

## **Assistive Listening & Alerting Devices**

Assistive Listening Devices (ALDs) are devices used *in addition* to hearing aids and cochlear implants to make more sounds accessible to people with hearing impairment.

Specifically, hearing aids and cochlear implants are traditionally designed to enhance conversational speech, in one-on-one situations and in relatively quiet situations. However, while listening in the presence of significant background noise, or at a distance, or in special circumstances such as listening to a television playing from across the room, or while trying to use a telephone or listening to the radio, or at a lecture in a large hall, additional listening support is useful.

### **FM Systems**

FM systems are very useful and very popular in educational settings. FM systems are micro-radio transmission systems (hence the name “FM”) that maximize the speaker’s voice. FM is very popular in educational settings. The teacher speaks into a tiny and portable microphone (usually clipped onto his/her collar) and the sound is delivered wirelessly into the student’s hearing aids using FM signals—thus, avoiding the introduction of background noise, reverb/echo, and while maintaining an excellent signal-to-noise ratio. FM is also very useful for adults in many listening situations.

### **Sound Field Systems**

Another popular listening system designed for classrooms are sound field systems. While employing sound field systems, the teacher wears a small, wireless, microphone and the sound signal is sent to strategically placed speakers located across the classroom to enhance the speech signal. Sound field systems are not only beneficial for students with hearing loss, but many studies have shown that all students in the classroom benefit when sound field systems are used to improve classroom acoustics.

### **T-Coils and Loop Systems**

Indeed, most people with hearing loss depend on or benefit from some kind of ALD to help them develop or maintain a comfortable level of independence in their daily lives. From infra-red TV headsets to closed-captions (CC) used while watching TV, to amplified telephones, people with hearing loss use a multitude of ALDs to remain connected to their world. Other popular ALD systems include tele-coils (also called T-Coils, available in many hearing aids for more than 50 years) and loop systems. Loop Systems transmit electromagnetic signals into a “looped area” (such as a living room or an auditorium) allowing the hearing aid wearer to perceive the sound signal through the tele-coil switch on t-coil supplied hearing aids.

The "Get in the Hearing Loop" campaign was created in collaboration with HLAA to address a national looping initiative. The goal of the effort is increase consumer and audiology awareness of hearing aid- and cochlear implant-compatible assistive listening systems. The campaign will culminate in the Second International Hearing Loop Conference to coincide with the HLAA annual convention in Washington, DC, June 16 – 19, 2011. As part of the campaign we will be creating educational resources for consumers and audiologists alike. Check back on this site for further developments.

### **Alerting Devices**

Beyond the most common ALDs (used for television and telephone), there are many visually based alerting devices (ADs) designed to alert hearing impaired and deaf people to special circumstances and situations. For example, alarm clocks with traditional bells and buzzers are of little use for people with severe-to-profound hearing loss. Therefore, special alerting devices are built into alarm clocks with strobe lights, or perhaps vibrating pillow inserts—to help wake people who cannot hear the typical alarm. Additionally, fire and smoke alarm systems are available that offer visual alarms, too.

Importantly, with the introduction of Bluetooth wireless connectivity, more and more of the products that were previously “add-ons” to hearing aid systems (such as TV and telephone-based ALDs, FM systems and more) are being incorporated into advanced hearing aids as a more complete and often seamless “listening system.” Please speak with your audiologist to learn about advanced wireless systems and features, which can be incorporated into some advanced hearing aid systems.

These products (ALDs and ADs) are commercially available and are highly recommended. Please speak with your audiologist about ALDs and ADs, to get the best and most useful products to enhance your listening experience.

*Information was obtained from the American Academy of Audiology website at [www.audiology.org](http://www.audiology.org).*