



Specialized Telecommunication Devices for Individuals with Disabilities

The ability to communicate with friends, family and colleagues by telephone is a very important part of our day-to-day routine. Most people take this for granted while others feel frustrated or isolated because the task of dialing the phone or holding a handset up to their ear is impossible. Listed below are some telephone alternatives to make communication more accessible.

Emergency Telecommunication Systems

Emergency Dialing Devices - allows a person to get help by simply pressing a button. This button sends radio frequency signals to a transponder that is attached to a phone line. Some options include a single button that automatically dials a number and leaves a pre-recorded message. In another option, the transponder automatically dials the monitoring service and the listener can listen to the home through a console-mounted microphone. Monthly monitoring service fees apply.

Medical Alert Telephones – in case of an emergency, the caller activates a wireless remote and it automatically calls your pre-programmed emergency contacts until it reaches a live person. A pre-recorded message alerts the person who answers the call that an emergency exists.

Telephones and Accessories for Individuals who are Blind or Visually Impaired

Braille Speakerphone – large numbers on the keypad are raised and have accompanying symbols in Braille and the speakerphone allows for “hands free” or minimal physical use.

Braille TTY – specialized telephone that combines a TTY with a Braille output device to provide telephone communications for a person who is deaf-blind.



High Contrast Display – provides maximum contrast between characters and the background. White on black or dark color is more legible. Useful for individuals with moderate to severe vision impairments.

Large Button Telephone – features giant numerals on large buttons. Allows an individual with poor dexterity to press the correct key and improves readability for persons with low vision.

Large Button Telephone with Braille – has high contrast, 3/4" black numbers on a white background. Each number is raised as well as augmented by Braille indicators.

Large Button Telephone with Number Announcer – provides a keypad with large numbers for ease in dialing and a digital voice feature that vocalizes each number as it is pressed on the keyboard.

Large Visual Display – enables large characters to be shown on display terminal to increase readability by the user. Useful for individuals with moderate to severe vision loss.

Tactile Key Markers – allows users to feel the keys of a telephone. A single raised dot on the number 5 key assists with orientation of the keypad. Useful for individuals with moderate to severe vision impairments, blindness and deaf-blindness.

Tactile Signaler – this is a telephone signaling device that alerts a person who has limited hearing or sight that their telephone is ringing by a vibrating pager worn on the belt.

Telephones and Accessories for Individuals with Cognitive Impairments

Noise Reduction Telephone – reduces background noise and is hearing aid compatible. Useful for individuals with moderate to severe hearing loss, moderate speech impairment, or cognitive impairment.

Photo-Button Telephone – a telephone for persons who have difficulty dialing or remembering numbers or who have limited cognitive abilities. The large buttons allow the user to insert photos or icons to represent the number being dialed. Telephone numbers can be pre-programmed into the telephone so the user



merely has to push the picture of the number being called and the telephone dials the number automatically.

Visual Display – provides text feedback to the user about the numbers dialed and caller ID information.

Telephones and Accessories for Individuals who are Deaf or Hard of Hearing

Amplified Handset – a replacement handset with a built-in amplifier that can be added to most standard telephones with detachable receivers. It comes with a dial in the handset that enables the user to “turn up” the volume.

Amplified Phone - extra loud ringer, amplification capabilities that increases incoming sounds for extra loud and clear conversations, reduces background noise and makes it easier to understand the caller on the other end of the phone.

Amplified Speakerphone - amplification available and a built-in speakerphone. The speakerphone provides "hands-free" conversations (traditional volume only). Many come with tone and frequency adjustments and loud ringers.

Braille TTY –a specialized telephone that combines a TTY with a Braille output device to provide telephone communications for a person who is deaf-blind.

In-line Amplifiers – external amplification devices that plug into the side of an existing telephone to convert a standard telephone into one with amplification. A dial on the unit enables the user to “turn up” the volume.

Large Button Amplified Telephone – an amplified telephone has a built-in volume control that makes incoming sounds louder. The large number keyboard makes reading and dialing numbers easier. Many come with tone and frequency adjustments and loud ringers.

Light Flasher (visual signaler) – a telephone signaling device that notifies the user that their telephone is ringing by converting sound (telephone ring) into a flashing light. Usually the phone and a lamp are plugged into the flasher device.

Loud Bell Ringer –a telephone signaling device that plugs into the telephone line to increase the volume of the telephone ring.



Noise Reduction Telephone – reduces background noise and is hearing aid compatible. Useful for individuals with moderate to severe hearing loss, moderate speech impairment, or cognitive impairment.

Portable Amplifier - a portable amplification device you attach to any standard, cordless or pay phone earpiece with a strap. Volume can be adjusted.

Ringer Pitch Adjustability – allows user to shift the dominant tone of the ringer into a region where they can hear it. Useful for individuals with moderate to severe hearing impairments.

Ringer Volume Adjustability – allows user to increase the volume of the ringer. Useful for individuals with moderate to severe hearing impairments.

Telecommunication Device for the Deaf (TTY/TTD) – a specialized text telephone that enables people who are deaf, hard of hearing or speech impaired to use the telephone by typing messages back and forth and reading the responses on the display terminal. A TTY is required at both ends of the conversation to communicate directly, or the hearing party can call via the Relay Colorado Service.

TTY and Large Print Printer – a text telephone printer that provides a choice of standard, medium and large print options.

TTY and Large Visual Display – a text telephone with a separate enlarged print display for persons who are deaf and have low vision. The large visual display (LVD) connects to an external port on the TTY to magnify the characters to ten times larger than the characters on the standard TTY display.

TTY Modem – a compatible modem for a personal computer. Allows the user to call other TTY users, communicate with a relay system to read your message to a standard phone user, or connect with automated services such as a bank.

Videophones – a telephone with a viewing screen and a built-in camera that allows you to see someone and communicate with them at the same time. These phones can be used to make video or voice-only phone calls. Picture quality



allows for communication using sign language. Picture quality and time delay reduce effectiveness of lip-reading.

Video Interpreting – using a video interpreter is like using any kind of interpreter only they appear on a video screen rather than in person.

Voice Carry Over (VCO) and Hearing Carry Over (HCO) Telephone – a telephone which combines voice and text communications over the telephone. It is used by persons who can not hear well, but who wish to speak over the telephone using their own voice, and by people who can not speak, but wish to hear others over the telephone. Those who can not hear can read what others are saying through a text display. Those who can not speak can use the typewriter keyboard to respond to what they hear over the telephone.

Telephones and Accessories for Individuals with Mobility Impairments

Air Switch - operates the functions of a phone simply by blowing on an air sensor that activates the remote-controlled voice-activated speakerphone.

Computer Supported Voice Dialing – computer software with voice recognition that provides dialing capabilities. Requires access to a computer with a microphone, speakers and a modem.

Cordless Telephone with Voice Dial – allows for voice activated operation.

Extension Clamps - hold the handset for you.

Hand Clip Holders - an alternative way to hold the phone receiver for those with reduced hand strength or grip.

Hands Free Telephone – a telephone for persons who have limited use of their hands or have mobility limitations. It comes with remote control or voice activation capabilities. It accepts a variety of assistive accessories such as air switch, sip & puff, pillow switch, lapel microphone or headset.

Headsets - are light weight and can fit directly into the ear, cover both ears and can also have a microphone with padded earpieces.



Lapel microphones - are a highly sensitive microphone that clips onto the collar and provides hands-free conversation.

Large Button Telephone – features giant numerals on large buttons and allows an individual with poor dexterity to press the correct key and improves readability for persons with low vision.

Non-Slip Base – prevents the non-mounted telephone from moving about when lifting or replacing the handset or pressing buttons. Useful for individuals with limited dexterity, limited use of hands/arms, a weak grip or hand tremor.

Phone Flipper – holds the connect button down and allows the handset to be removed from the cradle and permanently stored on a phone holder.

Pillow Switch - can be used to control the telephone. By gently touching a switch with the hand, arm, leg or other body movement, the phone is activated. This switch plugs into the console or the remote control.

Receiver Holder - designed to hold the on-off "hook" down in lieu of the receiver, which is (permanently) held on a Gooseneck in position at the user's ear level. To operate the telephone, the user merely lifts the lever and the lever stays up until it is voluntarily pushed back down.

Sip & Puff Switch - a head mounted switch that allows a person to operate a telephone by simply sipping or puffing in the appropriate tube, without using their hands.

Speakerphone – allows a user to communicate by voice with minimal physical operation requirements. Useful for individuals with physical impairments.

Speakerphone with Voice Dial – allows user to operate the phone with their voice and without the use of their hands

Telephone Company Voice Dialing Service – for a monthly fee, some phone service companies offer a voice dialing service for customers within their service area. The service allows the caller to pre-program telephone numbers to be dialed from their home phone by speaking an individual's name. The customer



picks up the phone and speaks the name. Contact your local phone company regarding availability of this service.

Voice Activated Answering – is only usable with incoming calls. When the phone rings, the individual says “hello” and the phone is answered. Calls are ended by pressing the “off” button on the keypad or using a remote switch.

Voice Dialer Telephone – a speed dialer that responds to spoken word that can be added to any phone. Stored names are pre-programmed with corresponding phone number. Once programmed, the phone can be used by speaking instead of dialing. Simply speak one of the pre-programmed names and the number is immediately speed-dialed.

Telephones and Accessories for Individuals with Speech Impairments

Noise Reduction Telephone – reduces background noise and is hearing aid compatible. Useful for individuals with moderate to severe hearing loss, moderate speech impairment, or cognitive impairment.

Speech Amplification System and Speakerphone – allows for volume adjustment of the out-going voice and “hands-free” conversations.

Speech Amplified Handset – a special replacement handset for persons with a speech impairment who have difficulty producing volume in their voices. The handset amplifies outgoing speech up to three times the normal level.

Speech Amplified Telephone – allows an individual with a quiet voice or difficulty speaking to increase the volume of their voice. Useful for individuals with moderate to severe speech impairments.

Telecommunication Device for the Deaf (TTY/TTD) – a specialized text telephone that enables people who are deaf, hard of hearing or speech impaired to use the telephone by typing messages back and forth and reading the responses on the display terminal. A TTY is required at both ends of the conversation to communicate directly, or the hearing party can call via the Relay Colorado Service.

Voice Carry Over (VCO) and Hearing Carry Over (HCO) Telephone – a telephone which combines voice and text communications over the telephone. It



is used by persons who can not hear well, but who wish to speak over the telephone using their own voice, and by people who can not speak, but wish to hear others over the telephone. Those who can not hear can read what others are saying through a text display. Those who can not speak can use the typewriter keyboard to respond to what they hear over the telephone.

Miscellaneous Telephone Modifications

Computer Programs - work with voice recognition software that also provides dialing capabilities. This requires access to a computer with a microphone, speakers and modem.

Telephone Location - is also important. A telephone located in each room will prevent someone from having to travel far to make or receive a phone call. As a safety feature for the bathroom, a telephone can be located on the wall near the toilet and tub. Although it sounds extravagant, having a telephone in the bathroom can provide quicker assistance if needed. Also, having a telephone in the garage is another good idea.

Telephone Jacks - should be placed at least 15” above the floor for persons in a wheelchair to reach without excessive bending. Wall phones can be mounted 48” above the floor.

Resources

Access-Able
819 Hazelwest Drive
St. Louis, MO 63042
314/835-1231
www.access-able.org

Access Board’s Telecommunications Act Accessibility Guidelines (Section 255)
www.access-board.gov/telecomm/html/telfinal.htm

Assistive Technology Partners
601 E. 18th Avenue, Suite 130
Denver, CO 80203

800/255-3477
www.uchsc.edu/atp

Assistive Technology Partners
WesTAC
2897 North Ave., Module 3A
Grand Junction, CO 81501
970/248-0876

Colorado Center for the Blind

Colorado Commission for the Deaf and Hard of Hearing

DBTAC



Assistive Technology Partners

SCHOOL OF MEDICINE

UNIVERSITY OF COLORADO ANSCHUTZ MEDICAL CAMPUS

Sections 255 and 713 of the
Telecommunications Act
www.fcc.gov/cgb/dro/dtftel.html

Section 508 of the Rehabilitation Act
www.access-board.gov/sec508/508standards.htm
www.section508.gov

Vendors

Active and Able
www.activeandable.com

ADCO Hearing Products, Inc.
5661 S. Curtice St.
Littleton, CO 80120
800/726-0851
www.adcohearing.com

Arizona Hearing Online
5975 W. Western Way, Suite 119
Tucson, AZ 85713
866/674-3549
<http://azhearing.com>

Beyond Sight
5650 S. Windermere St.
Littleton, CO 80120
303/795-6455
www.beyondsight.com

CSD
15155 Technology Drive.
Eden Prairie, MN 55344
800/825-6758 Voice
800/825-9187 TTY
www.harriscomm.com

Dynamic Living
428 Hayden Station Rd.
Windsor, CT 06095
888/940-0605
www.dynamic-living.com

ElderStore
11640 Jones Bridge Road, Unit3
Alpharetta, GA 30005
888/833-3375
www.elderstore.com

EnableMart
400 Columbia St. Suite 100
Vancouver, WA 98660
888/640-1999
www.enablemart.com

Headset Zone
21102 31st Ave., SE
Bothell, WA 98021
800/533-4014
www.headsetzone.com

HearingPlanet, Inc.
100 Westwood Place, Suite 300
Brentwood, TN 37027
800/432-7669
www.hearingplanet.com

independent living aids, inc.
PO Box 90222
Hicksville, NY 11802
800/537-2118
www.independentliving.com

Krown Manufacturing



Assistive Technology Partners

SCHOOL OF MEDICINE

UNIVERSITY OF COLORADO ANSCHUTZ MEDICAL CAMPUS

3408 Indale Rd.
Ft. Worth, TX 76116
817/738-2485 Voice
817/738-8993 TTY

www.krowntty.com

Marilyn Electronics
6 Feener Circle
Randolph, MA 02368
800/622-9558

www.marilynelectronics.net

Pathways HomeCare
11091 E. Mississippi Ave.
Aurora, CO 80012
888/755-5593

www.pathwayshomecare.org

Phone Merchants
929 W. Pike St.
Clarksburg, WV 26301
877/291-1076

www.phonemerchants.com

Picture Phone Direct, Inc.
200 Commerce Drive
Rochester, NY 14623
800/521-5454

<http://picturephone.com>

Senior Shops

2211 S. 300 West
Salt Lake City, UT 84115
800/894-9549

www.seniorshops.com

TWAComm.com
Oceanview Promenade
101 Main St., 3rd Floor
Huntington Beach, CA 92648
877/892-2666

www.twacomm.com

Ultratec, Inc.
450 Science Drive
Madison, WI 53711
800/482-2424

www.ultratec.com

Walker Equipment
4289 Bonny Oaks Drive, Suite 106
Chattanooga, TN 37406
800/426-3738

www.handset.com

YouCan TooCan
2223 S. Monaco Parkway
Denver, CO 80222
888/663-9396

www.youcantoocan.com



Assistive Technology Partners

SCHOOL OF MEDICINE

UNIVERSITY OF COLORADO ANSCHUTZ MEDICAL CAMPUS

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

**303.315.1280 office
303.837.1208 fax
303.837.3477 TTY
800.255.3477 toll free**

**generalinfo@at-partners.org
www.assistivetechologypartners.org**

This publication may be reproduced without the written permission of ATP
provided that the source is appropriately credited.