



Assistive Technology for Individuals Who Are Hearing Impaired

Hearing impairments are the most common form of chronic physical disability in the US. Hearing loss may be mild or severe; it may be present at birth, occur throughout life and during later years. A hearing loss may present substantial educational, vocational and social barriers or be a minor inconvenience.

Access

Access to sound is a crucial factor in education and employment. Individuals should be given preferential seating and always sit near a speaker and have good lighting to take advantage of visual access.

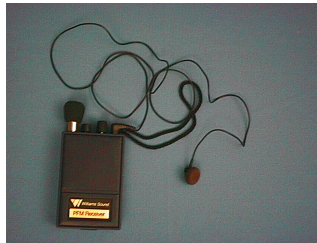
Amplification

The most important amplification device is the individuals' hearing aids. These should be used during all waking hours for formal communication and for all the incidental language and information that occurs unpredictably.

Several companies make hearing aids. An audiologist should be consulted prior to any purchases. They will match the hearing aid to the type and level of hearing loss.

An alternative to the hearing aid is an **auditory trainer**, which channels the speakers' voice directly to the individual as though the speaker was standing next to the individual at all times. This may be a separate piece of equipment or it may "boot" wirelessly directly to the individual's own hearing aids.

Another possibility is the **sound field system** – a microphone (transmitter), an amplifier, and speakers. The speaker wears a microphone, sending his/her voice to the amplifier which arrives to the individual through speakers. While a sound field system brings enhanced sound to individuals, it also has the effect of a public address system. Classmates and co-workers may find their attention turning to the change in the sound of the speaker's voice.



Amplification Device

A **cochlear implant** is a medically implanted device which translates sound from the environment to the acoustic nerve. Its popularity is increasing with continued advances in its capacity for use with a wider audience. Implantation has been restricted to deaf people since the implant destroys any residual hearing in the cochlea.

Closed Captioning

A Closed Caption (CC) device projects text on a television screen to read when speech may not be understandable through hearing alone. All TV sets on sale now have the closed caption capability built in, and the service itself is provided free of charge by the television industry. To use this system, the viewer must activate a visual display that is coded on the signal of the program.

Personal & TV Listening Systems

Enjoy crisp, clear sound without having to turn up the TV to maximum volume. The latest wireless technology provides direct sound with adjustable volume and without distracting background noise.

Large area personal listening systems provide assisted listening in schools, churches, or meeting facilities.

Telephones & Ringers

Hear conversations with improved clarity and amplification by using telephones that have built-in volume and frequency adjustments, or make an existing telephone louder by adding an auxiliary amplifier or replacement handset.



Telephone Amplifying Device

Amplified telephone ringers allow customized selection of volume and frequency for those who may have difficulty in hearing the phone ring.

TTY/TDDs – “Text Telephones”

Communication for hearing and speech-impaired persons is now as easy as dialing the phone and typing a text conversation with the use of a TTY. A teletypewriter (TTY), also known as a telephone device for the deaf (TDD), allows a person who does not hear well enough to talk on the phone to communicate his/her message through text. A small device resembling a typewriter couples to the telephone and transmits the text as typed by the user. The person at the other end must have a similar device, or use Colorado Relay Service.

Colorado Relay Service is a Federal program in which messages are transmitted between a hearing impaired person and a hearing person who does not have a TTY or TDD. An operator reads text to the hearing person from a TTY/TDD and types back to the hearing impaired person. He/she also voices on the telephone to the other person who does not have the TTY/TDD. Sign language might also be used with a video camera. While this particular agency is in Colorado, the service is mandated by Federal Law and is available in all states in some form.

Alerting Systems

Visual or vibrating systems provide signals to alert for messages, doors, phone, fire, baby, wake-up alarm, and medications.

Other Devices



Sometimes speech is so difficult to understand that an **augmentative communication device** might be needed. This can take the form of palm spelling, voicing by computer, machine, or other devices. Individuals with multiple handicaps might also benefit. Technological advances are multiplying the range of choices.

The latest **internet devices** are set up for soundless communication. A hand-held communication device from Wyndtell is intended particularly for the hearing impaired, but can be used by anyone. It fits in a pocket, has a full keyboard, and works with TTYs. It vibrates to notify the owner to check communication, which might be a page, e-mail, a fax (receipt only), text to voice, or voice to text. It is a very versatile device for hearing impaired or communication impaired people.

VENDORS

ADCO

4242 South Broadway
Englewood, Colorado 80113
303/794-3928
800/726-0851
www.adcohearing.com

Harris Communications
15155 Technology Drive
Eden Prairie, MN 55344
800-825-6758
800-825-9187 TTY
Email: info@harriscomm.com
www.harriscomm.com

Hear-More, Inc.
42 Executive Blvd.
Farmingdale, NY 11735
800/881-4327
800/281-3555 TTY
www.hearmore.com

RESOURCES

Alexander Graham Bell Association
for the Deaf
3417 Volta Place N.W.
Washington, DC 20007-2778
202/337-8767 Voice/TTY
202/337-8270 FAX
www.agbell.org

Assistive Technology Partners
601 E. 18th Ave., Suite 130
Denver, CO 80203
303/315-1280 Main
800/255-3477 within Colorado
303/837-8964 TTY
303/837-1208 FAX
www.assistivetechologypartners.org

Assistive Technology Partners
Southeast Technical Assistance
Center (SETAC)
4825 Lorna Place
Colorado Springs, CO 80915



Assistive Technology Partners

SCHOOL OF MEDICINE

UNIVERSITY OF COLORADO ANSCHUTZ MEDICAL CAMPUS

719/380-6229 Main

970/380-6230 FAX/TTY

www.assistivetechologypartners.org

Assistive Technology Partners
Western Slope Technical Assistance
Center (WesTAC)

2897 North Ave., Module 3A

Grand Junction, CO 81501

970/248-0876 Main

970/248-0877 FAX/TTY

www.assistivetechologypartners.org

National Association for the Deaf

Silver Spring, MD 20910-4500

301/587-1788

301/587-1789 TTY

301/587-1791 FAX

www.nad.org

National Institute for the Deaf

52 Lomb Memorial Drive

Rochester, NY 14623-5604

716/475-6700 Voice/TTY

716/475-2696 FAX

www.rit.edu

ONLINE RESOURCES

Visit the websites of the following organizations for more information on assistive listening devices and other resources for ensuring hearing access/

Western Region Outreach Center

www.wou.edu/wrocc

Association for Late Deafened Adults

www.alda.or

**For more information contact:
Assistive Technology Partners
601 East 18th Avenue, Suite 130
Denver, CO 80203**

303.315.1280 office

303.837.1208 fax

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800.255.3477 toll free

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