

APPS FOR LOW VISION

What is a Mobile App?

A Mobile App is a software application developed specifically for Smart Phones and Tablets.

Using your Smart Device as an Assistive Device.



Using a Smart Phone as an Assistive Device for the Visually impaired, is facilitated by the Accessibility features included in the Operating Systems of the Smart Device. These features generally include Font Size and Colour, Magnification, Zoom and Screen reader Speech. In addition, the Speech Recognition feature

allows the user to give verbal commands. Finally, there are a vast number of Apps, specifically created to assist Visually Impaired users. These Apps include OCR (Optical Character Recognition) to read printed documents, Video Magnifiers, Object / Colour / Currency Identifiers, GPS (Global Positioning Systems) Apps for route and destination guidance and interactive Video / Voice / Messaging Assistance.

Android



Android is a Mobile Operating System, developed by Google, designed primarily for touchscreen mobile devices such as Smart Phones and Tablets.

As of 2017, the Google Play store features over 3.5 million apps.

Android accessibility options.

You can customize your Android device using accessibility settings and apps.

- Talk back. To interact with your device using touch and spoken feedback, you can turn on the Talk Back screen reader. Talk Back describes your actions and tells you about alerts and notifications.
- Voice Commands. Google Assistant. Google Assistant is included in the Android Operating System to allow users voice commands to perform tasks and functions on Android Smart Devices.
- Use voice commands. Voice Access: If using a touch screen is difficult, the Voice Access App lets you control your device with spoken commands. Use your voice to open apps, navigate, and edit text hands-free

Make your screen easier to see

Android devices have several settings to make your screen easier to see.

- Display size and font size: To change the size of items on your screen, adjust the display size or font size
- Magnification Gestures. To temporarily zoom or magnify your screen, use Magnification Gestures.

- Contrast and colour options. To adjust contrast or colours, use high-contrast text, Colour conversion or Colour correction.

Android Apps for the visually Impaired.

- Android Authority – Best Android Apps for the Blind and Visually Impaired.
- Blindness Support Services – Android Apps
- Access World Magazine – Android Apps addressing Low Vision.

Apple's iOS Operating System.



iOS is a Mobile Operating System created and developed by Apple Inc exclusively for it's hardware. It is the operating system that presently powers many of the company's mobile devices, including the iPhone, iPad and iPod Touch. It is the second most popular mobile operating system globally after Android.

iOS Accessibility features for the Visually Impaired.

- VoiceOver. VoiceOver is a gesture-based screen reader that lets you enjoy using iPhone even if you don't see the screen. With VoiceOver enabled, just triple-click the Home button to access it wherever you are in iOS. Hear a description of everything happening on your screen, from battery level to who's calling to which app your finger is on. You can also adjust the speaking rate and pitch to suit you. Because VoiceOver is integrated in iOS, it works with all the built-in iPhone apps. You can create custom labels for buttons in any app — including third-party apps. And Apple works with the iOS developer community to make even more apps compatible with VoiceOver.
- VoiceOver Gestures. You can control VoiceOver using a simple set of gestures. Touch or drag your finger around the screen and VoiceOver tells you what's there. Tap a button to hear a description, then double-tap to select. Or flick left and right to move from one element to the next. When you interact with an element, a black rectangle appears around it so sighted users can follow along. When you prefer privacy, you can activate a screen curtain to turn off the display completely, but still hear all that VoiceOver has to say.
- VoiceOver and Text Input. With VoiceOver enabled, each character on the keyboard is read aloud as you touch it, and again when you enter it. A flick up or down moves the cursor so you can edit precisely. To help you type more quickly and accurately, iOS supports multiple character input methods — including handwriting — and corrects misspelled words. Enable Speak Auto-text and you hear a sound effect and the suggested word spoken. Keep typing to ignore it, or tap the space bar to have your iPhone type it for you.
- VoiceOver can now describe images to you, such as telling you if a photo features a tree, a dog, or four smiling faces. It can also read aloud text in an image — whether it's a snapshot of a receipt or a magazine article — even if it hasn't been annotated. And in the Photos app, you can touch to explore the facial expressions of people in your photos. Just tap the image with three fingers to have VoiceOver describe what's there.
- VoiceOver and the Rotor. VoiceOver features a virtual control called the rotor. Turning the rotor — by rotating two fingers on the screen as if you were turning an actual dial — lets you efficiently move through a web page or document. When you're on a web page or PDF, turn the rotor to hear settings like "headings," "links," and "images." Then flick to choose how you navigate the page. For example, you can skip from one heading to the next.
- VoiceOver and Pronunciation Editor. The Pronunciation Editor allows you to create a list of words or phrases along with the phonetic ways you want them to be pronounced. With VoiceOver

turned on, these words and phrases will then be read aloud with your preferred pronunciation in documents, messages, web pages, and other text.

- Updated Audio Descriptions. Watch movies with detailed audio descriptions of every scene on your iPhone. Movies with audio descriptions are displayed with the AD icon in the iTunes Store. iPhone now also lets VoiceOver users access closed caption and subtitle tracks audibly or through their braille displays.
- Display Accommodations. iOS lets you 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. You can select a common preset or fine-tune the color tint and hue to customize a display setting that works for you. With the Smart Invert Colors setting, iOS automatically recognizes when a piece of media is using a dark color style, so you can reverse the colors of the display without affecting the look of images, videos, and certain apps. And once you set your filters, the settings apply to everything that appears on your iPhone.
- Zoom. Zoom is a built-in screen magnifier that works wherever you are in iOS. And it works with all apps from the App Store. Turn Zoom on for full-screen or picture-in-picture view, allowing you to see the zoomed area in a separate window while keeping the rest of the screen at its native size. You can adjust the magnification between 100 and 1500 percent and access multiple filter options in either view. While you're zoomed in, you can use all the familiar gestures to navigate your iPhone. And Zoom works with VoiceOver, so you can better see — and hear — what's happening on your 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. Apps adapt to accommodate larger font sizes so text remains legible and clear as it grows. And you can choose bold text to make the text heavier across a range of built-in applications.
- Magnifier. Magnifier works like a digital magnifying glass. It uses the camera on your iPhone to increase the size of anything you point it at, so you can see the details more clearly. Use the flash to light the object, adjust filters to help you differentiate colors, or snap a photo to get a static close-up.
- Speak Screen. If you have a hard time reading the text on your iPhone, use Speak Screen to read your email, iMessages, web pages, and books. Turn on Speak Screen and swipe down from the top of the screen with two fingers to have all the content on the page read back to you. You can adjust the voice's dialect and speaking rate, and have words, sentences, or words within sentences highlighted as they are being read.
- Control Center. The redesigned Control Center is customizable, so you can easily add and organize shortcuts for the tools and settings you use the most. For example, you can add a quick link to Magnifier so it's always handy, or add a Text Size control so you can adjust text size on the fly without leaving the app you're using. You can also turn on Guided Access or get to all the Accessibility Shortcuts you have enabled.
- Dictation. Dictation lets you talk where you would type. Tap the microphone button on the keyboard, say what you want to write, and your iPhone converts your words (and numbers and characters) into text. So it's easy to type an email, note, or web address — without typing at all.
- iOS Voice Command Assistant — Siri. Talking to Siri is an easier, faster way to get things done. It's always with you — on your iPhone, iPad, Mac, Apple Watch, Apple TV, and HomePod — ready to help throughout your day. With a redesigned interface and new, more expressive voice, Siri is more powerful than ever. And the more you use Siri, the better it knows what you need at any moment. Just say "Hey Siri" before a request, and Siri does it.

iOS Apps for the Visually Impaired.

Below are links to websites featuring lists of useful iOS Apps for the Visually Impaired.

- Apple Vis - iOS Apps Developed Specifically for Blind or Low Vision Users.
- App Advice - Apps For Blind And Visually Impaired
- eWeek - 10 iPhone Apps Designed to Assist the Visually Impaired

Useful apps for people with a visual impairment

If you have a visual impairment, a smartphone can help you to be more independent. Below is a list of apps which could help make a difference to everyday life.

The MD evReader App



Category: Reading

Description: The MD_evReader is a free app for the iPad or Android tablets, which has been developed to help people with a central vision loss read. It presents text from eBooks in a scrolling stream across the screen, in a similar way to a news ticker or a display board on a train. The app is designed for those people who use [Eccentric Viewing \(EV\) and/or steady eye strategies](#) for reading. Some people with macular degeneration may find it useful as a reading aid, or as a way of practising the Eccentric Viewing and steady eye techniques. The line of text scrolls horizontally from left to right and the reader aims to hold their gaze away from the line to view it with their best region of vision. The trackpad is used to control the speed of the text.

Available on: iOS and Android

Cost: Free

Website: www.macularsociety.org

BeSpecular, @BeSpecular



Category: Identification

Description: “Let blind people see through your eyes” is their tagline and this app matches sighted volunteers with visually impaired users. The visually impaired person takes a photo of what he or she needs help with and attaches a voice message, which is sent to a community of volunteers (or sightlings as they call them). Within minutes, the user receives a reply and then rates out of five stars the helpfulness of the volunteer. This app is great because you get a description from a real human being, it’s very accessible and it’s quick.

Available on: iOS and Android

Cost: Free

Website: www.bespecular.com

Aipoly Vision, @Aipoly



Category: Identification

Description: Aipoly Vision is an object and colour recogniser that uses artificial intelligence to help people with a visual impairment to understand their surroundings. Simply point your phone at the object of interest and press any of the recognition buttons at the bottom of the screen to turn on the artificial intelligence. The app will keep running and recognising objects until you switch to a different mode. Aipoly Vision can recognise 1,000 essential items for free, and many more through a subscription. You get the odd (often humorous!) inaccuracy but generally it's pretty impressive.

Available on: iOS and Android

Cost: Free or £4.99 for monthly subscription

Website: www.aipoly.com

iDentifi



Category: Identification

Description: iDentifi is an app that uses artificial intelligence to enable a visually impaired user to click a photo and get an instant description. It's able to recognise objects, brands, colours, facial expressions, handwriting and text, and delivers an audible description of the image's contents to the user. The interface is very accessible and gives the option to choose from three different modes of object and text recognition, as well as how fast you want the app to speak.

Available on: iOS

Cost: Free

Website: <http://getidentifi.com/>

Be My Eyes, @BeMyEyes



Category: Identification

Description: "Lend your eyes to the blind" is their tagline and Be My Eyes is very similar to BeSpecular in that the app matches a visually impaired user with a sighted volunteer. The difference is that you are connected through a live video connection and the sighted volunteer can tell the user what they see when the user points their phone at something using the rear-facing camera. Watch our Be My Eyes video to see it in action.

Available on: iOS

Cost: Free

Website: www.bemyeyes.com

TapTapSee, @TapTapSee



Category: Identification

Description: TapTapSee uses a phone's camera and VoiceOver functions to photograph objects and identify them for the user. You double-tap the device's screen to photograph any two or three dimensional object at any angle, and the app analyses the image and gives you a description, out loud, within seconds.

Available on: iOS

Cost: Free

Website: www.taptapseeapp.com

Color ID



Category: Identification

Description: Color Identifier uses the camera on your phone or tablet to identify and speak the names of colours in real-time. It's an augmented reality app that helps you discover the colours around you. There are many free apps that do this though so have a play and if you don't like it try one of the others, such as, AidColors, Color Visor and Aipoly Vision.

Available on: iOS and Android

Cost: Free

Light Detector



Category: Identification

Description: Light Detector transforms any natural or artificial light source it encounters into sound. Just run the application and point your phone's camera in any direction. You will hear a higher or lower sound depending on the intensity of the light, enabling you to understand where light fixtures and windows are in a room.

Available on: iOS

Cost: £1.99

CamFind, @CamFind



Category: Identification

Description: CamFind allows you to do an online search by simply taking a photo of an object –

the app then uses mobile visual search technology to tell you what it is. It provides fast results with no typing necessary. Snap a picture and learn more. Search results include related images, local shopping results and a selection of web results, which are also easy to share through the app.

Available on: iOS and Android

Cost: Free

Website: www.camfindapp.com

Magnifying Glass with Light



Category: Reading

Description: This app enables the user to very simply magnify text or objects up to 10x. You can have the light on or off and simply tap to focus. The simple features all work well with VoiceOver and it's great for someone with a low level visual impairment for things like reading menus or receipts.

Available on: iOS

Cost: Free

DAISY Talk



Category: Reading

Description: DAISY (Digital Accessible Information System) is an international standard for digital books designed for people with print disabilities. DAISY Talk is an app that reads out text of a DAISY book using a synthesized voice incorporated into an iOS device. This app is very accessible but there are a number of other apps that will do the same job, including [Read2Go](#).

Available on: iOS

Cost: £25.99

KNFB reader



Category: Reading

Description: KNFB Reader takes a photo of text and then reads it aloud in clear synthetic speech. It is fully accessible using VoiceOver and if you're worried about getting all the text in the photo, a tricky task if you're blind, the app will help you. It has text detection so you know you have the printed side of the page. It also has tilt assist and viewfinder assist, helping you to get the whole page photographed. It could read letters, receipts, bills, menus or any other text and it does so instantly. This one comes with a much heavier price tag than any of the other apps listed but can be a real life changer.

Available on: iOS, Android and Windows

Cost: £99.99

Website: www.knfbreader.com

Seeing AI



Category: Identification

Description: Seeing AI is a free app that narrates the world around you, harnessing the power of artificial intelligence (AI) to describe nearby people, text and objects. The app has a number of features, including speaking text as soon as it appears in front of the camera, providing audio guidance to capture a printed page and reading handwritten text. The app is an ongoing research project and as the research progresses, more channels may be added.

Cost: Free

Website: www.microsoft.com/en-us/seeing-ai/

Kindle



Category: Reading

Description: This fully accessible app enables you to turn your iPhone or iPad into a Kindle and carry all your eBooks with you. You're able to turn any eBook in to large print and all the eBooks (including those with narration) that you have purchased on Amazon will automatically appear in your app. Kindle Unlimited and Amazon Prime members can select and download eBooks directly in the app.

Available on: iOS, Android, PC and Mac

Cost: Free

Website: www.amazon.co.uk/kindle-dbs/fd/kcp

Blindfold Greeting Card



Category: Social Networking

Description: Blindfold Greeting Card is an e-card app for sending audio cards to your friends and family. You create a greeting card by first selecting a sound effect, and then recording yourself saying something. After both steps are done, prepare and listen to the card to make sure you like it, and then send the card. Cards can be sent via email, text message, facebook, twitter or any other social networking app that your phone may have.

Available on: iOS

Cost: Free up to ten cards then you can purchase more credits

Website: www.blindfoldgames.org/card

BlindSquare, @BlindSquare



Category: Navigation

Description: BlindSquare is an accessible GPS app, which describes the environment, announces points of interest, streets and user specified points as you travel. The most important BlindSquare functions can be accessed through an audio menu via any headset or speaker that supports Apple's music controller. Once BlindSquare has determined your location using your phone's GPS, it will look up information about your surroundings, for example, you could use it to find restaurants within a 200 meter radius or to find the nearest post office or the library.

Available on: iOS

Cost: £40

Website: www.blindsquare.com

Station Alert UK



Category: Navigation

Description: Knowing where to get off the train is not easy when you have little or no vision – in fact many sighted people often miss their stop. The Station Alert UK app allows you to select your stations and save them as favourites. It will then alert you at whatever distance from the station you have selected, so you can sit back and relax.

Available on: iOS and Android

Cost: Free

ATM Finder



Category: Navigation

Description: This fully accessible app was developed with the Thomas Pocklington Trust (TPT) to enable visually impaired people to locate Link ATMs more easily. Users can filter their search to find ATMs that have audio assistance, are free to use, belong to a specific organisation, such as your bank, and are wheelchair accessible. The app is GPS-enabled and shows you the ATMs that are closest to you on a map and also allows you to search for ATMs in other locations to help you plan ahead.

Available on: iOS and Android

Cost: Free

Website: www.link.co.uk/atm-locator/mobile

Audible, @AudibleUK



Category: Entertainment

Description: Audible is an audio book service brought to you by Amazon. It has all the best sellers as well as classics, non-fiction and much more, professionally narrated by actors. The app is free but membership to the service is charged at a monthly subscription. The service is very accessible and you can try a month's free trial to see if you like it before you commit.

Available on: iOS, Android and Windows

Cost: One month free trial then £7.99 a month

Website: www.audible.co.uk

Able Road, @AbleRoadAccess



Category: Entertainment

Description: AbleRoad connects people with accessible businesses, allowing you to locate, rate and review them. AbleRoad reviews hotels, restaurants, shops, theatres and other venues, giving details of their level of accessibility for people with sensory and physical disabilities. It uses your phone's GPS to show businesses in your location.

Available on: iOS and Android

Cost: Free

Website: www.ableroad.com

Blind Bargains, @BlindBargains



Category: Shopping

Description: Blind Bargains is a great source for the latest deals and news for the visually impaired community. Browse the latest deals on things like computers, screen readers, note takers, Braille printers, hard drives, phones, memory cards and talking products. They also present articles, news, and podcasts.

Available on: iOS

Cost: Free

Website: www.blindbargains.com

Digit – Eyes, @Digit_eyes



Category: Shopping

Description: Digit-Eyes reads manufacturer's barcodes and tells you the product name. In some cases it will give you a full description, usage instructions and ingredients. You can also record

your own audio labels or make text labels that are read aloud by your phone, so that you know the difference between a can of dog food and a can of soup!

Available on: iOS

Cost: Free version available with upgrade for £9.99

Website: www.digit-eyes.com

Prizmo



Category: Work

Description: Prizmo is a photo-based scanner app that lets you scan and recognize text documents, business cards, and images, and then export them as PDF/Text, vCard, or JPEG/PNG. It supports multiple documents, has loads of great features and works really well with VoiceOver.

Available on: iOS

Cost: £9.99

Website: www.creaceed.com/iprizmo

Access Note



Category: Work

Description: AccessNote is a note taker used and developed by the American Foundation for the Blind. AccessNote is highly efficient, with a lot of additional features compared to other note taking apps, making it invaluable for visually impaired users in the classroom or business environment.

Available on: iOS

Cost: Free

Blind Abilities, @BlindAbilities



Category: Work

Description: Blind Abilities pulls together podcasts and blogs dealing with accessibility and technologies and products for people with sight loss. They interview developers, users and advocates in the world of visual impairment and share experiences and offer advice when needed.

Available on: iOS and Android

Cost: Free

Website: www.blindabilities.com

Keyboard Plus



Category: Keyboard

Description: Blind Abilities pulls together podcasts and blogs dealing with accessibility and technologies and products for people with sight loss. They interview developers, users and advocates in the world of visual impairment and share experiences and offer advice when needed.

Available on: iOS and Android

Cost: Free

Website: <https://itunes.apple.com/za/app/keedogo-plus-keyboard-for/id918496636?mt=8>

Fleksy Keyboard



Category: Keyboard

Description:

Available on: iOS and Android

Cost: Free

Website:

Voice Dream Reader



Category: Books

Description:

Available on: iOS and Android

Cost: R229,88

Big Keyboard



Category: Keyboard

Description: Stop squinting! Minimize mistyping! Big Keyboard is a custom iPhone keyboard that makes keys easier to see and tap by rendering them 40% larger and with 100% more contrast than the system keyboard does and by fitting every key onto a single screen.

Available on: iOS and Android

Cost: Free

Website:

Waze



Category: Directions

Description: Printable & Interactive Maps, Turn-by-Turn Directions. Live Traffic Conditions & Weather Updates - Avoid Delays. Search Local Gas Prices & More. Find Local Gas Prices. Access Traffic Conditions. Route Planner. Get Driving Directions. Types: Printable Maps, Street View Maps, Satellite Maps, Traffic Maps, Walking & Bike Paths, Weather Maps.

Available on: iOS and Android

Cost: Free

Website:

Uber



Category: Transport

Description: Reliable rides when you need them, 24/7. Reliable 24/7 travel. Know the price estimate. See who's picking you up. Any destination, any time. You will need to preload your credit card if not paying cash. There is a an assist service after the Uber van option which at no extra cost will assign a specially trained driver to give you more assistance. There is also an Accessibility section under the help section and a support number- in South Africa it is +27800172956.

Available on: iOS and Android

Cost: Free

Website:

Well-being

The apps listed have the potential to increase independence and as such improve well-being, crucial when you may be struggling with little or no vision. They will require a level of ability with technology to get you up and running. If you don't currently feel confident with technology then please don't let that put you off,

For the technically challenged down load one or two of the simpler apps, master those and then try more.

Some visually impaired are more tech savvy than others and are usually happy to share their expertise.