

Assistive Technology Classifications as defined for reporting under the AT Act

Classification of Devices

Throughout the reporting system you are asked to classify the devices provided. There are 10 categories for classifying devices.

- Vision
- Hearing
- Speech communication
- Learning, cognition, and developmental
- Mobility, seating, and positioning
- Daily living
- Environmental adaptations
- Vehicle modification and transportation
- Computers and related
- Recreation, sports, and leisure

Many devices can fit into more than one category depending on how they are used by a consumer. You must choose one category where a device belongs in each instance you are reporting and may not count a device more than once. For example, under your state financing activities your financial loan program may provide one loan to one consumer for one computer. Though this computer may be classified in many of the ten categories, it must be counted only once and placed in one category in this instance. This does not mean a computer must always go into the same category every time a loan for a computer is provided, however. When it is not immediately obvious in which category you should classify a device, you should classify it based on the functional need that is served by the “assistive” aspect of the device.

For example, while telephones are used for communication, not all telephones are immediately categorized in speech communication. A telephone could be classified in different categories, depending on the functional needs of the user. When the primary difficulty is seeing the dial, a large button phone would be classified under Vision. When the primary difficulty is hearing another person on the phone, an amplified phone would be classified under Hearing. When the primary difficulty is having one’s speech understood on the phone, an adapted phone would be classified under Speech Communication. When the primary difficulty involves another function (or multiple functions) the phone would be classified under Daily Living.

A component of a larger system should be classified according to the function or primary use of the larger system. For example, a mouth stick that is used to provide access to a communication system such as Pathfinder would be classified under Speech Communication. A mouth stick that is used to type papers would be classified under Computer Access. A mouth stick that is used generically as an aid to daily living would be classified as Daily Living.

Services are classified according to the AT category associated with the service. For example, an audiological evaluation would be classified under Hearing.

Each category below includes a description, decision rules, and examples that will assist you in deciding whether a device should go into a particular category.

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1. Vision

Definition: Products designed to assist with vision

Decision rules: Products intended to facilitate access and participation for people who are blind or visually impaired are classified in this category, even if they are used for activities of daily living, computer access, reading/learning, way finding/travel, recreation, etc. Products in this category characteristically provide output of information through large print/display, synthetic speech or Braille/tactile. If the adaptation is for an individual who is both visually impaired and hearing impaired, categorize according to the primary functionality of the device. Reading systems to accommodate vision are classified here while similar systems to accommodate learning are classified accordingly. A TTY with Braille output is classified as hearing. A telephone with both a large print keypad and amplification for listening may be classified in either vision or hearing.

Examples:

- Magnifiers including CCTV systems;
- talking scales, blood pressure gauge, glucometer etc.;
- screen readers, screen magnifiers and Braille displays;
- Daisy or Victor Readers;
- PDA's with large print, speech or Braille output;
- talking or Braille GPS, white canes, talking or tactile compass, etc.;
- OCR reading systems; talking thermostats, household appliances etc.

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2. Hearing

Definition: Products designed to assist with hearing

Decision rules: Products intended to facilitate access and participation for people who are deaf or hard of hearing are classified in this category, even if they are used for activities of daily living or could have another application for people with other disabilities or for other functions. Products intended to facilitate telephone usage for individuals with hearing disabilities are categorized here, rather than as aids to daily living. If the telephone adaptation is for an individual who is both visually impaired and hearing impaired, categorize under EITHER vision or hearing. Products that amplify voice are classified here if the purpose is to enhance the volume of speech produced by an individual without a disability, in order for his/her speech to be heard by persons who are deaf or hard of hearing. This category also includes systems that provide for text communication, both via telecommunication (text messaging; TTY) and face to face (Interpretype). Peripherals designed to facilitate access or otherwise support the use of a device for hearing (e.g. neck loop induction coils; TeleLink phone couplers; conference microphone; telephone signalers) are counted in this category.

Examples:

- Personal amplification systems (hearing aids, PocketTalker Pro, etc.)
- Assistive Listening Systems (FM; loop; infrared, sound-field, large area, personal)
- Wireless headphones to enhance TV listening (e.g. DirectEar; TV Listener)
- Daily living aids that use visual or tactile rather than audible signals (e.g. vibrating alarm clock; smoke alarm with strobe light; door bell with flashing signal; etc.)
- Instant messaging devices (used as portable TTY)
- Daily living aids with enhanced audible signals (Sonic Boom Alarm Clock)
- Amplified Telephones, in-line amplifiers for telephones, cell phone amplifiers
- Text telephones (TTYs), Voice carryover (including CapTel) and Hearing carryover telephones and Signaling devices (visual and/or tactile alerting to incoming phone calls)
- Classroom Captioning System
- iCommunicator (Voice to text system)
- AudioSee (enhanced view of speaker for speech reading, in addition to FM capabilities)
- InterpreType dual keyboard system

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3. Speech Communication

Definition: Products designed to assist with speaking and face-to-face communication for individuals with speech disabilities.

Decision rules: Products intended to facilitate computer access and usage for written communication are classified under Computers. Products intended to facilitate telephone usage for individuals with speech disabilities will be classified under activities of daily living, EXCEPT when the adaptation is for an individual who is deaf or hard of hearing in which case it is classified under hearing. Products that amplify voice are classified here if the purpose is to enhance the volume of speech produced by an individual with a disability, in order for his/her speech to be audible by persons without disabilities. If the purpose of the amplifier is to enhance the volume of speech produced by an individual without a disability, in order for his/her speech to be heard by persons who are deaf or hard of hearing, the device is classified under hearing. Peripherals designed to facilitate access or otherwise support the use of a device for speech communication (e.g. mounting systems; carrying cases, switch or mouth stick used for access) are counted in this category.

Examples:

- Speech generating devices such as BIGMack; DV4; ChatPC; DynaWrite; Pathfinder; talking photo album
- Communication boards/books
- Software with speech output e.g. Speaking Dynamically Pro
- Software that provides symbol sets for use in developing “low tech” communication boards/books or “high tech” overlays e.g. BoardMaker; Picture This!
- Artificial larynx
- Devices that produce text but not voice output for face-to-face communication (e.g. Crespeaker)
- Voice clarifiers (e.g. Speech Enhancer)
- Voice amplifiers (e.g. Falck amplifier)
- Stuttering aids

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4. Learning, Cognition, and Developmental

Definition: Products to provide people with disabilities with access to educational materials and instruction in school or other environments; products that assist with learning, and cognition.

Common subcategories:

- Cognitive aids
- Early intervention aids
- Instructional materials
- Memory Aids
- General Personal Organization Tools
- Sensory/Developmental Stimulation Products

Decision rules: Products intended to mitigate, compensate, or address learning or cognitive limitations should be classified here along with products used to facilitate computer access for individuals with learning/cognitive limitations. Products designed to assist people who are blind or visually impaired with reading, organization, learning, computer access, etc. are classified under vision.

Examples:

- Calculators and measurement tools
- Clocks/Timers/Wake-up Systems
- Electronic Reference Tools and Money Management Tools
- Memory Aids
- Electronic Notakers, Portable Word Processors, and Recording Devices
- Electronic Organizers/Personal Digital Assistants
- Scientific Equipment
- Educational/Instructional Software (cause and effect, reading, language, spelling, math, writing, science, history, etc)
- Cognitive/Perceptual Training Software
- Tape or other audio players (except as related to vision)
- Text-to-speech systems (WYNN, Read and Write Gold, etc. – not related to vision)
- FM systems (to support auditory processing - not related to hearing loss)

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5. Mobility, Seating, and Positioning

Definition: Products whose main focus is on augmenting or replacing the functional limitations of an individual's mobility

Decision rules: Wheelchair restraints associated with seating & positioning (shoulder or safety belts) are classified in this category. Wheelchair restraints (tie downs: 4-belt & docking or lock downs: trailer-hitch) associated van locks which allow a power chair user to drive and/or be transported safely is classified under "Vehicle Modification and Transportation."

Examples:

- Ambulatory aids: low tech aids such as canes, walkers or crutches; also includes orthotics & prosthetics
- Wheelchairs: dependent (such as strollers & transport chairs) & independent manual mobility (4-wheels propelled independently)
- Scooters and power chairs: Functionally matched motorized independent power mobility bases
- Seating and positioning – considerations based on postural control & deformity management, pressure & postural management, and/or comfort & postural accommodation. (such as pelvic guides, contoured seating systems, head supports)

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6. Daily Living

Definition: Devices that enhance the capacity of people with disabilities to live independently, especially AT that assists with Instrumental and other Activities of Daily Living, (ADLs, IADLs) such as dressing, personal hygiene, bathing, home maintenance, cooking, eating, shopping and managing money.

Common Subcategories:

Personal hygiene, care and toileting
Dressing and apparel, and aids to dressing
Housekeeping, cleaning, maintenance
Cooking and eating
Handling, reaching, manipulating
Alerting and signaling
Household management, bill paying (not cognitive, vision, or hearing AT)
Telephony equipment

Decision rules: Architectural/home adaptations or modifications are classified under Environmental adaptations. Life safety devices and systems that do not involve home modifications are categorized here. Devices intended to accommodate specific disabilities, such as hearing or vision, are assigned to those categories. Devices that assist with personal organization are classified as Learning, Cognition and Developmental AT. Devices used to accommodate multiple disabilities are categorized here. Devices that assist persons with motor impairments not categorized elsewhere are included here. EADLs that also function as environmental controls are classified according to their primary use. Telephony equipment not intended to accommodate other categories of disabilities is listed here.

Examples:

- Writing guides, adapted writing implements
- modified or large-handled tools and utensils
- eating/feeding equipment, spiked cutting board, jar opener
- zipper pulls, button hooks, needle threader
- personal pager, multi-sensing/multi-sensory alerting devices
- wheelchair desks/trays
- reacher
- wheelchair/walker bag
- switch-adapted food processor or other appliance
- large-button telephone (not for vision or cognitive accommodation).

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7. Environmental Adaptations

Definition: Environmental and structural adaptations to the built environment that remove or reduce barriers and promote access to and within the built home, employment and community facilities for individuals with disabilities. Environmental adaptations usually involve building construction, engineering, and architecture, but also include environmental controls and switches that can control a large portion of or an entire living environment. Environmental adaptations are typically permanent or semi permanent structures, modifications or additions

Decision rules: Adaptations or modifications to vehicles are classified under Vehicle modifications. Adaptations to furniture such as chairs, couches, beds, etc., would be generally be classified under Mobility, Seating, and Positioning. Items or structures that are portable or temporary, rather than permanent or semi-permanent, would generally be classified in another category related to the functional limitation address. For example, shower chairs, commodes, raised toilet seats and similar portable items should be classified in the daily living category where as a roll in shower, wall or floor mounted grab bars, installed ramps, etc would be classified here because they become part of the building structure.

Examples:

- Accessible HVAC controls, accessible plumbing fixtures and controls
- Adapted playground equipment and structures
- Alarm and Security Systems
- Cabinetry and Storage equipment
- Door/Gate Openers
- Environmental controls and switches (i.e., electronic systems that enable people to control various appliances, lights, telephones, security systems etc.)
- Flooring and Surface materials/Detectable warning surfaces
- General Environmental Access Products
- Lifts
- Lighting/lighting controls
- Ramps
- Signage/signaling products
- Workstations/Desks/Tables, Home-workplace adaptations

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8. Vehicle Modification and Transportation

Definition: Products that give people with disabilities independence and enhance safety in transportation through adaptation of vehicles.

Decision rules: Vehicle ramps are classified in this category. Versatile/portable ramps (temporary adaptation) and wheelchair lifts (permanently installed in buildings) are classified under Environmental adaptations.

Examples:

- Adaptive shoulder and seat safety belts
- Tie downs and lock downs that secure the wheelchair to the vehicle floor
- Hand controls
- Extended directional mirrors.
- Vehicles and vans modified with lifts, ramps, raised roofs, etc.

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9. Computers and Related

Definition: Hardware and software products that enable people with disabilities to access, interact with, and use computers at home, work, or school. Includes modified or alternate keyboards, switches activated by pressure, touch screens, special software, voice to text software

Common subcategories:

Decision rules: Classify standard computers and computer-related devices (those that will be used without any adaptations) in this category, along with input adaptations used to mitigate, compensate or address motor limitations. Do not include computer adaptations used to address vision or learning, cognitive or developmental limitations.

Examples:

- Standard software
- Standard hardware
- Computer accessories
- Alternative keyboards and pointing devices
- Switches and scanning software used for computer access
- Touchscreens
- Voice recognition systems

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10. Recreation, Sports, and Leisure Equipment

Definition: Products not already classified in other categories that help persons with disabilities to participate in sport, health, physical education, recreation, leisure, and dance events.

Common subcategories:

- Toys and games
- Sports equipment
- Fitness equipment
- Specialized wheelchairs and recreational mobility equipment
- Musical instruments and related devices
- Arts, crafts and photography equipment
- Gardening and horticultural equipment
- Hunting, fishing, shooting equipment
- Camping, hiking and other outdoor recreational equipment
- Audio and video entertainment equipment

Decision rules: Devices intended to accommodate specific disabilities, such as hearing or vision, are assigned to those categories. Specialized products designed specifically for recreational, leisure or athletic pursuits are categorized here. Devices that may have other uses, but are selected as AT for a recreational setting, should be categorized here. Devices for environmental control that also serve as entertainment system controls (e.g. television remote) are classified according to their primary use.

Examples:

- Switch-adapted toys and games;
- Tennis wheelchairs; beach wheelchairs
- Skiing equipment; sled/sledge hockey equipment
- Gardening tools and equipment;
- Playing card shuffler;
- Adapted camera and other photography equipment;
- Adaptive exercise equipment (not used in a rehabilitation setting);
- Adaptive equipment for fishing, hunting, and camping;
- Adaptive musical instruments and accessories (not used in a school setting);

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- Entertainment system remote control not used for lights, heat or other environmental control.