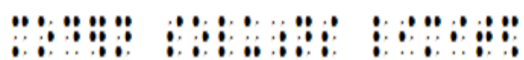




**Modern Solutions Limited**



**Accessibility Devices  
For persons living with different  
Impairment**

***One Stop Centre for  
Personalized Assistive Devices***





# Modern Solutions Ltd.

P.O. BOX 10362-00400

Nairobi-Kenya

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[Modern.solu@gmail.com](mailto:Modern.solu@gmail.com)

Website: [www.modernsolutions.co.ke](http://www.modernsolutions.co.ke)

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+254 20 231 4010

+254 781 529 394

## Mission

To promote access to modern assistive devices, technology, training, employment, and social opportunities by people with disabilities.

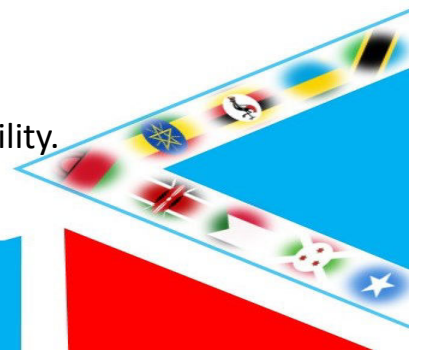
## Objectives

- a. Modern assistive devices and technology for persons with disabilities and Provision of braille books
- b. Advocacy for ratification of policies that promote inclusion, representation and access to opportunities for persons with disabilities.
- c. Empowerment of persons with disabilities towards increased self-determination, self-reliance and self-advocacy.
- d. Training of students and youth with disabilities on computers and computer software's as well basic life skills.

## Our Focus Area

Our interventions focus on a number of cross-cutting issues. Key among these shall be:

- a. Assistive devices and Technology for Persons with disability, Specific learning materials i.e. Braille books, etc.
- b. Training and Literacy for Persons with disability.
- c. Employment and Economic Empowerment for Persons with disability.
- d. Sensitization and Awareness Creation for Persons with disability.
- e. Personal Development and Empowerment for Persons with disability.

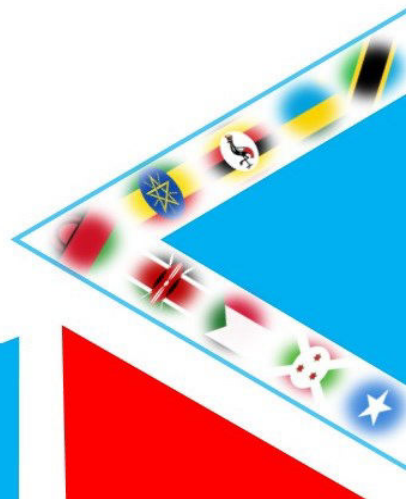




# Introduction to Visual Impairment

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## What Causes Visual Impairment?

People rarely lose their eyesight during their teen years. When they do, it's usually caused by an injury like getting hit in the eye or head with a baseball or having an automobile or motorcycle accident.

Some babies have **congenital blindness**, which means they are visually impaired at birth. Congenital blindness can be caused by a number of things — it can be inherited, for instance, or caused by an infection (like German measles) that's transmitted from the mother to the developing fetus during pregnancy.

Conditions that may cause vision loss after birth include:

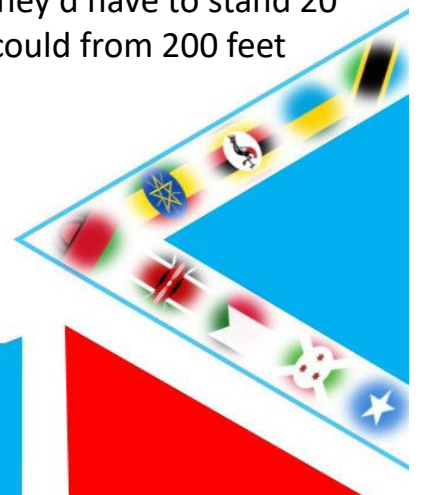
## What Is Visual Impairment?

Many people have some type of visual problem at some point in their lives. Some can no longer see objects far away. Others have problems reading small print. These types of conditions are often easily treated with eyeglasses or contact lenses.

But when one or more parts of the eye or brain that are needed to process images become diseased or damaged, severe or total loss of vision can occur. In these cases, vision can't be fully restored with medical treatment, surgery, or corrective lenses like glasses or contacts.

The American Foundation for the Blind estimates that 10 million people in the United States are visually impaired. **Visual impairment** is a term experts use to describe any kind of vision loss, whether it's someone who cannot see at all or someone who has partial vision loss.

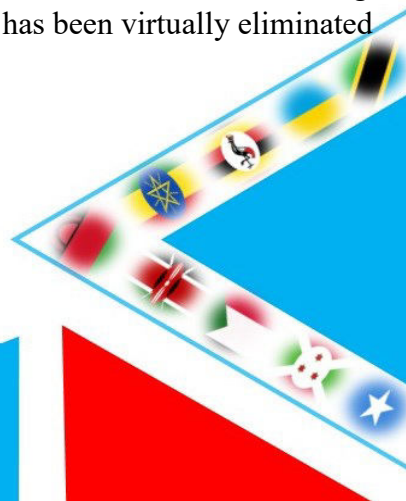
Some people are completely blind, but many others have what's called **legal blindness**. They haven't lost their sight completely but have lost enough vision that they'd have to stand 20 feet from an object to see it as well as someone with perfect vision could from 200 feet away.



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- **Amblyopia** (pronounced: am-blee-OH-pee-uh) is reduced vision in an eye caused by lack of use of that eye in early childhood. Some conditions cause a child's eyes to send different messages to the brain (for example, one eye might focus better than the other). The brain may then turn off or suppress images from the weaker eye and vision from that eye then stops developing normally. This is also known as a "lazy eye." **Strabismus** (misaligned or crossed eyes) is a common cause of amblyopia, since the brain will start to ignore messages sent by one of the misaligned eyes.
- **Cataracts** are cloudy areas in part or all of the lens of the eye. In people without cataracts, the lens is crystal clear and allows light to pass through and focus on the retina. Cataracts prevent light from easily passing through the lens, and this causes loss of vision. Cataracts often form slowly and usually affect people in their 60s and 70s, but sometimes babies are born with congenital cataracts. Symptoms include double vision, cloudy or blurry vision, difficulty seeing in poorly lit spaces, and colors that seem faded.
- **Diabetic retinopathy** (pronounced: reh-ton-AH-pa-thee) occurs when the tiny blood vessels in the retina are damaged due to diabetes. People with retinopathy may not have any problems seeing at first. But if the condition gets worse, they can become blind. Teens who have diabetes should be sure to get regular eye exams because there are no early warning signs for this condition. To help prevent retinopathy, people with diabetes should also avoid smoking, keep their blood pressure under control, and keep their blood sugar at an even level.
- **Glaucoma** is an increase in pressure inside the eye. The increased pressure impairs vision by damaging the optic nerve. Glaucoma is mostly seen in older adults, although babies may be born with the condition and children and teens can sometimes develop it as well.
- **Macular** (pronounced: MAH-kyoo-lur) **degeneration** is a gradual and progressive deterioration of the **macula**, the most sensitive region of the retina. The condition leads to progressive loss of central vision (the ability to see fine details directly in front). Macular degeneration is often age related (it occurs in older people, especially older than 60), but sometimes it can occur in younger people. Excessive exposure to sunlight and smoking can increase the risk for age-related macular degeneration. Symptoms may include increased difficulty reading or watching TV, or distorted vision in which straight lines appear wavy or objects look larger or smaller than normal.
- **Trachoma** (pronounced: truh-KO-muh) occurs when a very contagious microorganism called *Chlamydia trachomatis* causes inflammation in the eye. It's often found in poor rural countries that have overcrowded living conditions and limited access to water and sanitation. Blindness due to trachoma has been virtually eliminated from the US



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# Perkins Brailier



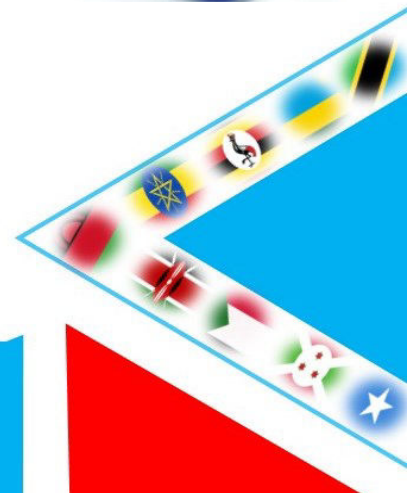
## Why the Perkins Brailier

- **Best in Class:** The most widely used mechanical braille writer in the world since its invention in 1951.
- **Durability that Lasts for Decades:** Metal casing, closed body architecture (limiting dust accumulation), and over 66 years of craftsmanship, resulting in a resilient product.
- **Wide-ranging Usefulness:** Wide paper length to accommodate complex math, note taking or other literacy activities.
- **Reliable Support:** One year warranty, repair service trainings and repair service centers throughout the world, ensuring that any problem with your product is resolved quickly

# SMART Brailier

## Why the SMART Brailier

- **Accelerates Learning:** Encourages multi-sensory learning through visual, tactile and auditory feedback, increasing the student's ability to process new information and making learning fun.
- **Lightens the Load:** Weighs 20 percent less than the classic Perkins Brailier, making it easy to transport between home and classroom.
- **Integrates with Mainstream Technology:** Edits, saves and transfers brailled documents to digital text files via USB, letting sighted teachers or parents read the document on a computer.
- **Involves Non-Braille Users:** Enables better collaboration between students and sighted teachers or parents using Roman letters on the display screen to mirror what is being brailled.
- **Reliable Support:** One year warranty and repair service training availability, ensuring that any problem with your product is resolved quickly.



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## Basic-D V5 presentation

### Useful features



- No need for a separate braille editor
- Supports all operating systems
- Supports horizontal and vertical printing
- Includes Index BrailleApp
- USB Host port for printing from USB memory
- Acapela speech guide the user
- High resolution tactile graphics
- Liblouis text-to-braille translation included
  - More than 150 languages
  - Literary (G1) and contracted (G2) Braille

## Everest-D V5

### Useful features

- No need for a separate braille editor with on the fly translation
- Support all operation systems
- Supports horizontal and booklet (vertical) printing
- Index BrailleApp
- USB Host port for printing from a USB memory
- High resolution tactile graphics
- Acapela speech guide the user
- Liblouis text-to-braille translation is included
  - More than 150 languages
  - Literary (G1) and contracted (G2) braille



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# BrailleBox V5

High-speed sheet-fed braille emboss-



## Useful features

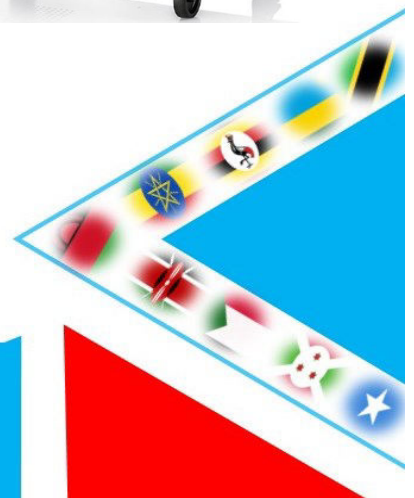
- No need for a separate braille editor
- Support all operation systems
- Supports booklet (vertical) printing
- Index BrailleApp
- USB Host port for printing from a USB memory
- High resolution tactile graphics
- Acapela speech guide the user
- Remote support via Internet
- Liblouis text-to-braille translation is included
  - More than 150 languages
  - Literary (G1) and contracted (G2) braille

# FanFold-D V5

High-speed tractor-fed braille embosser

## Useful features

- No need for a separate braille editor
- Support all operation systems
- Supports booklet (vertical) printing
- Index BrailleApp
- USB Host port for printing from a USB memory
- High resolution tactile graphics
- Acapela speech guide the user
- Remote support via Internet
- Liblouis text-to-braille translation is included
  - More than 150 languages
  - Literary (G1) and contracted (G2) braille



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## BRAILLO 300 S2 Braille Printer

The Affordable Entry Into True Production  
Braille Embossing



## Useful features

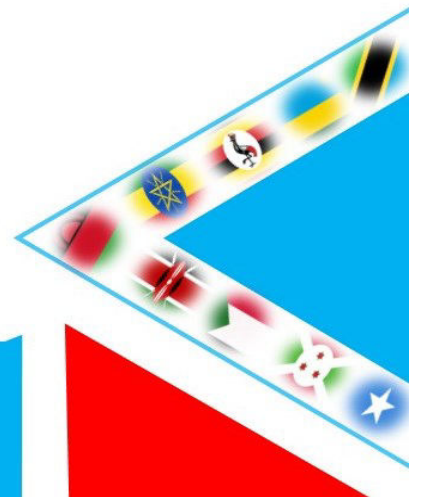
The Braillo 300 S2 is a reliable and dependable braille embosser for light to heavy braille production. Embossing at 300 CPS (900 pages per hour) using continuous/fanfold braille paper, it offers exceptional braille dot quality and reliability. Its combination of speed, durability, reliability and quietness are the reasons why it is used across the world by most of the blindness schools, prisons, braille publication businesses and large-scale braille production facilities.

## BRAILLO 450 S2 Braille Embosser

A High Speed Production Braille Embosser  
Perfect For Businesses

## Useful features

The Braillo 450 S2 is an ideal embosser for those that need increased braille output over the 300 S2, but not the speed and scalability of the 600 S2. It shares the same chassis as the 300 S2, but internal components are upgraded to ensure superior dot quality and consistency at these higher embossing speeds. Using continuous/fanfold braille paper and embossing at 450 CPS (1,350 pages per hour), it is trusted by braille producers worldwide and will be a high speed asset to your business



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# BRAILLO 600 S2 Braille Embosser

The World's Fastest Desktop Production Embosser With The Ability To Scale

## Useful features

The Braillo 600 S2 braille embosser is the faster, more robust counterpart to the Braillo 450 S2. Embossing at 600 CPS (1,800 pages per hour), it is the fastest continuous/fanfold embosser available, and it offers remarkable dot quality and dependability. Its combination of speed, reliability and quietness are the reasons why it is used across the world by most of the largest and most respected braille production facilities. Unique to the 600 S2 is that it is built upon a chassis that can be upgraded to a Braillo 600 SR2 as your braille production needs expand



# BRAILLO 600 SR2 Braille Embosser

The ideal braille embosser for high speed production using paper rolls

## Useful features

The Braillo 600 SR2 braille embosser is meant for large volume braille production. It embosses in 2 page-per-sheet format (front/back) and holds up to 1,000 sheets (2,000 braille pages) in the stacker. Unique to this braille embosser is that it uses [braille paper rolls](#), which saves money on paper expenses and minimizes downtime associated with loading paper. One roll can last nearly 8 hours and the embossed documents are separated by a blank sheet, making them easy to retrieve, organize and bind. A special feature of our embossers, and especially important during social distancing, is that they can be networked so that the transcribers are remotely sending files. Because the 600 SR2 can run uninterrupted for such a long period of time, a single person can then be with the printer collecting the finished braille documents and binding them.



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## JAWS

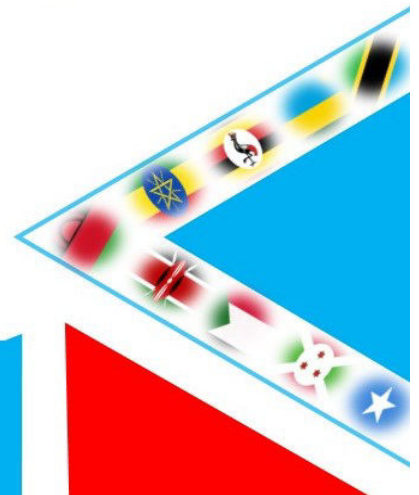


- Two multi-lingual synthesizers: Eloquence and Vocalizer Expressive
- Includes drivers for all popular Braille displays
- Convenient OCR feature for image files or inaccessible PDF documents
- Picture Smart service to recognize images
- Voice Assistant to issue infrequently used commands
- Supports PEARL Camera for direct access to print documents or books
- Built-in free DAISY Player and full set of DAISY-formatted basic training books
- Works with Microsoft Office, Google Docs, Chrome, Edge, Firefox, and much more
- Supports Windows® 11, Windows 10, Windows Server® 2019, and Windows Server 2016
- Become more efficient with Skim Reading and Text Analyzer
- Compatible with ZoomText, Fusion, and OpenBook Scanning and Reading Software

## Zoom Text Magnifier/Reader

### Enjoy Flexible Magnification

Full range of magnification levels up to 36x (up to 60x in Windows 8). Levels include: 1x to 8x in steps of 1, 10x to 16x in steps of 2, 20x to 36x in steps of 4, and fractional powers of 1.25x, 1.5x, 1.75x and 2.5x. 30 levels of magnification in ZoomText 10.1: 1x to 2x in steps of 0.2; 2.25x, 2.5x, 2.75x, 3x, 3.5x, 4x, 4.5x, 5x, 6x, 7x, 8x; 10x to 16x in steps of 2; 20x to 36x in steps of 4; 42x, 48x, 54x, and 60x. You can zoom in and out using All Zoom Levels, Favorite Zoom Levels Only or Whole Power Levels Only. Favorite Zoom Levels uses a custom set of user-defined zoom levels for zooming in and out. You can choose any combination of zoom levels to define your favorite zoom levels.



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# Open Book

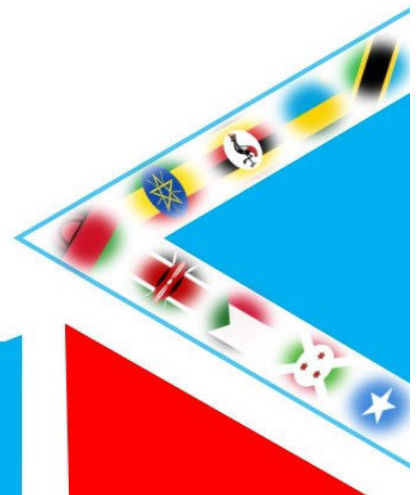


## Features

- Support for Windows® 8.1 and Windows 10
- Convert printed text to natural, human-like speech in many languages
- Powerful optical character recognition provides editable text
- Scan bound books and maintain pagination
- Powerful low vision features tailor the appearance of text on the screen, including font style, size, character spacing, and colors
- Lightning-fast OCR with the PEARL document camera
- Automatic page capture for efficient document acquisition
- Versatile document navigation and management tools maximize your productivity

## Business and Classroom Features

- Enhanced ability to search for and download books and other materials from the Internet
- Full support for listening to DAISY and other audio files
- Add comments and highlighting for increased productivity
- Emboss Braille documents directly from OpenBook
- Export to other applications like Microsoft® Word®
- Common key commands with JAWS® and MAGic®
- Built-in photocopy functionality



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## ONYX® Deskset HD

## Features



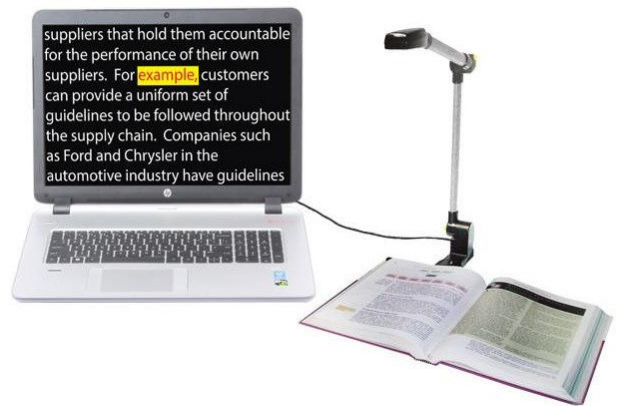
- Self-contained and easy to carry
  - Three-in-one flexible camera with distance, document, and self views:
- **In distance view**, even objects from across large rooms or auditoriums can be seen in sharp focus
- **Document view** gives you the ability to magnify items such as reading materials, daily business tasks, classroom assignments, product labels, and craft projects
- **With self view**, you get a magnified true mirror image close up
- Automatically remembers your last working settings in every view
- Choice of monitor sizes: widescreen 20-inch, 22-inch, or 24-inch
- Magnification up to 131 times the original size, depending on monitor
- Read what you want, where you want, with camera rotation in all three directions
  - True full color plus high-contrast full color
  - Optional rolling carrying case (20-inch and 22-inch models)

## PEARL

## Useful features

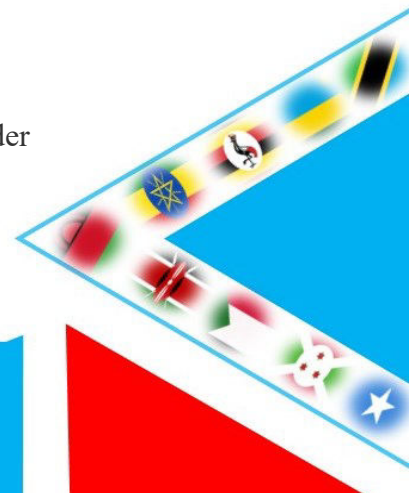
In automatic mode, the PEARL senses motion, so it knows to snap an image and begin reading again whenever you turn a page. The PEARL sets up in seconds and folds into a compact 14"x 3"x 2 1/8" package, and zips into its protective neoprene case for maximum portability.

- Plug and Play USB with the latest versions of JAWS, Fusion, and OpenBook
- Motion Sensor to detect new pages for Multi-Page scanning
- Built-in LED lighting for dim settings
- Scan 20 pages per minute while reading



### Additional OpenBook features

- Add comments and highlighting to scanned text
- OpenBook scanning identifies columns and places them in logical reading order
- Saves in many formats including BRL or even Audio
- Export to other applications like Microsoft® Word or Notepad

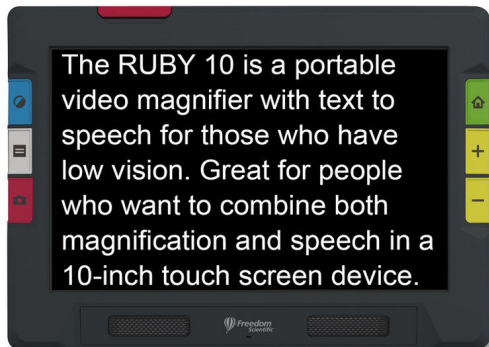


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# Product Features

## RUBY® 10

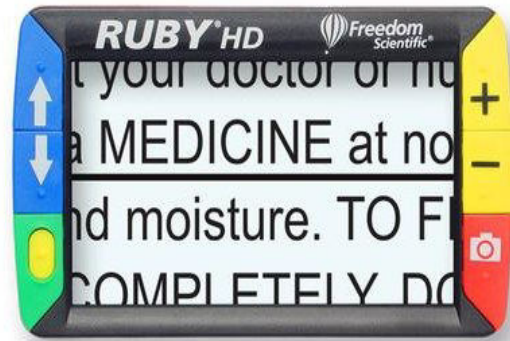


- Available with and without Speech
- Magnify from 2X to 24X
- Touchscreen and tactile buttons
- Portable and lightweight
- Magnify small objects and fine print
- See objects at a short distance
- Connect an external display via Miracast or USB
- Save scanned images and documents
- Scan and read full-page documents (Speech model)
- Connect a headset to listen to documents privately (Speech model)
- Carrying case and screen cleaning cloth included
- 3.5 hours continuous use and 4 hours charging time
- 10.28 x 7.44 x 1.42 in. (261 x 189 x 36 mm)
- 2.02 lbs. (915 g)

## RUBY® HD

### Useful features

- View text and images on the 4.3-inch LCD
- Continuous zoom with 2x–13x magnification
- Lightweight design at only 8 ounces
- Fast reading with no blur
- Easy flip-out handle
- Uses rechargeable or disposable AAA batteries
- Goes anywhere with 2 hours continuous use



### Advanced Features

- Freeze Frame with adjustable magnification
- Adjustable Reading Line and Masks to keep your place
- 20 high-contrast color viewing modes so you can adjust text to be easy on your eyes
- Save images and send to computer with USB port
- Slide Show mode for hands-free review
- Includes batteries, charger, wrist strap, case, and USB cable
- Optional reading stand



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# El Braille 40® 5th Gen

## Useful features

- Runs Windows 10 64-bit and JAWS
- Works with Focus 40 Blue 5th Generation Braille display
- Processor: 7th generation Intel® Core™ i5-7Y57 Processor with vPro technology Dual-core (4M Cache, up to 3.30 GHz)
- 128 GB SSD hard drive
- 8 GB RAM
- Two stereo speakers and 1/8" (3.5 mm) headphone jack
- Built-in microphone
- sound and vibration feedback for key functions such as powering on and off or connecting or disconnecting the AC adapter
- Wireless WLAN802.11 A/B/G/N/AC networks support (2.4 and 5 GHz)
- Bluetooth V4.2
- A built-in 4G LTE modem for cellular connectivity supporting AT&T compatible systems
- GPS/Beidou/Glonass/Galileo/QZSS
- Memory card slot supporting SD, SDHC, SDXC up to 2TB
- Ports: 2 USB 3.0, USB-C, and SIM card slot



# Focus 14 Blue 5th Gen

## Useful features

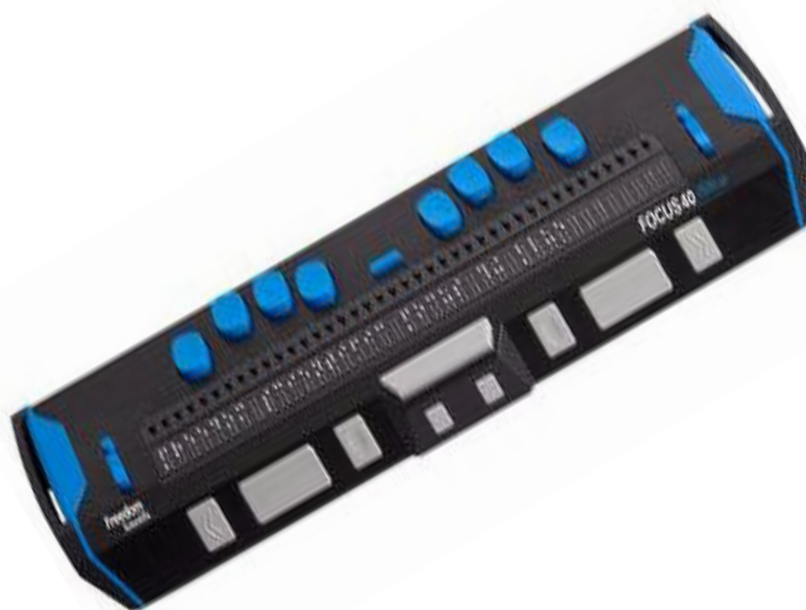
- 14 Braille cells
- 8-dot Braille keyboard
- Seamless Braille with a more crisp and uniform feel
- Compact and durable – designed for portability
- Convenient front panel controls and customizable NAV rockers  
Our exclusive NAV Rockers let you rapidly scroll by line, sentence, paragraph, or pan through a document
- Menu button, conveniently centered above the cursor router buttons, for quick access to calendar, clock, Bluetooth connections, and more
- Built-in Scratchpad with BRF Book Reader
- Micro SD Card up to 32 GB
- Select your personal Braille firmness with VariBraille
- USB-C micro connector – always right-side-up to reduce wear and tear
- Charge battery via USB
- Unique use-in carrying case
- Dimensions: 195 x 78 x 19 mm (7.7 x 3 x 0.75 in.)
- Weight: Approximately 283 grams (10 oz.)



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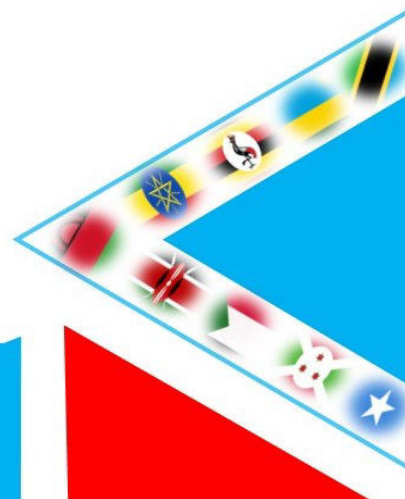


## Focus 40 Blue 5th Gen



### Useful features

- 40 Braille cells
- 8-dot Braille keyboard
- Seamless Braille with a more crisp and uniform feel
- Convenient front panel controls and customizable NAV rockers
- Our exclusive NAV Rockers let you rapidly scroll by line, sentence, paragraph, or pan through a document
- Menu button, conveniently centered above the cursor router buttons, for quick access to calendar, clock, Bluetooth connections, and more
- Built-in Scratchpad with BRF Book Reader
- Micro SD Card up to 32 GB
- Select your personal Braille firmness with VariBraille
- USB-C micro connector – always right-side-up to reduce wear and tear
- Dimensions: 368 x 78 x 19 mm (14.5 x 3 x 0.75 in.)
- Weight: Approximately 565 grams (1.24 lbs.)



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## Focus 80 Blue 5th Gen

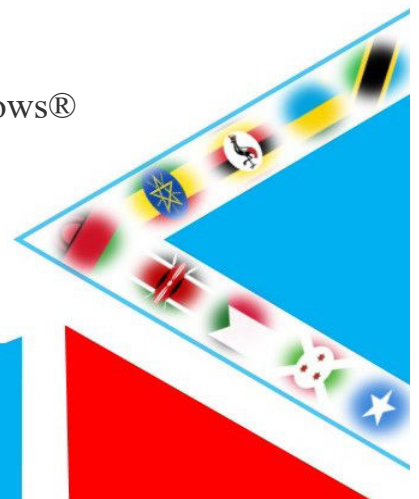


### Useful features

- 80 refreshable Braille cells
- 8-dot Braille keyboard
- Convenient thumb keys and panning buttons
- Freedom Scientific exclusive NAV Rockers let you rapidly scroll by line, sentence, or paragraph, or pan through a document
- Smooth, paper-like feel
- Adjustable key repeat for rapid scrolling and panning
- Select your personal Braille firmness with VariBraille

### Compatibility and connectivity features

- Bluetooth 2.0 and USB 2.0 connectivity – toggle between two connected devices
- Out-of-the box compatibility with iOS devices such as iPhone® and iPad
- Compatible with Apple® Devices
- Use with JAWS for combined speech and Braille access
- Use with JAWS for Braille Study Mode to learn and teach Braille
- Works with JAWS BrailleIn™ for contracted Braille input in Windows®
- Works with Talks and Mobile Speak



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Magnifying lens



Braille slate with one stylus



Reading Telescope



Stack of braille paper (20 Sheets)

White Canes



Braille abacus



Braille/Talking Watch

blind tape measure



Blind football start up kit



Talking Calculator

cubarithim board





Code Jumper

Orbit Reader 20 Plus



TOPAZ® Ultra



HIS and HERS Talking  
4 Alarm Medical Watches



Geometry set large

ClearReader

Rediscover the joys of reading anytime and anywhere with the award-winning Optelec ClearReader+, combining fast text-to-speech, a choice of high quality naturally sounding voices, and all in an attractive portable design. Simply switch-on, scan your printed reading material and start listening in an instant



Duxbury Software for the blind



Duxbury Systems leads the world in software for braille. The **Duxbury Braille Translator (DBT)** is used by virtually all of the world's leading braille publishers. No one supports more languages than Duxbury Systems. DBT supports over 170 languages in either uncontracted or contracted (when such rules exist) braille. Our software can produce contracted and uncontracted literary, mathematics, and technical braille.

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## Victor Reader Stream – Handheld media player



Featuring a phone-like touchpad, the Victor Reader Stream is a handheld audio player that lets you listen to books, newspapers, web radio, music, and other online resources. Simple to use, it packs all your media into place and gives you 15 hours of battery life, leaving more time to enjoy your content.

## Reveal 16i – Smart desktop magnifier with XY table

With **Reveal 16i video magnifier**, you can enjoy best-in-class image quality showcased on a large **16-inch touchscreen**. With up to 10x optical zoom and up to 45x digital magnification, this **electronic reading aid** is ideal for anyone living with **vision loss** or **low vision**. This is the **best smart magnifier** for an uncompromised reading experience.



## Brailliant BI 40X braille display



Uniquely powered by Bluetooth 5 wireless technology, this refreshable 40-cell braille display will double your pairing speed and quadruple your range, providing a more reliable and stable connection for an outstanding user experience. Plus, the Brailliant BI X series of braille displays are the first to include text-to-speech, bringing you closer to a hybrid notetaker feel



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## Brailiant I 20X braille display

Brailiant BI 20X is the ideal portable 20-cell refreshable braille display that you can pair with your favorite devices or use with standalone applications. The Brailiant BI X series of braille displays are the first to include text-to-speech, bringing you closer to a hybrid notetaker feel. By customizing the features, you maximize your reading pleasure while staying connected on the go.



## Brailiant 80 braille display

Featuring an 80-cell configuration, the Brailiant 80 display is perfectly suited for extended braille reading. With intuitive screen navigation using HumanWare's signature thumb keys, book lovers can enjoy long reading sessions with ease.



## Braille Sense 6

The BrailleSense 6 is the most powerful braille notetaker in the world. Designed with the fastest hardware and powered by Android 10, it is the ultimate notetaker.



## Orion TI-30XS Multi-View Talking Scientific Calculator

### Description

The Orion TI-30XS Multi-view Talking Scientific Calculator is a modified TI-30XS Multi-view with increased support that adds accessibility and additional controls. APH partnered with Orbit Research and Texas Instruments to make this powerful calculator accessible.



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## BrailleNote Touch Plus 32 – Tablet and note taker



The 32-cell BrailleNote Touch Plus 32 combines the simplicity of a note-taking tool with the power of a smart digital device. Supported by the Android Oreo platform, it takes your braille experience to new levels and keeps you engaged and connected with your world.

## Rattle Ball, Soccer Size

### Description

- Light sound ball, soccer size (size 5)
- Fine imitation leather (PU)
- Good rattling sound (3 large sound devices)
- diameter 22 cm
- 360 gram



## Torch-It Torch For The Visually Impaired



### Description

Torch-It is technical, economical, smart solution for visually impaired people. It is device which detects the obstacles in their path while walking. It is like a virtual cane (stick)

## Stellar Trek

The StellarTrek, as the name suggests, is an exceptional digital orientation and mobility assistant with state-of-the-art GPS technology and a user-friendly tactile interface with buttons to guide you along your chosen route using appropriate voice commands.



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## Esysuite

Designed especially for people with vision loss, *esysuite* allows the blind population to type or translate Braille in different types of documents and to print both in black ink characters and Braille (braille printer needed)

esysuite



## Corvus

Corvus consists of two main parts – Corvus screen reader for access of Android environment and special COrvus interface tailored for users with visual impairment.

## HandyReader HD -

Our best selling magnifier

- Continuous zoom
- Fast reading speed
- Adjustable screen & LED brightness
- User replaceable battery



## Clover Book Lite

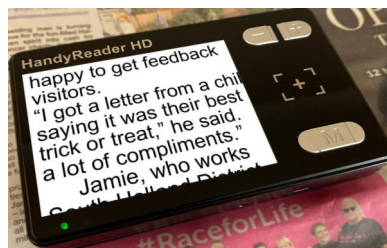


- Full high definition screen
- 4K 60 fps close-up camera
- Image storage
- Easy-to-use tactile controls with joystick for panning of live & captured documents
- Upgradeable software
- Folds flat for storage & transport
- User replaceable battery
- Carry case with handle & shoulder strap
- Clover Book Plus - All the features of the Lite, with the addition of:
  - Matt touch-screen (for panning & pinch-to-zoom)
  - Overview mode: quickly find your place
  - Digital distance panning eliminates camera repositioning
  - Discreet 4K distance & self viewing camera



## Handy Reader HD -

Our best selling magnifier • Continuous zoom • Fast reading speed • Adjustable screen & LED brightness • User replaceable battery



## Eye-D v2 -

Best value 4.3" screen handheld • Centrally mounted camera • Sharp clear image • Continuous zoom • Integrated comfortable handle • Freeze frame with zoom • Speech output on all menu options

## Looky 4 (Touch) -

Looky 5 (HD Touch) - £595 • Intuitive, single finger touch screen interface • Removable Li-ion battery • Touch-focus camera for reading at greater distances • Fold-out handle • Ideal for viewing photocopier & appliance controls, filing & writing etc. • Exceptionally fast reading speed with no blurring or ghosting • Angled screen for improved viewing comfort • Reading line for tracking



## Compact 10 HD Speech

• Magnifier & text-to-speech with a 10" touch screen • 3 High Definition 13MP auto-focus cameras • Reading camera to read documents at a table or desk • Swing-out camera for full page text-to-speech & signature placing • Over-view camera for seeing objects and text from a short distance



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## Luna 6

- Auto focus camera • 5.4" matt screen • Easy to use tactile buttons • Automatic power off • Slim, light and portable • Distance viewing • Image storage • TV, computer & monitor connectivity • Reading stand



## Prodigi Connect 12 -

- Stylish compact design • Ready to use apps • Wi-Fi connectable distance viewing camera (10x or 25x) option enables access to whiteboard etc. • Manual multicapture

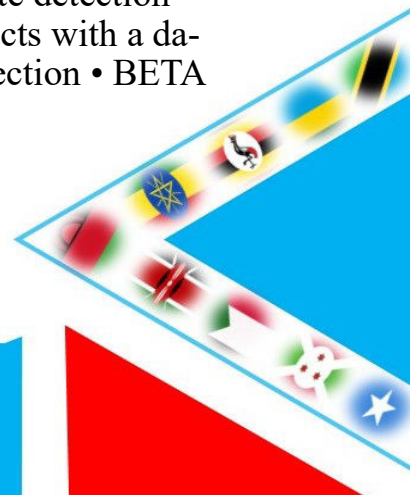
## DaVinci Pro Full HD/OCR -

- All-in-one HD video magnifier with full page text-to-speech • HD camera • High resolution display • Text-to-speech (OCR) • 3-1 1080p camera • Lightweight • Ergonomic design • High-powered versatility



## OrCam MyEye Pro

- Facial recognition for up to 100 members of your friends or family • Programme products or items to automatically recognise (e.g. tomato soup) • Automatic banknote detection • Automatically recognises products with a database of barcodes • Colour detection • BETA orientation features



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## Onyx PRO -

- Twin camera system • Magnification up to 32x • Adjustable reading lines • Colour contrast options • Touch screen menu buttons • Integrated LED lighting • Scans and reads printed text back to you • Lightweight and folds flat • Save images and documents to your Surface Pro 7 • Record and save videos for viewing later



## VTKeys Bluetooth PC or Mac -

- Mini bluetooth keyboard • Perfect for Windows® PC & laptop or Mac®, MacBook® Pro, Air & iPad® • Two options available - PC or Mac • Lightweight and compact design • Easy to transport • Dedicated Windows or Apple keys

## Evo E10 -

- Simple to use, tactile controls • Integrated rechargeable Li-ion battery, (15 hours use, 5 hours charging time) • Integrated Wi-Fi with internet radio & podcast support • Quality Ivona TTS voices • Daisy 2.0 & 3.0 compatible • Music playback with equalizer • 8GB internal storage • High quality integrated microphone • External microphone & headphone port • Alarm, voice reminder, voice memo, talking compass, calculator & calculagraph functions • Additional storage via SD card (up to 32GB)



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## EYE4



- The lightest electronic 'glasses style' wearable
- Discreet & comfortable
- Peripheral vision remains usable, maintaining mobility
- Unique EyeSwitch™ feature allows fast switching to the phone camera; perfect for viewing items out of the user's eyeline e.g. high & low shelves, inside cupboards, more detailed close-up work etc.
- Unique AutoZoom feature adjusts zoom automatically between close-up & distance tasks
- Unique image stabilisation; makes reading across lines of text at high magnification easier
- Its tethered mobile phone acts as the controller, processes images and powers the glasses
- Includes Samsung Galaxy mobile phone, phone case, neck lanyard & distance viewing stand

## Acesight VR -

- Lightweight, high quality & easy to operate wearable magnifier
- Comfortable to wear for long periods
- 65 degree field of view
- Great for watching television, seeing faces, reading, hobbies etc.
- No image lag, 60 frames per second camera
- Can be used while charging
- 48 megapixel camera gives exceptional image quality
- Easy to operate, comes with a wireless 3-button controller
- Edge detection mode (enhance outlines of objects)



## IrisVision Inspire -

- Breakthrough wearable technology
- All-new 'glasses' style wearable
- Modern, stylish and sleek design
- Up to 10x magnification
- Removable eye guard allows users to block external light or maintain peripheral vision for mobility
- 3 viewing modes: Reading mode, greyscale, white on black
- Control via buttons on the headset, the included wireless controller, or with your voice
- Includes Samsung Galaxy mobile phone with neck lanyard
- Use the dedicated controller to adjust magnification, colour contrast and viewing mode



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## What Does Hearing Impairment Mean?

- The definition of the term "hearing impairment" depends on the context in which it is being used.
- For instance, the Individuals with Disabilities Education Act (IDEA) uses “hearing impairment as a technical term to classify hearing loss in children.
- ” The Act defines hearing impairment as any decrease in hearing, whether fluctuating or permanent, that interferes with a child’s ability to perform in an educational setting. The term excludes deafness, which the Act defines as a hearing loss so severe that it impairs the processing of language information in an educational context, with or without the support of a hearing amplification.
- The term "hearing impairment" can also describe hearing loss in adults. “The everyday meaning of the term ‘hearing impairment’ is that a person cannot hear at a level that is optimal for communication or for the activities of daily life,” Hamid Djalilian, MD, Director of Otology, Neurotology and Skull Base Surgery at the University of California, Irvine, tells WebMD Connect to Care.
- The type and degree of a person's hearing loss will often determine the characteristics of their hearing abilities. According to the American Speech-Language-Hearing Association, there are three types of hearing loss
- Conductive hearing loss is when sound can’t reach the inner ear for a variety of reasons, such as fluid in the ear, a problem with the eardrum, or a problem with the bones that help produce hearing abilities.
- Sensorineural hearing loss is a type of hearing loss that concerns the inner ear. Common causes of inner ear damage are aging, trauma, and loud noise exposure.
- Mixed hearing loss is when hearing loss is due to a combination of issues in the outer/middle ear and the inner ear.

### Degrees of hearing. loss

- The degrees of hearing loss can be broken down into four general categories, according to the Centers for Disease Control and Prevention:
- Mild: Soft sounds are difficult to hear.
- Moderate: Very little speech is heard when someone is talking at a normal level.
- Severe: No speech is heard at normal levels and only some loud sounds are heard.
- Profound: No speech is heard, and only very loud sounds are perceived.

### Hearing Loss Can Be Managed and Treated.

- The earlier you address the symptoms of hearing loss, the more likely you are to avoid irreversible damage. Get the answers you need to start treatment today.



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## Assistive devices for Hearing Impairment (HI)

### What are assistive devices?

• **Assistive devices are external devices that are designed, made, or adapted to assist a person to perform a particular task. Many people with disabilities depend on assistive devices to enable them to carry out daily activities and participate actively and productively in community life.**

### Loop receiver (PERSONAL Amplifier with microphone)

- CMR3 calibrated measuring receiver
- LOOP RECEIVERS

• The CMR3 calibrated receiver is designed for measuring the performance of audio induction loop systems. The audio output is within  $\pm 0.25$  dB over the frequency range and when used with a suitable audio analyser such as the Minilyser from Neutrik Ltd, the frequency response and field distribution of the magnetic field from any audio induction loop system can be plotted. \* Calibrated to provide 0dBu output for a field strength of 400mA/m RMS, in accordance with the international induction loop standard IEC60118-4 it is an essential tool for anyone wishing to assess loop system performance for analyses or certification.



### ALARM CLOCK WITH VIBRATING PAD



## Description

• This Dual Alarm Clock With Vibrating Pad has a dual alarm feature which is simple to set and great for those who want multiple alarms. It has very good vibration and loud sound, with an easily adjustable tone and volume.

• This clock is ideal for those with poor vision who want large, easy to read numbers and a simple to operate alarm clock.



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## SIGN-LANGUAGE GLOVE

- A glove that translates sign language into speech in real time has been developed by scientists – potentially allowing deaf people to communicate directly with anyone, without the need for a [translator](#).
- The wearable device contains sensors that run along the four fingers and thumb to identify each word, phrase or letter as it is made in American Sign Language.
- Those signals are then sent wirelessly to a smartphone, which translates them into spoken words at a rate of one word per second.



## DRAGON SPEECH TO TEXT SOFTWARE



From students to everyday multi-taskers, there's no better way to get more done on your PC simply by speaking than with Dragon Home version 15, the most intelligent speech recognition solution for home use. Designed using Nuance Deep Learning technology, Dragon quickly transcribes words into text 3x faster than typing with up to 99% recognition accuracy.

- Plus, Dragon Home now includes 12 months access to the Dragon Anywhere Mobile app at no additional cost, meaning you can use your voice to dictate homework assignments, send email, surf the web and more—at home or on the go.

## HAPTI BRAILLE FOR DEAF BLIND

HaptiBraille Communicator — device for communication for deaf-blind people

- The device allows you to speak in a synthesized voice and hear the speech of the interlocutor and is designed to solve the communication problem due to the fact that the interlocutors can use accustomed ways of communication. For those who can see and hear, this is spoken language, and for those who cannot see and hear, this is Braille.



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## NECK LOOP RECEIVER

### Description

- The Roger NeckLoop (02) is a universal receiver compatible with any hearing aid or cochlear implant with a T-coil. It is worn around the neck on a detachable induction loop and gives access to the complete Roger microphone transmitter portfolio.
- The neckloop is discreet, lightweight, easy to use and is accessible to any hearing aid with a Tcoil. It can even be tucked under clothing if desired!
- For those who are hard or hearing and don't wear a hearing aid, the neckloop also offers headphone connection.



### Hearing Aids

- [Hearing aids](#) today are sleek, compact, and technologically advanced to meet the demands of your lifestyle. Hearing aids also are designed in different [styles](#) such as in-the-ear or behind-the-ear, and they specifically address the type of hearing loss you have, whether it be mild, moderate, moderately-severe, severe, or profound.

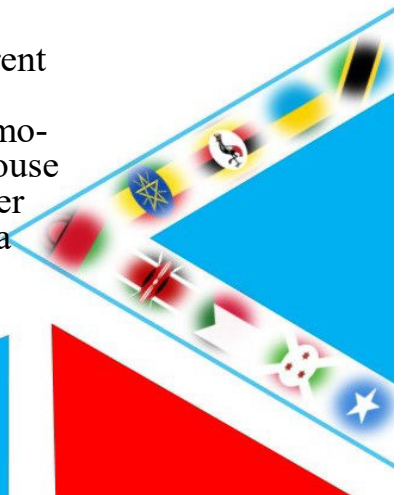
### Head pointer

The adjustable head pointer is an essential aid for people with limited hand use, for activities including turning pages, drawing or painting.



### Voice Mouse

With voice access, you can use different ways to control your mouse with voice commands. For users with mobility disabilities, controlling a mouse with voice commands can be easier than using a physical mouse. For a list of voice access commands,



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## Low vision Keyboard



large print and large key computer keyboards come in many varieties. Large key keyboards may have bigger individual keys, but surprisingly often don't take up any more space on your desk than a regular keyboard. In the case of our big button keyboard, this is because there's no right numpad, instead numbers can be inputted using the row of digits across the top. (Shown below)

## Deaf society emergency alarms

What are emergency alerting devices for the deaf?

- Alerting devices use a loud tone, flashing lights or vibrations to alert people with hearing loss to various environmental sounds. These devices may also be called signalers or notification devices. Most devices work by sending signals to receivers in your home or office.

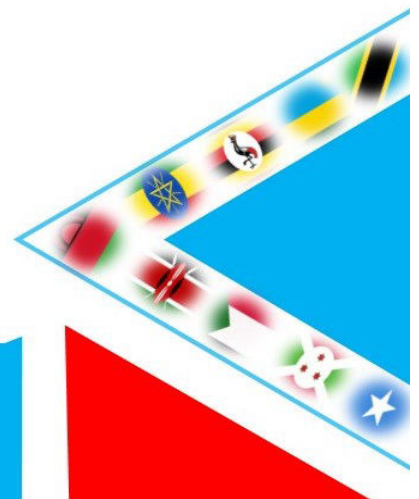


## Pencil Grips



The four mature pencil grips

The four "mature" pencil grips are dynamic tripod, dynamic quadrupod, lateral tripod, and lateral quadrupod. The lateral or dynamic descriptor refers to the thumb placement, and the tripod or quadrupod signifies whether the pen rests on the middle or ring finger.



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# Introduction to Physical Impairment



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## What is Physical Disability?

•A physical disability is the long-term loss or impairment of part of a person's body function, resulting in a limitation of physical functioning, mobility, dexterity or stamina. Due to the functional loss the person will experience the inability to perform normal movements of the body, such as walking and mobility, sitting and standing, use of hands and arms, muscle control, etc.

### WHAT CAUSES PHYSICAL DISABILITY.

•Physical disabilities can be caused by either hereditary, congenital or acquired reasons.

#### Hereditary or congenital

A person with a hereditary or congenital physical disability has had the condition since birth, developed the condition because of inherited genetic problems, issues with muscle cells or the person suffered an injury during birth.

#### Acquired

A person can acquire a physical disability due to a number of reasons. These can be severe accidents, brain injuries, infections, diseases and as a side effect of disorders and other medical conditions, such as a stroke and dementia.

### TYPES OF PHYSICAL DISABILITY.

There is a vast number of physical disabilities, each affecting people differently. Types include mobility impairment, visual impairment, hearing loss, chronic fatigue or pain and seizures.

#### Common physical disabilities

##### •Cerebral palsy

Cerebral palsy occurs in young children and is a group of non-progressive disorders that damage the brain, causing impairment of motor function. Including associated disabilities such as intellectual and behavioral, a person with cerebral palsy usually has problems with movement and co-ordination.

##### •Spina bifida

Spina bifida is when there are problems in the development of a baby's spinal cord, resulting in a gap in the spine, causing spinal nerves to be exposed. The development defect of the spinal canal may cause paralysis of the lower part of the body. Additionally, the person may lose bowel and bladder control as a result.

Spinal cord injuries can result in total or partial impairment of sensory and motor functions in the body and limbs. A spinal cord injury can lead to paraplegia and tetraplegia, also known as quadriplegia.

Paraplegia affects the lower limbs and results in a loss of movement and bowel and bladder control. Tetraplegia is a paralysis affecting both arms and legs, the stomach and some chest muscles, resulting in total impairment of sensory and motor functions.

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- Epilepsy

Epilepsy is a neurological condition that causes a person to have a tendency of recurring seizures. There are many types of epilepsy which range in severity and each person with epilepsy experiences it differently.

- Multiple sclerosis (MS)

Multiple sclerosis is a condition affecting a person's brain and spinal cord, causing a range of physical problems including movement, sensation and balance. Symptoms can include but are not limited to fatigue, loss of motor control, numbness and visual disturbances.

MS lasts for a person's whole life and can cause severe disability. Although there are treatments, the average life expectancy for people with MS is reduced.

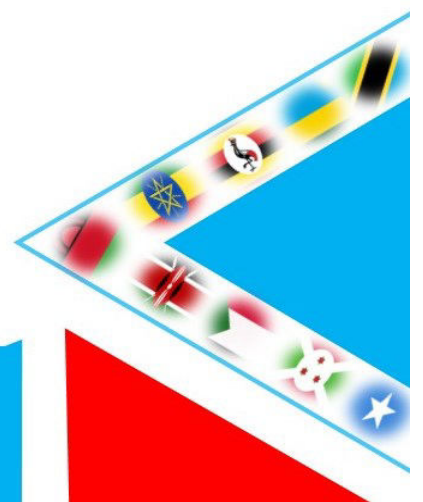
Assistive devices.

- What are assistive devices?

Assistive devices are external devices that are designed, made, or adapted to assist a person to perform a particular task. Many people with disabilities depend on assistive devices to enable them to carry out daily activities and participate actively and productively in community life.

What are mobility aids?

- Mobility aids are devices designed to help people who have problems moving around enjoy greater freedom and independence.



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## Crutches

Crutches are medical devices designed to aid in ambulation, by transferring body weight from the legs to the torso and arms. They are mainly used to assist individuals with lower extremity injuries and/or neurological impairment for example amputee. There are many different types of crutches depending on the area of need, including:

- Axillary (underarm) crutches. One part of an axillary crutch is placed against the ribcage under the armpits, while users hold onto the hand grip. These crutches are typically used by those with short-term injuries.
- Lofstrand (forearm) crutches. This type of crutch involves placing the arm into a metal or plastic cuff and holding a hand grip. Forearm crutches are more commonly used by people with long-term disabilities.
- Platform crutches. With platform crutches, the hand holds a grip while the forearm rests on a horizontal platform. Platform crutches are not commonly used, except by people with a weak hand grip due to conditions such as arthritis or cerebral palsy.



## Canes.

Canes are similar to crutches in that they support the body's weight and help transmit the load from the legs to the upper body.

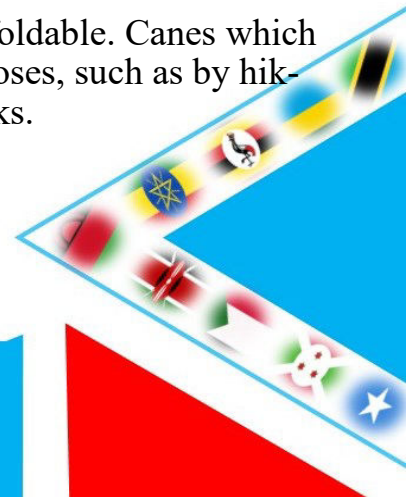
However, they take less weight off the lower body than crutches and place greater pressure on the hands and wrists.

Assistive canes are useful for people who have problems balancing and who are at risk of falling.

Common types of canes include:

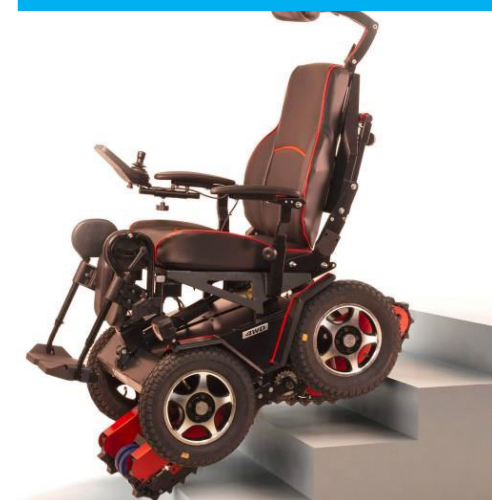
- Quad canes. These have four feet at the end of the cane, providing a wider base and greater stability.
- Forearm canes. Offering extra forearm support, these canes allow greater weight to be distributed from the wrist to the arm.

Some canes are adjustable or foldable. Canes which are used for non-medical purposes, such as by hikers, are known as walking sticks.



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## Stair-climbing wheelchair

The named below wheel chair is of help to both customer care and the clients especially when accessing the places with stair case. With this kind of wheel chair, one will not require a person to help incase of any movement challenges

### Useful features

Parameter	Unit	Value
Width	cm	65
Length (including footrests)	cm	105-130 (depends on the position of the footrests)
Length (without footrests)	cm	92
Height in transportation mode	cm	68
Seat width	cm	45
Seat depth	cm	38, 43, 52 (adjustable)
Height of the backrest	cm	53-63 (adjustable)
Height of the armrests	cm	16-29 (adjustable)
Weight (with batteries)	kg	98
Max. load capacity	kg	100
Driving wheels (pneumatic, sound-absorbing)	mm	355
Max speed on wheels	km/h	7
Max speed on tracks	km/h	0.8
Max distance range	km	25
Max stairs angle	deg	40
Max step height	mm	200
Noise level	dBA	≤65
Battery capacity	Ah	42 (Lithium)
Motor operating voltage	V	24
Charging current	A	5
Lightning options	Front and rear lights	
Additional safety options	Protective covers on the track platform; Mechanism to prevent the tracks from slipping over the wheels; Reinforced chain drive; Sealed electronics module according to IP66 standard; Ball bearings in track pulleys	

## Walkers.

A walker is a walking aid that has four points of contact with the ground. It provides a wider base of support than a walking stick, so it is used more to stabilize patients with poor balance and mobility or lower extremity impairment. A walker is often used by those who are recuperating from

Types of walkers beyond the basic model include:

- Rollators. This common style of walker consists of a frame with four wheels, handlebars, and seat so the user can rest as needed. Rollators also include hand breaks as a safety feature.
- Knee walkers. Similar to a rollator, this device allows the user to rest their knee on a padded cushion while propelling themselves forward with their stronger leg.
- Walker-cane hybrids. A cross between a cane and a walker, this mobility aid has two legs rather than a full frame. It can be used with one or both hands and provides greater support than a standard cane.



## Wheelchair.



Wheelchairs are used by people who should not put weight on their lower limbs or who are unable to walk. They can be more suitable than walkers for people with severe disabilities or when travel over greater distances is required.

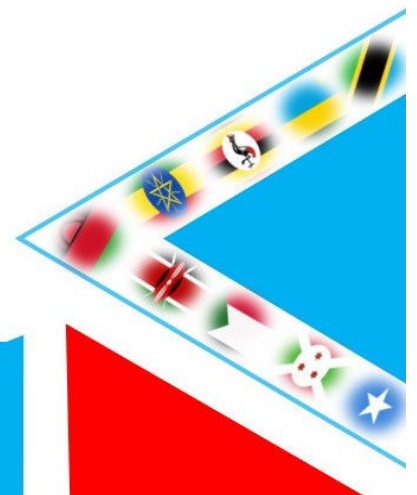
Wheelchairs can be manually propelled by the user, pushed by someone else, or electrically powered.

N.B. The type of a wheelchair to use depends on the area of disability. For example persons with cerebral palsy and amputees use two different types of wheelchairs.

Examples of specialized types of wheelchairs include standing wheelchairs, where users are supported in an almost upright position, and sports wheelchairs, which have been developed for use during specific sports.

### Product Feature:

- Powder coated steel frame
- Detachable armrest
- Detachable legrest
- 8" PVC front castor
- 24" solid spoke wheel



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## Product details



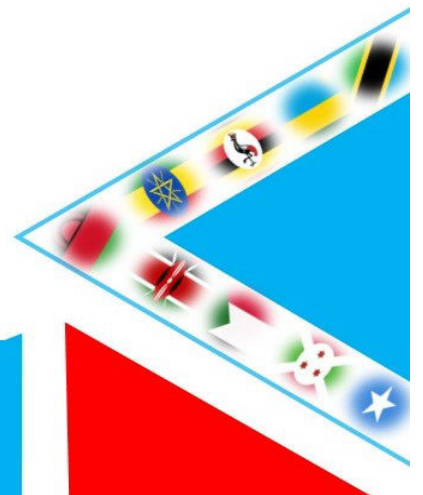
The Ruedamann 8ft quality portable telescoping wheelchair ramps with a maximum 800 lbs distributed weight capacity. Great for power wheelchairs, manual wheelchairs, power-chairs. Designed for increased access over stairs, steps, curbs and into side or rear van doors. Ruedamann 8 feet telescoping wheelchair ramps includes handles, carry with them easily. And the ramp is made with high quality aluminum construction for years of use.

### Features:

1. Brand new and high quality
2. It is easy for you to set up and push the wheelchair on stairs
3. Designed of telescoping, save spaces for you to storage
4. Made of durable material, aluminum line with holes, keep water away. Non-slip surface ensures stable movement and can be used for a long time
5. Maximum gradient: 8 ft long ramp is most appropriate for 16" rise or less.
6. Nylon handle, small and strong

### Specifications:

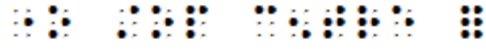
1. Material: Aluminum Alloy
2. Color: Silver
3. Size: 8 ft
4. Length: 52.75" to 94.48"
5. Inner width: 10"
6. Outer width: 11.5"
7. Weight capacity: 800 lbs
8. Product net weight: 34.6 l



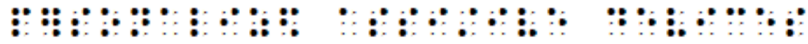
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# Personalized Assistive Devices



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