MFi, Bluetooth and Telecoils – Oh My!
A Webinar on
Made For iPhone (MFi),
Bluetooth and Telecoil Wireless Technology

Learn where and when each technology can help you hear with hearing devices you already own.

Looking to replace your instruments in the near future? Attend this webinar to learn what questions to ask of your hearing provider regarding wireless technology.
Today’s topics:

• Hearing Aids and CIs – Benefits & Limitations

• The different wireless technologies

• To make you more educated so you can make a more informed decision regarding which technology is right for you
Hearing aid/Ci limitations

- Work well for most users in quiet
- Work “OK” in near-field background noise
  Yes you all know this depends on many factors:
  1. Distance from you to the speaker
  2. Background noise & where it is coming from
  3. Speaker
  4. Your individual hearing ability
- Don’t work well in many situations where you want/need to hear such as…..(Fill in the blank)
For Hearing Devices to meet your most challenging needs you’ll need:

- Some kind of wireless receiver to give you “super” hearing
1. NFMI (Near Field Magnetic Induction)

- Offered by Siemens, Phonak, AB, Widex & Oticon
- Requires an intermediary or gateway device aka a streamer
1. NFMI (Near Field Magnetic Induction)

- Offered by Oticon, Phonak, AB & Widex
- Requires an intermediary device aka a streamer
- Why is this intermediary device needed?

  Because hearing aids and CIs cannot communicate directly with Bluetooth signals that come from your laptop, cell-phone or TV transmitter
NFMI (Near Field Magnetic Induction)

a. signals from a Bluetooth transmitter
b. Are sent to your streamer/gateway device *(Note: The devices have to be paired)*
c. The streamer sends the signal to your hearing devices
If you use two of the same make devices and the signals you want to hear come from a Bluetooth enabled device, a streamer is one way to hear (Oticon).
If you use two of the same make devices and the signals you want to hear come from a Bluetooth enabled device, a streamer is **one** way to hear (Siemens)
Some MFRs offer gateway devices for *very specific* situations (no pairing required)

Widex TV-Dex and Phone-Dex
Some MFRs offer gateway devices for *very specific* situations *(no pairing required)*

Widex Uni-Dex
If you want hands off binaural Phone listening

• You need two of the same hearing aids
• You need to pair your cellphone to the streamer
• Own a home phone that offers Bluetooth
• Benefit: You hear the phone in both ears!
• Use a Phone-Dex (if you own Widex)
• Some Phonak & Widex BTE instruments models broadcast phone signal from one ear also to the opposite ear for binaural hearing
What else can I use my streamer for?
If you already own an an personal FM system – Your streamer can be used for FM Listening
If you own a streamer some MFRs offer special microphones – similar to FM but generally cheaper.
Siemens EasyTek Streamer

VoiceLink

Additional microphone
Other companies offer similar microphones to be used with streamer.
These NFMI devices

ALWAYS need an intermediary device or a streamer nearby – usually worn around the neck
Wireless systems that don’t (always) need an intermediary device
2. 900MHz and 2.4 GHz (not MFi)
Starkey and ReSound & Cochlear CIs

- Difference between 2.4 GHz and 900MHz – and NFMI – is the transmission protocol
- 2.4Gz and 900MHz antennas for signal reception are located inside the hearing aid or CI
- Advantage? NO need to wear a neck worn device when listening to signals you want to hear: TV, Computer, iPod or Radio
- Disadvantage - will drastically increase battery consumption and 900MHz is not applicable worldwide
900MHz and 2.4 GHz (not MFi)
Starkey and ReSound & Cochlear CIs

- You will still need a "phone clip" when using a cell phone or Bluetooth enabled home phone.
900MHz and 3.2.4 GHz (not MFi)
Starkey and ReSound & Cochlear CIs

• Why is a Phone Clip needed?

The hearing devices are not compatible with BT signals from the phone directly
900MHz and 3.2.4 GHz (not MFi)

Starkey and ReSound & Cochlear CIs

NOTE:

- Use the phone clip, which houses the mic as it was intended, meaning close to your mouth
- otherwise the (normal) hearing person on the line cannot hear you!
Wrongly Positioned Mic

Wrongly Positioned Mic

Mic Positioned the right way
2. 900MHz and 3. 2.4 GHz (*not MFi*)
Starkey and ReSound & Cochlear CIs

• The advantage of 900 MHz & 2.4 GHz?
• No need for an intermediary device when watching TV
• You *will* need to plug in the TV transmitter
Starkey uses the SurfLink

Sound from your TV...

when connected to the transmitter...

streams stereo sound directly to your hearing aids.
A word about the Roger system 2.4GHz (by Phonak)
Roger and receivers for CIs
What about a system that can receive signals direct from a cellphone?
Introduced in 2005 by Starkey
The latest and greatest?
• Starkey HALO
• ReSound LiNX or ENZO (or Beltone First)
• Stream signals from iPhone direct to hearing aids
• Introduced in 2014 in small sizes only
• This meant they lacked telecoils 😞
The Good news?
Now available in Power instruments that include telecoils

LiNX  RIC = 312,  LiNX = thin tube #13 battery,  ENZO: 675 Battery
Claim to Fame?
Claim to Fame?
Starkey Halo
Drawback?
Lacks telecoil
Advantages

• Stream audio from iPhone direct to Haids
Advantages

• Stream audio from iPhone direct to Haids
• Allows use of iPhone as a Remote Control
Allow adjustment of Volume and Programs using an iPhone

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Android phones can be used as a RC

But...not yet for Phone reception
Advantages

• Stream audio from iPhone direct to Haids
• Allows use of iPhone as a Remote Control
• **Allows use of the iPhone as an external Mic**
Couple the IPhone to the Blue Mikey: Use this highly directional mic in noise Richard Einhorn uses with the SoundAMPR app & his Hearing Aid or high fidelity earphones.
Advantages
- Stream audio from iPhone direct to Haids
- Allows use of iPhone as a Remote Control
- Allows use of the iPhone as an external Mic

Disadvantages
- With #312 battery – short battery life
- High cost – you will need to buy new HAids
What if you...

- Are NOT in the market for new devices?
- Use 2 different make hearing aids?
- Use a Cochlear Implant & one Hearing Aid?
- Want to hear in a public venue such as a theater, movie houses, meeting rooms or London City Cab?
Use your telecoil

• Yep... your good ol’ friend the telecoil
• For large area listening: The T-coil will be around for a long time...Until a worldwide universal wireless standard that consumers can use in every country, with every make, model hearing aid and PSAP becomes available...
• The ITU (Int’l Telecommunications Union) has formed a special study group, to work on this but 193 member states would have to agree (main condition is that it cannot drain the battery excessively)
For now – use your telecoil

• In looped venues
• In venues that offer infra-red or FM technology with a personal neckloop
• In your TV room – by installing your own loop
• When using a Bluetooth neckloop device such as the ClearSounds
What if you...

• Are NOT in the market for new devices?
• Use 2 different make hearing aids?
• For example: an implant & a Hearing Aid?
• Want to hear cell phone and you are in private?
A great standby for cell phone users:
Push the speaker button
Hold the phone close to your mouth
What does the future hold for wireless hearing aid users?

There will come a day you’ll be able to walk into a theater & your smart phone will pick up a Wi-Fi signal and send it to wirelessly to your hearing aids

(Although this has to happen in real-time or you will hear delays/see lip-sync issues.)
What does the future hold for wireless hearing aid users?

Later yet: You will see a universal wireless technology that will broadcast direct to your hearing aids and/or implants

(My husband is still hoping for his Jetpack)
Questions?

For your attention

email me at

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