HaptiBraille

Communication device

Manual

HaptiBraille Communicator

Version 3.0

Contents

Introduction

Congratulations! You hold the manual for the world's first communicator that allows a user with hearing, voice and speech impairments to speak in a synthesized voice, as well as to recognize and transmit oral speech.

How HaptiBraille Communicator works

Type the words you want to say using the six keys on the front Braille keyboard and the HaptiBraille Communicator will voice it in a synthesized voice. You can hear your companion with the help of the HaptiBraille Communicator. Their words will be recognized, converted and transmitted to you as vibrations on your fingertips placed on the Braille keyboard.

Accessories

In the box you will find:

- HaptiBraille Communicator
- Micro-USB charging cable with fast magnetic connection
- Neck strap for HaptiBraille Communicator so it is always with you
- Braille user manual with instructions for usage
- Illustrated user manuals for easy assistance

Appearance

Let's learn about the appearance of the device, find out where the buttons are located and what they are used for. Then we will explain how it all works.

Keyboard and orientation

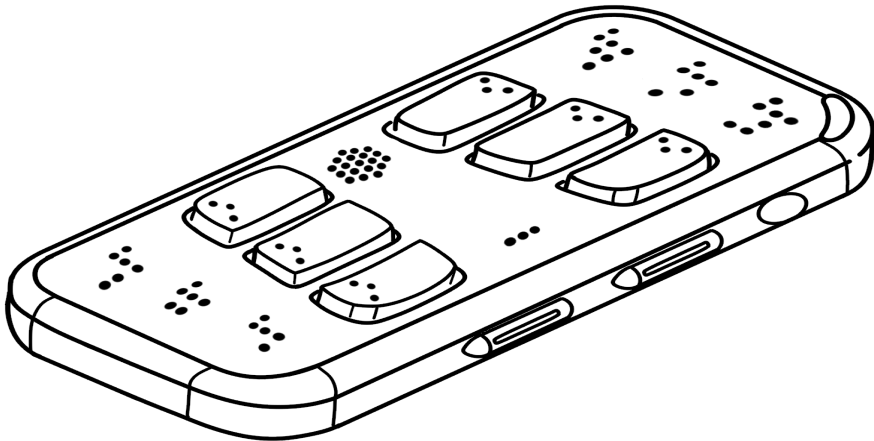Take the HaptiBraille Communicator in your hands and examine it by touch.

On one side you will find keys, arranged in two rows. This is the front side of the communicator where the main 6-key Braille keyboard is located.

Please note that each key is numbered and labeled in Braille.

If you cannot tactilely recognize the numbers labeled in Braille, ask your assistant to go through this section in the manual and to show you the numbering for each key.

At the top of the HaptiBraille Communicator, you will find two elongated main buttons. They are also numbered in Braille on the back. Also, you will find one flat switch here.

At the bottom of the device you will also find four flat switches numbered in Braille.
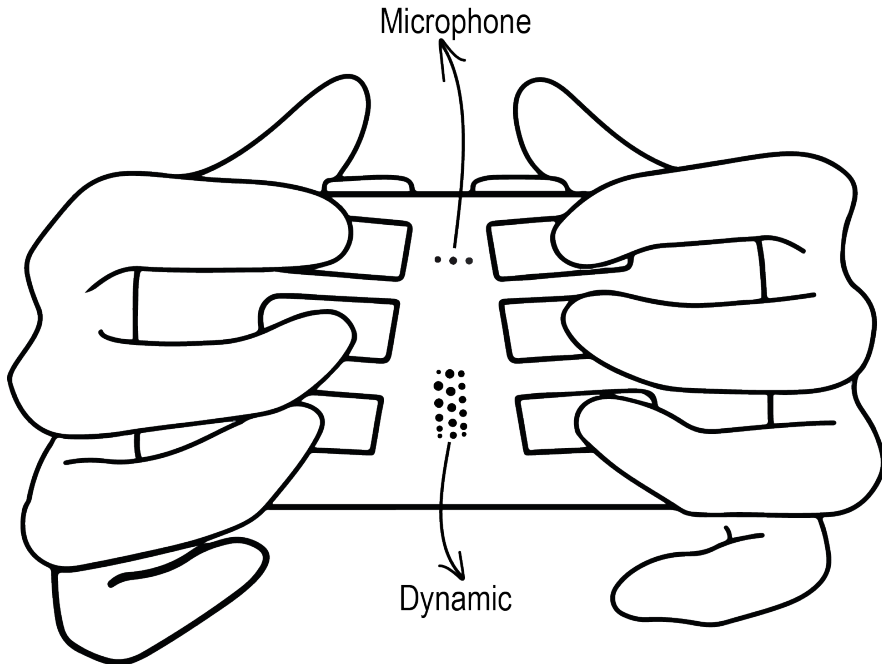
Front side

Hold the device so that the fingers of both hands, from index to ring finger rest on the keys of the 6-key keyboard. In this case, so that the thumbs lie on the top of the device, where the elongated buttons are.

The numbering of the keys on the 6-key keyboard corresponds to the numbering in Braille.

That is, your index finger of your left hand is on key #1, which is dot #1 in Braille, and your ring finger of your right hand is on key #6, which is dot #6 in Braille.

If necessary, the mapping of keyboard buttons and braille dots can be changed in the settings so that dots 1, 2, and 3 are on the right side; and dots 4, 5, and 6 are on the left side.*

How to hold the device

Microphone

Dynamic
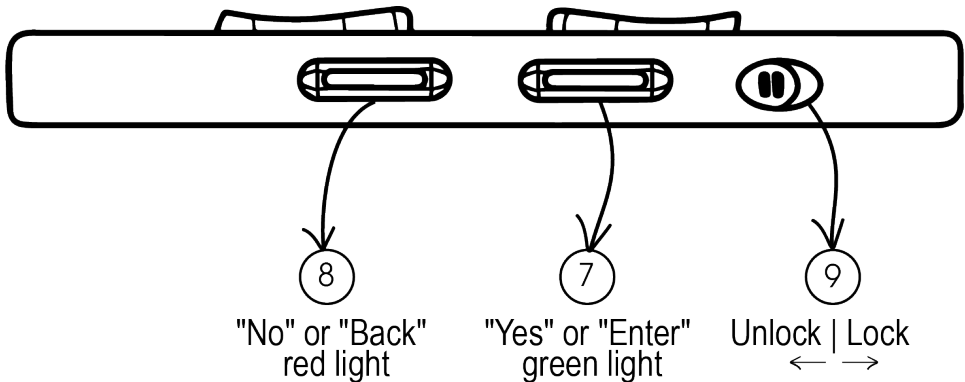
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* See more in "Menu" section.

Top side

On the top there are elongated buttons, which are assigned numbers 7 and 8. This numbering has nothing to do with Braille. These buttons are used for performing various actions, which are described further in this manual.

If you take the device correctly, as described earlier, then button #7 will be located under the thumb of the right hand and in some cases will mean "yes" or "enter" and button #8 will be located under the thumb of the left hand and will mean "no" or "back". Also, to the right of button #7 you can find the switch #9. Use it to lock your keyboard against accidental presses.

• In order to lock the keyboard, slide switch #9 to the right.

• In order to unlock the keyboard, slide switch #9 to the left.

Top side

| 8 | 7 | 9 |
| "No" or "Back" red light | "Yes" or "Enter" green light | Unlock \| Lock ← → |

Bottom side

Ports

On the bottom of the device you will find 4 switches. Switch #13 turns the device on and off, and the other three switches allow you to configure the device.*

On the bottom, in the center of the device, you will find a USB port to turn on the charging. This spot is marked with a small tactile strip.

Bottom side

USB

(13)
Switching
Off | On
← →

(12)
Transmission speed
Slow | Fast
← →

(11)
←Sequential
Simultaneous →

(10)
Vibration
Max | Min
← →

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* See information on other switches in "Setting on the device" section.

Charge

The total battery life of the HaptiBraille Communicator after one charge is 8 hours, but you can also use the device while it is charging. Use the special cord for charging the communicator, which is included in the set. In the slot where the charging cord is inserted, there is a special magnetic adapter that allows you to put the device on charging.

Switching on and off

To turn the device on and off, use the switch #13. It is located on the bottom of the device, on the left side. The switch has two positions.

- In order to turn the device on, slide switch #13 to the right.

- In order to turn the device off, slide switch #13 to the left.

When turned on, you will feel sequential vibrations on your fingertips on the main six keys.

Installation and connection

The HaptiBraille Communicator only works with an Android mobile phone of version minimum 5.1 and iOS version 12.1 or later or the HaptiBraille App. At the time of the release of this manual, HaptiBraille application is available on the Google Play Store and App Store.

It is important to note that for the speech recognition program to work, your mobile phone must be connected to the Internet (mobile or home). However, you do not need an Internet connection to speak with HaptiBraille Communicator or use a mobile phone.

Application

Find and download the free HaptiBraille app from the Google Play Store and App Store.
It allows you to use HaptiBraille Communicator for voice communication: to synthesize your messages into voice and recognize the words of your companion.
In order to download the application, you will need the help of your assistant or a sighted person.

If your mobile device is iOS and you have a Braille display, then you can install and configure the application by yourself.

Synchronization with a mobile phone

Only at the first start and setting up the communicator will you need the help of a sighted person, so ask your friends and relatives to read this section of the manual.

Download and run the HaptiBraille app. Turn on the communicator using the switch #13, the location of which is marked on the image.

After turning on device, you will feel a sequential vibration on all six main keys, and if you are a sighted person, you will also see two buttons located on the top of the device blink.

Follow the instructions on the mobile app. The app will need to get permission for accesses to the different functions of the device. After completing the basic settings, you will see a list of devices available for connection, find your HaptiBraille Communicator in the list of devices and connect to it.
Lock the screen with the lock button for HaptiBraille Communicator to work.

When using the device with iOS, a screen lock is not required for the application to work. If you need to unlock your phone or change settings, follow the onscreen instructions.

The application provides
various settings that will make
communication convenient, for
example, changing the language
of the app or turning on the learning
terminal. You can learn more about
this in the "Settings" section.

You can use your device in wireless
headset mode. In this case, all voice
messages and sound signals will
be transmitted not to the speaker
of the smartphone (to which the
communicator is connected),
but to the built-in speaker of
the communicator. In addition,
messages for recognition will not
be received by the microphone of
the mobile device, but the built-in
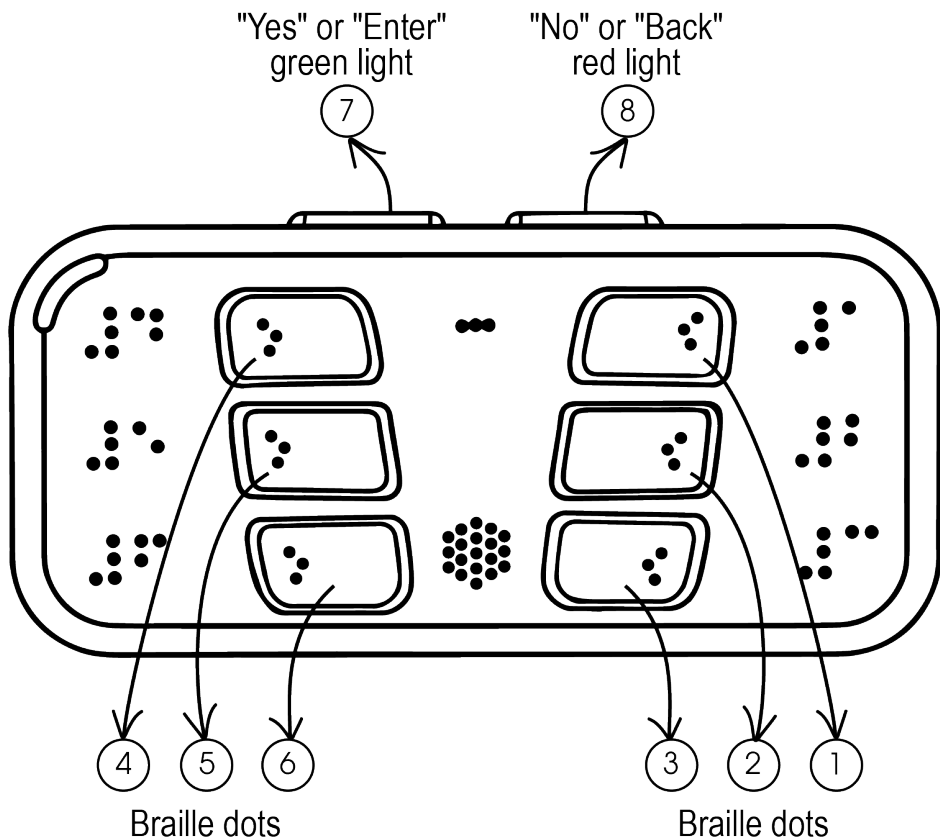microphone of the communicator.

To use your device as a wireless
headset, go to your mobile device's
Bluetooth settings and select
BK8000L from the device list, then
connect to it.

Finger placement

Make sure you hold the device correctly before using it. Ask someone you know to check if you are holding the device correctly by comparing it with the picture in this manual.

If you hold the device correctly, then the index finger of your left hand is on key #1, the middle finger is on key #2, and your ring finger is on key #3. Your right index finger rests on key #4, your middle finger on key #5, and your ring finger on key #6. Your right thumb is on button #7, and your left thumb is on button #8.

Front side

"Yes" or "Enter"
green light

"No" or "Back"
red light

7

8

4   5   6

3   2   1

Braille dots

Braille dots

Communication via HaptiBraille

Before getting started, make sure your device is turned on and synced with your mobile phone. Lock your phone by pressing the lock button and put it in your pocket or bag, during use it should be within 3,3 feet of the HaptiBraille Communicator.

The device works only when the phone is locked. Do not use a password on the phone, it will prevent HaptiBraille Communicator from working.When using the device with iOS, a screen lock isn't required for the application to work.

In the main menu, you will find two commands available: "Listen" and "Speak".

In order to start speaking, press and hold button #7 for a while. Once you feel vibrations on your fingertips, you can start typing.

Use key #6 to enter a space between words. A short press on the button #7 will sound to your companion what you have typed.

Before the text you typed is read aloud, your companion will hear a short beep.

In order to repeat the text, you've just typed, press and hold for a while button #7 again.
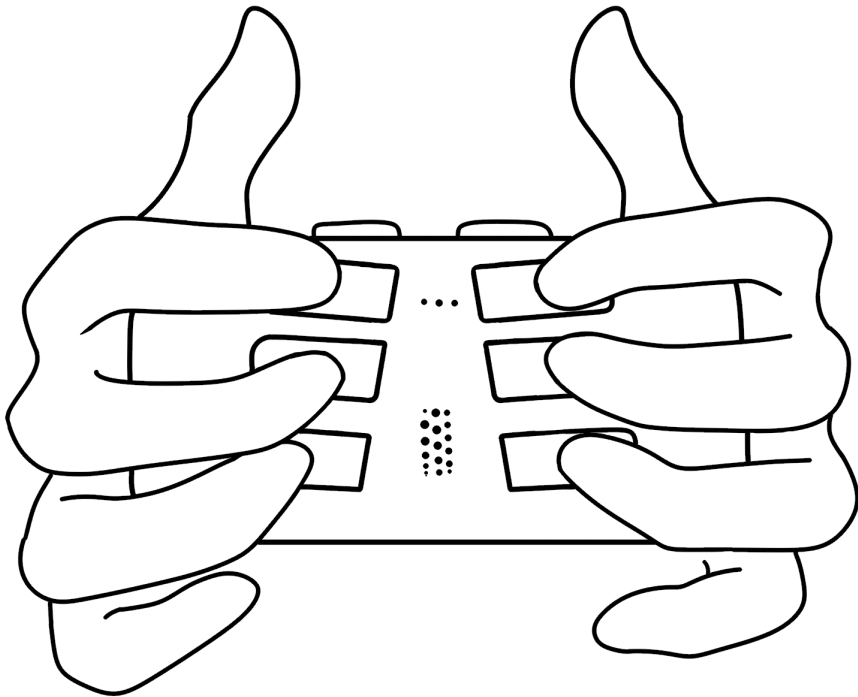
After you finish typing and are ready to listen to what your companion wants to say, you need to return to the main menu press and hold buttons #7 and #8 at the same time.

Vibrations on your fingertips will signal the successful execution of the command.

In order to hear what your companion wants to say to you, being in the main menu, press and hold button #8 for a while.

You will feel vibrations on your fingertips, and your companion will hear an attention-grabbing sound signal from the HaptiBraille Communicator speaker and the phrase: "Please press the green button to start speaking, the red button to refuse". Immediately after this phrase, buttons #7 and #8 on your device will be highlighted

In order for your companion to be able to make their choice, you need to remove (lift up) your thumbs after choosing the command "Listen". Periodic vibrations on the main six keys will let you know that your companion is speaking right now.

After your companion presses the green button, they will hear a beep, after which the speech recognition program will be turned on. When your companion has finished speaking, the speech recognition software will automatically be turned off. After that, your companion will hear the phrase "You wanted to say…?", and then they will hear the words they said before.

After that HaptiBraille will ask to press button #7 (green) if the message was recognized correctly, or button #8 (red) if it is incorrect.

If the message is recognized incorrectly, and the companion presses button #8, the whole cycle will be repeated. And if the companion interrupts the dialogue and does not want to speak, you will also receive a notification about this.

If your companion confirms that what they said was recognized correctly, you will receive their message in the form of vibrations on the keys of the front keyboard.

In order to receive messages and service signals, keep your fingers on the front keyboard.

The commands you can use to read messages are listed below.

Reading by characters

Press key #6 to read the next character.

Press key #3 to read the previous character.

When using the commands for moving through characters, the automatic scrolling of the text stops, and the user independently moves through the text in the desired direction.

Reading by words

Press key #5 to read the next word.

Press key #2 to read the previous word.

In the word reading mode, the automatic scrolling of the remaining text does not stop but continues after the transition to a particular word.

To interrupt reading the text and return to the main menu, press and hold buttons #7 and #8 at the same time until you feel vibrations on your fingertips. You will return to the main menu, where you can continue to work with the device.

If you are not using HaptiBraille Communicator, use switch #9 to lock the keypad.

Message preview

When you are typing a message using Braille input, you may feel the need to re-read the message before it is spoken. In order to view a typed message, do the following steps:

- Press and hold button #8 to switch to message viewing mode;

- Use keys #3 and #6 for reading by character, and keys #2 and #5 for reading by words;

- If you're satisfied with the message typed, press and hold button #7 for a while, the message will be read aloud, and you will return to the typing message mode;

- If you change your mind to read aloud the message typed, press and hold the button #8 for a while, the message will be deleted, and you will return to the typing message mode;

- You can also press and hold buttons #7 and #8 at the same time in order to return to the main menu.

Settings

There are two types of settings — settings on the device and settings in the application.

Settings on the device

Use the switch #10, located on the bottom side, to adjust the vibrations intensity. This switch has four positions. The maximum right position of the switch sets the minimum vibrations intensity, and the maximum left position of the switch sets the maximum vibrations intensity.

With the help of switch #11, that is also located on the bottom, you can change the mode of transmission of characters to the HaptiBraille Communicator. You can make the vibrations transmitted to all keys simultaneous or sequential. When you first start using the device, we recommend using sequential character transmission.

This switch has two positions. In the maximum right position, the simultaneous point transmission mode is activated, and in the maximum left position, all points are transmitted sequentially.

Switch #12 allows you to adjust the characters transmission speed. There are four modes of speed settings. In the maximum right position, you can set the fastest transmission rate, and in the maximum left position, you can set the slowest transmission rate.

Settings in the application

In order to set the settings in the application, you will need the help of a sighted person. If your mobile device is iOS and you have a Braille display, then you can install and configure the application by yourself.

In the application, you can configure the language of communication, as well as the application language. If you want to communicate in a foreign language, you will need help in order to make the appropriate changes in the settings

If you do not feel like a confident user and need support while working with HaptiBraille Communicator, then the app provides a learning terminal function. This is a special program that displays all the actions performed with the communicator, the messages sent to you, the texts you type, as well as all the buttons in the interface on the mobile phone screen. In this case, do not move the mobile phone far away and allow your assistant to look at the screen.

Menu

When connected to an Android device, the communicator has a built-in menu for controlling functions and changing settings in addition to buttons and switches that have already been installed. The menu appears immediately after turning on the communicator if HaptiBraille is already connected to the mobile device.

Menu navigation

Use the following commands to navigate through the menu:
- Key #1 — move to the previous menu item.*
- Key #4 — move to the next menu item.

*You can also move to the previous menu level by briefly pressing button #8.

- Button # 7 — activation of the selected element.

In addition to moving through menu items, you can use the following commands to read the current item:
- Key #2 — read previous word
- Key #5 — read next word
- Key #3 — read previous character
- Key #6 — read next character

Main Menu

After turning on the communicator, you find yourself in the Main Menu. The communicator consists of three items:
- Speak — gives access to the corresponding function of the communicator.
- Listen — gives access to the corresponding function of the communicator.
- Settings — opens access to the settings of the communicator.

Note: the operation of these functions is described in details in the relevant sections of the manual.

Note: You can quickly return to the Main Menu from any mode of the communicator by simultaneously pressing and holding buttons #7 and #8 for a while.

Settings Menu

The Settings serves for changing the operation parameters of the communicator. To access the Settings menu, do the following:
1. Go to the Main Menu by simultaneously pressing and holding buttons #7 and #8.
2. Use keys #1 and #4 to find the "Settings" item.
3. Briefly press button #7 to choose the item.

Specification

- Total unit weight: 4 oz. (110 g.)
- Size: 5.5/0.3/1.9" (14/1,5/5,5 cm) (Length / Width / Height)
- Colour: black
- Charging port: Micro USB
- Battery: 800mAh
- Working time: 6 to 8 hours on a battery charge

Manufacturer warranty

This device is a high-quality product. The HaptiBraille lifespan
is 4 years. The warranty is provided in accordance with applicable law and is valid for 2 years from the date of purchase for all blocks and components of the Communicator (except for the charging cable). The battery is guaranteed for 1 year.

The warranty covers all components (except battery) and performance. If you find any defects or problems, please contact us at the contacts on the official website www.4blind.com. Repairs during the warranty period are carried out at the company's office.

Please note that warranty conditions are subject to change. Please find out the latest information on our website.

Please keep your receipt of purchase as you may need it for warranty repair or replacement.

Show the original copy of the receipt. If the device is to be returned, use the original packaging. The warranty applies to all cases in which the damage is not attributable to misuse, abuse, negligence or natural disaster.

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Do not disassemble device
by yourself or allow anyone other than a person qualified by 4Blind company to do so. Unauthorized or unskilled disassembly of the device can cause serious damage. If the device is disassembled by an unqualified technician, the warranty will be void, as will the provision of free support. If the device is damaged as a result of liquid ingress or external influences, this also voids its warranty, even if the damage occurred during the warranty period.

Customer support

If you need help setting up your device or support, please contact the nearest 4Blind office or visit our website www.4blind.com.

Manufacturer's contacts:

• North America: +1 617 982 1855

Mail support: welcome@4blind.com

Safety precautions

The HaptiBraille Communicator is a modern, sophisticated, high-tech product and must be handled very carefully. Following the recommendations below will allow you to enjoy using your device for many years.

Do not leave device for long periods of time in a closed, hot environment, such as in a car on a hot summer day, or in the sun, as the built-in battery may be damaged or ignited.

Protect your device from high temperatures. Excessive temperatures will shorten the battery life, damage the battery, and may deform or melt some parts of the device.

Avoid drops and hits to the HaptiBraille Communicator. Rough handling can damage the internal components of the device.

This equipment complies with FCC radio frequency exposure guidelines set out to protect the environment. During installation and use, this equipment should be kept at least 20 cm away from your body. This transmitter should not be located near or in the same direction as other transmitters.

At the end of the HaptiBraille Communicator life cycle, its internal components must be disposed of in accordance with local regulations.

Do not dispose of batteries in a fire, as they may explode. Recycle batteries whenever possible. Do not dispose of batteries with household waste.

Do not disassemble, cut, destroy, bend, puncture, or otherwise damage the battery.

In the event of a battery leak do not allow the liquid to come in contact with the skin or eyes. If something happens, immediately flush skin or eyes with water, or seek medical help.

The time to fully charge the battery is on average 1 hour. You can use the device while charging. If you want to keep optimal battery performance, do not keep the device on charge for long after it has been charged.

Use only compatible chargers like the one supplied with your HaptiBraille Communicator.

Do not connect incompatible devices. Unplug the charger when not in use. The device and its accessories are not toys. HaptiBraille Communicator contains small parts. Keep it out of the reach of children.

Terms of use:

- Operating temperature: 10 to 40°C.
- Storage and transportation temperature: -20 to 45°C.
- Operating relative humidity: 20% to 80%.
- Storage and transportation relative humidity: 10% — 95%.
- Operating altitude: from -700 to 7000 feet above sea level.
- Storage and transportation altitude: 700 to 40000 feet above sea level.
- Barometric pressure during storage and transport: 70 to 103 kPa.

Cleaning and maintenance

Wipe down HaptiBraille Communicator with a damp cloth. Do not use aggressive chemicals, solvents or concentrated detergents to clean the communicator. Device is not waterproof, do not immerse it in water.

If device is accidentally immersed in water, dry the device at a temperature not exceeding 40°C.

Certification and compliance

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