What is a loop?

An audio frequency induction (loop) is a way of transmitting sound through a wire loop to the telecoil in a hearing aid or a suitable receiver. They are mostly used to eliminate background noise.

Our system is a loop system. However, there are two other assistive listening technologies commonly used. Both operate by transmitting the audio signal to a receiver carried by the listener. These are commonly known as Infrared (IR) and FM carrier systems.

How does a loop work?

A loop system consists of a loop of wire around an area (eg a room) that is connected to an amplifier. A signal (eg television, stereo, PA system etc) goes to the amplifier, which drives a current through the loop. As the current from the amplifier flows through the loop, it creates a magnetic field within the looped area and transmits to the telecoil in a hearing aid, or in a specifically designed induction loop receiver within the looped area.

When a hearing aid user switches their hearing aid to the 'T' position on the hearing aid, the telecoil in the hearing aid picks up the changes in the magnetic field and converts them back into alternating currents. The alternating currents are amplified and converted by the hearing aid into sound.

How do hearing aids compatible with a loop system work?

Compatible aids are equipped with a telecoil and have a switch allowing either "M" (microphone) or T (telecoil) operation. Some models may have a switch marked MT (microphone and telecoil) or MT (muted microphone and telecoil).

- The M (microphone) position is for 'normal' listening; that is, receiving sound via the microphone built in to the hearing aid.
- **The T position is for receiving the sound via the telecoil, which is built in to the hearing aid.**
- The MT position, which is provided on some hearing aids, allows for listening simultaneously to both airborne sound via the microphone and to transmitted sound via the telecoil.

What about digital hearing aids?

Digital hearing aids work in exactly the same way as analogue hearing aids in terms of induction loop use but **you must make sure that the digital hearing aid has a 'T' switch position or 'T' program accessible by a program button or remote contro**l.

Many digital hearing aids allow the relative levels between microphone and 'T' coil inputs to be adjusted by the audiologist. If the loop signal is too quiet or loud relative to normal microphone use and audiologist can adjust it.

How To Use Hearing Loop

- If your hearing aids have a telecoil, you can turn it on via a remote controller or a program button on the hearing aid. It then connects to the hearing loop system.

- **Switch your hearing aid to ‘T,’ either via the switch on your aid, or through a ‘T’ program accessible via a program button or remote control.**

- Switching to ‘MT’ allows for airborne and transmitted sound should you wish to listen to both.

- Using a hearing induction loop is super convenient! There is no additional equipment (i.e receiver) that you need apart from your hearing aids and the built in telecoil.

- **Don’t forget to switch your aid back to ‘M’ during intermission and post-show!**