



Assistive Technology

WHAT IS ASSISTIVE TECHNOLOGY?

Some hearing aid users may continue to experience difficulty understanding speech in noisy environments or from a distance, for example, when watching TV, attending a movie or play, or while on the telephone.

A person with even a mild to moderate hearing loss might miss a doorbell chime while listening to the TV a room away. This same person may not hear the smoke alarm located down the hall.

Many auditory and non-auditory devices are collectively known as Assistive Technology, Assistive Listening Devices (ALDs), or Hearing Assistance Technology (HAT). These devices are available to help people with all degrees of hearing loss and can help facilitate improved face-to-face communication, reception of electronic media, telephone reception, and reception of important warning sounds and situations.

HOW CAN ASSISTIVE TECHNOLOGY HELP?

Devices to Help Face-to-Face Communication and the Reception of Electronic Media

Auditory ALDs can be thought of (roughly) as 'binoculars for the ears'. By placing a remote microphone next to the talker (or loudspeaker) or by connecting directly into the sound source (TV, VCR, MP3 player, etc.), these devices bring the desired sound closer to your ear(s) before it has a chance of being mixed with other noise and reverberation. The sound is then sent to the listener via a 'hardwired' or 'wireless' link.

Wireless Systems

Three wireless systems can be used with assistive technology: FM, infrared or

inductive (audio loop). In order to use these systems, the hearing aid must be equipped with either a 'telecoil' or a feature called 'direct audio input' (DAI).

Direct Audio Input (DAI) and Telecoil



DAI allows very tiny FM receivers to be plugged into the bottom of the hearing aid. DAI or a telecoil also allow

body worn FM and infrared receivers to be used with more styles of hearing aids. Finally, a telecoil allows the hearing aid itself to function as the receiver when listening to a room-sized inductor (room loop) installed in a building (e.g. church, cinema). For greatest listening flexibility, ask for hearing aids with an in-built telecoil. For the opportunity to use the latest FM receivers, think about purchasing behind-the-ear (BTE) hearing aids equipped with DAI.

Two types of visual systems are available to help people understand speech at a meeting or other live event: Computer-Assisted Note taking (CAN) and Communication Access Real Time Translation (CART), also known as Real Time Captioning.

Devices to Help with Telephone Reception

Three special telephone amplifiers are available that can either: replace the telephone handset; attach to the phone between the handset and the phone (in-line amplifiers) or attach to the handset and are powered by a battery (portable amplifiers). Each of these amplifiers can be used with or without a hearing aid and can be coupled to a hearing aid either acoustically or inductively. With acoustic coupling, the amplifier is held up to the hearing aid's microphone.

CONCERNS AND ISSUES

While acoustic amplification tends to work well with a CIC hearing aid, it may result in an annoying whistling sound (feedback) with the larger hearing aid models. However, if the larger models are equipped with a telecoil, then the hearing aid can be set to T' and held next to the amplifier, with no feedback.

Special telephones with built-in amplification are also available in both standard and wireless handset models. Also available are devices that enable you to use your hearing aid(s) with a mobile phone for distortion-free and noise-free reception.

For those who cannot understand over the voice telephone, even with amplification, there are other options such as the Voice Carry Over (VCO) or "read and talk" telephone. Used with the telephone relay service, VCO allows you to talk directly to the other party while an operator translates what the other party says to you into print that is displayed on a small LCD screen.

ALERTING DEVICES

Alerting devices allow hard of hearing and deaf people to be aware of many environmental sounds and situations in the home, in school or in the workplace, as well as for travel and recreation. Such systems use either microphones or electrical connections to pick up the desired signal and hardwired or wireless transmission to send the signal to you in a form to which you can respond. For example, when someone presses the doorbell button, when the phone rings or the fire alarm is activated, these events can trigger a flashing incandescent or fluorescent light, a loud horn, a vibrational device (pager, bed shaker), or a fan.