

Telecoils and Hearing Loops: The most available and accessible assistive listening technology

Hearing loops and telecoils are still the only technology that meet all the needs of hearing aid users, including intelligibility, discretion, ease of use, transient use and availability.

Hearing aid manufacturers make telecoils available in 80% of the models they produce.

There is a significant difference between being able to connect to localised, personal devices such as smart phones and connecting to broadcast assistive listening and public announcement systems. A fact that is not always made clear to the recipient.

Only 22% of hearing aid recipients are informed about hearing aid accessories by their health care provider.

Background

Assistive listening systems have been widely available since the 1930s, the most successful of which have been the hearing loop and telecoil combination. This partnership has given hearing aid and cochlear implant users access to audio in many areas which would normally be uncomfortably noisy or unintelligible; including theatres, lecture halls, places of worship, retail and public service counters, help points, digital displays and even on mass transport systems.

With the proliferation of smart phones, networking and internet access there has been a great deal of discussion recently regarding new technologies available for assistive listening. Some very exciting developments are starting to emerge; however, there is significant confusion amongst hearing aid users and facility providers, many of whom, for example, expect current Bluetooth technology to provide the same access to audio in venues and public facilities as hearing loops, which of course it does not.

Due to its limitations the Bluetooth enabled devices currently available are not suitable for connection to broadcast assistive listening systems.

In addition, possibly due to a lack of awareness and/or promotion, there appears to be a common misconception that relatively few hearing aids have telecoils equipped.

Availability and connectivity

In fact, a recent review of the connectivity of 462 hearing aids^{1,2,3} and their 756 variants, although not exhaustive, indicated that 286 (38%) variants had a Telecoil fitted as standard and 316 (42%) variants had the option to have a Telecoil enabled. See tables and figures below.

Table 1: Hearing aid variants and telecoil availability

No. of hearing aid variants		Telecoil availability					
		Not available		Available as standard		Available as an option	
RIC <i>(Receiver in the canal)</i>	224	77	34%	88	39%	59	26%
BTE <i>(Behind the ear)</i>	235	49	21%	110	47%	76	32%
CIC <i>(Completely in the canal)</i>	105	17	16%	28	27%	60	57%
ITE <i>(In the ear)</i>	94	4	4%	32	34%	58	62%
ITC <i>(In the canal)</i>	98	7	7%	28	29%	63	64%
Total	756	154	20%	286	38%	316	42%

¹ Sources: USA Consumer guide to hearing aids 2020

² Hearing Aid Manufacturers websites (see list in appendix)

³ IIC – Invisible in Canal hearing aids not included in this review

Figure 1: Telecoil availability

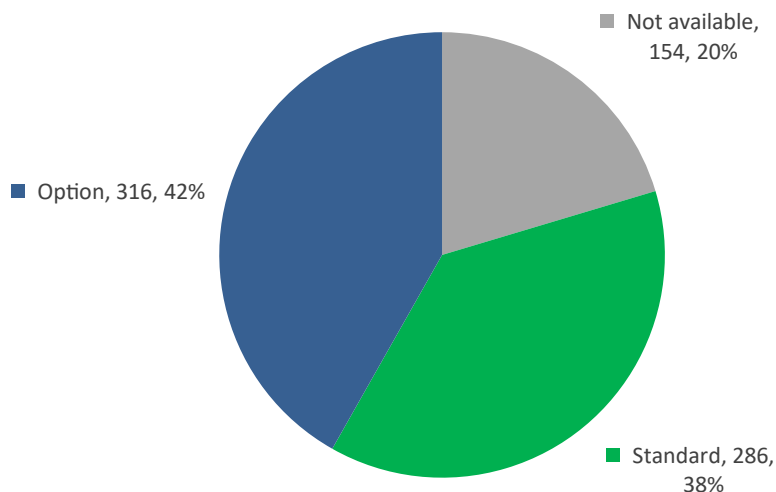
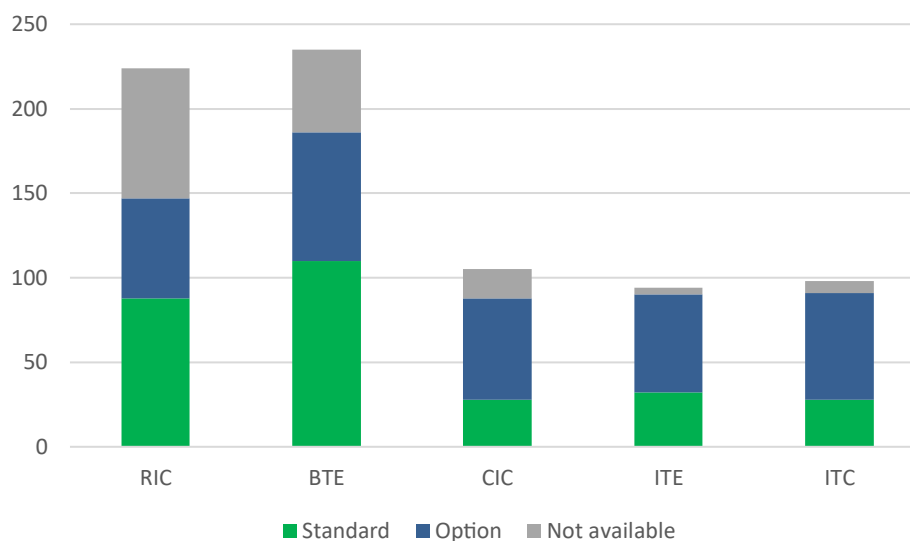


Table 2: Telecoil availability by hearing aid style



Most hearing aid recipients experience severe or profound hearing loss⁴, and whilst RIC, CIC and ITC styles of hearing aid are good choices for mild to moderate hearing loss⁵, and ITE models work well up to severe hearing loss, only BTE models are ideally suitable for those with severe to profound hearing loss. In short, most hearing aid recipients (>79%) have access to a Telecoil.

⁴ Source: EuroTrak pooled data GER, FRA, UK, IT, SP 2018/2020: Hearing impaired N=6,547

⁵ <https://www.mayoclinic.org/diseases-conditions/hearing-loss/in-depth/hearing-aids/art-20044116>

Thousands of hearing loop systems are installed by businesses and service providers every year, as part of their legal obligations to provide fair access to audio for those with hearing issues.

In the UK supporting their investment is the 2019 NHS Supply Chain Framework agreement for Hearing Aids and Custom Ear Moulds (2019-2023)⁶ which states:

3.13. [Hearing aids] Must incorporate minimum of 2 independently fitted programs, plus Telecoil where used."

Further to this the framework states in all lots containing hearing aids;

"[A] Telecoil must be offered as standard on all BTE [Behind The Ear] hearing aids. Where offered –it is to be independently programmable, i.e. not a fixed relationship with the gain curve, and be able to match the acoustic performance of the microphone. Telecoil to include T (Telecoil) and MT (Microphone telecoil) options. It must be assumed to be included as standard in all adult BTE hearing aids."

However, in a 2018 EuroTrak⁷ study of the UK Hearing aid sector, only 22% of recipients had been informed about hearing aid accessories by their health care provider.

The UK is a special case in that approximately 75% of all hearing aids are provided by the National Health Service either directly or via the AQP (any qualified provider) scheme. Other countries have different arrangements and healthcare systems dispensing hearing aid technology⁸; however, this does not alter the fact that the vast majority of hearing aid models available have variants which support telecoils and the use of hearing loops.

Therefore, on behalf of our members and hearing aid recipients, we are seeking a renewed commitment from the hearing instrument manufacturing and dispensing community to raise awareness and improve equality of access to audio for all.

⁶ <https://www.supplychain.nhs.uk/product-information/contract-launch-brief/hearing-aids-and-custom-ear-moulds/>

⁷ EuroTrak UK 2018 was designed and executed by Anovum (Zurich) on behalf of the European Hearing Instrument Manufacturers Association (EHIMA).

⁸ Source: EuroTrak pooled data GER, FRA, UK, IT, SP 2018/2020: Hearing impaired N=6,547

So, what can be done to help?

- Ensure patients, customers and clients are aware of the benefits of telecoils and loops
- Tell them what to look out for that will signal an assistive listening solution is available
- Show them how to use the T-setting on their hearing aid
- Encourage them to complain when an assistive listening solution isn't available
- Demand telecoil enabled hearing aids from the manufacturers and your suppliers

Appendix A: Manufacturers list

Manufacturer	URL
Audibel	https://www.audibel.com/
Audifon	https://www.audifon.com/en/
Audina	https://www.audina.net/en/
Audio Service	http://www.audioservice.com/
Beltone	http://www.beltone.com/
Bernafon (Oticon)	http://www.bernafon.com/
Coselgi	http://www.coselgi.it/
Danalogic (GN Resound)	http://www.gnresound.com/
General Hearing	https://generalhearing.com/
Hansaton (Sonova)	http://www.hansaton.com/
Interton	http://www.interton.de/
Kamplex (Puretone)	https://www.puretone.net/
Microtech	http://www.mtheating.com/
Miracle Ear	https://www.miracle-ear.com/
Nuear	https://www.nuear.com/
Oticon	https://www.oticonmedical.com/
Persona	https://personamedical.com/custom/
Philips	https://www.hearingsolutions.philips.com/
Phonak (Sonova)	http://www.phonak.com/
Rexton	http://www.rexton.com/
RX Ears	https://www.rxears.com/
Signia	https://www.signia-hearing.com/
Sonic Innovations	https://www.sonici.com/
Starkey	http://www.starkey.com/
Unitron (Sonova)	http://www.unitron.com/
Widex	http://www.widex.com/