

## Assistive Technology in the Inclusion and Special Needs Support Center

The manual provides a detailed explanation of the assistive technology, devices and softwares, available in the Inclusion and Special Needs Support Center, and the benefits of using them and the types of disabilities that can take advantage of them.

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## 1. Devices

### Jelly bean Twist, Buddy Button



- A switch that is used for easy mouse control and requires only the slightest touch on its surface. It provides an auditory click and tactile feedback to inform the user that the button has been clicked.
- Provides easy access for people with motor disabilities and activates the use of assistive technology devices, communication devices, environmental control devices, computer programs and mobile phones.
- The switch is programmed to simulate the mouse click to the right, left, top or bottom.
- Clicking the switch can be controlled by hand, arm or head
- Available in red, blue, yellow or green depending on the user's choice and what is suitable for people with visual impairments.

### Crick USB switch box



- It is a USB port and switch box and is the best way to connect keys such as (Jelly Bean Twist - Buddy Button) electronic devices
- It can connect 4 switches or buttons that are programmed to click to the right, left, top or bottom.
- They are used by people with physical disabilities

## Optima Trackball USB



- A wired trackball mouse designed to make computer use more comfortable and efficient and accessible to people with motor disabilities
- Lightweight and robustly constructed, Optimax can be used as either a desktop or hand-held unit.
- Contains a smooth tracking ball, that requires a simple movement, and red buttons to press left and yellow to right-click which allows precise control

## Big keys LX



- BigKeys are simplified keyboards, has 60 large, chunky keys, and offers access to function keys.
- 1-inch-square keys on a standard sized keyboard allowing users to select individual keys, instead of accidentally pressing multiple keys, which is convenient to people with mobility issues.
- Characters on keys are easy to read; bold black, white, beige, multicolored, or white characters on black keys.
- Designed specifically for people with visual impairments, learning disabilities, ADHD, or who have difficulty using regular keyboards.

## Big track switch adapted (Infogrip)



- The BIGtrack Trackball Switch Adapted is designed to make computer use more comfortable and effective and provide access to people with motor disabilities
- It has a 3-inch trackball which makes it the largest trackball available. The large ball requires less fine motor control than a standard trackball and it is ruggedly built.
- It has a left and right mouse click button that is located behind the trackball to avoid unwanted mouse clicks. The mouse clicks are simple for those with poor motor control.
- The BIGtrack Switch Adapted is easy to install and works on any Windows or Macintosh computer.

## Compact 7 HD



- High-definition portable magnifier provides an increased field of view and the ability to see more words per line with the best image quality available.
- The Compact 7 HD allows you to see the smallest details of photos or objects on the ergonomically positioned, high brightness 7-inch widescreen.
- Used by people with learning disabilities, ADHD and visual impairments.
- The patented LED lighting system eliminates glare reflections when reading text and looking at photos.

## Candy 5 HD II



- CANDY 5 HD II is a handheld (with handle) 5.0" LCD HD video magnifier with high-definition wide-screen LCD and continuous zoom magnification from 2.5x – 22x.
- This versatile video magnifier has an intuitive center-position HD autofocus camera and can be used as either a “handheld” or “stand” magnifier. Use it at home or take it with you to school, work, restaurant, pharmacy, bank, library, grocery or department store or on vacation.
- The magnifier has a second camera for the user to see with automatic focus control. It also includes 5 different color modes
- It is used by people with visual impairments, older persons, people with learning disabilities and people with ADHD.

## Ergorest Arm rest



- The ErgoRest Arm Rest is an articulating ergonomic support for elbows, forearms, and wrists while computing.
- Supports arm and can provide full range of movement via keyboard. Relaxes muscle strain and fatigue from the shoulders and relieves pressure on the sensitive areas of the wrist and strain on the lower back area.
- Easy to install as it is set on the table and adjusts the mode that provides convenience to the user to perform multiple tasks on the computer.
- Used by persons with motor disabilities or who complain of muscle or joint pain

## Super clamp



- A tool designed to mount and carry objects (mugs), electronic devices (Ipad), assistive technology tools easily in the wheelchair or tables.
- Used by persons with motor disabilities to ensure easy access to the objects they use.

## Universal switch mounting system



- This strong, reliable mounting system uses an easy-turn friction knob to lock all joints securely into place.
- Used to install Jelly Bean Button & Buddy Button and assistive technology tools and I pads in tables or wheelchairs.
- Used by persons with motor disabilities to ensure easy access to the objects they use.

## Evoluent vertical mouse 4 left



- Evoluent vertical mouse 4 left is a special mouse designed for people with motor disabilities to help them use the PC or laptops.
- Keeps the hand position vertically in the "handshake" mode while moving the cursor, clicking and browsing. This prevents twisting the forearm and arm, providing additional comfort for long-term use of the mouse.



- It has programmable buttons, adjustable optical sensor that allows the user to adjust the speed of the mouse pointer.

### Humanscale Switch Mouse



- The Switch Mouse is designed for maximum user comfort. The peripheral device, including a V-shaped based, puts the wrist and forearm in a comfortable position to reduce injury risks among computer users.
- It accommodates both left and right handed users while being adjustable in size.
- It is used by persons with motor disabilities and those who complain of joint and muscle pain.

### Cherry Keyboard



- The keyboard is designed to be easy to carry, use and write on.
- White characters on the keys make character recognition easy.
- The keyboard can be connected to laptops.
- Suitable for many disabilities.

## High Contrast Keyboard



- Keyboard with large, clear letters and numbers on the keys, making it very suitable for users with visual impairments.
- The keyboard is in yellow letters with a black background for better visibility.

## Gold Touch Keyboard



- This keyboard is designed to make users more comfortable and productive as the keyboard can be adjusted on both vertical and horizontal angle to suit the individual needs of users.
- The keyboard is adjustable so that users can put their wrists straight and correct which helps to relieve the strain on the tendons and align the arms and shoulders in a normal and comfortable position.
- It is ideal for people with motor disabilities.

## Eye-Pal Solo



- Eye-Pal SOLO is a stand-alone scanning and reading appliance with OCR and read-aloud capabilities.
- Easy to use where the device is turned on and a document, book or newspaper is placed on the base of the device, and then it will read the text aloud.
- This device enables people with visual impairments and those with learning disabilities (dyslexia) or ADHD to read the content of any text printed easily by listening.

## Supervario 24



- Braille display designed for use by people who are blind or have low vision, and the device allows users to access computers, laptops and smart phones.
- Connects to a computer or laptop through USB or smart phone through Bluetooth. The device works with screen readers to provide accessibility.

## Tiger Braille Embosser



- A printer for printing Braille texts and graphics in tactile form and used by people with visual disabilities.
- Works on windows operating system.

## IPad Air 2



### Accessibility for visual disability

- VoiceOver is a gesture-based screen reader that lets people with visual impairment use iPad without seeing the screen. With VoiceOver enabled, the user can hear a description of everything happening on the screen, from battery level to who is calling to which app the user selects. The speaking rate and pitch can be adjusted to suit the user. This feature supports Arabic language
- VoiceOver can now describe images. It can also read aloud text in an image — whether it is a snapshot of a receipt or a magazine article. In the Photos app, the user can touch to explore the facial expressions of people in your photos and the VoiceOver will describe what is there.
- VoiceOver includes system wide support for braille chords in 6 and 8 dot braille, enabling direct braille entry without the need for a physical braille keyboard. The braille keyboard is available in the rotor, so users can use it to type text, unlock your iPad, launch apps, and find content in apps

- iPad is fully compatible with more than 70 refreshable braille displays. A Bluetooth wireless braille display can be connected to read VoiceOver output, including contracted and uncontracted braille and equations using Nemeth Code. When editing text, the display shows the text that is edited in context, and the edits are seamlessly converted between braille and printed text. Braille displays with input keys can be used to control iPad when VoiceOver is turned on.
- Users can watch movies with detailed audio descriptions of every scene on iPad. Movies with audio descriptions are displayed with the AD icon in the iTunes Store.
- iPad also lets VoiceOver users access closed caption and subtitle tracks audibly or through their Braille displays.
- iOS lets users invert colors, reduce white point, enable grayscale, or choose from a range of color filters to support different forms of color blindness or other vision challenges.
- Zoom is a built-in screen magnifier that works anywhere in iOS. It works with all apps from the App Store. Turn Zoom on for full-screen or picture-in-picture view, allowing users to see the zoomed area in a separate window while keeping the rest of the screen at its native size. Zoom works with VoiceOver, so users can better see — and hear — what’s happening on screen.
- When you activate Larger Dynamic Type, the text inside a wide range of apps, including Calendar, Contacts, Mail, Messages, Music, Notes, and Settings, and even some third-party apps, is converted to a larger, easier-to-read size.
- Magnifier works like a digital magnifying glass. It uses the camera on iPad to increase the size of anything it points at to see the details more clearly.
- Users can have a hard time reading the text on iPad, so they can use Speak Screen to read your email, iMessages, web pages, and books. Users can adjust the voice’s dialect and speaking rate, and have words, sentences, or words within sentences highlighted as they are being read.

- Siri helps with many tasks such as sending messages, e-mails, making phone calls, creating calendar events, and even turning on VoiceOver, accessibility features and adjust colors.
- Dictation lets users talk where they would type. Users tap the microphone button on the keyboard, speak what they want to write, and iPad converts words (and numbers and characters) into text. Therefore, it is easy to type an email, note, or web address — without typing at all.

#### Accessibility for physical disability

- Siri assists users to do their daily tasks through speaking or writing.
- Dictation allows users to speak rather than write to send email, messages, or dial a phone number.
- AssistiveTouch lets users adapt the Multi-Touch screen to their physical needs. Therefore, if users need to change some gestures, like pinch, they can make them accessible with just a tap of a finger.
- With Predictive Text, users can tap to choose the perfect suggestion for next word — Predictive Text adjusts results based on whom users are talking to and what they have said before.
- If there is a word or phrase frequently used, users can create a custom shortcut — and iPad will type it out. Keyboard shortcuts make it easier and faster to type name, email address, home address, or any other text typed often.

#### Accessibility for hearing disability

- Made for iPad, hearing aids can help users have better conversations in loud places. Users need to turn on the Live Listen feature and move iPad toward the people they are talking with.
- Users can enable "Type to Siri" feature where they can Tap the Dictation button on keyboard to dictate their query, set up adjust reminders, and so on.

- iMessage lets users start up a conversation without needing to say or hear a word.
- Users can watch movies, TV shows, and podcasts with closed captions. Users can even customize captions with different styles and fonts, including styles that are larger and outlined for better legibility.
- When Users are using headphones, iOS plays both audio channels in both ears, and let users adjust the balance for greater volume in either ear.
- Using FaceTime, a high-quality video connection that enables the user to see gestures and facial expressions. This is an ideal solution for people who use sign language.
- iPad delivers both visual and vibrating alerts for incoming phone calls, new text messages, new and sent mail, and calendar events. Users can set an LED light flash for incoming calls and alerts or have incoming calls display a photo of the caller. Users can choose from different vibration patterns or create their own.

#### Accessibility for learning disability – ADHD – Autism

- iPad has features like Speak Screen, Speak Selection, Typing Feedback, and Predictive Text
- When Typing Feedback activated, each letter typed on the keyboard is spoken aloud as well.
- Predictive Text feature suggests word options that users can listen to and choose from to get help with spelling.
- Dictionary gives users quick access to definitions and commonly used phrases to help with spelling, pronunciation, and grammar.
- For some students, navigating the web can be a sensory overload. Safari Reader reduces the visual clutter. It strips away ads, buttons, and navigation bars, allowing users to focus on just the content they want.
- Guided Access helps people with autism or other attention and sensory challenges stay focused on the task (or app) at hand. With Guided Access,

a parent, teacher, or therapist can limit iPad to stay on one app by disabling the Home button, and limit the amount of time spent in an app. Users can even restrict access to the keyboard or touch input on certain areas of the screen. So wandering taps and gestures will not distract from learning.

- Siri Helps in searching online, sending messages, setting reminders, or even turning on frequently used accessibility settings.

More information on iPad accessibility is available on [Apple Website](#)

## Big grip



- Big Grips Frame is a protective iPad case. It is big, squishy, easy to grab, comfortable to hold, and very grip-able.
- It has a base to install the iPad so as not to fall. It helps to protect the Ipad from scratches or fractures and makes it easy to carry and use.
- Suitable for the use of persons with motor disabilities.



## Braille sense U2



- It is a Braille notebook developed and manufactured for people who are blind or with low vision
- Contains a text processor that enables the user to create, edit and print different types of documents using the Perkins keyboard.
- The device supports Internet connection. The user can browse the Internet or use e-mail
- Contains calendar to remind of important appointments
- Contains a calculator to calculate algebraic equations, including scientific calculations
- Users can also exchange files by connecting the device with the computer through a USB cable or using Bluetooth.
- Contains a text reader software, which helps to write text in Braille while being read aloud at the same time.

## Lenovo Think Center



- It is a computer with a touch screen.
- The screen can be adjusted to fit the user's position.

## Keys-U-See



- USB keyboard with large keys with large letters and numbers that are easy to see, even in low light.
- Used by persons with visual disabilities and who have learning disabilities or Attention Deficit and Hyperactivity Disorder (ADHD).

## PACmate BX400



- A versatile portable computer with built-in JAWS to provide speech or Braille access to Windows and mobile applications for people who are blind.
- The PAC Mate Omni synchronizes with users' desktop computer to update email, contacts, appointments, files, tasks, and even Web favorites.

## Liberty Solo



- Liberty Solo is a full colour magnifier with an integrated high brightness 2" screen; it is battery operated.
- A flexible and ergonomic reading position can be chosen to suit the needs of the user due to the tiltable display and lightweight mouse camera.
- Used by persons with visual disabilities and who have learning disabilities or ADHD.

## Acrobat LCD



- It is a magnifying device used to enlarge text and images. It has a high-quality camera to provide clearer colors and has an electronic zoom feature.
- Users can simply rotate the camera, adjustable arm, tilt screen, to be positioned at any angle for optimal viewing.
- Used by persons with visual disabilities and who have learning disabilities or ADHD.

## Perkins Braille



- It is a manual Braille printer used by students with visual disabilities to write notes and summarize lectures.

## Optelec ClearView



- It is a desktop video magnifier with High definition camera and 24 inch widescreen. It magnifies images, and texts in a smooth way and with different magnification levels
- Continuous zoom magnification: 1.5X - 75X (optional: up to 170X)
- High contrast semi-colours for improved reading fluency, including yellow text on a black background - select up to 4 combinations from a possible choice of 16
- Position locator and overview function - never lose your place on the page
- Add lines or mask out areas top/bottom or left/right of the screen for easier reading
- Used by persons with visual disabilities and who have learning disabilities or ADHD.

## Beats headphones



- Headphones are used to amplify the sound
- Used by persons with hearing disabilities and those with learning disabilities or ADHD.

## Optelec FarView



- Using a single, high-quality camera and a 4.3-inch widescreen, the FarView allows users to access information around in real time or to store images for later reference.
- Used by persons with visual disabilities and who have learning disabilities or ADHD.

## BookSense XT 50



- It is a device for recording lectures and listening to them
- E-books, audio files and text files can be downloaded onto the device for listening
- Contains up to 4 Gigabytes memory
- Used by persons with visual disabilities and who have learning disabilities or ADHD.

## Recorders



- It is a device for recording lectures and listening to them
- E-books, audio files and text files can be downloaded onto the device for listening
- The list of recordings can be easily searched
- Used by persons with visual disabilities and who have learning disabilities or ADHD.

## Everest-D V4 Braille Embosser



- A Braille printer that prints on both sides of the paper and is used especially when there is a large amount of printing (books, references, etc.)

## AKG headphones



- Headphones are used to amplify the sound
- Used by persons with hearing disabilities and those with learning disabilities or ADHD.

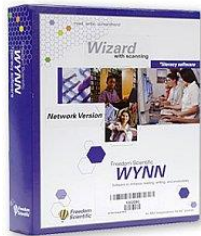
## 2. Softwares

### Zoom Text 10



- It is a software for zooming and reading texts, which allows people with visual disabilities to access documents, spreadsheets, web pages, mail, applications and software on their computers.
- Used by persons with visual disabilities and who have learning disabilities or ADHD.

### WYNN



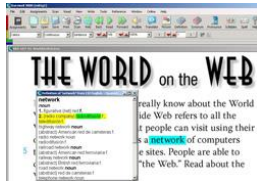
- A software designed to promote success of people with learning disabilities, especially in reading and writing (Dyslexia - Dysgraphia) and those with Attention Deficit Disorder (ADD) or attention deficit and hyperactivity disorder (ADHD).
- The software highlights and reads text at the same time and provides definitions to unfamiliar vocabulary
- The software can benefit people with visual disabilities as it reads texts on the computer and also scans and reads texts in books and documents.

## Read & Write 10 Gold



- This software aims at improving literacy skills
- Contains a text reader which reads web pages and documents
- It has word prediction feature and a dictionary that provides words' meanings with a description of images
- The software can benefit people with learning disabilities, especially in reading and writing (Dyslexia - Dysgraphia).

## Kurzweil 3000



- A software used for reading electronic and printed texts in a voice similar to human voice
- It contains a dictionary to provide meanings
- It contains a spell checker when printing text
- It helps the user to browse the Internet and search for references and e-books
- It benefits people with learning disabilities, especially in reading and writing (dyslexia - dyslexia) and persons with visual disabilities



## NVDA



- It is a free screen reader software which supports reading the Arabic language
- Users can use it to surf the Internet and read e-mails
- The software supports Microsoft Office applications
- Converts texts to Braille if the user is using a Braille Display device.
- It benefits people with visual and learning disabilities