**Public FAQ**

# Monarch Hardware

## Q: Why was it named the Monarch?

A: When students are taught to read correctly on paper braille, the gestures their hands perform to track and meet in the middle are often regarded as the butterfly method of learning to read. This is how Monarch got its name.

## Q: How big is the Monarch display area?

A: The Monarch has an approximate display area of 96x40 equidistant pins, utilizing 480 braille cells.

## Q: What are equidistant pins?

A: The Monarch utilizes 9 pins, instead of the traditional 6, horizontally to allow for crisper tactile graphics resolution. A user first trying out the Monarch may notice a slight spacing between braille characters, testing has shown that this becomes an insignificant change as the user grows accustomed to the technology.

## Q: What is Dynamic Refresh?

A: If the braille pins are Touched while trying to refresh, the Monarch display may not refresh properly. However, the device uses the dynamic refresh feature to sense where your fingers are located, and when the touch has been lifted away from that significant area, it will automatically refresh the display. Holding down the Action button between keys 1 and 4 will also perform a manual refresh.

## Q: What is a Membrane?

A: The Monarch display has a cover or, "membrane" which protects the mechanical pins underneath. Each new device is supplied with five replacement membranes. Testing has shown that there may be an initial identification from users that a membrane is there, but like equidistant pins, users notice the membrane less as the become accustomed to the technology.

## Q: Can I order extra membranes?

A: Yes, you can contact our customer service team to purchase these.

## Q: How can I find the serial number of my Monarch?

A: From the Main Menu press **Space with I** then navigate to Model. Press **Enter** and you will find the information listed there. It is also located on the back of the device itself on a braille label.

## Q: Can the Monarch connect to a monitor or display?

A: Yes, the Monarch has an HDMI port on the right side to allow connections to any standard monitor or television with HDMI input.

## Q: What is the difference between power off and sleep mode?

A: Pressing the Power button on the left side of the Monarch once will put the Monarch into sleep mode, pressing the Power button again will "wake" the device up. To turn off the Monarch completely, press and hold the Power button for three seconds and select "Power Off" when the "Tablet Options" notification screen occurs.

## Q: What do the vibrations/blinking lights mean on the Monarch when a power cable is plugged in?

A: When the Monarch is completely out of battery, you may see a rapid blinking light as it charges enough to turn on. Typically, when connecting your Monarch to the power cable, you will receive a vibration if the Monarch is turned on, telling you the unit is charging. If powered off, you will see a charging screen appear, indicating the percentage and showing an image of a battery charging.

## Q: What is Point-And-Click?

A: The Monarch tactile display contains a touch sensor slightly above the display. This sensor tracks the location of your fingers and allows you to interact with tactile elements on the surface. Point–And–Click is the way that you interact with items, such as routing your cursor in a document or choosing a location to zoom in to on a graphic. To execute a Point-And-Click, isolate one finger while lifting the rest of your fingers on your hand above the display. Touch the location where you want to take action on the tactile surface. With your other hand, single or double-click the action button quickly. The action button is the circular button between dots 1 and 4. If done correctly, you will see the action taken at that location you were touching.

## Q: How long is the average battery life?

A: Up to 24 hours with standard usage. It is recommended to turn the Monarch off completely when you don’t plan on using the device for a while.

## Q: Does the Monarch have two volume settings?

A: Yes, Pressing Enter with dot 1 or dot 4 lowers and raises the speech volume. Pressing Enter with dot 2 or dot 5 lowers and raises the media volume.

## Q: Is the Monarch supportive of users who are DeafBlind?

A: Monarch is multimodal meaning it provides all feedback in braille, speech and haptics.

## Q: How much storage space is on the Monarch?

A: 160GB

## Q: What version of WIFI and bluetooth does the Monarch have?

A: WIFI 802.11ac – 2.4GHz and 5GHz. Bluetooth 5.1.

## Q: What are the dimensions of Monarch?

* A: Width
  + 403.5mm (15.89in)
* Depth
  + 266.5mm (10.49in)
* Thickness
  + 35.5mm (1.40in)
* Weight
  + 2.1 kg (4.65lbs)

## Q: Can I use the Monarch without the Membrane?

A: The membrane protects the braille pins from attracting foreign objects. Dirt or dust getting into the pins could result in their failure to perform. Using the Monarch without the Membrane will void your warranty, so we do advise that a membrane is used at all times. In the event of the Membrane being damaged, please replace the membrane immediately. Further information on how to replace the membrane can be found on the support page.

# Monarch Software

## Q: What software is the Monarch using?

A: The Monarch is Android-based and utilizes KeySoft as the interface. If you have used any of Humanware’s BrailleNote or Brailliant products, you will be familiar with KeySoft.

## Q: Does Monarch support Text To Speech (TTS)

A: Yes, Monarch uses the Acapella speech engine. You can use up to 4 Voices at any given time through your language profiles with a wide variety of different voices per country.

## Q: Is Math supported on Monarch?

A: Yes, the onboard word processor KeyWord supports MATHML. This means that you can bring in Word documents that have correctly inserted math equations. Users can also write Math context directly into the word processor, avoiding the need to use KeyMath. To insert a Math Equation, press Enter + M.

## Q: What are the differences between KeyMath and Equation editor?

A: The equation editor is used to write math expressions while remaining in KeyWord. Pressing **Enter + M** will place you in an equation editor box where you can start to type maths using the selected math code. Once you finished typing your math equation, pressing **Enter + M** will toggle you out of Math mode. If, however, you want to perform a calculation or create real-time graphs, this is where KeyMath will be used. To access KeyMath from KeyWord, press **Backspace + M**, and you will be directed to the KeyMath application.

## Q: What Math braille code is supported?

A: UEB and Nemeth math are supported along with French Maths. The language profile contains a setting that determines your math code. Refer to the configuring your language profile for more information.

## Q: What are supported file types that can be opened using the Monarch?

A: The following filetypes are supported:

* BRL
* EPUB
* Txt
* PDF
* Doc
* Docx
* PDF images
* BMP
* GIF
* PDF documents
* PNG
* JPG
* TXT
* BRF
* EBRF
* APK

## Q: What files can I open in Braille Editor?

A: BRF and BRL files

## Q: What files can I open in Keyword?

A: TXT, PDF documents, Doc, DOCX

## Q: How do I load a textbook onto my Monarch?

A: Currently you can open a BRF textbook in the Braille Editor app, or if you have an EPUB or Daisy version of a textbook, these can be opened in the Victor Reader app. In 2025 eBraille versions of textbooks from APH will be available and will be able to be opened in the Victor Reader app. eBraille files have all the navigation capabilities of an EPUB file while retaining all the spatial formatting of paper braille.

## Q: When using the Word Processor, how many documents can I have open at once?

A: The most common use case is to use space plus dots 1-2-5-6 to toggle between two documents but if needed you can add additional opened files by pressing **backspace with O** (Dots 1-3-5) and using **space with dots 1-2-5-6** to switch amongst them. You can have up to 10 documents open at once. Just ensure to close them all out prior to shutting the Monarch down completely.

## Q: What's the difference between Braille Editor and the word processor?

A: The Braille Editor is used to create, edit or read braille documents such as BRF or BRL files. This device has no braille translation built in and is a great tool for students to take notes, work out spatial math problems, and is basically an electronic braille writer. It is also a great way to read BRF books. Remember what you braille is what you get, so files created in the Braille Editor can not be immediately translated to print for a sighted teacher.  
  
The Word Processor (KeyWord) is a full Microsoft Word style word processor. It can open .doc or .docx files, and anything typed in braille will be translated to print when sending the .docx file to a sighted teacher. KeyWord also includes a built-im math Equation Editor, similar to that of Microsoft Word on a PC. A student can enter the equation editor, type their math content in Nemeth or UEB math, and upon closing the equation editor, the braille math will be converted to print math for a sighted classroom teacher when they open the file. Inversely if a sighted teacher uses the equation editor in Microsoft Word to create a math assignment and sends it to a student using a Monarch, the math created in the equation editor will be shown as Nemeth or UEB math depending on the student’s preference, enabling them to independently complete STEM worksheets.

## Q: How do I export graphs I've made in KeyMath?

A: When using the KeyMath Desmos powered graphing calculator, after generating a graphed equation, a user can export that image to the clipboard and paste it into a KeyWord DOCX math assignment file as an example. Upon creating the graph, press backspace with E (Dots 1-5) to export that image to the clipboard. Open the math worksheet in KeyWord, position your cursor where you want to paste the graphic and press backspace with V. In braille you will see the braille math of the equation but visually the image will be available to a sighted teacher if opening the file in Microsoft Word. These commands can be found in the Context menu by holding the square button on the front edge of the Monarch.

## Q: What services can I connect to using the Victor Reader App?

A: Bookshare, NFB Newsline, and Project Gutenberg are widely used in the U.S. and there are many international options for locating books.

## Q: Can I add my own graphics that were not made by a tactile graphics artist?

A: Yes, the Tactile Viewer app opens most tactile graphics created by users in a PDF format. Simply load the file onto a USB drive and move it to storage on the Monarch to view.

## Q: How can I send a file from my Monarch?

A: Currently the best way to provide a sighted teacher or classmate your file is to save this file on a thumb drive and give them the thumb drive to open your file. To do this

* 1. Open the file manager and press Space with D to view your list of drives. Select the storage drive and find the folder where the desired file is located. Press enter on that folder to open it.
  2. Navigate to the file you want to copy and press **backspace with Y** (Dots 1-3-4-5-6) to copy it to the clipboard
  3. With your thumb drive inserted, press **space with D** to jump back to the drive list, navigate to the thumb drive and press enter on it
  4. Navigate to the folder you want to paste the file into and press enter to open it
  5. Once in the desired location on your thumb drive, press **backspace with A** to complete the action, or navigate down to the “Copy,” button to complete the transfer.

## Q: How can I switch between a book and a tactile graphic quickly?

A: Similar to using a PC, the Monarch allows you to quickly toggle between apps, just like pressing Alt Tab on a computer. If you **double-press** the square button on the front edge of the device, you will toggle back and forth between the two most recent open apps.

## Q: How will I get new apps on my Monarch?

A: New apps will be installed via the KeyUpdater app. You will be notified of pending updates id connected to WIFI.

Q: How do I install the new apps?

A: If connected to WIFI you will be notifed of a new update available. Clicking Yes to install will start the update process. If however you skip this message, opening KeyUpdater from the All application menu then clicking on check for updates will start the process. If however you are not able to connect to WIFI, a offline update is available.

Q: Why does the Internet browser say “Beta”?

A: Currently the internet browser "Ecosia" is still in a testing phase. Users may experience issues related to browsing, braille, speech, and website compatibility as we continue to improve how our browser operates. The priority function of the beta browser is to provide a means in which to connect to an internet which requires the use of an internet portal.

## Q: I've never played chess before. how did I learn Monarch chess?

A: To assist in mastering the Point-And-Click gesture, Monarch Chess is located in the All Applications menu off the main menu. Open Monarch Chess, and you will find a full Chess tutorial that will teach you the entire game of Chess before you play.

Q: Can the Monarch use a screen reader such as JAWS, VoiceOver, or NVDA?

A: APH and HumanWare are currently partnering with all available screen reader providers and we expect Monarch to be supported within the next year.

## Q: Does the Monarch have access to the Android Store?

A: Because the Monarch is a truly purpose built specialized device, the Monarch is not Google Certified with the PlayStore, therefore no access to the PlayStore is given.

## Q: Where can I download new apps for the Monarch?

A: When apps become available from APH, HumanWare or our partner developers, they will be available via the KeyUpdater app from the All Applications menu.

## Q: Can you disable speech output?

A: Yes toggle speech with **backspace + enter + S (Dots 2-3-4).**

## Q: How do I sign In to Bookshare?

A: Open the Victor Reader book reading app and select “Manage Libraries.” Select the book provider option and then choose bookshare from the list. You will be prompted to sign in with your email and password. Once successful you will see a new Bookshare item on the Victor Reader menu at the end. Select it and you can search the library with a WIFI connection.

## Q: How do I sign in to NFB Newsline?

A: Similar to signing into Bookshare, From the Victor Reader menu, choose to Manage Libraries. Select Magazine Providers and choose the NFB newsline option. Enter your username and password and you will see NFB Newsline added to the end of your Victor Reader menu.

## Q: Can I listen to BARD audiobooks?

A: Not at this time. We are looking to add NLS Bard as a new library in the future.

## Q: Can I watch YouTube?

A: Yes, you can access YouTube via the internet browser, but please be aware that the Internet browser may be unstable due to being in Beta.

## Q: How can I view a PowerPoint presentation on my Monarch?

A: We will be looking to add Powerpoint file support to the Monarch in the future. Currently you can save a Powerpoint file in outline form as a Microsoft Word file, and open that file in the Word Processor.

## Q: Can I view an Excel document?

A: Not at this time but this is an app we will be looking to add.

## Q: How will a text PDF open?

A: Accessible PDFs can be opened via the Word Processor app.

## Q: Is there a music player and can I play it in the background?

A: No

# Troubleshooting

## Q: How do I connect to Wifi?

A: Follow the below instructions:

* 1. From the device’s main menu **press enter with Q (Dots 1-2-3-4-5)** to open the Quick Settings screen
  2. Press **Enter** on Network and Internet
  3. Press **Enter** on Internet
  4. Ensure the WIFI checkbox is checked by pressing enter on it. You should see that WIFI is turned on when a full cell appears in the box next to Wi-Fi.
  5. Navigate down to your desired network name and press **Enter** on it
  6. If a password is needed type it now using computer braille and press enter
  7. If your organization uses a web portal rather than a password that you need to log into, you should see that webpage appear instead of a password field. Navigate to your username / password field on the page and press enter to activate them to fill in the information.
  8. Once connected you will see the word “Connected,” next to your network name in the list

## Q: Is there a command for commonly used keystrokes?

A: Throughout the KeySoft system you can always find relevant key commands by accessing the context menu by holding the square button on the front edge of the device, or by pressing space with M (Dots 1-3-4)

## Q: What should I do if an app stops working?

A: In the event an app crashes or is not functioning correctly, the first recommendation that usually fixes the problem is to completely close and reopen the app. To remove an app from the recent apps list, tap the **square button** on the front edge of the device to open the recent apps list, navigate to the malfunctioning app, and close it by pressing **Backspace with dots 2-3-5-6**

## Q: How do I reset to factory default settings?

A: In the event you want to completely erase all user data on the device and revert it back to the state it was in when you had first received the Monarch, you can perform a factory reset. To do this:

* 1. Press **Enter with Q** to open the Quick Settings list
  2. Navigate down to, “System, Languages, gestures, time and backup,” and press **Enter**
  3. Type an **R** to jump to “Reset Options,” and press **Enter**
  4. Select the last item in the list called, “Erase all data (Factory Reset)” and press **Enter**
  5. Confirm by pressing **Enter** on the “Erase all data,” button
  6. The Monarch will power off. Once you receive the power off vibration, hold the power button for a couple seconds to power the device back on and start the factory reset process

1. You will need to reconnect the Monarch to any WIFI networks after this is completed

## Q: How do I adjust Braille grade/language tables?

1. The Monarch allows for multiple language profiles to be created. This is specifically valuable for students or users who are multilingual or learning another language. To set up a language profile Open the options menu by pressing **Space with O** (Dots 1-3-5). The first option is “Configure Language Profile. Press **Enter** on this and the Monarch by default has one language profile called, “Primary Language Profile.” This is the default language profile. Press **Enter** on this item and you can change many aspects of the language profile from the text to speech language and voice, to the preferred braille codes, etc.

## Q: My Monarch arrived in uncontracted braille, how do I change this to contracted?

A: Open the options menu pressing **Space with O** and activate the “Configure Language Profile,” item. Activate the Primary Language Profile, and select the item called “Literary Braille Table.” Ensure this is set on English UEB Duxbury Grade 2.

## Q: How do I submit an issue report?

A: If you find an issue with your Monarch, please contact our Technical support team.

## Q: How can I manually refresh the screen?

A: If your Monarch’s display is not refreshing properly, you can force the entire display to refresh by removing your hands from the display and holding the circular **Action** button between dots 1 and 4, for 2 seconds.

## Q: What information should I provide to my IT department regarding the Monarch?

A: Depending on your IT administrator and requirements, it is suggested to explain the Monarch as:

* 1. An Android tablet-style device running Android 13
  2. The Monarch stays up to date with all of Google’s security patches
  3. The Monarch has a web browser but is not Google Certified, meaning it does not have access to the Google Playstore
  4. If the school requires the student to access the network via a web portal, this can be done through the Monarch’s web browser

## Q: What should I expect from future software updates for the Monarch?

A: HumanWare and APH will be constantly working to update the Monarch with new apps, features and fixes. All updates can be installed through the KeyUpdater app. The easiest way to do this is with a WIFI connection.

## Q: What warranty comes with the purchase of the Monarch?

A: Monarch comes with a 2 year manufacturer warranty. Extended care packages can be purchased for additional warranty coverage.

## Q: Can I play Chess online with friends?

A: Not at this time but this is something we are looking at adding.

## Q: How will I get new apps on my Monarch?

A: New apps will be installed via the KeyUpdater ap. You will be notified of pending updates if connected to WIFI.

## Q: What should I do If liquid is spilled on the display?

A: The Monarch’s protective membrane should protect the braille cells from liquid spills; however, it is important to wipe the spill off as quickly as possible. If liquid is spilled in other areas this can cause damage to the components inside. Please ensure to contact Technical support who will best advise to return the Monarch for inspection.

## Q: How do I clean my Monarch?

A: A slightly damp cloth can be used to wipe off the device, including its tactile display.

## Q: Can I fly with the Monarch?

A: Yes Monarch can travel in carry on luggage.

## Q: I am in a math class, is it possible for my math teacher to provide me worksheets that I can access on my Monarch?

A: Using the Microsoft Word equation editor, a math teacher can create a worksheet in Microsoft Word. They can save that file as a .docx file and if you open that file on your Monarch, all the print math created in Word, will convert to your preferred braille math code and you can read it in braille. If you need to add math content into the document, you can insert math by entering Math mode with Enter with the letter M. You can type your math using your preferred braille math code, and when finished, press **Enter with M** again to toggle math mode off. The math content created will convert to print when saved as a .docx file in KeyWord. Note that if using Monarch visually with a screen, the newly created math content will show up as braille symbols until you enter the print preview mode with **Enter and V.**

## Q: I am a teacher and it would be helpful if I could see the braille content on the visual screen. Is this possible?

A: Monarch has a visual braille setting that can be enabled. Do the following to toggle it on/off:

* 1. Press **Space with O** (dots 1-3-5) to open the Options menu
  2. Choose Miscellaneous Settings
  3. Toggle Visual Braille Output to on
  4. You will now see the braille dots overlay along with a representation of where the student is touching.

## Q: I am seeing $P and $L in my documents representing new lines and paragraphs. Can these be turned off?

A: Yes. To turn off those characters, do the following:

* 1. Press **Space with O** (Dots 1-3-5) for options menu
  2. Select Braille and Navigation Settings
  3. Choose Format Markers Rendering
  4. Select No Format Markers

## Q: What age is right for the Monarch?

A: The Monarch can assist a student with a wide variety of tasks. We have found that with younger students around the 1st or 2nd grade age, using the Monarch to complement paper braille activities has been well received. Showing a student a graphic on paper, and then comparing it to the experience of seeing a graphic on the Monarch can create that technological relationship. In addition, having a student read books or material on the Monarch teaches them the same reading skills as if they were reading on paper braille.   
  
We have seen students 5th grade and above take off with the Monarch and use all of its features from reading novels to solving complex math equations.

## Q: I'm trying to load a book but I keep getting an error:

A: If there is an error when trying to import a book, it's most likely that the Monarch has never connected to the internet. To resolve this the Monarch must connect to the internet once.