HARPO

Mountbatten Brailler Tutor

Quick Start Guide

Congratulations on purchasing the Mountbatten Brailler Tutor - the modern tool for education and a Braille literacy concept.

This Quick Start Guide serves as a first reference after receiving a Mountbatten Brailler Tutor for use. You can read all the sections or choose anyone that seems helpful. This Guide is for a sighted person who will help a blind student, the future Mountbatten Braille Tutor user.
The User Manual delivered with your MB Tutor includes detailed information on all features, detailing all options, commands, etc.

Opening the box

When you receive the Mountbatten Brailler Tutor (we will keep calling it MB Tutor for short), it will be packed in a backpack that comes as a standard accessory and then in a carton box filled with some foam pieces for protection. In the bag, you will find:
- MB Tutor main unit with the top cover installed

- wireless keyboard

- MB Tutor reading table

- power supply unit with a cord suitable for your county

- User Manual and Quick Start Guide (this document)

Setting up for use

Removing the main unit from its bag

To remove the MB Tutor main unit from the backpack, grab the leather handle and lift it. Put the main unit on a desk in front of you.

The main unit and keyboard controls and connectors

After you remove your new Mountbatten Brailler Tutor from its backpack, you will notice a power switch at the front left, a display screen at the front right, and some connectors on both sides of the device. Please see the pictures below for explanations of their purpose:
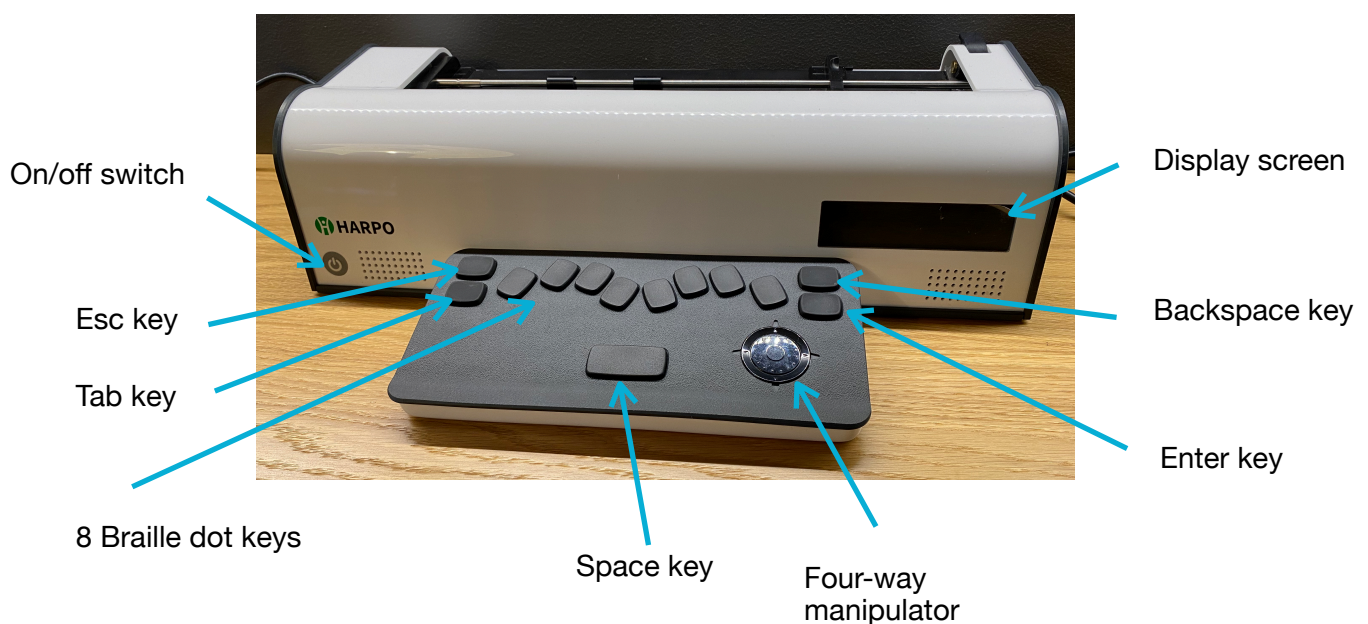
Power supply socket

PC USB connector

Keyboard/memory stick
USB connector

Headphone connector

Loudness potentiometer

Printer USB connectors

Removing the top cover

The top cover protects your brailler from getting dust or any objects in the inner part of the device. It must be taken away while the machine embosses.

Charging the batteries

Although a battery inside powers your new unit, connecting the power supply to a wall outlet and the MB Tutor to charge the battery is required periodically. You can work while the battery is charging.

The same applies to the **wireless keyboard** that you will find in a special pocket on top of the MB backpack. Please remove it from there and place it in front of your unit:

The wireless keyboard is charged whenever placed in its nest in front of the main unit while on or at least connected to the mains. Please leave the keyboard charging for about 5 hours when first used. As mentioned before, for the main unit - you may keep working while the keyboard charges.

Installing the reading table

As the Mountbatten Brailler Tutor teaches writing and reading Braille, it is essential to comfortably feel the Braille as soon as the dots have been embossed. This model has an additional implement that makes reading easier and extends the possibility to 7 lines of Braille behind the embossing head.
To install the reading table, place its short bent margin into the gap as shown:

Removing the paper bail

The paper bail is only needed when the MB Tutor operates as a Braille embosser. When using the MB Tutor as a Braille writer, we recommend removing it because it is difficult to read the Braille just written with the paper bail in place.
First, lift the paper grip lever on the right side of the unit to remove the paper bail. Then, slide the right-hand margin adjuster as far to the right as it will go. The adjuster will only move if the paper lever has been lifted.
Squeeze the spring-loaded sleeve on the left side of the paper bail and move it to the right to release and lift, then get it out from its nest on the other end.

Powering the MB Tutor on and off

To power on, press briefly the On/Off button in front of the main unit – near the left edge. The essential operation starts in a few seconds.
The advanced functions (synthetic speech, games, Internet connectivity, and other unit management features) will be available after another internal system starts - this takes two to three minutes. When the full functionality is on, you will hear a message: "Advanced Mountbatten Brailler Tutor functions are available now".

To power off, press the On/Off switch for at least half a second (shorter presses will be ignored). If the power off command is accepted, you will hear a "bye-bye" prompt (only if the advanced functions are active) followed by a series of short sounds/beeps signalling that the system is closing. After the successful close, you will hear three consecutive short sounds with decreasing pitch, and the device will turn off.
In case of any problems with stopping one of the internal systems, the power management unit inside the Mountbatten will force-switch off. If you need to force-switch off the system manually, keep the On/Off switch pressed for 10 seconds. Using this method too often is not good, as some internal systems may sometimes only save some current data.

The display screen

The screen in front of the MB Tutor displays information for sighted people working with blind students. It shows the text that the student types with the Braille keyboard, back-translated text

(in case of contractions, one is very different from the other), menus, help information, and what is being embossed.

Setting font size

The screen may display letters typed in (Latin letters plus some special characters) and below the back translation of the Braille as mentioned earlier to regular text.

Depending on the font size setting, the screen displays two lines - one originally typed, one back-translated, up to three lines of each (three lines of originally typed-in and three of back-translated text). This may be set in the menu: Main Menu -> More Options -> Display -> Small fonts (8 lines), Main Menu -> More Options -> Display -> Standard fonts (4 lines), Main Menu -> More Options -> Display -> Big fonts (3 lines). In advanced mode, you must use the settings: Main Menu -> Display -> Small fonts (8 lines), Main Menu -> Display -> Standard fonts (4 lines), Main Menu -> Display -> Big fonts (3 lines).

When the menu is used - the screen shows the menu items (as many lines fit in with the chosen font size).

Connecting external devices

MB Tutor can enable communication in Braille even if a person (teacher, carer, or friend of the blind student) doesn't know how to use Braille. A regular QWERTY keyboard, a PC, a smartphone, or a tablet may help.

If you don't know Braille and want to quickly type a message in Braille, connecting a QWERTY PC keyboard through USB is recommended. Most keyboards available on the market will work when connected to the lower USB port on the right side of the MB Tutor.

If you want more - e.g., exchanging data between your smart device (smartphone or tablet with iOS or Android system) and MB Tutor, embossing longer text, or reading text typed in by the student - you may use a free app MBMimic that needs to be installed on your smart device.

If you have a PC, you could install a free program called MBComm and connect to the MB Tutor over USB (the lower port on the right side) or remotely via the Internet.

A forward (text-to-Braille) or back-translation (Braille-to-text) is needed when using one of the mentioned devices connected to the MB Tutor. You may turn the conversion on or off within your application or in the device's menu.

Simplified Mode and Advanced Mode

Your MB Tutor has two modes: Simplified Mode and Advanced Mode. When your MB Tutor arrives, it is in Simplified Mode to let the new user start with the basic functionality of the device, not to have the advanced features con in the way while the user learns.

While in Simplified Mode, the menu will only consist of the four most valuable items. All the advanced features will be present in the last More Options menu.

Setting language

The Mountbatten Brailler Tutor is multilingual - it has 32 languages installed - both the menus, prompts, and spoken messages, plus a speech synthesiser, are available for each language. To set the language, you may use the menu: Main Menu -> More Options -> Language - choose one from a displayed list (Main Menu -> Language in the advanced mode).

The setting will make your brailler speak and show all menus in the chosen language and set text-to-Braille and vice versa conversion tables appropriate to this language. If there are more Braille tables for the given language, go to another list: Menu -> More Options -> Braille tables (Menu -> Braille tables in the advanced mode), and choose the desired table. For some languages, you may see 6- and 8-dot tables.

Setting up Internet connection

It is a good idea to connect your unit to the Internet over a Wi-Fi network at home and school. Some functionality, like remote connection to a PC, updates, games, etc., will require a working Internet connection. To set the connection, use Main Menu -> More Options -> System -> Wi-Fi

connection (Menu -> System -> Wi-Fi connection in the advanced mode), next search from a list or enter your network name manually, and type in your password.

Updating your device

1. Check your current firmware version of the device (Main Menu-> More Options -> System->Device information or Main Menu -> System -> Device information in advanced mode)
2. In the "Cumulative Updates" folder, find an installer dedicated to updating from your version to the desired version (for example, "1.5.1 - 1.5.11 - MBUPDATE.TUT.zip" to update from version 1.5.1 to 1.5.11).
3. Download and unzip the content of the "zip" archive.
4. Place the unzipped "MBUPDATE.TUT" folder in the root folder of a USB drive with the FAT32 filesystem.
5. Plug the USB drive into the upper USB port on the device's right side (from the user's point of view).
6. Choose the "Update device" command from the menu (Main menu-> More Options -> System->Update device or Main Menu -> System -> Update device).
7. The device will be updated and restarted.

If the device doesn't start, the update can be initiated by holding the power button for about 3 seconds (until the first beeps) during startup (with the USB pendrive connected). Only essential files are updated in this scenario, allowing the user to start the device. New sounds and translations are not installed and require an upgrade with the standard procedure.

Please consider that upgrading from an ancient version may take some time (even more than 2 hours).

Learning Braille with the Mountbatten Brailler Tutor

The Mountbatten Brailler was invented to facilitate the process of teaching Braille. The new MB Tutor extends the functionality through games (learning through fun and competition), remote teaching, and the Internet.

Mountbatten Brailler may be the first acquaintance of an electronic device explored by a blind child and can prepare the student for future PCs, smartphones, Braille displays, etc. With Mountbatten Brailler Tutor, important concepts that can be easily explained include a page of text, a paragraph, a line, backspace, editing text, capitals, typed key echo, word echo, etc. These concepts will be used at school and in future employment.

Loading paper

Although there are two main methods of loading a paper sheet into the MB Tutor, we will explain the one that seems more accessible.

1. Lift the paper lever on the right side of your brailler, in its rear part, and slide the right-hand margin to the position that suits the paper size. Lay the paper flat on the reading table. Ensure the form is positioned underneath the small rollers on the left and right margins and under the embossing head.

2. Slide the paper into the unit. Some people grasp either side of the form and push it in. Others prefer to slide it in by pressing on the reading table and sliding back.

3. When the paper is fully inserted, align the top of the page on the reading table's

indentation - behind the paper bail.

4. Check that the paper is placed straight against the left-hand margin. In case it isn't - slide the right margin to the left until it rests against the right edge of the paper. Flip the paper lever to the down position. The embossing head will now move to the right margin adjuster and back to check the paper size.

The machine is now ready for embossing.

Keyboard description and how to type

The keyboard works wirelessly, physically separated from the main unit of the MB Tutor. To introduce the typical PC keyboard layout to a user, the special keys (space, Esc, Tab, Backspace, and Enter) are placed in the standard position to the keyboard's left, down, and right. A convenient four-way manipulator on the right helps to use menus. It has four keys (left, top, right, and down), a ring that you may turn clockwise or anti-clockwise for performing swift movements up and down, and the middle Action key.

There is an additional USB-C type socket on the right side of the keyboard for charging. This wired charging is faster than regular wireless charging. It would be best to place the keyboard in front of the MB Tutor main unit to charge wirelessly. When the keyboard is close to the middle of the main unit case, the magnets inside lead it to the correct charging position.

There are 8 Braille dots keys on the keyboard. Depending on the language used, Braille can be 6-dot or 8-dot. The 8-dot keyboard is suitable for both. Typing Braille requires pressing several keys at once. Each dot-key produces one dot on paper when embossed.

You can use the four-way manipulator to enter and navigate menus and other functions like advancing paper, regulating loudness, and embossing speed.
The MB Tutor can be set for one-hand use. This unique method accepts both typing the Braille keys simultaneously or one at a time. It is meant for students with hand mobility problems.

In the rare case of a keyboard malfunction, try resetting the keyboard. To reset, find a tool like a ball pen with a narrow tip and insert it into the opening underneath the keyboard. A short press will reset the electronic circuit inside the keyboard and may fix the problem.

Navigating and embossing

When the unit is on, with a paper sheet installed and the keyboard functioning, any press of a key on the keyboard will cause a reaction from your unit. If you press one of the Braille keys (one of six or eight, depending on the language), you will hear the machine emboss a dot on the paper. Other keys will perform typical functions for each: tab will move the embossing head to the next tab position, Enter will move the paper sheet by one line, space will move one letter space to the right without embossing, and so on.

Paper you can use for embossing
The MB Tutor has been designed to work best and most quietly with regular office paper. This is 80 gsm or 20 lbs paper sold for use in photocopiers and printers.
The first strategy is to use lighter paper because it is quieter and more affordable. Properly produced on more lightweight paper, Braille lasts well and has good-quality dots.
The embossing head moves from left to right while embossing Braille dots individually. (When the embossing is initiated from a file or external device, the Brailler sometimes embosses dots from right to left to save time). The die arm moves and can be used to explain a cursor concept. The unit allows for reading Braille just behind the die arm, so each letter can be read immediately after it is typed.

Moving around on a page
With the MB Tutor, you can move the embossing head around the page **using the four-way manipulator** (up, down, left, and right buttons). Other methods are:
- a press of the Tab key that moves the head to the next tab position,
- Enter chord (Space-Enter) that moves the paper down the line, leaving the head at the same horizontal position,
- B chord (Space-Tab) - head to previous tab position
- F chord (Space-F) - down the line, head left on the same horizontal position
- C chord (Space-C) - down the line, the head goes to the beginning of the line
- R chord (Space-R) - up a line, head left on the same horizontal position
- P chord (Space-P) - page eject

When you navigate the page, you will see the text of the current line of Braille on display. The screen cursor will keep showing where the Braille head is.
Additionally, the dial used to set the volume (on the right panel of your unit) when moved while Space is pressed will advance the paper in small steps. This helps regulate the vertical paper position in detail.

Correcting the Braille already embossed on paper

If you navigate to a Braille text and type over it, you will see both Braille and display overwritten with the new text (in the case of Braille, the old contents will get erased). You can type over some text already embossed, or - if you want to correct the last character embossed - type the correct

character while pressing the BackSpace key; MB Tutor will then erase the existing letter and type the new one.

The corresponding text will be edited on screen, too.

Menu

Mountbatten Brailler Tutor has a menu that invokes many options and switches some features on or off. It would be best to use the four-way manipulator to enter and browse the menu. The manipulator is used to:

- action key (short press - shorter than a second): enter the MB menu - you will hear „Main menu" and the name of the currently selected menu;
- action key (long press - longer than 2 seconds): enter a command manually - you will hear „Command"';
- action key while in the menu - enter a submenu or issue a command under the cursor;
- up/down to choose between the menu items on the list;
- left to escape a menu level to a higher one;
- right to enter a submenu.

Around the action key, you will find a ring that can be turned left or right. This ring can quickly move to an item lower in a menu or list (by turning it right) or higher (by turning left).

Games

One crucial new feature of the MB Tutor is the possibility of playing **Braille-learning games** that help with computer skills. Some games – like **Keyboard Master,** are embedded in the device; others will be available for download on the Internet. Contact us for more games by visiting the Mountbatten website, www.mountbattenbrailler.com.

The pre-installed games include:

- **Keyboard Master** - lets the user learn how to write and read Braille, Braille letters, and Braille typing skills. It is a rich game that has many levels and stages. Students can compare their scores and progress. It has four modes of operation:
  - Explorer mode
    Start with explorer mode if your student is new to Braille. This mode is for getting you to know the keyboard. Press any key, and the program will tell you what the key does. Try Perkins (Braille dot) keys and any other keys on the MB Tutor keyboard. To exit this mode, double-tap any key.
  - Learning mode
    This mode is for practising the student's typing skills. The Tutor will request to type a dot (e.g., dot 3) or dots corresponding to a letter.
  - Character contest mode
    This mode is suitable for testing typing skills. The user's task is to press keys corresponding to the requested letter.
  - Word contest mode
    Word contest mode is suitable for practising typing skills.

- **Letter Relay Race** - fun playing with the device or other persons, allowing for vocabulary development and improving spelling skills.

The game aims to guess and type (in Braille) words with the first letter equal to the last of the words entered by the preceding player. Mountbatten Brailler Tutor may be one of many players and checks the correctness of whatever word is entered by any player. If the word is correct, you will receive several points in proportion to the length of the word. You will get a penalty for misspelt words. The player who earned the most points wins.

Tips for using the MB Tutor to learn

Useful functions

Saving the typed text
A text typed on the Braille Keyboard can be saved to a file inside the MB Tutor or on an attached pendrive. To save a text, you need to use Main Menu -> File -> Create new file, give a name to the new file, enter the text and choose Main Menu -> File -> Close current file.
The saved file will include all typed Braille, corrections, and even commands if entered while the text was typed. This file can be later embossed using Main Menu -> File -> Emboss..
Choosing Main Menu -> More Options -> Emboss -> Emboss ON/OFF toggle (or Main Menu -> Emboss -> Emboss ON/OFF in advanced mode) before the file is created is useful when creating a file without embossing and embossing it later.

Embossing Braille with the use of a regular QWERTY keyboard
When a QWERTY keyboard is connected to the USB socket on the main unit's right side, you may use it to emboss Braille without knowing how to do Braille.
The text typed in on the QWERTY keyboard will show in Braille literally - a character for a character. Suppose you wish to use contractions or Grade 1 Braille translation (basic rules for converting text to Braille). In that case, you need to set Main Menu -> More Options -> Forward translation settings -> Emboss forward translation toggle ON (or Main Menu -> Forward translation settings -> Emboss forward translation toggle ON in advanced mode). With the default Braille level set to Grade 2, you will get a single "b" character whenever you type the "but" word - this is how the contraction works. It saves much space and reading time.

Embossing from an external device
To emboss a file that exists on a device (a smartphone, a tablet, a PC), you need to use one of the applications: MBMimic (for iOS or Android devices) or MBComm (on a PC).
- MBMimic: all the settings for printing text already in the application are set in the application - contractions, etc. The application is straightforward, and the settings are easy to find. Please see the MB Tutor User Manual for details.
- MBComm: In this application's case, you will need to use the MB Tutor commands in the menu - like when you set forward translation for the external QWERTY keyboard.
The applications allow for moving files from MB Tutor to the external device.