



braille

ALVA BC640 & ALVA BC680

English

Optelec

User Manual



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Contents

1. Introduction	5
1.1. <i>About this manual</i>	6
1.2. <i>ALVA Braille Controller package contents</i>	6
2. Getting to know your ALVA Braille Controller	7
2.1. ALVA BC640 Base Unit	7
2.1.1. Surface and front panel lay-out	7
2.1.2. Right side lay-out	8
2.1.3. Left side lay-out	8
2.1.4. Front panel keys	8
2.2. ALVA BC680 Unit	9
2.3.1 Surface and front panel lay-out	9
2.3.2 Back panel lay-out	10
2.3.3 Right side lay-out	10
2.3.4. Left side lay-out	10
2.3.5. Front panel keys	10
3. Installation	12
3.1. Setting up the ALVA Braille Controller	12
3.1.1. Setting up the USB connection	12
3.1.2. Setting up the USB keyboard connection of the ALVA BC680	12
3.2. Installing ALVA BC6-series screen reader drivers	12
3.3 Bluetooth® connection	13
4. The ALVA BC6-series menu	14
4.1 Local Menu	14
4.1.1. Activating the Local Menu	14
4.1.2. Changing settings in the Local Menu	15
5. Power Sources	23
5.1. USB power	23
5.2 Internal battery	23
5.3 External power adapter	23
Appendix: Safety and regulatory notices	24
Optelec offices worldwide	28

1. Introduction

Congratulations on choosing the ALVA Braille Controller. The ALVA Braille Controller 6-series merges classic Braille display access with advanced functionality. The high quality and reliability of the ALVA BC6-series gives you optimal flexibility and productivity in an ultra compact design.

Each ALVA Braille Controller features future proof hardware standards as wireless Bluetooth® connection and USB ports. The ergonomic design with its high quality Braille cells and optimal navigation possibilities allows you to be in full control of your computer, tablet or smartphone. Used in combination with screen reading software, the ALVA Braille Controller can be installed for a wide range of operating systems to provide a tactile and audible user interface.

The ALVA Braille Controller offers an enhanced ergonomic design that extends the navigation and operation possibilities of the screen reading software. The ergonomics are designed for optimal efficiency when working with a computer, tablet or smartphone.

The ALVA Braille Controller was designed to adhere to the Open Standard philosophy using mainstream technology. This enables compatibility with most screen reading software and operating systems. The available and supported functionality of the ALVA Braille Controller depends on the Braille display options of your screen reader, your mainstream computing hardware and operating system. Contact your distributor or Optelec for updated information about screen readers that fully support the device.

If you have any questions or suggestions concerning the use of this Braille display, please contact your distributor or Optelec's head office using the contact information at the last page of this manual. Your feedback is highly appreciated. We hope you enjoy working with your ALVA Braille Controller.

1.1. About this manual

This manual will familiarize you with the features and basic operation of your ALVA Braille Controller. Please read this manual carefully before using your device. Please note that this manual is about the ALVA Braille Controller and does not contain information about screen readers, screen reader commands, screen reader installation procedures, screen reader Braille display selection or screen reader key assignments. Refer to your screen reader documentation to find out more on these topics.

1.2. ALVA Braille Controller package contents

The ALVA BC640 package contains the following:

- A protective sleeve
- The ALVA BC640 Base Unit
- Power adapter 110/240V
- Long and short USB cables
- The ALVA BC driver software for Windows 7 and higher and documentation on CD-ROM

The ALVA BC680 package contains the following:

- A protective sleeve
- The ALVA BC680 unit
- Power adapter 110/240V
- Long and short USB cables
- The ALVA BC driver software for Windows 7 and higher and documentation on CD-ROM

If any of these items are missing from your package, please contact your distributor.

2. Getting to know your ALVA Braille Controller

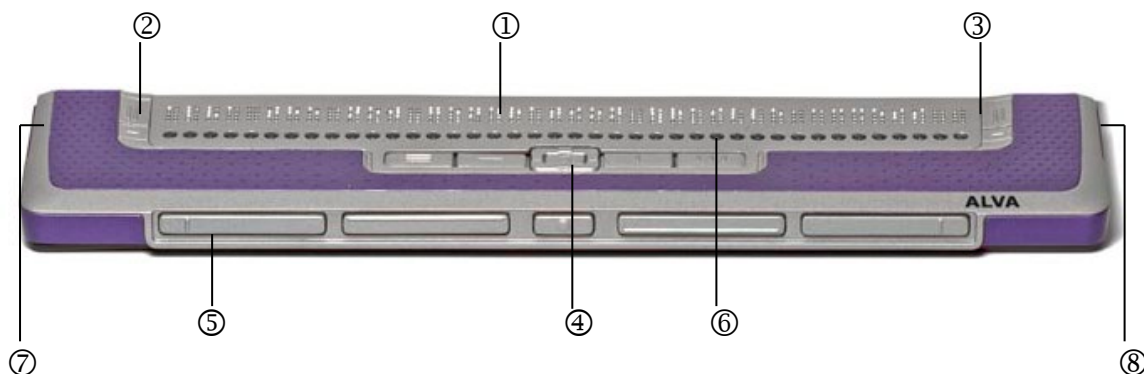
The ALVA Braille Controller consists of a 40 cell or 80 cell Braille line with advanced navigation possibilities. This chapter will give a detailed overview of the lay-out of the ALVA BC640 Base Unit and the ALVA BC680 unit.

2.1. ALVA BC640 Base Unit

The ALVA BC640 Base Unit is placed correctly in front of you when the Braille cells are located at the back of the flat surface and the thumb keys are facing towards you.

The ALVA BC640 contains:

1. 40-cell Braille display
2. Two eTouch keys (left of the Braille line) for panning left and right or other screen reading functions
3. Two eTouch keys (right of the Braille line) for panning left and right or other screen reading functions
4. Smartpad with 5-way navigation key and 4 function keys
5. Five thumb keys for panning, left, right, up and down and returning to the cursor position
6. 40 Cursor Routing Keys
7. Power supply and mini USB connector
8. On/off switch



2.1.1. Surface and front panel lay-out

The ALVA BC640 is designed with a row of 40 Braille cells at the back of the flat surface. In front of the Braille cells one row of small buttons can be found, known as Cursor Routing Keys. Each Braille cell has a corresponding Cursor Routing Key that can be used for multiple functions. On the left and right side of the Braille line you will find two groups of two keys. These so-called eTouch keys can be used for Braille panning left and right as well as various other screen reader functions.

In the middle, just in front of the Cursor Routing Keys, you will find a group of 9 keys. This group is called Smartpad and consists of 4 function keys and a 5-way navigation key.

2.1.2. Right side lay-out

The power switch is located at the right side of the Braille Controller. The Braille Controller is switched on when the rectangular push button is pressed. Switching the Braille Controller on will generate an audio signal.

2.1.3. Left side lay-out

The left side of the Braille Controller contains three connectors. From front to back: power connector, mini USB connector and a feature connector. The feature connector has no function with the release of this manual.

2.1.4. Front panel keys

The names of the ALVA BC640 keys listed in this section will be used in all documentation, including your screen reader documentation. This section describes the name of the key(s) and its main function, which is supported by the screen reader. The exact functionality is defined by the screen reader. Please refer to your screen reader documentation for detailed functionality of the ALVA BC640.

Smartpad

The integrated Smartpad allows for navigation through menu's and dialog boxes. From left to right, the Smartpad keys are:

Smartpad key 1	First rectangular key at the left marked with 3 horizontal lines
Smartpad key 2	Second rectangular key at the left marked with 1 horizontal line
LEFT	Left key on the 5-way navigation key
UP	Top key on the 5-way navigation key
DOWN	Bottom key on the 5-way navigation key
RIGHT	Right key on the 5-way navigation key
MIDDLE	Middle key marked with a round dot of the 5-way navigation key
Smartpad key 3	Second rectangular key from the right marked with 1 vertical line
Smartpad key 4	Most right rectangular key marked with 3 vertical lines

eTouch keys

The two keys on each side of the Braille line are called the eTouch keys. They are used for panning left and right as well as various other Braille functions.

eTouch 1	Top left key marked with two vertical lines
eTouch 2	Bottom left key marked with one horizontal line
eTouch 3	Top right key marked with two vertical lines
eTouch 4	Bottom right key marked with one horizontal line

Cursor Routing Keys

The cursor routing keys correspond to the particular Braille cell immediately above each button. Typically, they are used for routing the cursor or caret to the corresponding Braille cell, generating a left or right mouse click at that point, or for obtaining additional information about the contents of the Braille cell.

Thumb Keys

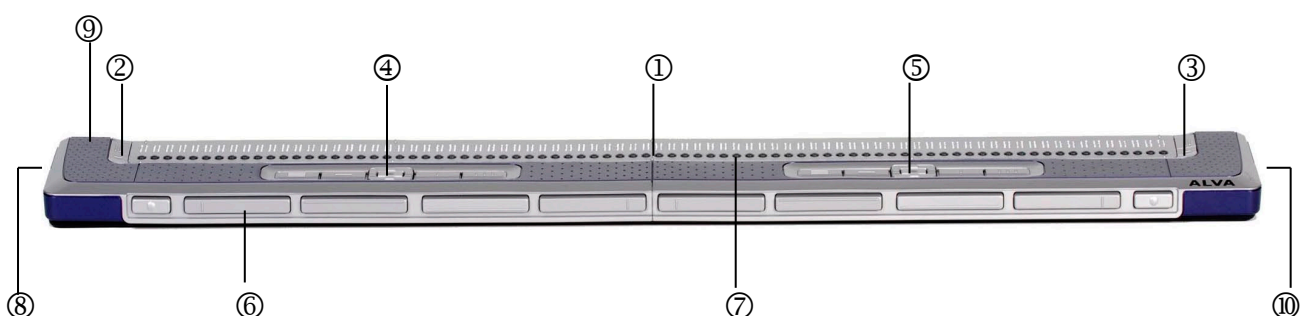
At the front of the Braille Controller five front panel keys are placed, the so called thumb keys. Four bigger keys are symmetrically aligned along the front of the ALVA BC640. One smaller button is located in the middle of the front. Pressing one of the four bigger thumb keys will navigate left, right, up or down. By pressing the middle key you will return to the cursor position

2.2. ALVA BC680 Unit

The ALVA BC680 is placed correctly in front of you when the Braille input keys are located at the back of the flat surface and the thumb keys of the ALVA BC680 Unit are facing towards you.

The ALVA BC680 contains:

1. 80-cell Braille display
2. Two eTouch keys (left of the Braille line) for panning left and right or other screen reading functions
3. Two eTouch keys (right of the Braille line) for panning left and right or other screen reading functions
4. Smartpad (left) with 5-way navigation key and 4 function keys
5. Smartpad (right) with 5-way navigation key and 4 function keys
6. Ten thumb keys for panning left, right, up and down and returning to the cursor position
7. 80 Cursor Routing Keys
8. Power supply and USB keyboard connectors
9. USB ports (USB port 1 and USB port 2)
10. On/off switch



2.3.1 Surface and front panel lay-out

The ALVA BC680 is designed with a row of 80 Braille cells at the back of the flat surface. In front of the Braille cells one row of small buttons can be found, known as Cursor Routing Keys. Each Braille cell has a corresponding Cursor Routing Key that can be used for multiple functions. On the left and right side of the Braille line you will

find two groups of two keys. These so-called eTouch keys can be used for Braille panning left and right as well as various other screen reader functions.

In front of the Cursor Routing Keys, you will find two groups of 9 keys. These groups are called Smartpad. The ALVA BC680 contains a Smartpad Left (below cell 11 to cell 30) and a Smartpad Right (below cell 51 to cell 70). Each Smartpad consists of 4 function keys and a 5-way navigation key.

2.3.2 Back panel lay-out

At the back of the Braille Controller, two USB ports can be found. The left USB port (marked with one dot) can be used for charging the integrated batteries over USB and for connecting the optional built-in screen reader with your PC. The right USB port has been marked with two dots. This port cannot be used for charging the integrated batteries over USB and for connecting the optional built-in screen reader with your PC.

2.3.3 Right side lay-out

The power switch is located at the right side of the Braille Controller. The Braille Controller is switched on when the rectangular push button is pressed. Switching the Braille Controller on will generate an audio signal.

2.3.4. Left side lay-out

The left side of the ALVA BC680 contains two connectors. From front to back: a USB keyboard connector and a power connector.

2.3.5. Front panel keys

The names of the ALVA BC680 keys listed in this section will be used in all documentation, including your screen reader documentation. This section describes the name of the key(s) and its main function, which is supported by the screen reader. The exact functionality is defined by the screen reader. Please refer to your screen reader documentation for detailed functionality of the ALVA BC680

Smartpad

The integrated Smartpad allows for navigation through menus and dialog boxes. The ALVA BC680 contains two Smartpads. The left Smartpad is located on the left side of the Braille Controller, in front of Braille cells 11 to 30. The right Smartpad is located on the right side of the Braille Controller, in front of cells 51 to 70. From left to right, the Smartpad keys are:

Smartpad key 1	First rectangular key at the left marked with 3 horizontal lines
Smartpad key 2	Second rectangular key at the left marked with 1 horizontal line
LEFT	Left key on the 5-way navigation key
UP	Top key on the 5-way navigation key
DOWN	Bottom key on the 5-way navigation key
RIGHT	Right key on the 5-way navigation key
MIDDLE	Middle key marked with a round dot of the 5-way navigation key
Smartpad key 3	Second rectangular key from the right marked with 1 vertical line
Smartpad key 4	Most right rectangular key marked with 3 vertical lines

eTouch keys

The two keys on each side of the Braille line are called the eTouch keys. They are used for panning left and right as well as various other Braille functions.

eTouch key 1	Top left key marked with two vertical lines
eTouch key 2	Bottom left key marked with one horizontal line
eTouch key 3	Top right key marked with two vertical lines
eTouch key 4	Bottom right key marked with one horizontal line

Cursor Routing Keys

The cursor routing keys correspond to the particular Braille cell immediately above each button. Typically, they are used for routing the cursor or caret to the corresponding Braille cell, generating a left or right mouse click at that point, or for obtaining additional information about the contents of the Braille cell.

Thumb keys

At the front of the Braille Controller ten front panel keys are placed, the so-called thumb keys. Eight bigger keys are symmetrically aligned along the front of the ALVA BC680. Two smaller buttons are located at the far left and right side of the front. Pressing one of the eight bigger thumb keys will navigate left, right, up or down. By pressing one of the smaller keys, you will return to the cursor position.

3. Installation

In this section, a general description of the installation procedure is described for the JAWS, Window-Eyes and Dolphin Supernova screen readers for Windows 7 and higher and Bluetooth® installation.

The ALVA Braille Controller is compatible with most modern operating systems, including Windows 7, Windows 8, Linux, Apple OS X, Apple iOS, Google Chrome OS and Android. Please refer to the screen reader documentation for instructions on how to setup and configure the Braille display for your screen reader of choice and operating system.

3.1. Setting up the ALVA Braille Controller

3.1.1. Setting up the USB connection

The ALVA Braille Controller does not need any special USB drivers. Windows 7 (or higher and most other operating systems) will automatically detect the ALVA Braille Controller and install the necessary USB drivers.

1. Attach the USB cable to the ALVA Braille Controller and computer.
2. A removable drive will appear on the screen. This drive contains the ALVA BC6-series screen reader drivers for JAWS, Window-Eyes and Dolphin Supernova.
3. Switch on the ALVA Braille Controller. Windows will automatically install the necessary drivers. This process will take approximately 1 minute. Please do not turn off the ALVA or cancel the installation during this process. Generally this does not require any further user input. When the connection is established the ALVA Braille Controller will issue an audible signal and displays the message "USB connected".

3.1.2. Setting up the USB keyboard connection of the ALVA BC680

The USB keyboard connection is only available on the ALVA BC680. To connect your PC keyboard to the ALVA BC680, locate the USB keyboard connector on the left side of the ALVA BC680. Make sure your ALVA BC680 is connected to the PC and insert the USB plug of your keyboard. Windows will automatically detect your keyboard without having to install drivers.

3.2. Installing ALVA BC6-series screen reader drivers

Drivers for the majority of the screen readers are included in the products themselves. Therefore, you do not need to install the screen reader drivers from the ALVA BC6-series CD-ROM or removable drive within the ALVA. Please refer to your screen reader documentation for more information on the setup of, and selection of a Braille display to select and configure the ALVA Braille Controller in your screen reader.

Only if the drivers on the CD-Rom are newer than the drivers included with the screen reader, we recommend to install the screen reader drivers from the CD-ROM or ALVA internal removable drive:

1. Insert the ALVA BC6-series software CD-ROM that came with the package in your computer's disk drive.
2. The program will automatically run if the autostart feature of your CD-ROM drive is enabled.
 - a. If the autostart feature is not enabled, press the Windows key and type d:\setup.exe (assuming d: is the letter assigned to your CD-ROM drive) and press Enter.
 - b. Or, locate the ALVA folder on the ALVA BC6-series removable drive and run the "ALVA BC6 Setup.exe".
3. Select "Install screen reader drivers"
4. The setup program will guide you through the installation.
5. The setup program will automatically search your system for installations of JAWS, Window-Eyes and Dolphin screen readers and will install all necessary drivers, manuals and the ALVA BC6 Bluetooth® pairing utility.

3.3 Bluetooth® connection

To create the Bluetooth® connection with your ALVA, the device will need to be paired with the PC using the ALVA Bluetooth Utility included with the ALVA screen reader drivers.

Important:

Please use the ALVA Bluetooth Utility to establish the Bluetooth connection. Do not use the standard Windows Bluetooth pairing control panel applet. The ALVA Bluetooth Utility will register the ALVA with the screenreader.

Pairing the ALVA BC640 or BC680 using the ALVA BC6 Bluetooth®Utility

1. Launch the ALVA BC6 Bluetooth® Utility located on your desktop or by going to Start, All Programs, ALVA BC6, ALVA BC6 Bluetooth® Utility;
2. Press the Search button.
3. Select the ALVA BC6 from the list by checking the checkbox;
4. Click on "OK" if you did not change the default PIN code "0000". Otherwise, please enter your PIN code and click on "OK".

Connecting the Bluetooth ALVA BC680 USB keyboard:

1. In the ALVA Bluetooth® Utility, select the ALVA BC680 you just paired from the list and right click or press shift-F10;
2. Select "Connect keyboard" from the context menu.
3. A new window will open. In this window, select your ALVA (other device) and right click or press shift-F10;
4. In the context menu, select "Properties";

5. On the “Services” tab, check the checkboxes to enable the available services.

Unpairing an ALVA:

1. In the ALVA Bluetooth® Utility, select the ALVA BC6 from the list and right click or press shift-F10;
2. Select “Unpair” from the context menu and press enter.

Please note:

- A. *You will have to restart your screen reader to establish the Bluetooth® connection.*
- B. *Most screenreaders use the first found ALVA. Therefore, make sure that the ALVA you would like to use is at the top of the list. Use the “Up” button in the ALVA Bluetooth® Utility to move an ALVA up the list.*
- C. *Unchecking the checkbox in the list of paired ALVA’s in the ALVA Bluetooth Utility will not unpair the ALVA. By unchecking the checkbox the screenreader will no longer use this particular ALVA and will remove it from the list of available ALVA’s for the screenreader.*
- D. *If there are multiple Bluetooth® stacks installed on your system, make sure you select the Bluetooth® stack you would like to use with your ALVA in the ALVA Bluetooth® Utility before proceeding with pairing the unit.*

4. The ALVA BC6-series menu

This chapter describes the menus of the ALVA BC6-series. Standard there is one so-called Local Menu on the ALVA BC640 and ALVA BC680. The Local Menu enables you to change several built-in settings of the Braille display.

When the ALVA BC640 or ALVA BC680 is switched on, the following message is displayed:

“ALVA BC640 ready” followed by the date and time.

“ALVA BC680 ready” followed by the date and time.

This message will automatically disappear when the screen reader is loaded and a successful connection with the ALVA BC640 or ALVA BC680 is established.

4.1 Local Menu

Some menu items in the Local Menu are only available when using an ALVA BC680. These menu items are marked as “*ALVA BC680*”.

4.1.1. Activating the Local Menu

To enter the Local Menu press the keys Smartpad key 2 + Smartpad key 3 + arrow down key simultaneously.

To exit the Local Menu:

1. Press Smartpad key 1. The Smartpad keys are located on top of the ALVA BC640. If you are using an ALVA BC680, please use the left Smartpad, located in front of Braille cell 11 to 30. The arrow keys and Enter key are located in the centre of the Smartpad. The four remaining keys are labeled from left to right Smartpad key 1 to 4. Refer to chapter 2 for a detailed description of the ALVA Braille Controller keys.
2. Or, press eTouch key 1. eTouch key 1 is the top key marked with the 2 vertical lines, located left of the Braille line.

Note: Depending on the used screenreader, you may need to close your screenreader first in order to access the local menu

4.1.2. Changing settings in the Local Menu

The Local Menu allows you to configure the ALVA Braille Controller or review information about the current status of the ALVA BC6-series.

To navigate in the menu use the following keys:

Local menu	Key Combination
Next menu item	Thumbkey 4 or Smartpad arrow down key
Previous menu item	Thumbkey 2 or Smartpad arrow up key
Select menu item	Thumbkey 3 or Smartpad Enter key
Next field in menu item	Thumbkey 5 or Smartpad arrow right key
Previous field in menu item	Thumbkey 1 or Smartpad arrow left key
Change value in menu field item	Thumbkey 2 and 4 or Smartpad arrow up / down keys
Confirm and leave field	Thumbkey 3 or Smartpad Enter key
Exit menu without saving changes	eTouch key 1 or Smartpad key 1

To indicate that a menu item is activated, it will be underlined with dot 7 and 8.

The Local menu has the following items:

Battery: 45%, charging

Battery presents the status of the battery and informs you if the battery is charging. In case the USB connection is used, the ALVA BC640 or ALVA BC680 will charge via USB automatically.

Date/Time: 01/01/2014 01:00:00

Date and time. This menu item shows the current date and time. To set the date and time and to change the date and time format, please refer to the set date, set time and date and time format menu options.

Bluetooth® status: connected

Bluetooth® status displays if the ALVA BC640 or ALVA BC680 Bluetooth® is connected or disconnected.

Set Bluetooth® pairable

Set Bluetooth® pairable. Activating this menu item will disconnect the current Bluetooth® connection and make the ALVA Braille Controller visible to other Bluetooth® devices. Alternatively, switching the ALVA BC640 or ALVA BC680 off and on will disconnect the current Bluetooth® connection and switches the Bluetooth® module into the pairable state as well.

Bluetooth: on

Bluetooth® on / off. The ALVA Braille Controller Bluetooth® module can be switched on or off using this menu item.

Bluetooth® pin: 0000

Bluetooth® PIN. The ALVA Braille Controller is protected by a Personal Identification Number (PIN) to prevent other people from setting up a wireless connection with your Braille display. This setting allows you to enter your own PIN code. By default the PIN code is set to 0000. This number is required when setting up a wireless connection with your PC or other Bluetooth® device. Use this menu item to change the Bluetooth® PIN.

Bluetooth® name: ALVA BC640

Bluetooth® name: ALVA BC680

Bluetooth® Name. Specify the Bluetooth® name for the ALVA BC640 or ALVA BC680. This allows you to uniquely identify the ALVA Braille Controller if you are setting up a wireless Bluetooth® connection with your PC or other Bluetooth® device. By default the Bluetooth® name is ALVA BC640 when using an ALVA BC640, or ALVA BC680 when using an ALVA BC680. To be able to use your ALVA with Apple and Android devices, please do not change the default name. Apple and Android require the Bluetooth® name to start with ALVA BC640 or ALVA BC680.

Sleep: 30

Sleep. By default the sleep time function is set to 30 minutes. Set a time of 5, 10, 15 or 30 minutes, indicating the time after which the Braille display puts itself into sleep mode if there is no activity. To disable the sleep function, select never. Consequently, the ALVA BC640 and BC680 consume virtually no energy when the Braille display is in sleep mode.

Dot pressure: 5

Dot pressure. Select the Braille reading comfort by setting the dot pressure. If you prefer hard and stiff Braille dots set the value to 5. If you prefer soft and weak Braille dots, set the value to 1. The default setting is 5.

Number status cells: 0

Number status cells. By default the number of status cells is 0. To enable status cells, select a value of 1 to 20 status cells when using an ALVA BC640 or a value of 1 to 40 when using an ALVA BC680. If the status cells are set to 0, the status cells will be disabled and all 40 or 80 Braille cells are used for displaying text and data. Status cells provide useful information about the text on the screen, Windows controls and screen reader mode.

Please note that some screenreaders, such as JAWS, ignore this setting. To set the number of status cells in JAWS, please refer to the JAWS help documentation.

Status cells: Left

Status cells. The default position of the status cells is on the left. Select the position of the status cells either on the left or right side on the Braille display.

Please note that some screenreaders, such as JAWS, ignore this setting. To set the number of status cells in JAWS, please refer to the JAWS help documentation.

Split point configuration menu

When split point is **enabled**, the Braille display will be divided into two segments. This enables you to read and interact with two devices simultaneously. For example, the Bluetooth® screen reader output of a mobile phone can be displayed on the first segment of the Braille display while the second segment can be used to read the PC screen reader output via the USB connection. The cell between the two segments will have all 8 dots raised to indicate where the first segment ends and the second segment starts. By default the first segment will display the information sent via the Bluetooth® connection. The second segment will display the information sent via the USB connection. If you own an ALVA BC680 you can connect e.g. two PCs using the two USB ports on the back side of the ALVA BC680. To be able to use the split point feature, please make sure your screen reader supports this function. To find out if your screen reader supports the ALVA BC6 split point functionality, please refer to your screen reader documentation.

Split point configuration menu : Split point active: off

Split point active. The first item in the Split point Configuration menu is the option to enable or disable the split point feature.

Split point configuration menu: Split point: 5

Split point. Adjust the number of cells used for the split point function by selecting the number of cells.

Split point configuration menu: Display layout: BT-USB

Display layout. This option selects which connection is linked to a Braille display segment. By default the Bluetooth® connection is linked to the first segment and the USB connection to the second segment. The hotkey on the ALVA BC680 to change the display layout is Right Smartpad 2 + Right Smartpad 3 + Smartpad up or down.

Split point configuration menu: *ALVA BC680* Split keys: off

Split keys. This menu item is only available when using the ALVA BC680. The ALVA BC680 offers the feature to split the keys in 2 groups of ALVA BC640 keys. If this option is enabled, the left group of keys will be assigned to the left Split point segment and the right group of keys to the right Split point segment. This option can be enabled and disabled using the hotkey Right Smartpad 2 + Right Smartpad 3 + Right Smartpad Enter.

Split point configuration menu: Keys to: left segment

Keys to. When selecting the keys to the left or right segment, the ALVA BC640 keys will be directed to the selected segment and connection. The hotkey to switch the keys on the ALVA BC640 to the left or right segment is Smartpad 2 + Smartpad 3 + cursor routing key 1 for the left segment, and cursor routing key 40 for the right segment.

On the ALVA BC680 this option configures if the connected USB keyboard input is sent to the left or right segment. If the ALVA BC680 Split keys feature is switched off, selecting the Keys to segment will also direct the ALVA BC680 keys to the selected segment. The ALVA BC680 hotkey to switch the keys to the left segment is Right Smartpad 2 + Right Smartpad 3 + Right Smartpad left. To switch the keys to the right segment press Right Smartpad 2 + Right Smartpad 3 + Right Smartpad right.

Repeat keys: on

Repeat keys. The repeat function of the thumb keys can be enabled or disabled. When holding down a thumb key with the repeat function switched on, the thumb keys will start repeating after half a second. This enables you to quickly scroll the display by keeping the thumb key pressed.

2nd cursor routing row: on

2nd cursor routing row. The ALVA BC640 and ALVA BC680 are equipped with one row of cursor routing keys. However, by keeping the cursor routing key pressed the ALVA Braille Controller is able to emulate a second row of cursor routing keys. This will give you the possibility to perform a left and a right mouse click with one row of cursor routing keys. When enabled, the ALVA Braille Controller will differentiate between a short and a long cursor routing key press. A short press will be treated as a press of a key of the first row of cursor routing keys, while a long press will be seen as a press of a key of the second row of cursor routing keys. The length of a “long press” can be set by adjusting the delay time. The default time is half a second. The assignment of the first and second row of cursor key actions depends on the used screen reader. Refer to your screen reader documentation for the assignment of the first and second cursor routing key actions.

2nd cursor routing delay: 500 ms

2nd cursor routing delay. The length of the delay before the second cursor routing key is activated can be set by adjusting the delay time. By default the delay is set to 500 ms or half a second.

Sounds: off

Sounds can be switched on or off. When switched on, a short beep is being generated on each key press. If you prefer no sounds to be generated, select “off”. For each group of keys the beeps can be switched on or off individually.

Cursor routing sound: on

Cursor routing sound can be switched on or off. When switched on, a short beep is generated on each cursor routing key press. If you prefer no sounds to be generated when a cursor routing key is pressed, select off.

eTouch key sound: on

eTouch key sound can be switched on or off. When switched on, a short beep is generated on each eTouch key press. If you prefer no sounds to be generated when an eTouch key is pressed, select off.

Thumb key sound: on

Thumb key sound can be switched on or off. When switched on, a short beep is generated on each thumbkey press. If you prefer no sounds to be generated when a Thumb key is pressed, select off.

Smartpad sound: on

Smartpad sound can be switched on or off. When switched on, a short beep is generated on each Smartpad key press. If you prefer no sounds to be generated when a Smartpad key is pressed, select off.

Set time: 01:01:00

Set time. This setting allows you to adjust the time of the internal clock of the ALVA.

Set date: 01:01:2014

Set date. This setting allows you to adjust the date.

Date format: dd-mm-yyyy

Date format. This setting allows you to set the date format. By default this is set to day / month / year. The date can be displayed in the formats dd-mm-yyyy, yyyy-mm-dd and mm-dd-yyyy.

Date separator: /

Date separator. This setting allows you to set the date separator. By default the “/” symbol is used. The date separator can be changed in a “/”, “:”, “.” or “-”.

Time format: 24 hours

Time format. This setting allows you to set the time format. The default is the 24 hour format. The time can be displayed in either the 24 hours or 12 hours format.

Time separator: :

Time separator. This setting allows you to set the time separator. The default is the “:” symbol. The time separator can be changed in “.” or “:”.

Language: English

Language. Select the language for the Local Menu.

Preferred interface: Bluetooth®

Select the preferred interface; Bluetooth® or USB. If the ALVA BC640 or ALVA BC680 is connected to two mainstream devices using its Bluetooth® and USB connection, the device will only “communicate” with the preferred interface. By default the preferred interface is Bluetooth®. The USB connection will be ignored.

For the ALVA BC640 the hotkey to change the preferred interface is Smartpad 2 + Smartpad 3 + Cursor Routing Key 1 for the Bluetooth® connection and Smartpad 2 + Smartpad 3 + Cursor Routing Key 40 for the USB connection.

ALVA System drive: on

ALVA System drive. When the ALVA System drive is on, the internal drive is visible and accessible by Windows. When turned off, the drive is no longer accessible by Windows resulting in the drive not popping up when switching on the ALVA BC640 or BC680.

BT MAC: xxxx:xx:xxxxxx

BT MAC refers to the ALVA BC640 or ALVA BC680 Bluetooth® MAC address. A Bluetooth® MAC address uniquely identifies a Bluetooth® device.

Firmware: #.#.# BT: #.##.#

Firmware version shows the version of the built in ALVA BC6-series software and the software version for the Bluetooth® module.

Hardware: 98

Hardware version shows the version of the ALVA BC640 or ALVA BC680 hardware revision.

Restore factory settings

Restore factory settings allows you to restore the factory settings. If you select this option the ALVA BC6-series factory defaults will be restored. Alternatively, the ALVA BC6-series factory defaults can be restored by deleting the SETTINGS.A6 file from the internal ALVA_BC6 drive. To delete the SETTINGS.A6 file:

- Connect your ALVA Braille Controller to the USB port of your PC using the supplied USB cable
- The ALVA_BC6 driver will automatically appear
- Locate and open the system folder
- Locate the SETTINGS.A6 file
- Delete the file

To format the internal drive and restore all settings, press thumbkey 1 and 5 while switching on the unit.

Note: The system folder is a hidden folder. To see hidden folders, you have to enable “show hidden files and folders” in Windows Explorer.

Test mode

Test mode. Use the test submenu if you have the impression that certain keys or Braille cells are not responding properly. The ALVA BC640 and ALVA BC680 have

two built-in tests: a Braille cell test and a key test. When activating the key test, pressing a particular key provides a unique dot pattern on the array of Braille cells. The Braille cell test will cycle all dots continuously.

5. Power Sources

There are three ways to power the ALVA BC640 or ALVA BC680:

- Using the USB power;
- Using the internal battery;
- Using the external power adapter

In the subsequent sections, you will find more information about each power option.

5.1. USB power

If you connect your ALVA BC640 or ALVA BC680 directly to a PC using the USB connection, the PC will provide power to the Braille display through the USB cable. The USB connection provides sufficient power to charge the base unit's internal battery and to operate the ALVA Braille Controller Base Unit. If you are using an ALVA BC680, please make sure to connect it to the left USB port (marked with one dot) as the internal battery can only be charged by using this USB port.

5.2 Internal battery

The ALVA BC640 and ALVA BC680 run on an internal battery if no external power is plugged in or no USB connection is used. The ALVA BC640 will approximately run up to 15 hours on a fully charged battery and the ALVA BC680 will run approximately 10 hours on a fully charged battery. Typically, the internal battery is used in case of a wireless Bluetooth® connection.

5.3 External power adapter

An external power adapter is provided with the ALVA BC640 or ALVA BC680 package. As soon as the external power adapter is connected to the Braille Controller, the battery will be charged and the ALVA Braille Controller will draw its power from this adapter. Charging an empty battery will take approximately 4 hours. The external power can be used in combination with wireless Bluetooth® technology or the USB connection.


Warning! Do not use another external power adapter than the one supplied in the ALVA BC640 or ALVA BC680 package.

Appendix: Safety and regulatory notices

Regulatory notice

This equipment has been developed and tested in order to comply with the following regulations:



and  for a Class B digital device, pursuant to part 15 rules.

These limits are designed to provide reasonable protection against harmful interference in a residual installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one of the following measures:

- Re-orient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the distributor or an experienced radio/TV technician for help.

Medical electrical equipment needs special precautions regarding EMC (Electro Magnetic Compatibility) and needs to be installed and put into service according to the EMC guidelines.

WARNING: The use of accessories, transducers and cables other than those specified and sold by the manufacturer of the ALVA BC6 as replacement parts for components, may result in increased emissions or decreased immunity of the ALVA BC6.

By design the ALVA will shut down in case of an ESD 8KV test pulse. The ALVA Braille Controller will need to be switched on again to resume.

FCC Caution:

To assure continued compliance, follow the attached installation instructions and use only shielded interface cables with ferrite core connecting to computer or peripheral devices. Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

FCC RF Radiation Exposure Statement:

This Transmitter must not be co-located or operating in conjunction with any other antenna or transmitter. This equipment complies with FCC RF radiation exposure limits set forth for an uncontrolled environment. To maintain compliance with FCC RF exposure compliance requirements, avoid direct contact to the transmitting antenna during transmitting. Any changes or modifications (including the antennas) made to this device that are not expressly approved by the manufacturer may void the user's authority to operate the equipment.

CE Caution:

- The input and output parts need to be connected properly;
- The unit is for exclusive interconnection with IEC/EN 60XXX certified equipment outside of the user environment and IEC/EN 60601-1 certified equipment within the user environment.
- This device complies with EN 60601-1-2. To minimize the interference from other equipment, a minimum 0.5 m distance shall be kept from other potential electromagnetic sources, such as a Mobile Phone.
- Equipment connected to the analog or digital interfaces must comply with the respective IEC/EN standards (e.g. IEC/EN 60950-1 for data processing equipment and IEC/EN 60601-1 for medical equipment).
- To reduce the risk of an electric shock, make sure the power cord is unplugged from the wall socket. To fully disengage the power to the unit, please disconnect the power cord from the ac outlet.
- Do not open the housing.
- Only qualified service personnel should service the unit.
- All possible configurations shall comply with the current version of the standard for SYSTEMS IEC/EN 60601-1-1 directive.
- When connecting additional equipment to the signal input part or signal output part of the device, be aware a medical system is being configured. Therefore, the person who configures and interconnects the system is responsible for the whole system and needs to make sure it complies with the current version of the requirements of the system standard IEC/EN 60601-1-1. In case there is any doubt about the system compliance with the current version of the requirements of the system standard IEC/EN 60601-1-1, consult the technical service department or your local representative.

Explanation Of Graphical Symbols:

This symbol warns user that uninsulated voltage within the unit may have sufficient magnitude to cause electric shock. Therefore, it is dangerous to make any kind of contact with any part inside this unit.



This symbol alerts the user that important literature concerning the operation and maintenance of this unit has been included. Therefore, it should be read carefully in order to avoid any problems.



Stand-by



Direct Current

Safety Logo:

This device complies with the 93/42/EEC, EN60601-1, EN60601-2 of related European standards.

Disposing of your old product:

-If you see this symbol-

Information on Disposal for other Countries outside the European Union.



This symbol is only valid in the European Union. If you wish to discard this product, please contact your local authorities or dealer and ask for the correct method of disposal.

Classification:

Power by Class I power adapter: TRC-05-2000M

- No Applied Part.
- No protection against the ingress of water: IPX0
- Mode of operation: Continuous Operation
- The equipment not suitable for use in the presence of a flammable anesthetic mixture with air or with oxygen or nitrous oxide: Not AP or APG Category:

Product Specifications:

Specifications

Power Adapter	Input Voltage Range:	100 – 240 VAC
	Input Frequency Range:	50 – 60 Hertz
	Fuse:	Internal and not user replaceable
	Power Output:	5V 1.5A
	Max Input AC Current:	90-264VAC 0.3A
Environment	Operating Temperature:	+0 °C~ +40 °C
Conditions	Storage/Transportation Temperature:	-20 °C~ +60 °C
	Operation Relative Humidity:	20% ~80% Non-Condensing
	Storage/Transportation Relative Humidity:	10% ~95% Non-Condensing
	Atmospheric pressure:	500~1060 hPa

Warranty conditions

Optelec warrants the ALVA BC640 and the ALVA BC680, effective from the date of delivery, to be free of any defects in material and workmanship.

Warranty is not transferable and does not apply to groups, multi users or agencies.

The ALVA BC640 and BC680 has been designed for the individual purchaser to be used in home and office environments. Optelec reserves the right to repair or replace any purchased ALVA BC640 and BC680 with a similar or better product.

In no event shall Optelec or its distributors be liable for indirect or consequential damages. The original user's remedies are limited to replacement of ALVA BC640 and BC680 modules. This warranty is valid only when serviced in the country of original purchase and with intact seals. For additional warranty claims or service during or after warranty period, please refer to your distributor. Optelec takes no responsibility for use of this device other than described in this manual.

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