APH Mantis Q40™

User Guide

V 2.4

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Contents

Getting Started

Welcome to your new Mantis Q40 keyboard. This keyboard is both a standard keyboard and a refreshable braille display in one device.

This user guide provides instructions for orientation, usage, navigation, and updating of the device. For more information, please refer to the [Mantis Q40 product page](#) on the APH Website or call your nearest APH supplier if you are located in the USA. If you are located outside of the USA, please refer to the [Mantis Q40 product page](#) on the HumanWare website or call your nearest HumanWare supplier.

You can always find the most recent version of this document in the User guide application that is present in the main menu of this device.

Please note: to be sure that your device downloads the most recent version of this user guide when available, please make sure to connect it regularly to Internet.

Please also note: it is possible to use a text-to-speech (TTS) voice on your Mantis. To do so, you need to be connected to an audio Bluetooth device. Please read the [section "Connecting Mantis Q40 to a Bluetooth device"](#) to know how to connect an audio Bluetooth device to your Mantis.

In the Box

The box contains the following items:

- Mantis Q40 keyboard
- USB-A to USB-C cable
- USB-C to AC power adapter
- Thermoplastic polyurethane (TPU) protective case
- Print *Getting Started* Guide

Orientation of Mantis Q40

The Mantis has a 40-cell braille display, a standard keyboard, a Home Button, and four thumb keys for navigation. There are buttons and ports on the front, back, and left edges.

Top Face

The top face of the Mantis can be divided into two sections: front and rear.

The front section consists of a refreshable braille display containing 40 braille cells and 40 cursor-routing buttons. Each cursor-routing button is associated with the cell directly below it.

When editing text, pressing one of the cursor-routing buttons moves the editing cursor to the associated braille cell. While in the menus, pressing any cursor-routing button activates the selected item.

The rear section includes a standard computer keyboard.

Front Edge

On the front edge of the Mantis are five buttons. From left to right, the buttons are as follows:

- Previous thumb key
- Left thumb key
- Home button (circular shape) – used to return to the Main menu, exit Terminal mode or access to the settings when in Terminal mode only (see section "Terminal mode only").
- Right thumb key
- Next thumb key

Left Edge

On the left edge, from front to back are the following:

- USB-A port
- Power button—Press and hold this button for 2 seconds to turn the device on.
- Green LED—This lights up to visually indicate the status of the device.
- USB-C port—Use the cable that came with your Mantis to connect it to a power outlet or a PC.

Rear Edge

The left side of the rear edge contains an SD-card port. This port allows you to insert SD cards with a capacity of up to 64 GB for external storage.

Bottom Side

In each corner underneath your Mantis is one of four anti-slip pads.

In the middle, closer to the front edge, is a slightly indented rectangle with a different texture. In this rectangle is a sticker containing printed hardware information about your Mantis. Above the sticker, there is a braille label containing the serial number of your device.

Towards the back-left of the device is the battery compartment. It is closed and secured with two Phillips-head screws.

Keyboard Layout

This section provides only a description of the system keys, as the location of the letter keys varies depending on your keyboard configuration and language. Starting with the top row (furthest away from you), from left to right, the system keys on the Mantis keyboard are laid out as follows:

Row 1 (top row): Esc, F1 to F12, Delete

Row 2: Backspace (at the right end of the row)

Row 3: Tab (at the left end of the row)

Row 4: Caps Lock (left end of the row), Enter (right end of the row)

Row 5: Left Shift, right Shift

Row 6: Left Ctrl (control), Fn (function), Windows, left Alt (alternate), Spacebar, right Alt, right Ctrl, and Left, Up, Down, and Right Arrows

Charging Mantis Q40

Prior to using your Mantis, make sure you charge it completely.

Connect the USB-C end of the cable to the USB-C port located on the left edge of your Mantis. Minimal effort is required, and forcing the connection can damage the cable or the device.

Connect the USB-A end of the recharge cable to the power adapter, then plug the power adapter into a power outlet. Use the provided power adapter for optimal recharge.

Alternatively, you can charge the device using your computer and the USB-A to USB-C cable, but note that this method of charging is slower than charging with a power adapter.

Powering On and Off

The Power button is on the left edge of the Mantis. It is oval-shaped with a raised dot in the center.

Press and hold the Power button for approximately 2 seconds to power on the Mantis. There will be a quick vibration and "starting" will appear on the braille display along with a tactile loading animation that circles during start-up.

A few moments after you boot your device for the first time, you will be welcomed with a language-selection menu. Press Enter to open the list of languages, select one, and press Enter to close the list. Close the dialog box once the changes are completed.

After a few seconds, the start-up will be complete and "editor" will appear on the braille display. Your Mantis is now ready for use.

To power off, press and hold the Power button for approximately 2 seconds. A confirmation message will appear on the braille display. Select OK by pressing the previous or next thumb key, then press Enter or a cursor-routing key.

Alternatively, you can follow these steps to power off the Mantis:

1. Press P to reach the Power Off menu item.

2. Press Enter or a cursor-routing key.

3. Select OK by pressing the Previous or Next thumb key.

4. Press Enter or a cursor-routing key.

Adjusting the Sleep Mode and auto power off

To preserve the battery, Mantis goes into Sleep mode after 5 minutes of inactivity. You can adjust the length of time in the settings. You can also manually put your device into Sleep mode by a short press of the Power button.

If the device is in the sleep status, to wake up the device, short press the Power button.

Adjusting the auto power off

Auto power off will automatically power off your device after a designated period of inactivity. By default, your device will shutdown automatically after 3 hours of inactivity to preserve the battery life of your Mantis. You can modify this setting in the user settings, under the "Auto power off subsection". Here, you will have the opportunity to set the auto power off after 1 hour, 2 hours, 3 hours (by default), 4 hours or never if you don't want your device to auto power off.

When the auto power off time is reached, a message asking if you want to shutdown will be displayed. If you don't react during the next minute, the device will automatically shut down. If your device has been shutdown automatically, press and hold the Power button for 2 seconds to restart your device.

About the About Menu

The About menu provides various information about your device, such as version numbers, model number, serial number, licenses, and copyright.

To open the About menu:

1. Go to the Main menu.

2. Select Settings.

3. Press Enter.

4. Go to the About item.

5. Press Enter.

Alternatively, you can use the shortcut Ctrl + I to open the About dialog.

Navigating and Using Menus

Navigating the Main Menu

The Main menu options are:

- Editor

- Terminal
- Library
- Braille editor
- File Manager
- Calculator
- Date and Time
- Settings
- Online services
- User guide
- Power off

Press the Previous or Next thumb key to scroll through the list to the menu item of your choice. Then press Enter or a cursor-routing key to access it.

You can return to the Main menu at any time by pressing the Windows key, the Home button, or Ctrl + Fn + H on the keyboard.

Panning Text on the Braille Display

Oftentimes, the text on the braille display is too long to fit on a single line. To read the entire sentence, scroll or "pan" the text ahead or back by pressing the Left and Right thumb keys on the Mantis. The Left and Right thumb keys are the second and third buttons on the front edge of the device.

Using the Context Menu for Additional Functions

The Context menu is a special menu that is accessed from almost everywhere in the device. It offers useful contextual functions that are relevant to what you're currently doing on your Mantis. Think of it as the context menu on a PC (the menu you get when you right-click the mouse). If you're looking for a specific action, or simply forgot the shortcut, chances are it can be found in the Context menu.

To activate the Context menu, press Ctrl + M. A menu will open with a list of actions you can perform at that particular moment. Scroll through the menu to the desired action and press Enter or a cursor-routing key.

Press Esc to exit the Context Menu.

Navigating by First Letters of Words

Most of the time, you can jump to an item in a menu by typing the first letter of that item. Doing so automatically moves your focus to the first item in the list starting with that letter. Typing the same letter twice moves the focus to the second item in the list starting with that letter, and so on.

For example, to reach the Settings menu on the Mantis, type the letter "S" on your keyboard.

Using the Braille-Entry Method to Type

Although the Mantis comes with a standard keyboard, it is still possible to toggle to a Perkins-style keyboard, which uses the A, S, D, F, J, K, L, and keys. With this entry scheme, each of these keys represents a dot in the braille cell of computer braille, which has eight dots, as shown in Table 1.

Table 1: Keyboard to Braille Dot Equivalents

Keyboard Key	Braille Dot
F	1
D	2
S	3
J	4
K	5
L	6
A	7
ONLINE;	8

Note that the letters may differ, depending on your current keyboard layout.

Press F12 to toggle between standard keyboard entry and braille entry. A notification is given indicating what input method is in use.

Using Shortcuts/Key Combinations to Navigate

As the name implies, shortcuts, also known as key combinations, make it easy to quickly navigate through a menu or file.

The most commonly used shortcuts on the Mantis Q40 are indicated in Table 2.

Table 2: Shortcut/Key Combination Table

Action	Shortcut or Key Combination
Activate selected item	Enter or cursor-routing key
Esc or Back	Esc key
Previous item	Up arrow or Previous thumb key
Next item	Down arrow or Next thumb key
Jump to any item in a list	Type the first letter of the item or app
Pan left or right	Left or Right thumb key
Go to top	Ctrl + Fn + Left arrow
Go to bottom	Ctrl + Fn + Right arrow

Action	Shortcut or Key Combination
Toggle braille grade	Ctrl + Fn + G
Switch language profile	Ctrl + Fn + L
Toggle keyboard layout	Ctrl + Space
Battery level	Ctrl + Fn + P
Context menu	Ctrl + M
Main menu	Windows key, Home button, or Ctrl + Fn + H
System information	Ctrl + I
Toggle braille and standard keyboard	F12
Time	Ctrl + Fn + T
Date	Ctrl + Fn + D
Eject media	Ctrl + Fn + E
Create a quick note	Ctrl + Fn + N
Create a quick braille note	Ctrl + Fn + B
Search for WIFI	Fn + F10
Sticky Keys enabled/disabled	Shift key five (5) times
Help	F1 or Alt + Shift + H
Volume up	Alt + =
Volume down	Alt + -
Increase speed	Ctrl + Fn + =
Decrease speed	Ctrl + Fn + -
List all the paired audio devices	Ctrl + Fn + A

Connectivity

Connecting Mantis Q40 to a Wi-Fi network

Mantis Q40 can be connected to a Wi-Fi network. It can be very useful to download voices, and it is mandatory to access some apps (for example, Wikipedia and Wiktionary).

To access the Wi-Fi settings, when on the Main menu, navigate using the left and right thumb keys until attaining the Settings, then press Enter. Then, in the list that is displayed, navigate with the left and right thumb keys until reaching the Wi-Fi option, then press Enter or any cursor-routing key to enter in this menu.

- **Activate and deactivate Wi-Fi: The first item of the Wi-Fi menu is labelled Wi-Fi. If it is enabled, it will be indicated "on". Click on this option with the cursor-routing keys or**

the Enter key and it will deactivate the Wi-Fi capability. Click again on this option with the cursor-routing keys or the Enter key to reactivate it.

- **Status: In this subsection, you will find the SSID (the name of the Wi-Fi network in which you are connected if any), the signal strength, the IP address and the Mac address.**
- **New Connection: In this subsection, you can search for new connections. The device can scan for SSID (it will list all the available networks in your vicinity), it can establish a WPS connection (by using the WPS option on your router) and it can manually connect (by allowing you to enter the information about the network to which you want to connect). When selecting a network in the list, you will have to enter the password associated to this specific network, then press Enter to validate the connection. If the password is accurate and the connection successful, you will be informed and the connection will be established. If it fails, an error message will be displayed and you will be prompted to enter the password again.**
- **Launch connection: In this list, you will see the networks with which you connected your device before. Press Enter or any cursor-routing key on one of them to establish the connection.**
- **Delete connection: In this list, all the networks with which you connected the device before will be displayed. Press Enter or any cursor-routing key on the network that you want to delete, and the network will be deleted.**
- **Network settings: It allows to modify some technical settings about the network to which you are connected, for example, the DHCP.**
- **Import Wi-Fi configuration: You can import a Wi-Fi configuration from another device. To perform this operation, you will have to connect a USB thumb drive or SD card to your device.**
- **Validate connection: this option allows to test the connection with which your device is connected, to validate that it works properly. You will be informed of the success or failure of this procedure.**

Connecting Mantis Q40 to a Bluetooth device

Mantis Q40 can be used with Bluetooth devices. Some of them can be accessed via the Terminal (see section "Connecting by Bluetooth" **to know how to connect your Mantis Q40 to another device using a screen reader). For audio devices, you have to use the Bluetooth settings. To access these settings, navigate with the left and right thumb keys until attaining the Settings and press Enter. In the Settings, navigate with the left and right thumb keys until reaching the Bluetooth option.**

- **Activate or deactivate Bluetooth: the first option allows to activate or deactivate Bluetooth. If Bluetooth is set to on, Bluetooth devices can be connected to the device. Press on any cursor-routing key or the Enter key to put this option to Off**

and to prevent any Bluetooth connection. Press again on any cursor-routing key or the Enter key to reactivate it.

- **Pair audio device: press on the Enter key or on any cursor-routing key to activate this option. Mantis Q40 will scan the environment to find audio Bluetooth devices to connect. In order to perform the connection, the audio device has to be in pairing mode. If Mantis Q40 identifies the device, it will be listed. Press on the enter key or any cursor-routing key to connect to this device.**
- **Connect device: this option lists all the Bluetooth devices configured in your device. You can select one of them, to which you are not connected at that time, to connect to your Mantis Q40. Press Enter or any cursor-routing key on the desired device and if the device is powered on and near the Mantis Q40, it will connect.**
- **Disconnect device: it disconnects a connected Bluetooth device from your Mantis Q40. When you are positioned on the device you want to disconnect, press the Enter key or any cursor-routing key to disconnect.**
- **Delete paired device: in this list of previously paired devices to the Mantis Q40, you will be able to delete one of them. When you will be positioned on the device you want to delete, press Enter or any cursor-routing key. A confirmation message will be prompted, then the device will be disconnected after you will have pressed Enter or any cursor-routing key to validate this message and confirm the action.**

Bluetooth audio devices menu

This menu offers a quick access to Bluetooth audio devices and their settings. To access this menu, use the shortcut Ctrl + Fn + A. If no audio Bluetooth device had been configured, a message will be displayed in braille during few seconds giving this information and you will stay at your current position. If an audio Bluetooth device had been configured, it will be displayed when entering in this menu. An 8-dot symbol is added at the end of the device's name if it is connected. By entering in the Context menu with the shortcut Ctrl + M on the device's name, you will have the option to connect device (that will try to connect the device if it was not connected before and that will reconnect the device if it is connected), disconnect device and delete paired device. Please note that when your cursor is positioned on a device, you can press Enter to connect it directly. In the Bluetooth audio devices menu, after the list of previously connected audio devices, the Close button can be used to leave this menu and return to your previous position.

Using the Editor Application

The Editor is an application that allows you to open, edit, and create text files on the Mantis. You can open .docx, .doc, .odt, .txt, .brf,.brl, .pdf, .ban, and .bra files with the Editor. The files you create or modify are saved as .txt files.

To open the Editor, press the Next thumb key until you reach Editor or press "E" in the Main menu, then press Enter or a cursor-routing key.

The Editor opens in the Editor menu, which includes Create File, Open File, Recently Saved Editor Settings, and Close.

Create a File

There are several ways to create a file, depending on your current location on the device.

- If you are in the Editor menu, select Create File and press Enter or a cursor-routing key.
- From the Context menu, select and activate the File menu, then select Create File.
- Alternatively, press Ctrl + Fn + N from anywhere on the device to quickly create a new file.

The cursor will be visible between two braille brackets, and can be set as blinking in the User Settings. You can begin writing in your new file.

Open a File

If you are in the Editor menu, select Open File and press Enter or a cursor-routing key. Alternatively, you can press Ctrl + O, then select the file you wish to open using the Previous and Next thumb keys.

Note that the Mantis may display an error message when a PDF file is opened. This generally occurs when the file contains mostly images rather than text.

Recently Saved

You can open a list of the last ten documents you previously saved for quick access.

To open a list of the ten most recent files, select the editor from the main menu. Use your Previous or Next thumb keys until you reach recently saved and press Enter.

You can scroll through the ten most recent files using the Previous and Next thumb keys. Press Enter or a cursor-routing key to open a file from the list.

Close a File

To close a file that is opened in the Editor, press the Esc key. Alternatively, open the Context menu using Ctrl + M, then scroll to and activate the File menu. Select Close File Item.

If there are changes to your file that have not been saved, you will be asked if you want to save the changes before closing.

Note: If your device shuts down before you have saved your document, when you will restart your device and return to the Editor, a message will be prompted indicating that the file was not closed properly and asking you if you want to open or to discard the file.

Save a Text File

There are two types of saving in the Editor: Save and Save as.

Save: Press Ctrl + S to save your file to an already existing file name.

Save as: Press Ctrl + Shift + S to save a copy of your file with a new file name and to change the file location.

If your file has never been saved, the Editor will ask you to enter a new file name regardless of the save method you choose.

Note that if you open a file under any extension other that .txt, the device will prompt a message asking if you wish to keep the original file in addition to the .txt file that will be saved.

Using Auto-Scroll in the Editor

The Editor app includes an Auto-Scroll feature that automatically pans through the written text on the braille display. The TTS will also automatically read the text displayed.

To start Auto-Scroll, press Alt + G.

To stop Auto-Scroll, press any key.

Modifying Auto-Scroll Speed

You can change the Auto-Scroll speed when auto-scrolling inside a file.

To slow down Auto-Scroll, press Ctrl + -.

To speed up Auto-Scroll, press Ctrl + =.

Finding Text in a File

To find text in your file, press Ctrl + F. Enter your search term in the blank field. Your cursor will be placed at the first location the text is found.

Press F3 to find additional instances of the search term.

Press Shift + F3 to reach the previous instances of the search word.

Finding and Replacing Text

To find and replace text:

1. Press Ctrl + H.

2. Enter the text to find in the first edit box, called Find.

3. Enter the replacement text in the second edit box, called Replace.

4. Select Replace All to replace all text found with the text in the Replace box.

5. Select Next to find and replace the next instance of the word.

6. Select Previous to find and replace the previous instance of the word.

Cutting, Copying, and Pasting Text

The Editor lets you cut, copy, and paste text in a way similar to other computer programs.

To Select the text, position your cursor on the first character using a cursor-routing key, then press F8.

Alternatively, you can select text from the Context menu:

1. Open the Context menu with Ctrl + M.

2. Scroll down to Edit.

3. Press Enter or a cursor-routing key.

4. Scroll down to Select Text.

5. Press Enter or a cursor-routing key.

This marks the start of your selection. Now go to the location of the end of your selection, and press Enter or a cursor-routing key to end the selection.

To select all text included in the file, press Ctrl + A.

To copy the selected text, press Ctrl + C.

To cut the selected text, press Ctrl + X.

To paste the copied or cut text, position your cursor where you want the text to be pasted using a cursor-routing key and press Ctrl + V.

As always, these commands can be accessed through the Context menu.

The Ctrl + C shortcut can also be used to copy the last result from the Calculator application and the current paragraph in the Library application.

Search on Wikipedia, on Wiktionary and in WordNet

With the Editor, it is possible to obtain more information about a specific word by performing a search on Wikipedia, on Wiktionary or in WordNet. These 3 modules can be accessed via the Context menu, under the Edit submenu, or you can press the following shortcuts:

● Search on Wikipedia: Ctrl + Shift + W

● Search on Wiktionary: Ctrl + D

● Search in WordNet: Ctrl + Shift + D

Note: You can obtain more information about these modules in the <u>section "Modules available in multiple applications".</u>

Using Read Mode

Read mode allows you to read files without the possibility of editing content by mistake. You cannot edit files while in Read mode.

To activate or deactivate Read mode, press Ctrl + R.

To activate or deactivate Read mode from the Context menu:

1. Press Ctrl + M to activate the Context menu.

2. Scroll to File using the Previous and Next thumb keys.

3. Scroll to Read mode using the Previous and Next thumb keys.

4. Press Enter or a cursor-routing key.

Adding, Navigating, and Removing Bookmarks

Bookmarks are a useful way to keep your location within a file and allow you to return quickly to that position at a later time.

To open the Bookmark menu, press Alt + M. You can also press Ctrl + M to open the Context menu and select Bookmark menu.

Inserting a Bookmark

To add a bookmark in a file:

1. Press Alt + M to open the Bookmark menu.

2. Select Insert Bookmark using the Previous and Next thumb keys.

3. Press Enter or a cursor routing key.

4. Enter a specific unused bookmark number.

   Note: If you do not enter a number, the Mantis selects the first available number and assigns it to the bookmark.

5. Press Enter.

Alternatively, you can insert a Bookmark by pressing Ctrl + B. Note that a maximum of 98 bookmarks can be inserted in a document.

Navigating to Bookmarks

To jump to a bookmark, press Ctrl + J. You are prompted to enter the bookmark number. Enter the bookmark number you wish to navigate to, then press Enter.

Removing Bookmarks

To remove a saved Bookmark:

1. Press Alt + M to open the Bookmark menu.

2.   Scroll to Remove Bookmark using the Previous and Next thumb keys.

3.   Press Enter or a cursor routing key.

4.   Enter the Bookmark number you want to remove.

5.   Press Enter.

Note: If you want to remove all bookmarks in the document type 99 when prompted Bookmark number.

Toggle Text Indicators

Text indicators are a useful tool to help you locate your position when working in document of the Editor. Upon activating the text indicators, brackets will appear on the braille display to indicate the beginning and the ending of the text.

To toggle text indicators:

1.   Press Ctrl + M to activate the Context menu.

2.   Use the Previous or Next thumb keys until you reach File Menu and press Enter.

3.   Use the Previous or Next thumb keys until you reach editor settings and press Enter.

4.   Use the Previous or Next thumb keys until you reach show text editor indicators.

5.   Press Enter to deactivate the Text indicators; press Enter again to activate them.

Note that toggling Text Indicators will only apply to the editor; all other edit fields will continue to include text indicators.

Editor Commands Table

The Editor commands are listed in Table 3.

Table 3: Editor Commands

Action	Shortcut or Key Combination
Activate Edit mode	Enter or a cursor-routing key
Leave Edit mode	Esc
Create file	Ctrl + Fn + N
Open file	Ctrl + O
Save	Ctrl + S
Save as	Ctrl + Shift + S
Find	Ctrl + F
Find next	F3
Find previous	Shift + F3

Action	Shortcut or Key Combination
Replace	Ctrl + H
Start/stop selection	F8
Select all	Ctrl + A
Copy	Ctrl + C
Cut	Ctrl + X
Paste	Ctrl + V
Delete previous word	Ctrl + Backspace
Delete current word	Ctrl + Delete
Delete previous character	Backspace
Move to next edit box while editing	Enter
Move to next edit box without editing	Next thumb key
Move to previous edit box without editing	Previous thumb key
Move insertion point to start of text field document	Ctrl + Fn + Left Arrow
Move insertion point to end of text field document	Ctrl + Fn + Right Arrow
Start Auto-Scroll	Alt + G
Increase Auto-Scroll speed	Ctrl + =
Decrease Auto-Scroll speed	Ctrl + -
Search on Wikipedia	Ctrl + Shift + W
Search on Wiktionary	Ctrl + D
Search in WordNet	Ctrl + Shift + D
Read all (text-to-speech feature)	Ctrl + Shift + G
Stop reading (text-to-speech feature)	Ctrl
Toggle Reading mode	Ctrl + R
Bookmark menu	Alt + M
Jump to bookmark	Ctrl + J
Insert Bookmark	Ctrl + B

Using the Braille Editor Application

The Braille Editor is an application similar to the Editor, but explicitly designed to edit, open and create braille documents in .brf and .brl format. The files are created, modified, and saved as .brf.

To open the Braille Editor, press the Next thumb key until you reach Braille Editor or press "B" in the Main menu, then press Enter or a cursor-routing key.

The Braille Editor opens in the Braille Editor menu, which includes Create File, Open File, Recently Saved, Braille Editor Settings, and Close.

Note that when editing a document in the Braille Editor application, no standard keyboard input is possible. Entry will be limited to the Perkins-style keyboard configuration, using the keys A,S,D,F and J,K,L,; (see table 1 for more details).

Note that the Text-to-speech (TTS) feature is not possible with the Braille Editor application.

Create a File

There are several ways to create a file, depending on your current location on the device.

- If you are in the Braille Editor menu, select Create File and press Enter or a cursor-routing key.
- From the Context menu, select and activate the File menu, then select Create File.
- Alternatively, press Ctrl + Fn + B from anywhere on the device to quickly create a new .brf file.

The cursor will be visible between two braille brackets, and can be set as blinking in the User settings. You can begin writing in your new file.

Open a File

If you are in the Braille Editor menu, select Open File and press Enter or a cursor-routing key. Alternatively, you can press Ctrl + O, then select the file you wish to open using the Previous and Next thumb keys.

Recently Saved

You can open a list of the last ten documents you previously saved for quick access.

To open a list of the ten most recent files, select the editor from the main menu. Use your Previous or Next thumb keys until you reach recently saved and press Enter.

You can scroll through the ten most recent files using the Previous and Next thumb keys. Press Enter or a cursor-routing key to open a book from the list.

Close a File

To close a file that is opened in the Braille Editor, press the Esc key. Alternatively, open the Context menu using Ctrl + M, then scroll to and activate the File menu. Select Close File Item.

If there are changes to your file that have not been saved, you will be asked if you want to save the changes before closing.

Note: If your device shuts down before you have saved your document, when you will restart your device and return to the Braille Editor, a message will be prompted indicating that the file was not closed properly and asking you if you want to open or to discard the file.

Save a Braille File

There are two types of saving in the Braille Editor: Save and Save as.

Save: Press Ctrl + S to save your file to an already existing file name.

Save as: Press Ctrl + Shift + S to save a copy of your file with a new file name and to change the file location.

If your file has never been saved, the Braille Editor will ask you to enter a new file name regardless of the save method you choose.

Export a Braille File to Text

The .brf files opened in the Braille Editor application can be exported as text files. This can be useful if you wish to open them in the Editor application and work on them in another format, and also to read them using the Text-to-speech feature.

To export a braille file to text:

1. Press Ctrl + M to open the Context menu.
2. Using the Previous and Next thumb keys, navigate until reaching the item "Edit", then press Enter or any cursor-routing key.
3. Use the Previous and Next thumb keys to select the option Export as text and press Enter.
4. The Mantis will display a list of braille tables for exportation. Use the Previous and Next thumb keys to select the braille table of your choice and press Enter.
5. You will be prompted to enter a name for the exported file. Type the desired name and press Enter.
6. You will be prompted with the list of File Manager folders in which you can save your newly created file. Select the folder of your choice using the Previous and Next thumb keys and press Enter.

Using Auto-Scroll in the Braille Editor

The Braille Editor app includes an Auto-Scroll feature that automatically pans through the written text on the braille display.

To start Auto-Scroll, press Alt + G.

To stop Auto-Scroll, press any key.

Modifying Auto-Scroll Speed

You can change the Auto-Scroll speed when auto-scrolling inside a file.

To slow down Auto-Scroll, press Ctrl + -.

To speed up Auto-Scroll, press Ctrl + =.

Finding Text in a File

To find text in your file, press Ctrl + F. Enter your search term in the blank field. Braille input is required. Your cursor will be placed at the first location the text is found.

Press F3 to find additional instances of the search word.

Press Shift + F3 to reach previous instances of the search word.

Finding and Replacing Text

To find and replace text:

1. Press Ctrl + H.

2. Enter the text to find in the first edit box, called Find.

3. Enter the replacement text in the second edit box, called Replace.

4. Select Replace All to replace all text found with the text in the Replace box.

5. Select Next to find and replace the next instance of the word.

6. Select Previous to find and replace the previous instance of the word.

Cutting, Copying, and Pasting Text

The Braille Editor lets you cut, copy, and paste text in a way similar to computer programs.

To select the text, position your cursor on the first character using a cursor-routing key, then press F8.

Alternatively, you can select text from the Context menu:

1. Open the Context menu with Ctrl + M.

2. Scroll down to Edit.

3. Press Enter or a cursor-routing key.

4. Scroll down to Select Text.

5. Press Enter or a cursor-routing key.

This marks the start of your selection. Now go to the location at the end of your selection, and press Enter or a cursor-routing key to end the selection.

To select all text included in the file, press Ctrl + A.

To copy the selected text, press Ctrl + C.

To cut the selected text, press Ctrl + X.

To paste the copied or cut text, position your cursor where you want the text to be pasted using a cursor-routing key and press Ctrl + V.

As always, these commands can be accessed through the Context menu.

The Ctrl + C shortcut can also be used to copy the last result from the Calculator application and the current paragraph in the Library application.

Search on Wikipedia, on Wiktionary and in WordNet

With the Braille Editor, it is possible to obtain more information about a specific word by performing a search on Wikipedia, on Wiktionary or in WordNet. These 3 modules can be accessed via the Context menu, under the Edit submenu, or you can press the following shortcuts:

- Search on Wikipedia: Ctrl + Shift + W

- Search on Wiktionary: Ctrl + D

- Search in WordNet: Ctrl + Shift + D

Note: You can obtain more information about these modules in the [section "Modules available in multiple applications".](#)

Using Read Mode

Read mode allows you to read files without the possibility of editing content by mistake. You cannot edit files while in Read mode.

To activate or deactivate Read mode, press Ctrl + R.

To activate or deactivate Read mode from the Context menu:

1. Press Ctrl + M to activate the Context menu.

2. Scroll to File using the Previous and Next thumb keys.

3. Press Enter or a cursor-routing key.

4. Scroll to Read mode using the Previous and Next thumb keys.

5. Press Enter or a cursor-routing key.

Adding, Navigating, and Removing Bookmarks

Bookmarks are a useful way to keep your location within a file and allow you to return quickly to that position at a later time.

To open the Bookmark menu, press Ctrl + M. You can also press Alt + M to open the Context menu and select Bookmark menu.

Inserting a Bookmark

To add a bookmark in a file:

1. Press Alt + M to open the Bookmark menu.

2. Select Insert Bookmark using the Previous and Next thumb keys.

3. Press Enter or a cursor routing key.

4. Enter a specific unused bookmark number.

   Note: If you do not enter a number, the Mantis selects the first available number and assigns it to the bookmark.

5. Press Enter.

Alternatively, you can insert a Bookmark by pressing Ctrl + B. Note that a maximum of 98 bookmarks can be inserted in a document.

Navigating to Bookmarks

To jump to a bookmark, press Ctrl + J. You are prompted to enter the bookmark number. Enter the bookmark number you wish to navigate to, then press Enter.

Removing Bookmarks

To remove a saved Bookmark:

1. Press Alt + M to open the Bookmark menu.

2. Scroll to Remove Bookmark using the Previous and Next thumb keys.

3. Press Enter or a cursor routing key.

4. Enter the Bookmark number you want to remove.

5. Press Enter.

Note: If you want to remove all bookmarks in the document type 99 when prompted Bookmark number.

Toggle Text Indicators

Text indicators are a useful tool to help you locate your position when working in document of the Braille Editor. Upon activating the text indicators, brackets will appear on the braille display to indicate the beginning and the ending of the text.

To toggle text indicators:

1. Press Ctrl + M to activate the Context menu.

2. Use the Previous or Next thumb keys until you reach file menu and press Enter.

3. Use the Previous or Next thumb keys until you reach editor settings and press Enter.

4. Use the Previous or Next thumb keys until you reach show text editor indicator.

5. Press Enter to deactivate the Text indicators; press Enter again to activate them.

Note that the toggling Text Indicators will only apply to the Braille editor, all other edit fields will continue to include text indicators.

Format BRF

The Braille Editor offers Braille formatting options. It can be very useful to format your Braille documents the way they will be printed in Braille.

To adjust the Braille formatting of your documents, go to the braille editor application. Then, in the menu, press Enter on the Editor settings. In this window, you will find the option "Format BRF". Press Enter to activate this option, press Enter again to deactivate it. If you continue to navigate in that window, you will be able to select the number of characters per line to display, and the number of lines per page. These two controls can be modified to display exactly the number of characters per line and the number of lines per page that you want in your Braille document when you will print it. To modify one of these controls, press Enter on the desired one, then change the default value indicated, then press Enter to confirm your choice.

When on a BRF document, if the "Format BRF" option is activated, two options are added to the Contextual menu, in the File menu. You can be informed of your exact position in your document depending of the Braille formatting options chosen; this is the Where Am I function. To obtain this information, you can also press the shortcut Ctrl + W. You can also access a preview of your document when printed in braille. To access the preview mode, you can also use the shortcut Ctrl + Q.

Note: even though you deactivate the option "Format markers" in the system's User settings menu, they will be rendered when your document will be in Preview mode.

Preview mode

When the "Format BRF" option is enabled, you will have the opportunity to read your document in preview mode, by using the shortcut Ctrl + Q or by selecting this option in the context menu. In this mode, your document will be displayed as formatted as the way it will be presented when printed in Braille, according to the format BRF settings configured.

Please note that even though the format markers were disabled in the system's user settings, they will be displayed to help you apprehend more precisely the content of your future printed Braille document. Here are more explanations about the format markers.

To tell you how a document is formatted, system places special format markers at particular points in a document. These format markers are displayed on the Braille display. You may have

encountered a number of special groups of symbols on the Braille display when you were reviewing your document. They tell you how the document is formatted. When displaying format markers, system follows the guidelines set for literary Braille format established by the Braille Authority of North America.

On the Braille display, if the cursor is positioned under a format marker, it appears under each of the characters of the format marker.

Format markers are groups of symbols that always start with a computer Braille dollar sign, $. In US computer Braille this is *dots 1-2-4-6* which is the same as the grade 2 "ed" contraction. In UK computer Braille it is *dots 4-5-6.* There is always a space before the $ and another space after the group of symbols. The symbol or symbols following the $ determine what the format marker is showing.

Here are the format markers that you will go through in your document.

New Line: $p.

Form feed: $f

Tab: $t

Braille Editor Commands Table

The Braille Editor commands are listed in Table 4.

Table 4: Braille Editor Commands

Action	Shortcut or Key Combination
Activate Edit mode	Enter or a cursor-routing key
Leave Edit mode	Esc
Create braille file	Ctrl + Fn + B
Open braille file	Ctrl + O
Save	Ctrl + S
Save as	Ctrl + Shift + S
Find	Ctrl + F
Find next	F3
Find previous	Shift + F3
Replace	Ctrl + H
Start/stop selection	F8
Select all	Ctrl + A
Copy	Ctrl + C

Action	Shortcut or Key Combination
Cut	Ctrl + X
Paste	Ctrl + V
Delete previous word	Ctrl + Backspace
Delete current word	Ctrl + Delete
Delete previous character	Backspace
Move to next edit box while editing	Enter
Move to next edit box without editing	Next thumb key
Move to previous edit box without editing	Previous thumb key
Move insertion point to start of text field document	Ctrl + Fn + Left Arrow
Move insertion point to end of text field document	Ctrl + Fn + Right Arrow
Start auto-scroll	Alt + G
Increase Auto-Scroll speed	Ctrl + =
Decrease auto-scroll speed	Ctrl + -
Search on Wikipedia	Ctrl + Shift + W
Search on Wiktionary	Ctrl + D
Search in WordNet	Ctrl + Shift + D
Toggle Reading mode	Ctrl + R
Where Am I? (Format BRF option On)	Ctrl + W
Preview mode (Format BRF option On)	Ctrl + Q
Bookmark menu	Alt + M
Jump to bookmark	Ctrl + J
Insert Bookmark	Ctrl + B

Using the Library Application

The Library is the application you use to read or listen books on the Mantis. It supports the following file formats: .brf, .pef, .txt, .html, .docx, .odt, .pdf, .ban, .bra, .fb2 and .rtf, and is compatible with .zip files containing books in text format. It also supports books in DAISY 2, DAISY 2.02, EPUB and NISO books.

To open the Library app, press the Next thumb key until you reach Library, or press 'L' in the Main menu. Press Enter or a cursor-routing key to access the app.

The Library menu includes Book List, Recently Read, Search, and Close.

Navigating the Book List

In the Library, your books are stored in the Book List, comparable to a directory containing all the available media on your device in alphabetical order.

Use the Previous and Next thumb keys to select a book from the Book List, then press Enter or a cursor-routing key.

Note that the Mantis can display an error message if a PDF file is opened. This generally occurs when the file contains mostly images rather than text.

To close a book and return to the Book List, press Esc or Ctrl + Shift + B.

Searching for Books

To search for a specific book on the device:

1. Select Search from the Library menu or press Ctrl + F.

2. Type in the text/name of book.

3. Press Enter. You will be presented with a list of books matching your search criteria.

4. Use the Previous and Next thumb keys to scroll to the book.

5. Press Enter or a cursor-routing key to open it.

Accessing Recently Opened Books

You can open a list of the last ten books you previously opened for quick access.

To open a list of the ten most recent books, press Ctrl + R or select Recently Read from the Library menu.

You can scroll through the most recent books using the Previous and Next thumb keys. Press Enter or a cursor-routing key to open a book from the list.

Managing Your Books

When browsing the Book List, you can copy, move, or delete a selected book from the Library application to an external storage device. The actions that are available for each book depend on the type and location of the book. The Context menu tells you what actions are available.

The basic rules are:

- Books located on the SD card or the USB storage can be deleted.
- Books downloaded from online services can be moved or deleted.
- Books can only be copied or moved when external storage is connected.
- You cannot copy or move books from within the internal storage.

To copy, move, or delete a book:

1. Access the book list by pressing Ctrl + Shift + B.

2. Select a book using the Previous or Next thumb key.

3. Press Ctrl + Fn + M to open the Manage Book menu.

4. Select Copy to, Move to, or Delete.

Navigating and Accessing Additional Information in Books

The easiest way to navigate inside a book is by using the thumb keys. Use the Left and Right thumb keys to pan the text left and right.

Changing the Navigation Level for Books

The Library includes different navigation levels to make navigating through a book easier. Navigation levels are dependent on the file format of the book and may differ from book to book.

To change the Navigation level:

1. Press Ctrl + T.

2. Scroll through the available Navigation levels using the Previous and Next thumb keys.

3. Press Enter or a cursor-routing key to select the Navigation level.

Once the Navigation level is selected, use the Previous and Next thumb keys to navigate at this Navigation level.

For example, if you selected the "Sentence" Navigation level, pressing the Next thumb key would move you from sentence to sentence within the book.

Alternatively, you can select the Navigation level of your choice using a quick shortcut:

1. Press Ctrl + Fn + Up arrow to access the next Navigation level OR Press Ctrl + Fn + Down arrow to access the previous Navigation level.

2. Press the Previous or Next thumb key to navigate within the book in the Navigation level selected.

Navigating by Page, Heading, Percentage, or Bookmarks

To reach a specific page, heading, book percentage, or bookmark:

1. Press Ctrl + G.

2. Scroll through the navigation options using the Previous and Next thumb keys.

3. Choose between Page, Heading, Percent, or Bookmark.

    a. Note that the options available will vary based on the formatting available in the book.

4. Press Enter or a cursor-routing key.

5. Enter a value.

6. Press Enter or a cursor-routing key.

Using Auto-Scroll in the Library App

The Mantis Q40's auto-scroll function allows you to scroll through the text of an open book automatically.

To turn on Auto-scroll, press Alt + G when inside a book. Press any key to stop Auto-scroll and return to the regular Panning mode.

You can modify the Auto-scroll speed when auto-scrolling inside a book.

To slow down Auto-scroll, press Ctrl + -.

To speed up auto-scroll, press Ctrl + =.

Finding Your Current Position in a Book

Use the Where Am I command whenever you need to know your current position within a book.

To activate the Where Am I command, press Ctrl + W.

Alternatively, access the Context menu by pressing Ctrl + M. Go to Where Am I using the Previous and Next thumb keys, then press Enter or a cursor-routing key to activate the item.

Use the Previous and Next thumb keys to scroll through the available elements (Heading, Percent, Page, and Line). Use the Left and Right thumb keys to pan the text left and right.

Navigating to the Beginning or End of a Book

You can reach the beginning or end of a book using shortcuts.

To reach the beginning of a book, press Ctrl + Fn + Left arrow.

To reach the end of a book, press Ctrl + Fn + Right arrow.

Searching for Text in a Book

Another way to navigate within a book is to search for a specific string of text.

To search for text, press the Ctrl + F command. You are prompted to enter the text. Type the text, then press Enter.

Accessing Additional Book Information

You can display additional information about the book you are currently reading on the device (title, author, description, date, language, subject, publisher, and bookmarks).

To display additional book information, press Ctrl + I.

You can also press Ctrl + M to open the Context menu. Use the Previous and Next thumb keys to select the Book Information menu item, then press Enter or a cursor-routing key to activate it.

Use the Previous and Next thumb keys to scroll through the available book information. Use the Left and Right thumb keys to pan the text left and right.

Search on Wikipedia, on Wiktionary and in WordNet

With the Library app, it is possible to obtain more information about a specific word by performing a search on Wikipedia, on Wiktionary or in WordNet. These 3 modules can be accessed via the Context menu of the app, or you can press the following shortcuts:

- Search on Wikipedia: Ctrl + Shift + W

- Search on Wiktionary: Ctrl + D

- Search in WordNet: Ctrl + Shift + D

Note: You can obtain more information about these modules in the section "Modules available in multiple applications".

Adding, Navigating, Highlighting, and Removing Bookmarks

Bookmarks are a useful way to keep your location within the book and allow you to return quickly to that position at a later time, whether a physical position in a textbook or a time position in an audiobook.

To open the Bookmark menu, press Alt + M. You can also press Ctrl + M to open the Context menu and select Bookmark Menu.

Inserting a Bookmark

To add a bookmark to a book:

1. Press Alt + M to open the Bookmark menu.

2. Select Insert Bookmark using the Previous and Next thumb keys.

3. Press Enter or a cursor-routing key.

4. Enter a specific unused bookmark number.

    Note: If you do not enter a number, Mantis selects the first available number and assigns it to the bookmark.

5. Press Enter.

Alternatively, you can insert a Quick Bookmark by pressing Ctrl + B.

Navigating to Bookmarks

To jump to a bookmark, press Ctrl + J. You are prompted to enter the bookmark number. Enter the bookmark number you wish to navigate to, then press Enter.

Highlighting Bookmarks

The Highlight Bookmarks menu item is used to define the Start and End positions of a passage. Using highlighted bookmarks is a great way to study important passages in textbooks.

To highlight bookmarks:

1. Open the Bookmark menu by pressing Alt + M.

2. Select Highlight Bookmark Start using the Previous and Next thumb keys.

3. Press Enter or a cursor-routing key.

4. Enter a specific unused bookmark number.

    Note: If you do not enter a number, your Mantis selects the first available number and assigns it to the bookmark.

5. Press Enter.

6. Navigate to the end point of the highlighted passage.

7. Open the Bookmark menu by pressing Alt + M.

8. Select Highlight Bookmark End using the Previous and Next thumb keys.

9. Press Enter or a cursor-routing key.

    Note: The current position is set as the ending position. If the end position is placed before the start position, they are switched.

You can also insert a Quick Bookmark. It is used to mark the end of the Highlight Bookmark.

To insert a Quick Bookmark:

1. Press Alt + H to open the Highlight Bookmark list.

2. Select a Highlight Bookmark number.

3. Press Enter. The content of the current Highlight Bookmark will be displayed.

4. Use the thumb keys to navigate.

5. Press the Esc key to close the Highlight Bookmark and return to the entire book content.

Removing Bookmarks

To remove a saved bookmark:

1. Press Alt + M to open the Bookmark menu.

2. Scroll to Remove Bookmark using the Previous and Next thumb keys.

3. Press Enter or a cursor-routing key.

4. Enter the Bookmark number you want to remove.

5. Press Enter.

Note: If you want to remove all bookmarks type 99999 when prompted to enter a Bookmark number.

Library and Reading Commands Table

The Library and reading commands are listed in Table 5.

Table 5: Library/Reading Commands

Action	Shortcut or Key Combination
Book list	Ctrl + Shift + B
Manage books	Ctrl + Fn + M
Go to Option menu	Ctrl + G
Bookmark menu	Alt + M
Jump to bookmark	Ctrl + J
Insert Quick Bookmark	Ctrl + B
Show Highlight Bookmarks	Alt + H
Toggle Navigation level	Ctrl + T
Previous element	Previous thumb key
Next element	Next thumb key
Change to previous Navigation level	Ctrl + Fn + Down Arrow
Change to next Navigation level	Ctrl + Fn + Up Arrow
Start Auto-scroll	Alt + G
Increase Auto-scroll speed	Ctrl + =
Decrease Auto-scroll speed	Ctrl + -
Read all (text-to-speech feature)	Ctrl + Shift + G
Stop reading (text-to-speech feature)	Ctrl
Where am I	Ctrl + W
Info	Ctrl + I
Go to beginning of book	Ctrl + Fn + Left Arrow
Go to end of book	Ctrl + Fn + Right Arrow
Open recent books	Ctrl + R
Search for books or text	Ctrl + F
Find next	F3
Find previous	Shift + F3
Next non-blank line	Ctrl + Alt + Down Arrow

Action	Shortcut or Key Combination
Previous non-blank line	Ctrl + Alt + Up Arrow
Previous character	Left arrow
Next character	Right arrow
Previous word	Ctrl + Left Arrow
Next word	Ctrl + Right Arrow
Previous paragraph	Ctrl + Up Arrow
Next paragraph	Ctrl + Down Arrow
Start/Stop selection	F8
Select all (current paragraph)	Ctrl + A
Copy (current paragraph)	Ctrl + C
Delete book	Delete
Search on Wikipedia	Ctrl + Shift + W
Search on Wiktionary	Ctrl + D
Search in WordNet	Ctrl + Shift + D

Library app and reading commands for audiobooks are listed in Table 6.

Table 6: Library Commands for audiobooks

Action	Shortcut or Key Combination
Book list	Ctrl + Shift + B
Manage books	Ctrl + Fn + M
Go to Option menu	Ctrl + G
Bookmark menu	Alt + M
Jump to bookmark	Ctrl + J
Insert Quick Bookmark	Ctrl + B
Show Highlight Bookmarks	Alt + H
Open Navigation Level	Ctrl + T
Previous element	While playing, Previous thumb key and while not playing, Alt + Left arrow
Next element	While playing, Next thumb key and while not playing, Alt + Right arrow
Change to previous Navigation level	Ctrl + Fn + Up arrow
Change to next Navigation level	Ctrl + Fn + Down arrow
Where Am I	Ctrl + W

Action	Shortcut or Key Combination
Info	Ctrl + I
Go to beginning of book	Ctrl + Fn + Left arrow
Go to end of book	Ctrl + Fn + Right arrow
Open recent books	Ctrl + R
Delete book	Delete key
Play audiobook	Ctrl + Shift + G
Stop the reading	Ctrl
Fast forward 5 seconds	Right thumb key (single press)
Rewind 5 seconds	Left thumb key (single press)
Fast forward (Longer time jumps)	Right thumb key (press and hold)
Rewind (Longer time jumps)	Left thumb key (press and hold)
Increase reading speed	Ctrl + Fn + =
Decrease reading speed	Ctrl + Fn + -

Using Terminal Mode

One of the main features of the Mantis is Terminal mode. When connected to a host device running a screen reader, such as a computer or a smart device, Terminal mode displays all text selected on the host device.

You can connect to your host device either through Bluetooth® wireless technology, or by connecting the Mantis to the host device with the USB-C cable included in your kit. Up to five Bluetooth devices and one USB can be connected at one time.

Note that if a device is connected to the Mantis Q40 via USB, you can have the device automatically start the connection. See "Ask to open USB connection" in the User Settings Options Table for available settings options.

Connecting and Exiting Terminal Mode

To connect in Terminal mode, make sure you have a Windows®, iOS®, TVOS®, Android, or Mac® device with a screen reader running.

To activate Terminal mode:

1. Press the Windows key, the Home button, or Ctrl + Fn + H to enter the Main menu.

2. Go to Terminal mode by pressing "t"or by using the Previous and Next thumb keys.

3. Press Enter or a cursor-routing key.

To exit Terminal mode and access the list of connected devices, press the Home button once.

Determining Mantis Q40 Compatibility

The Mantis is compatible with the following:

Screen readers: JAWS® 18+ (version 18 and newer), NVDA, SuperNova, ChromeVox (USB only), Android and VoiceOver

Operating systems: Windows 8+, Android (15+ for Bluetooth support, USB only for previous versions), macOS® 10.15+ (Catalina), iOS device 13.4+, WatchOS 10+ and TVOS (Apple TV) version 18+

Waking Your iOS Device Using the Mantis

With your iOS device locked and your Mantis connected to it in Terminal mode, pressing any cursor-routing keys on the Mantis wakes it up and prompt you to enter your passcode. This allows you to keep your iOS device in a pocket or bag while you use the Mantis as its controller and output.

Using Mantis as an External Keyboard

When connected as a braille terminal, the Mantis also acts as an external keyboard for your host device. This works even if there is no screen reader running on your host device.

When connected to a Mac, the bottom-left keys become Ctrl, Function, Option, and Command, as they are when using a standard Mac keyboard.

Connecting by USB

To connect via USB:

1. Connect the Mantis to a Windows or Mac computer with the USB-C cable. Please note that you will have to follow the next steps if the "Always connect" option is not enabled in the user settings.

2. Select Connected devices (first item in the Terminal menu).

3. Press Enter.

4. Select USB connection.

5. Press Enter.

6. Wait for the connection to be established.

If the connection is successful, the content of your host device will be shown on the braille display.

The Mantis is now also available as an external keyboard for typing on the host device.

Connecting by Bluetooth

To pair a new device in Bluetooth:

1. From the host device, activate Bluetooth.

2. On the Mantis, go to the Main menu.

3. Select Terminal mode and press Enter or a cursor-routing key.

4. In the Terminal menu, select Add Bluetooth Device and Press Enter.

   If Bluetooth is off, it is automatically activated. Note that once the Bluetooth mode is activated, your display will be in a 5-minute discoverable mode.

   Note that at any time, you can press and hold the Enter key for 5 seconds to set the device in a 5-minute discoverable mode.

5. The braille display will prompt instructions on how to connect to the host device. From the host device, initiate Bluetooth-pairing with the Mantis.

6. On the braille display, a message will prompt: "xx is connected", where xx is the name of the host device. The focus will be directed to the list of connected devices.

7. Use Previous and Next thumb keys to move through the list of connected devices until you reach the host device you are trying to connect with. Press Enter or a cursor-routing key to activate it.

If the connection is successful, the content of your host device will be shown on the braille display.

Note: If using Windows 11 with Bluetooth connectivity, you may need to access your PC's Bluetooth settings and select "Advanced" under "Bluetooth devices discovery." Failure to do so may result in braille displays not appearing in the list of pairable devices.

Note: to pair an audio Bluetooth device, you will have to use the "Pair audio device" option in the Bluetooth settings (see [section "Connecting Mantis Q40 to a Bluetooth device"](#) for more information).

Terminal Clipboard

When a selection of text is copied or cut, it is stored in a global clipboard and can be pasted on other locations on the device. This feature can be useful if, for example, you wish to copy a passage from a book in the Library and paste it into a document in the Editor.

The global clipboard can also be used when using external devices paired with the Mantis via USB or Bluetooth. Currently, JAWS and iOS are supporting the terminal clipboard. All other screen readers might have difficulty in handling the clipboard. When using the Terminal clipboard, please note there is a 360 character limitation.

To copy an item to a connected device:

1. Press Ctrl + C to copy the element of your choice.
2. On the connected device, access the location where you wish to paste the item.

3. Enter the bypass command Fn + F3. The message "Enter local command" will be displayed. The bypass command allows you to use some internal functions on the Mantis while being connected to an external device, such as the Battery Status, and showing the Date and Time.
4. Press Ctrl + V to paste the item on the connected device.

Navigating Between Connected Devices

When you have more than one device connected with the Mantis, you can switch devices at any time.

To switch to another connected device, press the Home button + Next thumb key or Home button + Previous Thumb key to navigate through the list of devices.

Alternatively, you navigate to another connected device by doing the following:

1. Press the Home button to return to the list of connected devices.

2. Select the connected device using the Previous and Next thumb keys.

3. Press Enter or a cursor-routing key.

Note: When a Bluetooth device is connected, an 8-dot symbol is displayed after the device name. If the 8-dot symbol is not visible, click on the device to establish the connection.

If you have problems with a Bluetooth connection, you can click on Reconnect Devices. This turns Bluetooth off and back on and reconnects your devices. Use this option if you are not getting any braille when connected to a device.

USB connections in Terminal Mode

When using the Mantis Q40 in terminal mode, it is possible to either be automatically prompted to connect with a USB connection or automatically start the connection upon inserting a USB cable from a host device upon activating the Mantis when a device is connected.
To activate the Ask to open USB connection feature in terminal mode:
1. Go to the Main menu.
2. Select Settings and press Enter.
3. Select User Settings and press Enter.
4. Use the Previous and Next thumb keys until you reach the item Ask to open USB connection, then press Enter.
5. Here, 3 options are available: "Never ask", "Ask for connection" and "Always connect". Use the Previous and Next thumb keys until you reach the item you require, then Press Enter.

Terminal only mode

Consider enabling 'Terminal only mode' on your braille display if you find that the suite of applications are underutilized or too complex. This mode removes internal applications,

transforming the display into a terminal only. It streamlines connections to screen readers on your computer via USB or on your mobile device via Bluetooth. To activate or deactivate the Terminal Only mode, you will have to access the diagnostic menu (see section "Accessing the diagnostic menu").

In Terminal only mode, when booting the device, you are prompted 'braille display'. If your device is plugged into a computer, it will work with your screen reader instantly.

Please note: this mode comes with the following limitations.

- Text-to-speech is not available. You will only have access to braille.
- All menus will be displayed in grade 1 and will not be configurable.
- Sleep mode is not present in Terminal only mode. It remains possible to manually put the device in Sleep mode by doing a short press on the Power button.
- Only one Bluetooth device can be connected and paired in this mode. When activating the Terminal only mode, if more than one Bluetooth device had been previously configured on your device, All the devices except one will be forgotten and you will have to pair them again if you want to use them in the future.
- If a device is connected on Bluetooth and another on USB at the same time, the device connected on USB connection will always have priority.
- Accessing and exiting the settings menu is different when Terminal Only mode is enabled. A limited set of settings will be available, (see section Using the settings in Terminal Only mode).
- The Bypass local command is not working in this mode. For example, you will not be able to copy/paste some text from the terminal clipboard as described in section "Terminal clipboard".

Using the Settings in Terminal Only mode

To use the Settings in Terminal only mode, press and hold the Home button until you feel a short vibration. To exit the Settings, press and hold again the Home button.

Here are the settings available in Terminal only mode:

- User settings: airplane mode, message display time, auto power off, vibration, beep, wireless notifications, Key repeat, Sticky keys.
- Wi-Fi
- Bluetooth
- Change language
- Activate exam mode
- Software update
- About

Using the File Manager

The File Manager allows you to browse, delete, copy, and perform all the file operations you would expect from a PC file manager.

To open the File Manager, press the Next thumb key until you reach File Manager.

Alternatively, you can open the File Manager by pressing F in the Main menu, then pressing Enter or a cursor-routing key.

Browsing Files

You can browse through your files and folders using the Previous and Next thumb keys. Folder names have an 8-dot symbol in front of the folder name. Press Enter on a folder to open it.

Press Esc to return to the parent folder. Alternatively, you can scroll to the Back in the menu and press Enter or a cursor-routing key.

Selecting a Drive in the File Manager

Before using the File Manager, you first need to choose which drive you wish to access: the internal memory, an SD card, or a USB flash drive.

To select a drive, press Ctrl + D to display a list of available drives. Scroll through the list using the Previous or Next thumb keys, then press Enter or a cursor-routing key to confirm your choice.

You are now at the root of your selected drive.

Press Ctrl + D at any time to return to the Drive Selection screen.

Accessing File, Folder, or Drive Information

To get additional information on a file or folder, select it using the Previous or Next thumb keys, then press Ctrl + I.

You can now scroll through a list of information on the file or folder using the Previous and Next thumb keys. Use the Left and Right thumb keys to pan the text left and right.

The Ctrl + I shortcut can also be used to expose the amount of internal memory of a drive.

Displaying the Current File Path

The Where Am I function allows you to display the path of your current location on the braille display of the Mantis.

To display your current file path, press Ctrl + W.

Searching for Files and Folders

You can promptly access a certain file or folder by performing a search in the File Manager.

To start searching for a file or folder in the File Manager:

1. Press Ctrl + F.

2. Type in the file or folder name.

3. Press Enter. Your Mantis will generate a list of files and folders related to your results on the braille display.

4. Press Esc to close the search result.

Sorting Files or Folders

By default, file and folder names are sorted alphabetically. However, you can sort the files and folders using different parameters.

To change the sorting parameters of your files and folders:

1. Press Ctrl + Shift + V.

   Mantis displays a list of sorting options available: Name, Date, Size, and Type.

2. Scroll through the list using the Previous or Next thumb key.

3. Press Enter or a cursor-routing key to activate the sorting option of your choice.

Selecting the same sorting parameter already selected, changes the information from ascending to descending; it changes back again when selected once more.

Modifying Files and Folders

The File Manager on the Mantis lets you work with files similarly to a computer or tablet.

Creating a New Folder

The File Manager lets you create new folders.

The simplest way to do this is by pressing Ctrl + N and entering the name of the new folder in the blank field. Then, press Enter to create it.

Renaming Files or Folders

To rename a file or folder:

1. Select the file or folder you wish to rename using the Previous and Next thumb keys.

2. Press F2.

3. Enter the new file or folder name.

4. Press Enter to rename the file or folder.

Note: The file name must be unique in your current directory, and only one file or folder can be renamed at a time.

Selecting Files or Folders for Applying Additional Actions

Before you can perform an action on a file or folder, such as cut, copy, or paste, you must first select (or mark) the desired file or folder.

To mark a file or folder, select the file using the Previous or Next thumb keys, then press Ctrl + Enter.

To unmark a file or folder, select it and press Ctrl + Enter again.

To mark all files and folders in the current directory, press Ctrl + A.

Copying, Cutting, and Pasting Files or Folders

Copying and Cutting Files and Folders

To copy a single file or folder, select the file using the Previous or Next thumb keys, then press Ctrl + C.

To cut a single file or folder, select the file using the Previous or Next thumb keys, then press Ctrl + X.

To copy or cut multiple files or folders:

1. Select the file or folder to copy using the Previous or Next thumb keys.

2. Press Ctrl + Enter to mark the file or folder.

3. Repeat this step to mark all files or folders to be copied.

4. Press Ctrl + C to copy or Ctrl + X to cut.

    The files or folders are now copied/cut to the clipboard and ready to be pasted.

Pasting Files and Folders

To paste the copied or cut files or folders, navigate to the desired location, then press Ctrl + V.

Deleting Files or Folders

To delete a single file or folder, select the file using the Previous or Next thumb keys, then press Delete.

To delete multiple files or folders:

1. Select the file or folder you wish to delete using the Previous or Next thumb keys.

2. Once selected, press Ctrl + Enter to mark the file or folder.

3. Repeat this step to mark all files or folders you wish to delete.

4. When ready to delete the marked files or folders, press Delete.

Note: The Mantis asks if you are sure you want to delete the files and/or folders **only** when Confirm Deletion has been set to on in the Settings menu. Select Yes using the Previous or Next

keys, and press Enter or a cursor-routing key to confirm the deletion. For more information on the Confirm Deletion setting, go to the [Setting User Preferences section](#).

File Manager Commands Table

The File Manager commands are listed in Table 7.

Table 7: File Manager Commands

Action	Shortcut or Key Combination
Create new folder	Ctrl + N
File/drive info	Ctrl + I
Mark/unmark	Ctrl + Enter
Mark all/unmark all	Ctrl + A
Rename file	F2
Delete file	Delete
Copy file	Ctrl + C
Cut file	Ctrl + X
Paste file	Ctrl + V
Search file	Ctrl + F
Sort files	Ctrl + Shift + V
Where Am I	Ctrl + W
Select drive	Ctrl + D
Go to parent folder	Esc
Eject media	Ctrl + Fn + E

Using the Calculator Application

The Mantis features a calculator app that enables you to perform the most common operations.

Note: The braille output for the Calculator currently supports computer braille only.

To open the Calculator:

1. Go to the Main menu.

2. Press C or press the Previous or Next thumb keys until you reach the Calculator menu item.

3. Press Enter or a cursor-routing key.

Operating the Calculator

To use the Calculator, write your complete equation, then press Enter to get the result.

For example, type the equation 20-(6+8) (with no spaces). Press Enter and the Mantis will display 6 as the answer.

To clear the previous equation, press Delete.

To add operators, such as + or -, open the Context menu using Ctrl + M. Refer to Table 8 for a full list of Calculator commands and operators.

Calculator Commands Table

The Calculator commands are listed in Table 8.

Table 8: Calculator Commands

Action	Key or Key Combination
Plus	+
Minus	-
Multiply	*
Divide	/
Equals	= or Enter
Clear	Delete
Decimal point	.
Percent	%
Square root	Ctrl + Shift + S
Pi	Ctrl + Y

Using the Date and Time Application

The Mantis features an application that gives you the current date and time.

To open Date and Time:

1. Go to the Main menu.

2. Press the Previous or Next thumb keys until you reach the Date and Time menu item.

3. Press Enter or a cursor-routing key.

Displaying the Time and Date

When you open the Date and Time application, Mantis displays the current time.

Pan right once using the Right thumb key to display the date.

Pan left using the Left thumb key to return to the time.

To quickly review the date and time, press Ctrl + Fn + T for the time and Ctrl + Fn + D for date from anywhere on the Mantis.

Setting the Time and Date

To change the time and date, press Ctrl + M from the Date and Time application.

A submenu opens with the following options:

Change time: Type the current hour inside the square brackets, press Enter; repeat for the minutes.

Change date: Type the current year inside the square brackets and press Enter; repeat for the month and day.

Daylight Saving Time: Press Enter to turn Daylight Saving Time on or off.

Time format: Press Enter to change between 24h and 12h time format.

Date format: Select the preferred date format (listed below) and press Enter.

- Language Default
- Day, Month, Year
- Month, Day
- Month, Day, Year
- Year, Month, Day
- Day, Month

Modules available in multiple applications

Some modules are available in multiple applications. For now, it is possible to search on Wikipedia, on Wiktionary and in WordNet in the Editor, Braille Editor and Library app.

Search on Wikipedia

If you would like to obtain more information about a specific word in your document or book (e.g. its definition, other occurrences, biography of a famous personality, etc.), you can search on Wikipedia. This module can be used in text and audio documents and books. To do so, when in your document and with the cursor positioned on the word that you want to look at, you can use the shortcut Ctrl + Shift + W or you can find this option in the Context menu, under the Edit submenu. For Library app, this option can be found directly in the Library's menu, in the Context menu. The word under the cursor is selected and typed by default in the "Wikipedia" field. You can directly press Enter to search for this specific word on Wikipedia, or you can erase this word

and enter another word to search. Please note that in audio and braille books, you will have to enter the word to search in the field. Press Enter to complete the search.

The results associated with this specific search will be displayed. You will see the number, followed by the name of the article, then a short summary of the article will be available. You can use the left and right thumb keys to go through all the information displayed for an article, and you can use the previous and next thumb keys or the Up and Down arrow to navigate from one result to another. When your cursor is positioned on the desired result, press Enter to open this article.

You can now read the article that is displayed in text. You can navigate through the text by using the left and right thumb keys, or the Up and Down arrows. The previous and next thumb keys can be used to navigate through the headings in the article. It is also possible to use the shortcut Ctrl + Shift + G and the voice will read all the article. You can also find a specific word in the article by using the shortcut Ctrl + F. In the box that will be displayed when using this shortcut, enter your desired word to search for, then press Enter. The nearest occurrence of this word from the position of the cursor will be displayed. The shortcuts F3 or Ctrl + 3 to navigate to the next occurrence of your search and Shift + F3 or Ctrl + Shift + 3 to go to the previous occurrence can also be used. When you have finished reading the article, press Escape or the Close button.

Note: the article can only be read: it cannot be copy-pasted or saved. While reading an article, you will not have access to the context menu. Please note that articles listed in the search results will be displayed using the selected braille table of your current language profile. For example, if you are using a language profile set to French with a French Braille table configured, articles listed in the results will be in French. Finally, to use the "Search on Wikipedia" option, you have to be connected to the Internet. If it is not the case, an error message will be displayed when you try to perform the search.

Search on Wiktionary

As for the option "Search on Wikipedia", the option "Search on Wiktionary" can be used to search for a definition of a specific word. To do so, when your cursor is positioned on the desired word, press the shortcut Ctrl + D or you can find this option in the Context menu, under the "Edit" submenu. For the Library app, this option can be found directly in the Library's menu, in the Context menu. The word under the cursor will be selected and typed by default when in the "Wiktionary" field. You can change the word entered by erasing it then entering a new one, or you can keep this specific word. Please note that when in an audio and braille book, you will have to enter the word to search for. Press Enter to perform the search. Results for this search will be displayed. You can navigate through the information for each article with the left and right thumb keys, and through the results with the Previous and Next thumb keys or the Up and Down arrows. When on the desired article, press Enter to open it.

You can now read the article that is displayed in text. You can navigate through the text by using the left and right thumb keys or the Up and Down arrows. The previous and next thumb keys can be used to navigate through the headings on the article. It is also possible to use the shortcut Ctrl + Shift + G and the voice will read all the article. You can also find a specific word in the article by using the shortcut Ctrl + F. In the box that will be displayed when using this shortcut, enter your desired word to search for, then press Enter. The nearest occurrence of this word from the position of the cursor will be displayed. The shortcuts F3 or Ctrl + 3 to navigate to the next occurrence of your search and Shift + F3 or Ctrl + Shift + 3 to go to the previous occurrence can also be used. When you have finished reading the article, press Escape or the Close button.

Note: the article can only be read: it cannot be copy-pasted or saved. While reading an article, you will not have access to the context menu. Please note that articles listed in the search results will be displayed using the selected braille table of your current language profile. For example, if you are using a language profile set to French with a French Braille table configured, articles listed in the results will be in French. Finally, to use the "Search on Wiktionary" option, you have to be connected to the Internet. If it is not the case, an error message will be displayed when you try to perform the search.

Search in WordNet

WordNet is a lexical database owned by Princeton University. You can search in this lexical for specific words. To access this resource, press the shortcut Ctrl + Shift + D or access it via the Context menu, under the Edit submenu. For Library app, this option can be found directly in the Library's menu, in the Context menu.

In the "WordNet" field, you will be able to enter the searched word, then press Enter to begin the search. The definition of this word is displayed. You can navigate through the text with the left or right thumb keys or with the Up and Down arrows and through the different paragraphs using the Previous and Next thumb keys. It is also possible to use the shortcut Ctrl + Shift + G and the voice will read all the article. You can also find a specific word in the article by using the shortcut Ctrl + F. In the box that will be displayed when using this shortcut, enter your desired word to search for, then press Enter. The nearest occurrence of this word from the position of the cursor will be displayed. The shortcuts F3 or Ctrl + 3 to navigate to the next occurrence of your search and Shift + F3 or Ctrl + Shift + 3 to go to the previous occurrence can also be used. When you have finished reading the article, press Escape or the Close button.

Note: the article can only be read: it cannot be copy-pasted or saved. While reading an article, you will not have access to the context menu. Finally, please note that WordNet is only available in English. WordNet determines your language by checking the Braille table configured in the language profile you are using. To use WordNet, your Braille table configured has to be in English.

Shortcuts available in modules that can be used in multiple apps

Shortcuts for modules that work in multiple aps are displayed in table 9.

Table 9: Shortcuts for modules that work in multiple apps

Action	Shortcut or key combination
Search on Wikipedia	Ctrl + Shift + W
Search on Wiktionary	Ctrl + D
Search in WordNet	Ctrl + Shift + D

Setting User Preferences

To open the Settings menu, press the Next thumb key until you reach Settings or press "S" in the Main menu, then press Enter or a cursor-routing key.

User Setting Options Table

The Setting options are listed in Table 10.

Table 10: Settings Operations

Setting	Option/Result
Airplane mode	On or off; when on, all wireless functionalities are disabled
Format markers	On or off; when off, format markers are hidden
Cursor visible	On or off
Cursor blink	On or Off; when On, the cursor will blink at a rate of 0.5 seconds.
Message display time	1–30 seconds: time of message displayed
Sleep time	Number in minutes; 0 to turn off
Auto power off	The device shuts down automatically after a determined period of time, from 1 to 4 hours; never to turn off
Word wrap	On or off
Condense blank lines	On or off; when on, blank lines are not visible
Confirm deletion	On or off; when on, Mantis asks for confirmation of file deletion
Vibration	On or off; when on, Mantis vibrates
Beep	On or off; when on, Mantis beeps

Setting	Option/Result
Thumb keys configuration	Map the previous item, next item, pan left, and pan right commands to the thumb key of your choice.
Wireless notifications	Enable or disable wireless and Bluetooth connection feedback
Start in terminal	On or Off; when On, the device will automatically start in the Terminal menu upon restarting
Ask to open USB connection	When connecting the device to a PC with a USB cable, there are three possible outcomes: 1. If "never ask" is selected, nothing happens 2. If "ask for connection" is selected, the user will be asked if they want to open the connection 3. If "always connect" is selected, the device will automatically connect to the PC
Key Repeat	On or off; when On, the delete, backspace, space and arrow keys will be held down, which causes a behaviour similar to repeatedly pressing the held key at a short interval
Sticky Keys	When On, keys can be pressed and released one-by-one, the key combination is only confirmed once the Space key is pressed

Adding, Configuring, and Deleting Language Profiles

The Language Profile menu lists all the available language profiles on your Mantis. The active language profile is underlined with dots 7 and 8 on the device. Creating multiple language profiles can allow you to easily switch quickly between braille tables and voices.

Scroll through the available language profiles using the Next and Previous thumb keys, then press Enter or a cursor-routing key to select it.

Adding a Language Profile

To add a language profile, select Add language Profile, then press Enter or a cursor-routing key.

You will be prompted to enter the following options:

Profile name: Type the name for the profile in the brackets, then press Enter.

Braille grade: Choose between Uncontracted, Contracted, and Computer Braille, then press Enter. Note that the Mantis allows you to hide contracted braille and/or computer braille when toggling between the braille grades.

Computer braille table: Select your computer braille table, then press Enter. Select None to not have to cycle through computer braille when using the braille grade toggle.

Uncontracted braille table: Select your uncontracted braille table, then press Enter.

Contracted braille table: Select your contracted braille table, then press Enter. Select None to not have to cycle through contracted braille when using the braille grade toggle.

Content Voice: Select the content voice of your choice, then press Enter. Select None to turn the Content voice off. Voices available depend on your selection for the menu voice and additional voice, which can be changed from the download language and voices section within the Speech settings.

Save configuration: Press Enter to save your configuration.

The new language profile is now available in the language Profile Settings menu.

Configuring or Deleting a Language Profile

To configure or delete a language profile:

1. In the Settings menu, select the item language Profile.
2. Scroll through the available language profiles using the Next and Previous thumb keys.
3. Press Ctrl + M to open the Context menu.
4. Select Configure language Profile or Delete language Profile and press Enter.
5. Alternatively, Configure profile and Delete profile can be selected in the language profile menu.

Text-to-speech

The Mantis Q40 allows for the text that appears on the braille display to be heard via a text-to-speech (TTS) feature, which will adapt to the system language chosen.

Note that by default, the device only supports TTS for English and Spanish languages. If you have English or Spanish selected as your system language, then TTS will be activated. If an alternative language is chosen, then you will be prompted to download that language upon having an active network connection. Please also note that you have to be connected to an audio device to use TTS.

The first time the Mantis Q40 will be connected to a Wi-Fi network after the update or a factory reset, and no matter if a voice is active by default or not, a dialog will prompt inviting you to download language and voices.

To activate/deactivate the text-to-speech feature:

- In the Settings menu, select the item Speech Settings and press Enter.
- Use the Previous and Next thumb keys until you reach Speech settings.
- Press Enter to toggle the Speech settings On or Off.

Alternatively, you can use the Ctrl + Fn + S shortcut to toggle the Speech feature On or Off.

While editing text in the Editor or reading a document in Library, you can press Ctrl + Shift + G, which will start reading the text from the current position. Use the Ctrl shortcut to stop reading.

Note: When using the Braille Editor application, TTS will not be available.

Voice Selection

While navigating the device, you can select a menu voice that will be used to read menus, system messages and content. If you wish to use an alternative voice for your content reading, you can do so by selecting the change additional voice item. Your content voice can then later be changed within the language profiles.

Change *menu voice*

- In the Settings menu, select Speech Settings and press Enter.
- Use the Previous and Next thumb keys until you reach the download language and voices selection item and press Enter. A submenu will appear.
- Choose Change Menu Voice (current voice will be specified) and press Enter.
- Select the variant of your system language (for example, English North America) that you want if more than one is available.
- A list of available voices will appear. Choose a voice from the list and press Enter.

Any changes to the voices will require a restart of the device.

Change an additional *voice*

- In the Settings menu, select the item Speech Settings and press Enter.
- Use the Previous and Next thumb keys until you reach the download language and voices selection item and press Enter. A submenu will appear.
- Choose Change Additional Voice (current voice will be specified) and press enter.
- Select the desired language, then the language variant (for example, French Canada) that you want, if more than one is available.
- A list of available voices will appear. Choose a voice from the list and press enter.

Any changes to the voices will require a restart of the device.

For information about selecting a Content voice, which will read content in Editor and Library, please see the [section "Adding, Configuring, and Deleting Language Profiles"](#).

Swap voices

This option allows you to swap between the two voices installed on your device. To do so:

- In the Settings menu, select the item Speech Settings and press Enter.
- Use the Previous and Next thumb keys until you reach the "download language and voices" selection item and press Enter. A submenu will appear.
- Choose the option "Swap voices", then press Enter.

Any changes to the voices will require a restart of the device.

Speech Settings Table

Table 11: Speech Settings Options

Setting	Option/Result
Speech	On or off; when off, all speech features are disabled.
Speak menu	On or off; when off, all speech features are disabled while navigating in the menus, but stay enabled in the applications.
Speak word under cursor	On or off; when on, the user can press on a cursor routing key and the word below the key will be read.
Speak display content after panning	On or off; when on, the speech feature will read the remainder of a line when the user pans it on the braille display.
Echo delete	On or off; when on, the device will speak the characters deleted with the Backspace key.
Keyboard echo	Words, Characters, Characters and Words or Off; the item chosen determines what will be spoken when typing on the keyboard.
Download language and voices	Change menu voice, change additional voice, swap voices

Using a Wi-Fi Network or Bluetooth

Mantis Q40 features 2.4 GHz Wi-Fi capabilities.

Connecting to a Wi-Fi Network

Select New Connection from the Wi-Fi menu, then press Enter or a cursor-routing key to access it. You can also use the global shortcut to access the Wi-Fi search (note that if airplane mode is enabled, it will disallow access).

There are three connection choices:

- **Scan for SSID:** Select this option to discover the available networks in your vicinity. When Mantis is done scanning, it will display a list of all the networks it found.

- Press Enter or a cursor-routing key to select this network. Then enter the password and press Enter to complete the connection.

- **WPS Connection:** Select this option to establish a Wi-Fi connection using WPS. The Mantis displays "Loading…" for approximately 30 seconds. Press the WPS button on your network Router to turn on discovery of new devices. After a few seconds, you will be automatically connected to the network.

- **Manually Connect:** To enter the SSID of your network and the password manually, select this option. When done, press Enter to connect.

Wi-Fi Settings Table

The available Wi-Fi Settings are listed in Table 12.

Table 12: Wi-Fi Settings

Setting	Option/Result
Wi-Fi	Press Enter to turn Wi-Fi on or off
Status	Provides information about your current Wi-Fi status
New connection	Press Enter to create a new Wi-Fi connection
Launch connection	Connect to a Wi-Fi network known by your device
Delete connection	Make your device forget a known Wi-Fi network
Network settings	Change advanced network settings, such as Mode, IP, Subnet Mask, Gateway, and DNS
Import Wi-Fi	Import Wi-Fi network information from a file
Search for WIFI	Fn + F10

Choosing Bluetooth Mode Options

The following Bluetooth mode options are available on the Mantis Q40:

Bluetooth mode: On or off

Pair audio device: this option allows you to pair an audio Bluetooth device.

Connect device: Connect the Mantis to a paired Bluetooth device

Disconnect device: Disconnect the active Bluetooth connection

Delete paired device: Makes your device forget a Bluetooth device

Sticky Keys

The Mantis Q40 features Sticky Keys that allow entering shortcuts with only one hand. Each key can be pressed and released one by one.

For example, to perform the Go to top command (standard command is Arrow): press Ctrl, then Up arrow.

To lock any modifier keys, press them twice. To unlock, press the same modifier key again.

Note: the operation of the thumb keys and cursor routing keys remains the same as with the standard two-handed mode.

To activate/deactivate Sticky Keys:

Pressing the Shift key in sequence five times will activate or deactivate sticky keys. You will be prompted with a confirmation.

Alternatively, you can follow these steps:

1. Go to the Main menu.
2. Select Settings and press Enter.
3. Select User Settings and press Enter.
4. Use the Previous and Next thumb keys until you reach the Sticky Keys item.
5. Press Enter to activate Sticky Keys or press Enter again to deactivate.

Customize Main Menu

The Customization function allows you to take items off the Main menu of the Mantis. This feature is useful for beginners who wish to simplify the usage of their device.

To customize the main menu applications:

- Go to the Main menu.
- Select Settings.
- Press Enter.
- Go to Main menu applications.
- Press Enter.

- A list of the Main menu applications will appear. Go to the application you wish to take off the menu, and press on Enter to toggle it to Off. Pressing Enter again will toggle it back to On.

- Press on Save to apply the changes.

Change Language

To change the system language and keyboard layout of the Mantis Q40:

- Go to the Main menu.

- Select Settings.

- Select Change Language. Select the language of your choice from the list.

- Select the Keyboard Layout option; a list will appear on the display. Select the keyboard layout of your choice from the list. Select the secondary Keyboard Layout option; a list will appear on the display. Select the secondary keyboard layout of your choice from the list. Once you have selected a second keyboard layout, you can toggle from one layout to another by entering the Ctrl + Space shortcut.

- Select Close.

- You will be prompted to select the option Replace Language Default Profile. If you click on OK, a new Language profile will be created with a braille table allowing you to read braille menus in the selected language. Press Cancel if you wish to stay with your current Language profile.

- When prompted, reboot the Mantis to apply the changes.

Accessing and Using Online Services

The Online Services menu contains online libraries included on your Mantis. The online services are subscription-based and require you to enter your account credentials.

Note: Make sure you have an established internet connection with the Mantis before using online services.

Books from online libraries are downloaded to the Mantis's Online-Books folder. All books are included in the Library app's Book List.

Activating Bookshare and Downloading Books

The Bookshare® online library contains copyrighted content for people with qualifying print disabilities. More information about Bookshare is available from http://www.bookshare.org.

You are able to search for books and download them to the Mantis wirelessly. Newspapers and magazines are currently not available in the online library.

To activate the Bookshare service and download a book:

1. Enter your Bookshare account email address and password.
2. Search books by title, author, full text search, and category. You can also search for the most recent or popular books.
3. Press Enter or a cursor-routing key on a book to get more information.
4. Use the Previous and Next thumb keys to navigate between the title, author, and book description.
5. Select the book of your choice and press Enter to download it to the Mantis.

Configuring, Managing, and Syncing a NFB Newsline Account

If you have an NFB Newsline® account, the Mantis allows you to connect to your account and download NFB material for reading in the Library.

Configure account: Enter your NFB Newsline credentials, select the issue update frequency, and determine whether your Mantis should keep or delete outdated issues.

Manage publications: Select which material you wish to subscribe to. Subscribed material is underlined.

Sync content now: Syncing downloads the latest issues of your subscribed material.

NLS Bard

The Mantis can access BARD directly. You can view and download books from the most popular books list and the most recent books and magazines list. You can browse subject categories and search the collection. You can also download books and magazines from your wish list as well as add and remove items from it. Before you can access BARD, you must connect your device to a Wi-Fi network (see Connecting to a Wi-Fi Network for detailed instructions) and login to your BARD account.

Exam Mode

Exam Mode is used to block certain functions and applications from the Mantis for a certain amount of time. While Exam mode is active, you will have access to the Terminal functions only. Note that in Exam Mode, the Bluetooth connection is deactivated and Terminal mode is accessible only via USB. All other applications and the use of an external memory (USB drive or SD card) are blocked while this mode is active.

When activating Exam Mode, you will be prompted to enter a time between 1 and 360 minutes (6 hours) and will be asked to enter a desired password to turn off Exam mode. To unlock the device, you will need to either wait for the selected time to run out or enter the selected password.

Upon restarting the device, if the period selected is not completed yet, the device will automatically go back to Exam Mode.

To activate Exam Mode:

1. Go to the Main menu.

2. Select Settings.

3. Press Enter.

4. Go to Activate Exam Mode.

5. Press Enter.

6. Enter the desired time (between 1 and 360 minutes).

7. Enter the desired password to activate Exam Mode.

8. Press Enter.

Accessing the diagnostic menu

The Diagnostic menu is a special menu used to test internal components and also to realize some key operations especially when troubleshooting issues that you could have while using the device.

Here are the steps to access the Diagnostic menu:

- If your device is plugged into an energy source, please unplug it.
- If your device is running, press the Power button for two seconds. Your device will indicate "Shut down?". With the Previous and Next thumb keys, navigate until reaching the OK button then press on any cursor-routing key to activate it. Your device will shut down.
- Press simultaneously the Power and the Homekeys until your device indicates "Recovery mode", then release the buttons. After a few seconds, the device will shutdown again.
- Boot the device normally by pressing the Power button for 2 seconds. The device will start again, and you will be directed to the Diagnostic menu.

You might need to use the diagnostic menu for the following operations:

- Factory reset
- Clear user data
- Clear user configuration
- Activate or deactivate Terminal only
- Export logs when troubleshooting issues
- Exporting and importing data and configurations (see section "Exporting and importing data and configurations" to know more).

Press on any cursor-routing key on the desired option to select it. Then, navigate with the Previous and Next thumb keys to reach the Close button and press on any cursor-routing key to

select it. Your device will shutdown. Alternatively, you can close the diagnostic menu with the Escape key.

Please note: some of the options in this menu are irreversible: the factory reset, the clear user data and the clear user configuration. When done, it is impossible to recover the content deleted.

Exporting and importing user data and configurations

The Mantis contains an export and import utility both for your data and configurations such as Wi-Fi and library credentials. There are several reasons why you would import and export.

- Transferring your data to another device. Very useful if you have a care plan
- General backup.

These options can only be accessed using the diagnostic menu. There are two types of export/import options to be aware of:

- Export/import Configurations: This option refers to Wi-Fi and online book credentials. It will not, however export any Bluetooth configuration.
- Export/import user content: This option refers to user data. This includes newly created folders and files. It will also export any books downloaded from the current library providers. (This could be subject to change on new any future libraries added.

To export configuration or user content:

- Access the diagnostic menu.
- Now make sure to insert a USB thumb drive or an SD card; this is where you will export the data to.
- There are several items in the Diagnostic menu. Depending on what you wish to export, use your **Next thumb** key to move to the item called either "Export configuration or Export user content".
- Press **Enter** or any cursor-routing key on your selected item.
- You will now be prompted "Please wait" followed by "Export to USB done" or "Export to SD done" shortly after.
- When the operation is finished, please shutdown your device by navigating with the Previous and Next thumb keys until reaching the Close button then press Enter or any cursor-routing key on it, or you can close the diagnostic menu with the Escape key.

Note: The exported configuration cannot be opened on a computer.

To import configuration or user content:

- To import user content or configurations, you will once again need to boot the Mantis in diagnostic menu.
- Insert the USB thumb drive or the SD card, which contains the file to import.
- Using your Previous and **Next thumb** keys, move to the item called either "Import configuration or Import user content" then press **Enter**.

- You will be prompted "Please wait" followed shortly by "Import done".
- After the completion of the operation, please close the device by navigating with the Previous and Next thumb keys until reaching the Close button then press on Enter or any cursor-routing key. Alternatively, you can also close the device with the Escape key.

Important Note: All recently created content or editing of existing content made after the export file was generated will be deleted.

Updating the Mantis Q40

Updating the Mantis Q40 manually

When connected to the Internet with the Mantis, you can manually check if an update is available.

To check for an update manually:

1. Go to the Main menu.
2. Select Settings.
3. Press Enter.
4. Select Software Update.
5. Press Enter.
6. Select Check for Update.
7. Press Enter.

If prompted with a new update, select Download to download the update now or choose Remind Me Later to update it later. You can continue to use the Mantis while the update is downloading.

Note that the device must be plugged in and the battery must be more than 50% charged for the update to be performed.

After a few minutes, Mantis will ask you to install the downloaded update. Select OK to install it. The Mantis will reboot and a progress indicator line will be shown on the braille display.

At the end of the update process, all 8 dots of the 40 braille cells will raise one column at a time and then the device will shut down.

Updating the Mantis Q40 via USB or SD Card

You can update the Mantis by downloading the update file on a computer and transferring it to a USB flash drive or an SD card. To update the Mantis via USB or SD card:

1. Insert a USB flash drive or SD card into your computer.

2. Transfer the update file to the USB flash drive or SD card. Note that the update file must be placed at the root of the USB drive/SD card.

3. Insert the USB flash drive or SD card containing the update file into your Mantis. Make sure your Mantis is powered on.

4. When the Mantis detects an update file on the USB drive or SD card, the braille display will notify you that an update is available for installation.

5. Press the Next thumb key until you reach OK, then press Enter to activate the update. The device will shut down and restart to process the update.

The latest update is always available on the [Mantis Q40 Product Page](#).

Automatic Check for Update Feature

By default, an Automatic Check for Update feature is enabled. When connected to the internet, the Mantis regularly checks if a new update is available for download. If an update is available, the Mantis will prompt you to download it.

To disable/enable the Automatic Check for Update feature, follow these steps:

1. Go to the Main menu.
2. Select Settings.
3. Press Enter.
4. Go to Software Update.
5. Press Enter.
6. Select Automatic Check for Updates.
7. Press Enter to enable/disable the feature.

Note that when enabled, the Mantis will check every 23 hours if a new update is available.

Customer Support

USA Only

For customer support, please contact APH Customer Service at 800-223-1839 or cs@aph.org.

Europe and Other countries

For customer support, please contact the HumanWare office nearest you or view our web site at: www.humanware.com

Europe: (0044) 1933 415800 or send an email to eu.support@humanware.com

Australia / Asia: (02) 9686 2600 or send an email to au.sales@humanware.com

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All other trademarks are the property of their respective owners.

End User License Agreement

By using this Product (Mantis Q40), you agree to the following minimum terms:

1. <u>License Grant</u>. HumanWare grants to End User a non-exclusive, non-transferable right and licence to use the Software on this product.

2. <u>Ownership of Software</u>. End User acknowledges that HumanWare retain all right, title and interest in and to the original, and any copies, of software which is incorporated into this product. End User agrees not to: modify, port, translate, decompile, disassemble, reverse engineer, or make public in any way the software of this Product.

Warranty

Manufacturer Warranty

This device is a high-quality product, built and packaged with care. All units and components are guaranteed against any operational defects, as follows:

US and Canada: One (1) year

Continental Europe and UK: Two (2) years

Australia and New Zealand: One (1) year

Other countries: One (1) year

The warranty covers all parts (except battery) and labor. If any defect should occur, please contact your local distributor or the manufacturer's technical assistance line.

Note: Warranty terms may periodically change; please consult our website for the latest information.

Conditions and Limitations:

No replacement or repair covered by the warranty will be carried out unless the unit is accompanied by a copy of the original bill of purchase. Please retain your original. If the unit

must be returned, please use the original packaging. This warranty applies to all cases where the damage is not a result of improper use, mistreatment, negligence, or acts of God.

Extended Warranty

Extended warranties are available through APH and HumanWare. Please contact the organization from where you purchased the Mantis Q40 to discuss warranty options.

USA Only

APH: 1-800-223-1839 or send an email to cs@aph.org.

HumanWare: 1-800-722-3395 or send an email to us.info@humanware.com

Appendix A – Command Summary

Shortcut/Key Combination Table

Action	Shortcut or Key Combination
Activate Selected item	Enter or cursor-routing key
Esc or Back	Esc key
Previous item	Up Arrow or Previous thumb key
Next item	Down Arrow or Next thumb key
Jump to any item in a list	Type the first letter of the item or app
Pan left and right	Left or Right thumb key
Go to top	Ctrl + Fn + Left arrow
Go to bottom	Ctrl + Fn + Right arrow
Toggle Braille grade	Ctrl + Fn + G
Switch language profile	Ctrl + Fn + L
Battery level	Ctrl + Fn + P
Context menu	Ctrl + M
Main menu	Windows key, Home button, or Ctrl + Fn + H
System information	Ctrl + I
Toggle braille and standard keyboard	F12
Time	Ctrl + Fn + T
Date	Ctrl + Fn + D
Eject media	Ctrl + Fn + E
Create a quick note	Ctrl + Fn + N
Create a quick braille note	Ctrl + Fn + B

Action	Shortcut or Key Combination
Search for Wi-Fi	FN + F10
Sticky Keys enable / Disable	Shift key Five (5) times
Help	F1 or Alt + Shift + H
Increase the volume of the TTS	Alt + =
Decrease the volume of the TTS	Alt + -
Increase the speed of the TTS	Ctrl + Fn + =
Decrease the speed of the TTS	Ctrl + Fn + -
List all the paired audio devices	Ctrl + Fn + A

Editor Commands

Action	Shortcut or Key Combination
Activate edit mode	Enter or a cursor-routing key
Leave edit mode	Esc
Create file	Ctrl + Fn + N
Open file	Ctrl + O
Save	Ctrl + S
Save as	Ctrl + Shift + S
Find	Ctrl + F
Find next	F3
Find previous	Shift + F3
Replace	Ctrl + H
Start/Stop selection	F8
Select all	Ctrl + A
Copy	Ctrl + C
Cut	Ctrl + X
Paste	Ctrl + V
Delete previous word	Ctrl + Backspace
Delete current word	Ctrl + Delete
Delete previous character	Backspace
Move to next edit box while editing	Enter
Move to next edit box without editing	Next thumb key

Action	Shortcut or Key Combination
Move to previous edit box without editing	Previous thumb key
Move insertion point to start of text field document	Ctrl + Fn + Left Arrow
Move insertion point to end of text field document	Ctrl + Fn + Right Arrow
Start Auto-scroll	Alt + G
Increase Auto-scroll speed	Ctrl + =
Decrease Auto-scroll speed	Ctrl + -
Search on Wikipedia	Ctrl + Shift + W
Search on Wiktionary	Ctrl + D
Search in WordNet	Ctrl + Shift + D
Toggle Reading mode	Ctrl + R
Bookmark menu	Alt + M
Jump to bookmark	Ctrl + J
Insert Bookmark	Ctrl + B

Braille Editor Commands

Action	Shortcut or Key Combination
Activate Edit mode	Enter or a cursor-routing key
Leave Edit mode	Esc
Create file	Ctrl + Fn + B
Open file	Ctrl + O
Save	Ctrl + S
Save as	Ctrl + Shift + S
Find	Ctrl + F
Find next	F3
Find previous	Shift + F3
Replace	Ctrl + H
Start/stop selection	F8
Select all	Ctrl + A
Copy	Ctrl + C
Cut	Ctrl + X

Action	Shortcut or Key Combination
Paste	Ctrl + V
Delete previous word	Ctrl + Backspace
Delete current word	Ctrl + Delete
Delete previous character	Backspace
Move to next edit box while editing	Enter
Move to next edit box without editing	Next thumb key
Move to previous edit box without editing	Previous thumb key
Move insertion point to start of text field document	Ctrl + Fn + Left Arrow
Move insertion point to end of text field document	Ctrl + Fn + Right Arrow
Start auto-scroll	Alt + G
Increase Auto-Scroll speed	Ctrl + =
Decrease auto-scroll speed	Ctrl + -
Search on Wikipedia	Ctrl + Shift + W
Search on Wiktionary	Ctrl + D
Search in WordNet	Ctrl + Shift + D
Toggle Reading mode	Ctrl + R
Where Am I? (Format BRF option On)	Ctrl + W
Preview mode (Format BRF option On)	Ctrl + Q
Bookmark menu	Alt + M
Jump to bookmark	Ctrl + J
Insert Bookmark	Ctrl + B

Library/Reading Commands

Action	Shortcut or Key Combination
Book list	Ctrl + Shift + B
Manage books	Ctrl + Fn + M
Go to Option menu	Ctrl + G
Bookmark menu	Alt + M
Jump to bookmark	Ctrl + J
Insert Quick Bookmark	Ctrl + B

Action	Shortcut or Key Combination
Show Highlight Bookmarks	Alt + H
Toggle Navigation level	Ctrl + T
Previous element	Previous thumb key
Next element	Next thumb key
Change to previous Navigation level	Ctrl + Fn + Down Arrow
Change to next Navigation level	Ctrl + Fn + Up Arrow
Start Auto-scroll	Alt + G
Increase Auto-scroll speed	Ctrl + =
Decrease Auto-scroll speed	Ctrl + -
Where am I	Ctrl + W
Info	Ctrl + I
Go to beginning of book	Ctrl + Fn + Left Arrow
Go to end of book	Ctrl + Fn + Right Arrow
Open recent books	Ctrl + R
Search for books or text	Ctrl + F
Find next	F3
Find previous	Shift + F3
Next non-blank line	Ctrl + Alt + Down Arrow
Previous non-blank line	Ctrl + Alt + Up Arrow
Previous character	Left arrow
Next character	Right arrow
Previous word	Ctrl + Left Arrow
Next word	Ctrl + Right Arrow
Previous paragraph	Ctrl + Up Arrow
Next paragraph	Ctrl + Down Arrow
Start/Stop selection	F8
Select all (current paragraph)	Ctrl + A
Copy (current paragraph)	Ctrl + C
Delete book	Delete
Search on Wikipedia	Ctrl + Shift + W
Search on Wiktionary	Ctrl + D
Search in WordNet	Ctrl + Shift + D

Library Commands for audiobooks

Action	Shortcut or Key Combination
Book list	Ctrl + Shift + B
Manage books	Ctrl + Fn + M
Go to Option menu	Ctrl + G
Bookmark menu	Alt + M
Jump to bookmark	Ctrl + J
Insert Quick Bookmark	Ctrl + B
Show Highlight Bookmarks	Alt + H
Open Navigation Level	Ctrl + T
Previous element	While playing, Previous thumb key and while not playing, Alt + Left arrow
Next element	While playing, Next thumb key and while not playing, Alt + Right arrow
Change to previous Navigation level	Ctrl + Fn + Up arrow
Change to next Navigation level	Ctrl + Fn + Down arrow
Where Am I	Ctrl + W
Info	Ctrl + I
Go to beginning of book	Ctrl + Fn + Left arrow
Go to end of book	Ctrl + Fn + Right arrow
Open recent books	Ctrl + R
Delete book	Delete key
Play audiobook	Ctrl + Shift + G
Stop the reading	Ctrl
Fast forward 5 seconds	Right thumb key (single press)
Rewind 5 seconds	Left thumb key (single press)
Fast forward (Longer time jumps)	Right thumb key (press and hold)
Rewind (Longer time jumps)	Left thumb key (press and hold)
Increase reading speed	Ctrl + Fn + =
Decrease reading speed	Ctrl + Fn + -

File Manager Commands

Action	Shortcut or Key Combination
Create new folder	Ctrl + N

Action	Shortcut or Key Combination
File/drive info	Ctrl + I
Mark/Unmark	Ctrl + Enter
Mark all/Unmark all	Ctrl + A
Rename file	F2
Delete file	Delete
Copy file	Ctrl + C
Cut file	Ctrl + X
Paste file	Ctrl + V
Search file	Ctrl + F
Sort files	Ctrl + Shift + V
Where am I	Ctrl + W
Select drive	Ctrl + D
Go to parent folder	Esc
Eject media	Ctrl + Fn + E

Calculator Commands Using US Computer Braille

Action	Shortcut or Key Combination
Plus	+
Minus	-
Multiply	*
Divide	/
Equals	= **OR** Enter
Clear	Delete
Decimal point	.
Percent	%
Square root	Ctrl + Shift + S
Pi	Ctrl + Y

Appendix—Braille Tables

United States 8-Dot Computer Braille

exclamation mark: '!' 2,3,4,6

quote: '"' 5

pound: '#' 3,4,5,6

dollar sign: '$' 1,2,4,6

percent: '%' 1,4,6

ampersand: '&' 1,2,3,4,6

apostrophe: ''' 3

left paren: '(' 1,2,3,5,6

right paren: ')' 2,3,4,5,6

asterisk: '*' 1,6

plus sign: '+' 3,4,6

comma: ',' 6

dash: ' ' 3,6

period: '.' 4,6

forward slash: '/' 3,4

colon: ':' 1,5,6

semi-colon: ';' 5,6

less than: '<' 1,2,6

equals: '=' 1,2,3,4,5,6

greater than: '>' 3,4,5

question mark: '?' 1,4,5,6

at symbol: '@' 4,7

left square bracket: '[' 2,4,6,7

back slash: '\' 1,2,5,6,7

right square bracket: ']' 1,2,4,5,6,7

carat sign: '^' 4,5,7

underscore: '_' 4,5,6

grave accent: '`' 4

left curly bracket: '{' 2,4,6

vertical bar: '|' 1,2,5,6

right curly bracket: '}' 1,2,4,5,6

tilde: '~' 4,5

'0': 3,5,6

'1': 2

'2': 2,3

'3': 2,5

'4': 2,5,6

'5': 2,6

'6': 2,3,5

'7': 2,3,5,6

'8': 2,3,6

'9': 3,5

Uppercase letters:

'A': 1,7

'B': 1,2,7

'C': 1,4,7

'D': 1,4,5,7

'E': 1,5,7

'F': 1,2,4,7

'G': 1,2,4,5,7

'H': 1,2,5,7

'I': 2,4,7

'J': 2,4,5,7

'K': 1,3,7

'L': 1,2,3,7

'M': 1,3,4,7

'N': 1,3,4,5,7

'O': 1,3,5,7

'P': 1,2,3,4,7

'Q': 1,2,3,4,5,7

'R': 1,2,3,5,7

'S': 2,3,4,7

'T': 2,3,4,5,7

'U': 1,3,6,7

'V': 1,2,3,6,7

'W': 2,4,5,6,7

'X': 1,3,4,6,7

'Y': 1,3,4,5,6,7

'Z': 1,3,5,6,7

Lowercase letters:

'a': 1

'b': 1,2

'c': 1,4

'd': 1,4,5

'e': 1,5

'f': 1,2,4

'g': 1,2,4,5

'h': 1,2,5

'i': 2,4

'j': 2,4,5

'k': 1,3

'l': 1,2,3

'm': 1,3,4

'n': 1,3,4,5

'o': 1,3,5

'p': 1,2,3,4

'q': 1,2,3,4,5

'r': 1,2,3,5

's': 2,3,4

't': 2,3,4,5

'u': 1,3,6

'v': 1,2,3,6

'w': 2,4,5,6

'x': 1,3,4,6

'y': 1,3,4,5,6

'z': 1,3,5,6

United Kingdom 8 dot Computer Braille

exclamation mark: '!': 2,3,4,6

quote: '"' 4

pound: '#' 5,6

dollar sign: '$' 4,5,6

percent: '%' 4,6

ampersand: '&' 1,2,3,4,6

apostrophe: ''' 3

left paren: '(' 4,5

right paren: ')' 3,4,5

asterisk: '*' 3,5

plus sign: '+' 2,3,5

comma: ',' 2

dash: ' ' 3,6

period: '.' 2,5,6

forward slash: '/' 3,4

colon: ':' 2,5

semi-colon: ';' 2,3

less than: '<' 2,3,6

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equals: '=' 2,3,5,6

greater than: '>' 3,5,6

question mark: '?' 2,6

at symbol: '@' 2,3,4,6,7

left square bracket: '[' 1,2,3,5,6,7

back slash: '\' 5,7

right square bracket: ']' 2,3,4,5,6,7

carat sign: '^' 6,7

underscore: '_' 3,4,6

grave accent: '`' 2,3,4,6

left curly bracket: '{' 1,2,3,5,6

vertical bar: '|' 5

right curly bracket: '}' 2,3,4,5,6

tilde: '~' 6

Pounds sterling: '£' 2,3,6,7,8

degree sign: '°' 1,3,4,6,8

'0': 1,2,3,4,5,6

'1': 1,6

'2': 1,2,6

'3': 1,4,6

'4': 1,4,5,6

'5': 1,5,6

'6': 1,2,4,6

'7': 1,2,4,5,6

'8': 1,2,5,6

'9': 2,4,6

Uppercase letters:

'A': 1,7

'B': 1,2,7

'C': 1,4,7

'D': 1,4,5,7

'E': 1,5,7

'F': 1,2,4,7

'G': 1,2,4,5,7

'H': 1,2,5,7

'I': 2,4,7

'J': 2,4,5,7

'K': 1,3,7

'L': 1,2,3,7

'M': 1,3,4,7

'N': 1,3,4,5,7

'O': 1,3,5,7

'P': 1,2,3,4,7

'Q': 1,2,3,4,5,7

'R': 1,2,3,5,7

'S': 2,3,4,7

'T': 2,3,4,5,7

'U': 1,3,6,7

'V': 1,2,3,6,7

'W': 2,4,5,6,7

'X': 1,3,4,6,7

'Y': 1,3,4,5,6,7

'Z': 1,3,5,6,7

Lowercase letters:

'a': 1

'b': 1,2

'c': 1,4

'd': 1,4,5

'e': 1,5

'f': 1,2,4

'g': 1,2,4,5

'h': 1,2,5

'i': 2,4

'j': 2,4,5

'k': 1,3

'l': 1,2,3

'm': 1,3,4

'n': 1,3,4,5

'o': 1,3,5

'p': 1,2,3,4

'q': 1,2,3,4,5

'r': 1,2,3,5

's': 2,3,4

't': 2,3,4,5

'u': 1,3,6

'v': 1,2,3,6

'w': 2,4,5,6

'x': 1,3,4,6

'y': 1,3,4,5,6

'z': 1,3,5,6

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