

The induction loop system, or the **'loop system'** as it is commonly called, enables an audio frequency signal, such as speech, to be transmitted to a listener by means of a magnetic field. The elimination of direct sound transmission helps to reduce the interfering effects of distance and background noise, which are particular problems for hearing aid users.

Induction loops have been used in schools for many years. Interest is growing in their use in a variety of public and private buildings.

The concept of magnetic induction is simple. A current of electricity flowing in a wire creates a magnetic field around the wire and the wire then acts like a transmitting aerial. An audio signal, if amplified through the loop, is combined with or carried by the magnetic field. A small coil mounted in the hearing aid or other suitable receiver can pick up the magnetic or induction field.

The pickup coil in a hearing aid is usually selected by means of a switch marked **'M'** for microphone and **'T'** for telecoil. Sometimes a combined position, **'TM'** (if provided on the aid) allows simultaneous use of microphone and telecoil.

For some people a major drawback is that the hearing aid microphone is disconnected when the **'T'** switch is selected. You are cut off from other environmental sound. The only sound you hear is the sound that is being amplified through the loop. You must switch back to the microphone position on your hearing aid before you can carry on a conversation with other people in the room.

The loop comprises one or more turns of insulated wire laid around the listening area at a suitable height, usually around the skirting board or picture rail of a room. Maximum efficiency occurs when the loop is at the same height as the hearing aid. In practice the loop is often fixed at floor level. This is quite satisfactory.

A basic loop system is simple to put together. It is rather like a standard sound system but the loudspeaker is replaced by the induction loop.

Many "off the shelf" induction systems are available. The cost varies with the area to be covered by the loop, whether it has additional features such as automatic gain

control (AGC) or compression functions, and the number of different inputs it can cope with, such as cordless FM microphones and alarm signals. An AGC function allows the amplifier to cope with large ranges of input signal volume without the need to constantly manually adjust the loop amplifier volume.



The International Deaf Symbol

The International Deafness Symbol is displayed in venues that have loop systems installed. Loops can be easily retrofitted in existing venues.

Portable loop systems are also available, mainly for use in meetings. **hearservice** has a range of loops for demonstration and sale from clinics across Melbourne. Call **1300 30 20 31**, or visit www.hearservice.com.au for more information.

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