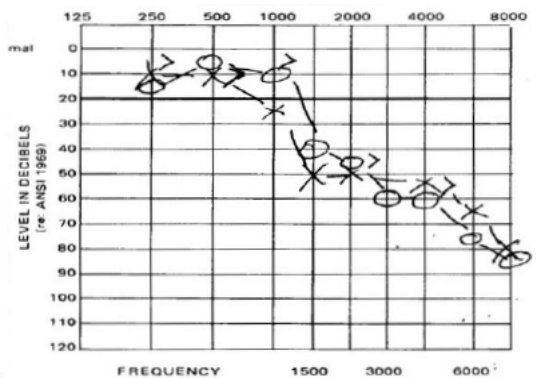
LISTEN
TECHNOLOGIES

Hearing Loss Association of America **HLAA**
2017
CONVENTION
JUNE 22-25 | SALT LAKE CITY, UTAH



Headsets don't customize sound

Hearing aids customize sound by providing the most amplification to those particular frequencies their user has difficulty hearing.



Hearing Loop Track Sponsored By:



To work with a hearing loop, hearing aids

MUST HAVE

- ✓ **Manually operated telecoils**
or a manual override on automatic telecoils

Also recommended:

- ✓ **Manual volume control**
CIs come equipped this way

Hearing Loop Track Sponsored By:



Do you wear hearing aids?

Questions for your hearing care provider:

Do my hearing aids have telecoils?

Have they been activated?

How do I turn them on?

Have they been adjusted for hearing loop use?

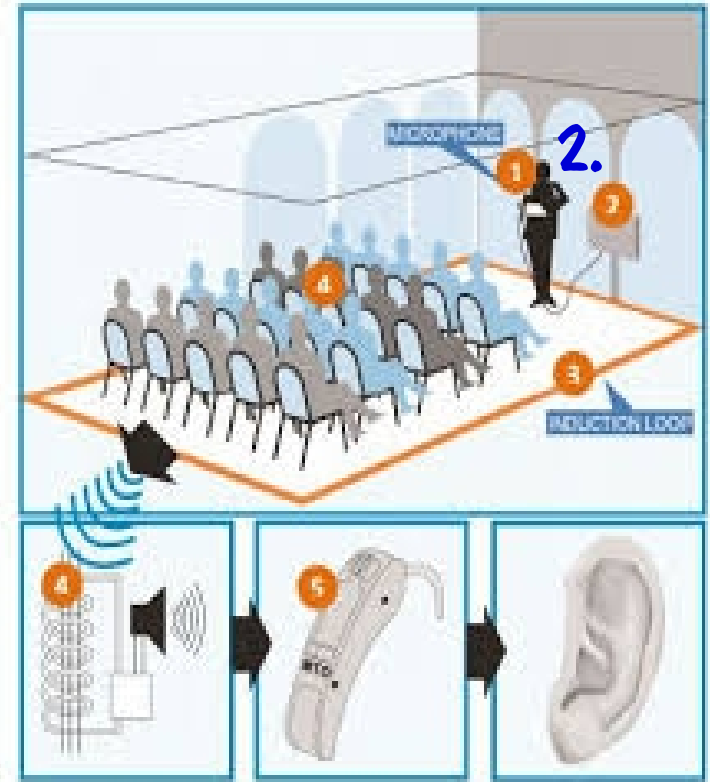
Can my hearing aids be retrofitted with telecoils?

Hearing Loop Track Sponsored By:



How does a hearing loop work?

1. Sound goes into a microphone
2. Sound sent to amplifier
3. Amplifier sends sound through loop creating an electromagnetic field
4. Telecoil receives electromagnetic signal
5. Digital circuitry in hearing aid turns signal back into sound



Hearing Loop Track Sponsored By:



NECKLOOPS

Another form of hearing loops



Hearing Loop Track Sponsored By:

LISTEN
TECHNOLOGIES

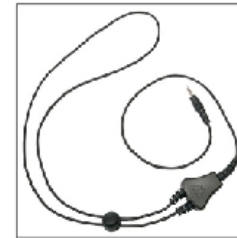
Hearing Loss
Association
of America **HLAA**
2017
CONVENTION
JUNE 22-25 | SALT LAKE CITY, UTAH

The Neckloop

Think of it as a headset



Amplified with
microphone



Unamplified

Hearing Loop Track Sponsored By:



Other uses for a neckloop

- ✓ Stereo and Surround Sound systems
- ✓ Computers or tablets
- ✓ Phones (Cell and home)
- ✓ MP3 Players
- ✓ On a TV equipped treadmill



at the gym

- ✓ On your TV at home or while traveling



Hearing Loop Track Sponsored By:



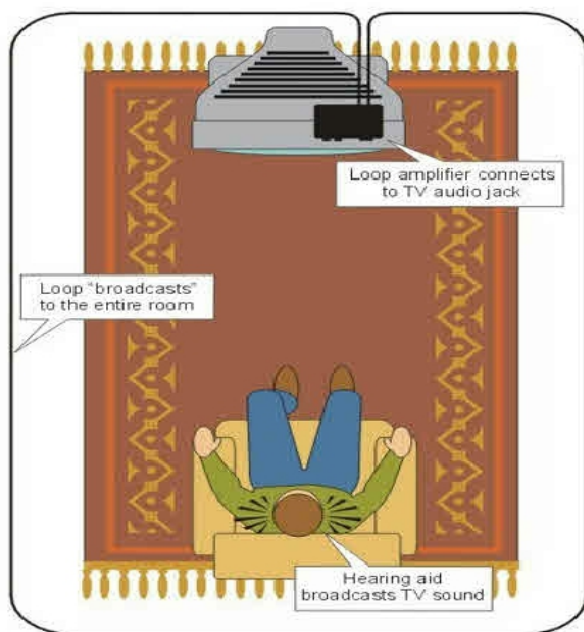
Chair loops

Amplifier plugged into TV just like a room loop with a wire discreetly strung to TV viewing chair and hooked to loop pad that goes under the chair's cushion.



Hearing Loop Track Sponsored By:





TV Room loops

Loop wire can be placed:

- ✓ Under the carpet
- ✓ Under an area rug
- ✓ Under the mop board
- ✓ On top of the mop board and over the door moldings ✓ In the crawl space/basement ✓ In the attic

Hearing Loop Track Sponsored By:

LISTEN
TECHNOLOGIES

Hearing Loss Association of America **HLAA**
2017
CONVENTION
JUNE 22-25 | SALT LAKE CITY, UTAH

What about Bluetooth ?

What can Bluetooth do?

- ☺ Enable a hearing aid user access to headset free use of an mp3 device such as an iPod.
- ☺ Connect hearing aids wirelessly and cable free to a cellular phone for hands free use.
- ☺ Enable the user to connect hearing aids wirelessly directly to a TV, computer or other sound producing device.
- ☺ Lots of other neat things and it's a great addition to hearing aid technology

Hearing Loop Track Sponsored By:



but.....



What about Bluetooth ?

What can Bluetooth NOT DO?

-  Broadcast a signal more than about 25 to 30 feet.
-  Allow multiple users with different brands of hearing aids to access that signal.
-  Connect to the assistive listening system in any place of worship, meeting hall, legislative chamber, any large public venue.
-  Connect to various sound sources AROUND THE WORLD

15 to 20 years before there's a universal technology that can replace loops and telecoils

Hearing Loop Track Sponsored By:

LISTEN
TECHNOLOGIES 

in all of their applications - STARKEY

 **HLAA**
2017
CONVENTION
JUNE 22-25 | SALT LAKE CITY, UTAH

2010 - HLAA and AAA

start campaign to raise awareness
and availability of telecoil
and hearing loop
technology
in America.



Hearing Loop Track Sponsored By:



Places You Might Find Loops

As the looping movement has gained momentum, loops are being installed throughout the U. S. in a huge variety of venues with houses of worship at the top of the list.



Artwork courtesy the Sheaf, University of Saskatchewan

Hearing Loop Track Sponsored By:



Where else are you likely to find loops?

Look for this symbol in any public venue, it indicates the availability of a hearing loop or neckloops and prompts those with hearing aids/cochlear implants to turn on their T-coils or borrow a neckloop.

Those without T-coil equipped hearing aids or a cochlear implant are alerted to **borrow a headset.**



Hearing Loop Track Sponsored By:



Performance Spaces



Oshkosh Grand Opera House



Albuquerque Little Theater



**Van Wezel
Auditorium
Sarasota**

Hearing Loop Track Sponsored By:





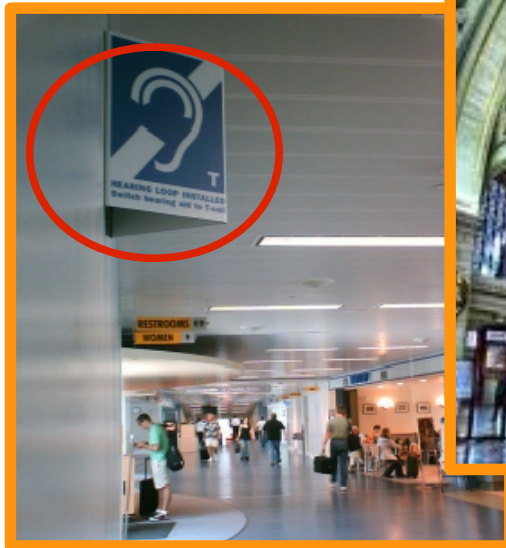
FIRST IN THE NATION

Breslin Center at Michigan State University

Hearing Loop Track Sponsored By:



Transportation hubs



Gerald Ford Airport



Union Station, Washington D.C.

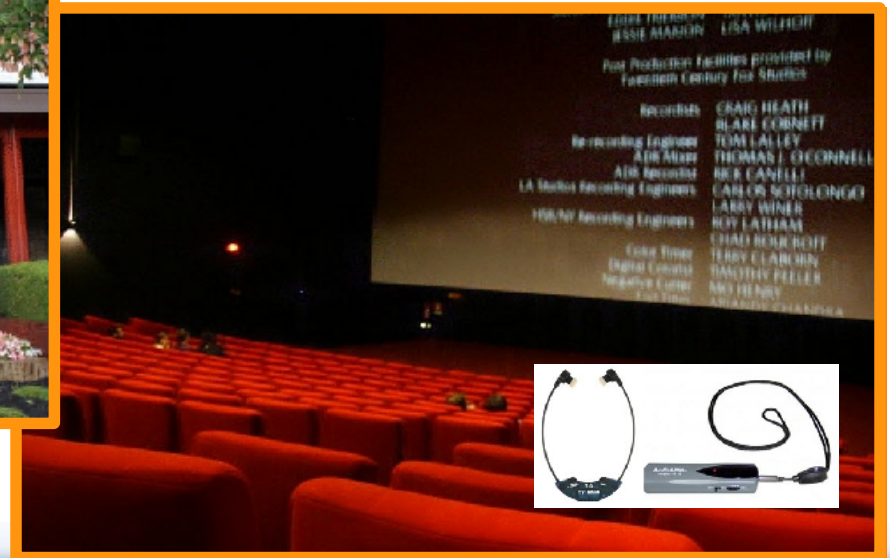


Milwaukee Intermodal Station

Hearing Loop Track Sponsored By:



Movie theaters



Hearing Loop Track Sponsored By:



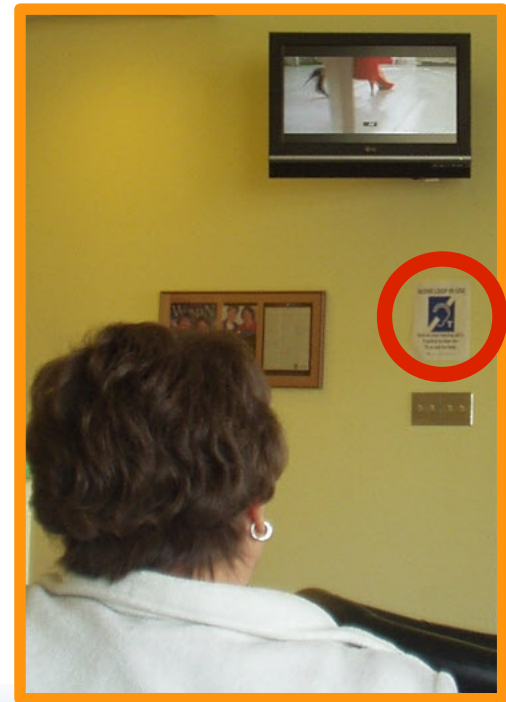
Banks and retail



Hearing Loop Track Sponsored By:



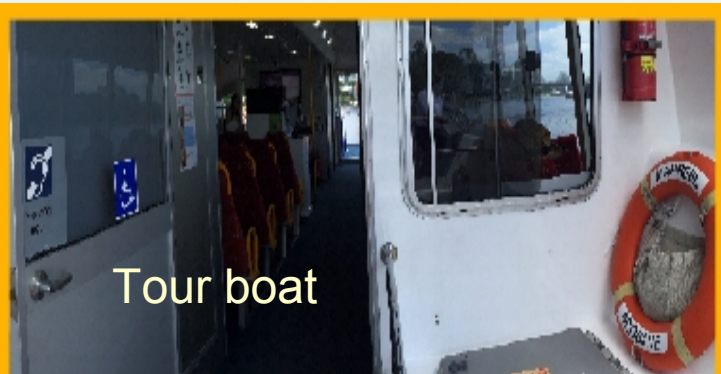
Offices and waiting rooms



Hearing Loop Track Sponsored By:



Unexpected places



Tour boat



City council chamber



Bart station



Disneyland

Hearing Loop Track Sponsored By:



New York City - In the loop



All new/renovated city financed assembly areas to be looped.

Hearing Loop Track Sponsored By:



Now appearing on the Great White



Hearing Loop Track Sponsored By:



Looped Theaters - Richard Rodgers, Gershwin,
Beaumont, Lunt Fontanne & Neckloops at others



Grand Central Station - NYC



With help from the NYC Human Rights Commission loops have been installed at some ticket windows.

Hearing Loop Track Sponsored By:

LISTEN
TECHNOLOGIES

Hearing Loss
Association
of America **HLAA**
2017
CONVENTION
JUNE 22-25 | SALT LAKE CITY, UTAH

New York City Taxi Cabs Have Loops



All new NYC taxis must be this hearing loop equipped "Taxi of Tomorrow".

Hearing Loop Track Sponsored By:

LISTEN
TECHNOLOGIES

Hearing Loss Association of America **HLAA**
2017
CONVENTION
JUNE 22-25 | SALT LAKE CITY, UTAH

Other New York City looped venues

**Penn Station
information booth**



**Metropolitan
Museum**



**Bronx Botanical
Gardens**

Hearing Loop Track Sponsored By:

New York City subway



Over 600 NYC subway fair/information booths looped and they really work !

Hearing Loop Track Sponsored By:



San Francisco BART



#1 of 45 stations to be looped



1,081 new train cars,

Hearing Loop Track Sponsored By:

LISTEN
TECHNOLOGIES

Hearing Loss
Association
of America **HLAA**
2017
CONVENTION
JUNE 22-25 | SALT LAKE CITY, UTAH

Hearing loops are found around the world



Induction loop technology is the only universal assistive listening system accessible world wide without the purchase of any country specific devices.

Hearing Loop Track Sponsored By:



Loop technology in foreign airports

Among international airports that feature loop technology are:

Gatwick - London

Heathrow - London

Manchester - U.K.

Edinburgh - Scotland

Charles DeGaulle – Paris

Orly Airport – Paris

Adolfo Suárez - Madrid

Swedavia - Stockholm

Kastrup - Copenhagen

Schiphol - Amsterdam

Tullamarine - Melbourne

Brisbane Intl. - Brisbane

Christ Church - New Zealand

Aerfort Bhaile - Dublin

Launceston - Tasmania

Hearing Loop Track Sponsored By:

LISTEN
TECHNOLOGIES 

 **HLAA**
2017
CONVENTION
JUNE 22-25 | SALT LAKE CITY, UTAH

Neckloops and airplanes



Virgin Atlantic now offers their international travel passengers a choice of ear buds or A NECKLOOP.

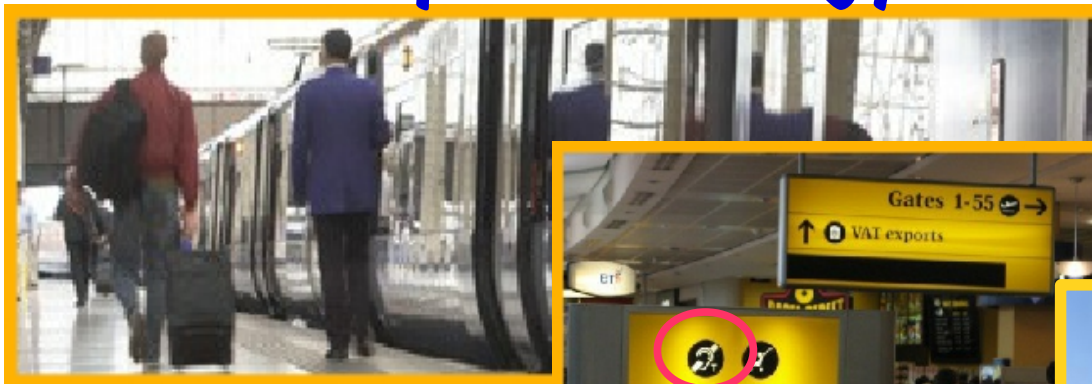
Your own neckloop will work on many airliners.

Hearing Loop Track Sponsored By:

LISTEN
TECHNOLOGIES

Hearing Loss
Association
of America **HLAA**
2017
CONVENTION
JUNE 22-25 | SALT LAKE CITY, UTAH

Loop technology in England



Heathrow Express Sign:
"For users of hearing aids,
we've fitted our on board PA
system with an induction loop."



Heathrow waiting area



**London
subway**



The Lord Nelson

Hearing Loop Track Sponsored By:



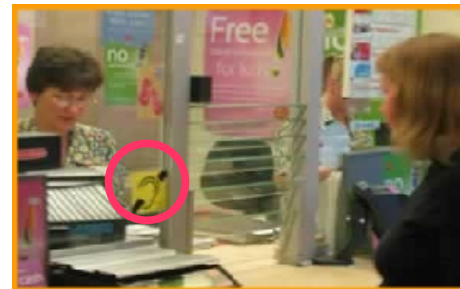
Loop technology in England



Canterbury Cathedral



Bank teller



Ticket window

Hearing Loop Track Sponsored By:



Westminster Abbey



~The very first sentence in the program for the 50th anniversary celebration of Queen Elizabeth's coronation in 2003~

The whole of the church is served by a hearing loop. Users should turn their hearing aid to the setting marked "I."

Hearing Loop Track Sponsored By:

LISTEN
TECHNOLOGIES

Hearing Loss
Association
of America **HLAA**
2017
CONVENTION
JUNE 22-25 | SALT LAKE CITY, UTAH

Loop technology in France



The Louvre



Notre Dame



Les Eysies

Hearing Loop Track Sponsored By:



Loop technology in Germany and Austria



Der Kölner Dom, Cologne



The Danube

Hearing Loop Track Sponsored By:



Looping campaigns have started up all over the U.S.....



Hearing Loop Track Sponsored By:



HLAA Chapter/State campaigns

Arizona

Florida

New York

Washington

Delaware

Michigan

North Carolina

Wisconsin

California

New Mexico

Oregon

Utah

Colorado

New Jersey

Rhode Island

hlaalopers@googlegroups.com

Google Groups

Hearing Loop Track Sponsored By:



<https://groups.google.com/>



Other Looping Campaigns



Hearing Loop Track Sponsored By:



You could start a looping campaign in your community..

We support

Get in the
Hearing Loop
hearingloss.org

Juliëtte Sterkens, Au.D.
Your Hearing Loop Advocate

Hearing Loop Track Sponsored By:



Why get involved?

- ▶ Raises awareness for the cause/your chapter
- ▶ Gives you a reason to reach out to AuDs/ HCPs
- ▶ Attracts community minded folks incl. Sertoma, Rotary
- ▶ Allows every chapter member to do "something"
- ▶ A novel way to reach people with hearing loss
- ▶ It's fun to "check off" another loop on your list



Hearing Loop Track Sponsored By:



How to Get in the Hearing Loop

- ▶ Form a committee – you cannot go at this alone
- ▶ Brainstorm re: venues you'd like see looped
- ▶ Funding? (Walk, providers, service organizations)
- ▶ Tackle 1 or 2 places you know/belong to/How

Hearing Loop Track Sponsored By:





Practical Help

The HLAA Task Force developed
a Hearing Loop Toolkit

Hearing Loop Track Sponsored By:



Free thumb drive



Name

- Advocacy Information Pieces
- Brochures
- For Audiologists or HCPs
- House of Worship Info
- Library info
- Magazine Articles
- New -Pending Review
- News Releases
- Newspaper Articles
- Retirement Community Info
- Theaters Info

Date modified

- 1/27/2017 1:30 PM
- 1/27/2017 2:50 PM
- 4/15/2017 4:17 PM
- 4/15/2017 4:25 PM
- 4/15/2017 3:55 PM
- 1/27/2017 1:35 PM
- 4/15/2017 3:55 PM
- 4/15/2017 3:57 PM
- 4/5/2017 5:16 PM
- 4/15/2017 4:21 PM
- 4/15/2017 4:20 PM

Type

- File folder
- File folder
- File folder
- File folder
- File folder
- File folder
- File folder
- File folder
- File folder
- File folder
- File folder

Includes most workshops

Hearing Loop Track Sponsored By:



We're here to help you...

- ▶ **AuD/HCP/Telecoil questions:**

Karen MacLennan - karenmacleannanloops@yahoo.com

Juliette Sterkens - jsterkens@hearingloss.org

- ▶ **For *any* hearing loop support/questions:**

Steve Frazier – HLAAnm@juno.com

- ▶ **For a Community Hearing Loop Outreach Workshop:**

(in person) Juliette - jsterkens@hearingloss.org

Hearing Loop Track Sponsored By:



Google Groups

<https://groups.google.com/>

Send an email to
LoopNM@gmail.com requesting to be
placed on the list.

Hearing Loop Track Sponsored By:



Get in the Hearing Loop Questions ?

Hearing Loop Track Sponsored By:



THANK YOU

FOR ATTENDING OUR WORKSHOP

Be sure you get your FREE looping track thumb drive containing this and other slide presentations.

Internet Resources:

<http://www.hearingloop.org/vendors.htm>

<http://www.time2loopamerica.com/Installers.aspx>

<http://www.loopamerica.com/loops.aspx>

<http://www.allocator.com/>

Hearing Loop Track Sponsored By:





Hearing Loop Track Sponsored By:

