

ALVA BC640 & ALVA BC680

User Manual English

UDC-02037B

© 2007 Optelec, the Netherlands.
All rights reserved



Optelec
2993 LT Barendrecht
The Netherlands
Telephone: +31 (0)88 6783 444. Fax +31 (0)88 6783 400
Internet: www.optelec.com

Content

- 1. Introduction..... 4
 - 1.1. About this manual 4
 - 1.2. ALVA Braille Controller package contents 4
- 2. Getting to know your ALVA Braille Controller 6
 - 2.1. ALVA BC640 Base Unit 6
 - 2.1.1. Surface and front panel lay-out..... 6
 - 2.1.2. Back panel lay-out 7
 - 2.1.3. Right side lay-out 7
 - 2.1.4. Left side lay-out 7
 - 2.1.5. Front panel keys, Smartpad, eTouch navigation buttons and cursor routing keys..... 7
 - Smartpad..... 7
 - eTouch keys 8
 - Thumb Keys 8
 - 2.2. The ALVA BC640 Braille Audio Feature Pack 8
 - 2.2.1. Braille Audio Feature Pack: Surface lay-out 9
 - 2.2.2. Right Side lay-out 9
 - 2.2.3. Left Side lay-out..... 9
 - 2.3. ALVA BC680 Unit 9
 - 2.3.1 Surface and front panel lay-out..... 10
 - 2.3.2 Back panel lay-out 10
 - 2.3.3 Right side lay-out 11
 - 2.3.4 Left side lay-out 11
 - 2.3.5 Front panel keys, Smartpad, eTouch navigation buttons and cursor routing keys..... 11
 - Smartpad..... 11
 - eTouch keys 11
 - Cursor Routing Keys 11
 - Thumb keys..... 12
- 3. Installation 13
 - 3.1. Setting up the ALVA Braille Controller 13
 - 3.1.1. Setting up the USB connection..... 13
 - 3.1.2 Setting up the USB keyboard connection of the ALVA BC680 13
 - 3.2. Installing ALVA BC6-series screen reader drivers 13
 - 3.3. Bluetooth® connection..... 14
 - 3.3.1. Preparing for Bluetooth® connection 14
 - 3.3.2. Setting up the Bluetooth® USB dongle..... 14
- 4. The ALVA BC6-series menu 19
 - 4.1. Local Menu 19
 - 4.1.1. Activating the Local Menu..... 19
 - 4.1.2. Changing settings in the Local Menu 19
 - 4.2. The Feature Pack Menus (ALVA BC640 only) 29
 - 4.2.1. The Braille Audio Feature Pack Bluetooth® Menu..... 29
 - 4.2.2. The Braille Audio Feature Pack Audio Menu 30
- 5. Power Sources 31
 - 5.1. USB power 31
 - 5.2. Internal battery 31

Optelec

5.3.	External power adapter.....	31
6.	The ALVA BC6 Control Panel	32
6.1.	Configuring Audio	32
6.2.	Using the Braille keyboard.....	32
6.3.	Remember selected Braille connection	33
7.	Using the Braille keyboard.....	34
7.1	Chord commands.....	34
7.2	Prefix chord commands	35
7.3	Contracted Braille on/off.....	35
7.4.	Special characters on/off.....	35
8.	Notes.....	36
8.1	Starting Notes.....	36
8.2	Using Notes	36
8.2.1	Editing text.....	36
8.2.2	Navigating in Notes.....	37
8.2.3	Defining a block	37
8.2.4	Reading in Notes.....	37
8.3	The Notes Menu	38
8.3.1	Notes main menu.....	38
8.3.1.1	File menu.....	38
8.3.1.2	Edit menu	39
8.3.1.3	Braille	39
8.3.1.4	Help.....	40
8.4	Notes Shortcut Key Combinations	40
	Regulatory notice.....	41
	CE Caution:	41
	Explanation Of Graphical Symbols:	42
	Safety Logo:	42
	Disposing of your old product:	42
	Classification:	42
	Product Specifications:	43
	FCC:	43
	FCC RF Radiation Exposure Statement:.....	44
	Optelec offices worldwide	45

1. Introduction

Congratulations on choosing the ALVA Braille Controller. The ALVA Braille Controller 6-series is the first series of wireless Braille Controllers that 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, PDA or (smart) phone. Used in combination with screen reading software the ALVA Braille Controller can be installed for particular 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, PDA or Smartphone. Note that the functionality of the ALVA Braille Controller depends somewhat on the Braille display options of your screen reader and your mainstream computing hardware.

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. 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.

1.2. ALVA Braille Controller package contents

The ALVA BC640 package contains the following:

- A pouch
- The ALVA BC640 Base Unit
- Power adapter 110/240V and power cable
- Long and short USB cables
- A USB Bluetooth® dongle, Class 1, Windows XP SP2 and Windows Vista compatible
- The ALVA BC driver software for Windows XP and Windows Vista and documentation on CD-ROM
- This manual in print

-
- Quick Start Guide in Braille and print

The ALVA BC640 with Braille Audio Feature Pack package contains the following:

- A carrying bag
- The ALVA BC640 Base Unit including the Braille Audio Feature Pack
- Power adapter 110/240V and power cable
- Long and short USB cables
- A USB Bluetooth® dongle, Class 1, Windows XP SP2 and Windows Vista compatible
- The ALVA BC driver software for Windows XP and Windows Vista and documentation on CD-ROM
- A headset
- This manual in print
- Quick Start Guide in Braille and print

The ALVA BC640's Braille Audio Feature Pack package contains the following:

- A carrying bag
- The Braille Audio Feature Pack
- The ALVA BC driver software for Windows XP and Windows Vista and documentation on CD-ROM
- A headset
- A hex key
- This manual in print
- Quick Start Guide in Braille and print

The ALVA BC680 package contains the following:

- A pouch
- The ALVA BC680 unit
- Power adapter 110/240V and power cable
- Long and short USB cables
- A USB Bluetooth® dongle, Class 1, Windows XP SP2 and Windows Vista compatible
- The ALVA BC driver software for Windows XP and Windows Vista and documentation on CD-ROM
- This manual in print

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

2. Getting to know your ALVA Braille Controller

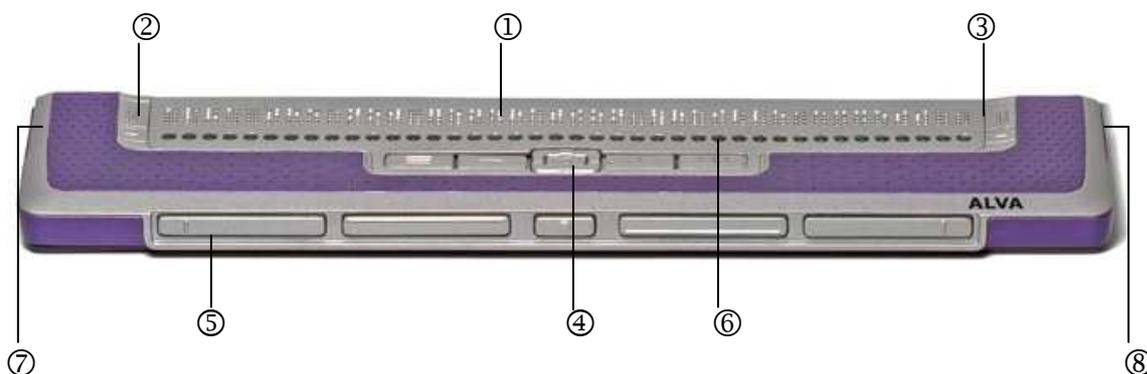
The ALVA Braille Controller consists of a 40 cell or 80 cell Braille line with advanced navigation possibilities. Optionally Braille Audio Feature Pack is available for the ALVA BC640. This chapter will give a detailed overview of the lay-out of the ALVA BC640 Base Unit, the ALVA BC640 Braille Audio Feature Pack 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. eTouch keys (left) for panning left and right and screen reading functions
3. eTouch keys (right) for panning left and right and screen reading functions
4. Smartpad with 5-way navigation key and 4 keys for easy access to mainstream devices
5. 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 connectors
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. The Smartpad can be used for operating mainstream devices such as PC's, (smart)phones and PDA's.

2.1.2. Back panel lay-out

At the back of the Braille Controller, a connector can be found for the Braille Audio Feature Pack.

2.1.3. 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.

2.1.4. 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.

2.1.5. Front panel keys, Smartpad, eTouch navigation buttons and cursor routing 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 simultaneous access to mainstream devices such as PC's, PDA's and (smart)phones and 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

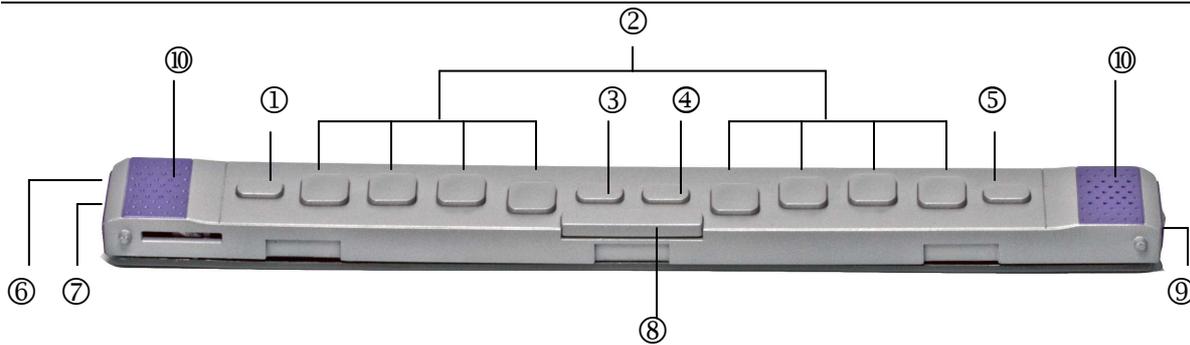
At the front of the Braille Controller five front panel keys are placed, the so called thumb keys. Four bigger keys are symmetrically aligned along the front of the ALVA BC640. One smaller button is located in the middle of the front. Pressing one of the four bigger thumb keys will navigate left, right,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

2.2. The ALVA BC640 Braille Audio Feature Pack

The ALVA BC640 Braille Audio Feature Pack 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 BC640 Base Unit are facing towards you.

The ALVA BC640 Braille Audio Feature Pack contains:

1. The Ctrl key
2. An eight key Braille keyboard (From left to right Braille keys 7, 3, 2, 1, 4, 5, 6, 8)
3. Windows key (to open the Windows Start Menu)
4. Enter key
5. Alt key
6. Headphone connector
7. Microphone connector
8. Space bar
9. Volume control and mute button
10. Integrated high quality stereo speakers



2.2.1. Braille Audio Feature Pack: Surface lay-out

The ALVA BC640 Braille Audio Feature Pack is designed with an eight-key Braille keyboard that is located directly behind the 40 cell Braille line. The Braille keyboard consists of eight Braille keys, a space bar, a Ctrl key, a Windows key, an Enter key and an Alt key and two integrated high quality stereo speakers that are located at the left and right of the Braille keyboard. The space bar is the long key that is located at the centre of the Braille Audio Feature Pack. The eight rectangular keys located at the left and right of the space bar are the Braille input keys. The four square keys are the Ctrl key, Windows key, Enter key and Alt key. From left to right the keys are labeled as Ctrl key, Braille key 7, Braille key 3, Braille key 2, Braille key 1, Windows key, Enter key, Braille key 4, Braille key 5, Braille key 6, Braille key 8 and the Alt key.

2.2.2. Right Side lay-out

The volume and mute button is located on the right side of the Braille Audio Feature Pack. Moving the button toward you allows you to turn the volume down and moving the button away from you will turn the volume up. Pressing the button will mute the audio, which will generate a low beep. Pressing this button once again will generate a louder beep and will switch the mute function off. A message will display on the Braille line to indicate whether or not the mute function is on or off.

2.2.3. Left Side lay-out

The left side of the Braille Audio Feature Pack contains two connectors. From back to front you will find a 3.5 mm headphone connector and a 3.5 mm microphone connector.

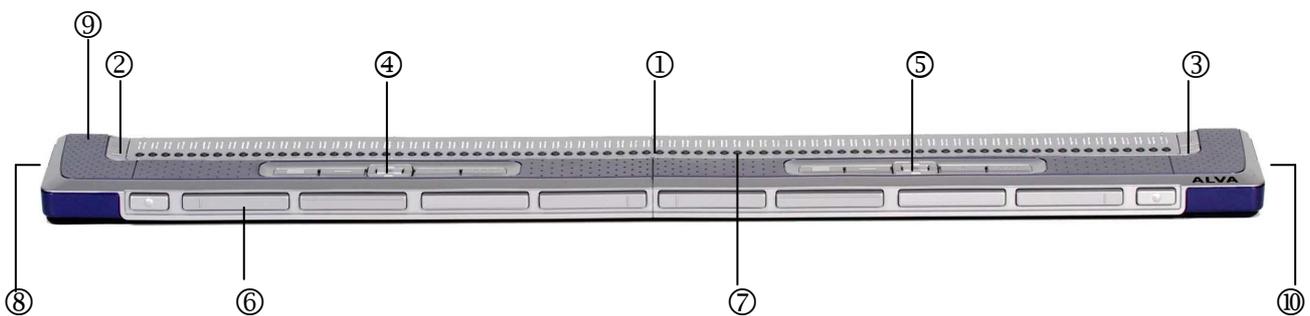
2.3. ALVA BC680 Unit

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 BC640 Braille Audio Feature Pack contains:

1. 80-cell Braille display
2. eTouch keys (left) for panning left and right and screen reading functions
3. eTouch keys (right) for panning left and right and screen reading functions

4. Smartpad (left) with 5-way navigation key and 4 keys for easy access to mainstream devices
5. Smartpad (right) with 5-way navigation key and 4 keys for easy access to mainstream devices
6. Thumbkeys for panning left, right, up and down and returning to the cursor position
7. 80 Cursor Routing Keys
8. Power supply and keyboard connectors
9. USB ports (left and right)
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. One 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 dots 11 to 30) and a Smartpad Right (in front of dots 51 to 70). Each Smartpad consists of 4 function keys and a 5-way navigation key. The Smartpad can be used for operating mainstream devices, such as PC's, (Smart)phones and PDA's.

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 and this port can not 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: keyboard connector and power connector.

2.3.5 Front panel keys, Smartpad, eTouch navigation buttons and cursor routing 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 simultaneous access to mainstream devices such as PC's, PDA's and (smart)phones and navigation through menu's 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 eTouch 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 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 and Dolphin screen readers for Windows XP and Windows Vista, the Braille Audio Feature Pack setup and Bluetooth® installation. Please refer to the screen reader documentation for instructions on how to setup and configure the Braille display for other screen readers and operating systems.

In case you upgraded your ALVA BC640 Base Unit to an ALVA BC640 with Braille Audio Feature Pack, please make sure to upgrade the firmware to version 1.14.0 or higher and Bluetooth® version 1.6.0 and 1.4.0. To learn more about the firmware version, please refer to chapter 4.

3.1. Setting up the ALVA Braille Controller

3.1.1. Setting up the USB connection

The ALVA Braille Controller is compatible with Windows XP and Windows Vista. Older Windows versions are not supported. It does not need any special USB drivers. Windows XP or Windows Vista will automatically detect the ALVA Braille Controller and install the necessary drivers.

1. Attach the USB cable to the ALVA Braille Controller and computer.
2. A 4GB removable drive will appear on the screen. This drive contains the ALVA BC6-series screen reader drivers for JAWS and Dolphin.
3. Switch on the ALVA Braille Controller. Windows will automatically install the necessary drivers. 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”.
4. If you use an ALVA BC640 with Braille Audio Feature Pack, the audio will be rerouted to the Braille Audio Feature Pack and the Braille keyboard will be installed. Please refer to chapter 6 for the configuration instructions for the USB audio and the eight key Braille input for the ALVA BC640 with Braille Audio Feature Pack.

3.1.2 Setting up the USB keyboard connection of 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 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

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, open the Windows Start Menu, select 'Run' and type d:\setup.exe (assuming d: is the letter assigned to your disk drive) and press Enter.
 - b. Or, locate the ALVA_BC640 or ALVA_BC680 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 Control Panel. Please note that the ALVA BC640 and BC680 is only supported by Windows XP and Windows Vista.

Drivers for screen readers other than Dolphin, Window-Eyes and JAWS are included in the products themselves and are not found on the ALVA BC6-series CD-ROM. Please refer to your screen reader documentation for more information about the setup of the ALVA Braille Controller. You have the choice between two setup types: a complete and a custom setup. We recommend that you use the "Complete" setup. The "Complete" setup will automatically install and update all the necessary components. If you would like to install the ALVA BC6-series software manually you can choose the "Custom" setup option. This option is for advanced users only. The "Custom" setup will ask you what components you would like to install. For each component chosen you will need to provide the correct installation location.

Note:

The USB audio channel in Windows is configured to mix the microphone audio with the playback audio. This can result in a beeping sound when connection the Braille Audio Feature Pack to the PC via USB. To prevent Windows from mixing the microphone with the playback device mute the microphone in the playback mixer of the Windows volume control.

3.3. Bluetooth® connection

3.3.1. Preparing for Bluetooth® connection

With the ALVA BC640 and ALVA BC680 a class 1 high range USB Bluetooth® dongle for Windows XP and Windows Vista is included. Depending on the Bluetooth® software included with other Bluetooth® modules, it will be possible that not all ALVA BC6-series functionality will be supported. The Bluetooth® dongle and software, which is included with the ALVA Braille Controller, is optimized for best performance and Bluetooth® range. We therefore highly recommend using the supplied dongle for best results and ease of installation.

3.3.2. Setting up the Bluetooth® USB dongle

Once the screen reader drivers have been installed, the next step is the installation of the supplied Bluetooth® USB dongle.

1. Upon Windows start-up, insert the ALVA BC6-series software CD-ROM. The installation program will automatically run if the autostart feature of your CD-ROM drive is enabled. Please make sure to use the ALVA BC6-series CD and not the Belkin CD.
2. Select Bluetooth® Setup
3. The setup program will guide you through the installation.

Warning!

Please note that the installation of the Bluetooth® software may take more than 20 minutes. Please do not interrupt the setup, even when the setup appears to be unresponsive. Interrupting the setup will result in an incorrect installation of the Bluetooth® software and will cause the ALVA BC6-series Audio and keyboard to function incorrectly. In case the installation is interrupted, please uninstall the Bluetooth® drivers before attempting to reinstall the Belkin Bluetooth® drivers. The uninstallation procedure may take more than 20 minutes. Please make sure to not interrupt the uninstallation procedure.

Once the Bluetooth® dongle and its software are installed, an icon named “My Bluetooth Places” will appear on the desktop of your Windows computer. To create the Bluetooth® connection with your ALVA BC640 Base Unit, ALVA BC640 with Braille Audio Feature Pack or ALVA BC680, the device will need to be paired with the PC. Once the ALVA Braille Controller has been paired successfully, the required Bluetooth® services have to be activated.

The ALVA BC640 Base Unit has one Bluetooth® module and uses one Bluetooth® service. The ALVA BC680 has one Bluetooth® module and uses two Bluetooth® services. The ALVA BC640 with Braille Audio Feature Pack has two Bluetooth® modules and uses four Bluetooth® services.

Bluetooth® modules and services:

Model	Bluetooth® Services			
	Braille Bluetooth® Serial Port	Bluetooth® HID Keyboard	Bluetooth® Mono Audio	Bluetooth® Stereo Audio
ALVA BC640 Base Unit	ALVA BC640 Bluetooth® module			
ALVA BC640 with Braille Audio FP	ALVA BC640 Bluetooth® module	ALVA BC640 Bluetooth® module	ALVA BC640 Bluetooth® module	ALVA BC640 FP Bluetooth module
ALVA BC680	ALVA BC680 Bluetooth® module	ALVA BC680 Bluetooth® module		

As indicated in the figure above, the ALVA BC640 Base Unit only uses the Bluetooth® serial service. However, the ALVA BC640 with Braille Audio Feature Pack uses two modules; one module for the serial connection or serial service, the

HID (Human Interface Device) keyboard connection or keyboard service and the mono headset connection or mono headset service. The second Bluetooth® module is used for the stereo audio. The ALVA BC680 uses the serial and keyboard services.

Pairing the ALVA BC640 or BC680 using the ALVA BC6 Control Panel:

1. Launch the ALVA BC6 Control Panel by going to Start, Programs, ALVA BC6, ALVA BC6 Control Panel;
2. Select the Bluetooth Setup Property Sheet;
3. Select the Belkin Stack and activate the Scan button;
4. Select the ALVA BC6 from the list and press configure;
5. The program will ask you for the pin code and will automatically configure the Bluetooth connection.

Pairing the ALVA BC640 Base Unit (without Braille Audio Feature Pack) using My Bluetooth Locations:

1. Activate the option "My Bluetooth Places"
2. A Wizard will automatically open in Windows Explorer.
3. Activate the "Find Bluetooth devices" option (we recommend you not to use the Bluetooth® setup wizard).
4. Locate the ALVA BC640 in the list with found devices, by using the arrow keys or click it once with the mouse. If the ALVA BC640 is not found, press the F5 key to search again.
5. Press ALT + B for the Bluetooth® menu and select "Pair device".
6. To pair the ALVA BC640 with your Bluetooth® dongle, you have to enter a PIN code. The default code is 0000. In case you changed this number in the Local Menu of the ALVA BC640, please enter your personal code and press Enter. The ALVA BC640 is now paired with your computer.
7. Select the ALVA BC640 from the list with found devices again and press Enter.
8. Select "Dev B on ALVA BC640" and press Enter to connect the serial port. A dialog box with the serial port number will appear. Press Enter to close this dialog box. The ALVA BC640 will issue an audible signal and displays the message "BT connected" to indicate that the connection has been established and is functioning.
9. Select "Headset on ALVA BC640" and press Enter to connect the mono audio. A dialog box will appear to confirm that the audio connection has been established. Press Enter to close this dialog box.
10. Select "Human Interface Device on ALVA BC640" and press enter to connect the Braille keyboard.
11. Press Backspace to return to the "Find Bluetooth Devices" screen.
12. To pair the second module of the Braille Audio Feature Pack for stereo audio, locate the ALVA BC640 Braille Audio Feature Pack in the list of found

devices, using the arrow keys or clicking the mouse once. If the ALVA BC640 Braille Audio Feature Pack is not found, press the F5 key to search again.

13. Press ALT + B for the Bluetooth® menu and select “Pair device”
14. To pair the ALVA BC640 Braille Audio Feature Pack with the Bluetooth® dongle, you have to enter a PIN code. The default code is 0000. In case you changed this number in the Local Menu, please enter your personal code and press Enter. The ALVA BC640 with Braille Audio Feature Pack is now paired with your computer.
15. Select the ALVA BC640 Braille Audio Feature Pack from the list with found devices again and press Enter. A dialog box will appear to confirm that the stereo audio connection has been established. Press Enter to close this dialog box.

Pairing the ALVA BC640 with Braille Audio Feature Pack using My Bluetooth Locations:

1. Activate the option “My Bluetooth Places”
2. A Wizard will automatically open in Windows Explorer.
3. Activate the “Find Bluetooth devices” option (we recommend you not to use the Bluetooth® setup wizard).
4. Locate the ALVA BC640 in the list with found devices, by using the arrow keys or click it once with the mouse. If the ALVA BC640 is not found, press the F5 key to search again.
5. Press ALT + B for the Bluetooth® menu and select “Pair device”.
6. To pair the ALVA BC640 with your Bluetooth® dongle, you have to enter a PIN code. The default code is 0000. In case you changed this number in the Local Menu of the ALVA BC640, please enter your personal code and press Enter. The ALVA BC640 is now paired with your computer.
7. Select the ALVA BC640 form the list with found devices again and press Enter.
8. Select “Dev B on ALVA BC640” and press Enter to connect the serial port. A dialog box with the serial port number will appear. Press Enter to close this dialog box. The ALVA BC640 will issue an audible signal and displays the message “BT connected” to indicate that the connection has been established and is functioning.
9. Select “Headset on ALVA BC640” and press Enter to connect the mono audio. A dialog box confirming that the audio connection is established will appear. Press Enter to close this dialog box.
10. Select “Human Interface Device on ALVA BC640” and press enter to connect the Braille keyboard.
11. Press Backspace to return to the “Find Bluetooth Devices” screen.
12. To pair the second module of the Braille Audio Feature Pack for stereo audio, locate the ALVA BC640 Braille Audio Feature Pack in the list with found devices, using the arrow keys or clicking the mouse once. If the ALVA

BC640 Braille Audio Feature Pack is not found, press the F5 key to search again.

13. Press ALT + B for the Bluetooth® menu and select “Pair device”
14. To pair the ALVA BC640 Braille Audio Feature Pack with the Bluetooth® dongle, you have to enter a PIN code. The default code is 0000. In case you changed this number in the Local Menu, please enter your personal code and press Enter. The ALVA BC640 with Braille Audio Feature Pack is now paired with your computer.
15. Select the ALVA BC640 Braille Audio Feature Pack from the list with found devices again and press Enter. A dialog box confirming that the stereo audio connection is established will appear. Press Enter to close this dialog box.

When the ALVA BC6-series screen reader drivers are properly installed (see paragraph 3.2), you may have to reload your screen reader to establish the Bluetooth® connection.

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 using an ALVA BC640 with the Braille Audio Feature Pack there will be two extra menus: the Bluetooth® connection menu and audio menu described in subchapter 4.3.

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 BC640 with Braille Audio Feature Pack or an ALVA BC680. These menu items are marked as “*FP*” or “*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 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.

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. Some menu items will only be active when a Braille Audio Feature Pack has been installed. These menu items will proceed with “FP”.

Local menu	Key Combination
Next menu item	Smartpad arrow up key
Previous menu item	Smartpad arrow down key
Select menu item	Smartpad Enter key
Next field in menu item	Smartpad arrow right key

Optelec

Previous field in menu item	Smartpad arrow left key
Change value in menu field item	Smartpad arrow up / down keys
Accept changed value in menu field item and leave field	Smartpad Enter key
Exit menu without saving changes	Smartpad key 1

Please note that when the menu is activated, it will be underlined with dot 7 and 8 on the Braille display.

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 start charging via USB automatically.

The status of the battery loading can be:

- Charging The battery is charging
- Not charging The battery is not charging

FP Notes

Notes. This menu item is only available when using an ALVA BC640 with Feature Pack. Press Smartpad Enter to activate the internal Notes function. Or, press space + N to activate Notes.

Date/Time: 01/01/2008 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 too.

Bluetooth: on

Bluetooth®. The ALVA Braille Controller Bluetooth® module can be switched off. To turn Bluetooth® off, press Smartpad Enter key and select “off” with the Smartpad up and down keys. To switch Bluetooth® on again, select “on”.

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. You can change the digits in the PIN by using the Smartpad Enter key and the Smartpad arrow up and down, left and right keys.

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 in case 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. You can change the separate characters by scanning through the alphabet. To change the Bluetooth® name press the Smartpad Enter key. Use the Smartpad arrow up and down keys to scan forward and backward through the alphabet. Use the Smartpad arrow left and right keys to move to the previous or next character. The maximum length of the Bluetooth® name is 16 characters. In case a Braille Audio Feature Pack has been installed, the Bluetooth® name of the Feature Pack will have the extension “FP”. By default the name of the Braille Audio Feature Pack is ALVA BC640 FP.

Sleep: 150

Sleep. By default the sleep time function is set to 150 seconds. Press the Smartpad Enter key and set a time from 5 seconds to 255 seconds, 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. Set the time by using the Smartpad arrow up and down keys. Increase the value by pressing the Smartpad arrow up key. Decrease the value by pressing the Smartpad arrow down key.

FP Braille configuration

Braille configuration. This menu item is only available when using an ALVA BC640 with Feature Pack. Press the Smartpad Enter key to open the Braille configuration submenu. The Braille configuration submenu contains three menu items: keyboard layout, Braille table and contracted (Grade 2) table. These three items are being used to translate the Braille input on the 8-key Braille keyboard into text. It is therefore important to select the same keyboard layout on the ALVA BC640 as in Windows. Your Windows keyboard layout can be found in the *Windows Control Panel/ Regional and Language options/ Languages/ Details*. When a keyboard layout is selected, the ALVA BC640 will attempt to match the Braille table and contracted table if present. If there is no matching Braille table present, no changes will be made. Or, you can manually select a different Braille table or Contracted table. The default Braille table is the NABCC (North American Braille Character Code) and the US English contracted table. The selected Braille table is used in the Local Menu. Please note that screen readers have their own Braille tables. Therefore, the Braille that is being displayed on the Braille display cannot be controlled by the ALVA BC640. Selecting a different Braille table for displaying Braille should be done in the screen reader itself.

To enable or disable the contracted (or Grade 2) Braille input, press Space + B1245 (Braille keys 1, 2, 4, 5). The ALVA BC640 will generate a serie of beeps to indicate that the contracted Braille is turned on or off. Space + B234 will enable or disable the special character set for languages that require multi-lingual input. When the Arabic Braille input is selected, this key combination will toggle between English and Arabic input.

Pressing Smartpad 1 allows you to exit this submenu.

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 statuscells are set to 0, the statuscells 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.

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.

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 send via the Bluetooth® connection. The second segment will display the information send via the USB connection. If you own an ALVA BC60 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. To enable or disable the split point feature select on or off using the Smartpad arrow up and down keys. Alternatively, you might enable or disable the split point feature by pressing the hotkeys Smartpad 2 + 3 + Enter.

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 with the Smartpad arrow up and down keys.

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. On an ALVA BC640 with Feature Pack the display layout can be changed using the quick menu Space+M. In this menu select the "Preferred Interface" and toggle the option by activating it with the cursor routing. The hotkey on the ALVA BC680 to change the display layout is Right Smartpad 2 + Right Smartpad 3 + Smartpad up and down.

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

Split keys. This menu item is only available when using a 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. On the ALVA BC680 this option configures if the 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 pres 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.

2 nd 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.

FP Default volume: 7

Default volume is the volume of the Braille Audio Feature Pack when the ALVA BC640 is switched on. The default volume is 7.

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 set the time. Press the Smartpad Enter key to enter the modification mode. Use the Smartpad arrow up and down keys to change

the time. Use the Smartpad arrow left and right keys to select the hour, minute or seconds.

Set date: 01:01:2008

Set date. This setting allows you to set the date. Press the Smartpad Enter key to enter the modification mode. Use the Smartpad arrow up and down keys to change the date. Use Smartpad arrow left and right keys to select the day, month and year.

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. Press the Smartpad Enter key to enter the modification mode. Use the Smartpad arrow up and down keys to change the date format. 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. Press the Smartpad Enter key to enter the modification mode. Use the Smartpad arrow up and down keys to change the date Separator symbol. 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. Press the Smartpad Enter key to enter the modification mode. Use the Smartpad arrow up and down keys to change the time 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. Press the Smartpad Enter key to enter the modification mode. Use the Smartpad arrow up and down keys to change the time Separator 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®. In the default situation, when the ALVA BC640 or BC680 is connected to two devices via Bluetooth® and USB, the device will only “communicate” with the Bluetooth® connection. The USB connection will be ignored. 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: 2.## BT: 1.##.#

Firmware version presents the version of the built in ALVA BC6-series software and the software version for the Bluetooth® module. If an ALVA BC640 with Braille Audio Feature Pack has been installed the second number after “BT” represent the firmware version for the Braille Audio Feature Pack.

Hardware: 18

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

Firmware update

Firmware update. When activated with the Smartpad Enter key, the ALVA BC640 or ALVA BC680 will be in “Firmware Update” mode. Please do not activate this option if you do not need to update the firmware. Confirming the confirmation message "Are you sure" with clicking on "Yes" with the cursor routing keys will result in the current

firmware being deleted and making the ALVA Braille Controller not usable anymore until a firmware update is performed.

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

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. Pressing Smartpad key 1 to exit the test mode.

4.2. The Feature Pack Menus (ALVA BC640 only)

The ALVA BC640 with Braille Audio Feature Pack has two extra menus: the Bluetooth® connection menu and Audio menu.

4.2.1. The Braille Audio Feature Pack Bluetooth® Menu

To enter the ALVA BC640 Bluetooth® Menu press Smartpad key 2 + Smartpad key 3 + arrow left simultaneously. To exit the Bluetooth® Menu press Smartpad key 1. The Smartpad keys are located on the top of the unit below the Braille line. The arrow keys and Enter key are located in the center of the Smartpad. The four remaining keys are labelled from left to right: Smartpad key 1 to 4. Please refer to chapter 2 for a detailed description of the keys of the ALVA BC640 Base Unit and Braille Audio Feature Pack.

BT: Braille keyboard stereo mono

Bluetooth® Menu. The Bluetooth® Menu shows the status of the various Bluetooth® connections. If a connection is activated dot 7 and 8 will be raised to indicate the connected state. Clicking on a connection with the cursor routing keys will connect or disconnect the particular Bluetooth® connection. Note that the Windows drivers will try to reconnect the Braille connection. Therefore it is highly recommended to disconnect the Braille in the screen reader and not in the ALVA BC640. Secondly, dismantling the keyboard from the ALVA BC640 will prevent the ALVA BC640 driver from reconnecting the keyboard until it is connected from the PC again. In general, it is recommended to have the ALVA BC640 software taking care of the connections. Manually connecting and disconnecting any Windows Bluetooth® connection from the ALVA BC640, except the stereo connection, may result in incorrect behaviour.

When the ALVA BC640 tries to reconnect the audio and keyboard for the first time, the Windows Bluetooth® software will generate a sound and show a popup window, asking for permission to automatically reconnect the ALVA BC640 to the audio and keyboard. To make sure the audio and keyboard automatically reconnect when a connection is lost or when Windows or the screen reader is restarted, please select the checkbox to always allow the connection and click the OK button. Please follow this procedure for the keyboard connection, mono connection and stereo connection. Should the popup not appear at the Bluetooth® notification sound, click on the Bluetooth® icon in the system tray next to the clock.

4.2.2. The Braille Audio Feature Pack Audio Menu

To enter the ALVA BC640 Audio Menu press Smartpad key 2 + Smartpad key 3 + the arrow right key simultaneously. To exit the Audio Menu press Smartpad key 1. The Smartpad keys are located on the top of the unit below the Braille line and cursor routing keys. The arrow keys and Enter key are located in the center of the Smartpad. The four remaining keys from left to right are labelled as: Smartpad key 1 to 4. Please refer to chapter 2 for a detailed description of the keys of the ALVA BC640 Base Unit and Braille Audio Feature Pack.

Audio: BT USB Off Exit

Audio Menu. The Audio Menu shows the availability and status of the Bluetooth® and USB audio. An audio channel is active and available when shown in the menu and underlined with dots 7 and 8. To switch to another audio channel, click the cursor routing key on the audio channel. Clicking the cursor routing key on the menu item “off” will disable the audio, while clicking on “Exit” will close the menu.

5. Power Sources

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

- Using the USB power (without Feature Pack only);
- 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. To power the ALVA BC640 with Braille Audio Feature Pack, please use the power supply that came with the unit. Please note that only the ALVA BC640 Base Unit and ALVA BC680 can be powered via the USB connection. 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. The ALVA BC640 with Feature Pack will approximately run 40 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. Please note that the ALVA BC640 with Braille Audio Feature Pack cannot be charged via the USB connection. 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.

6. The ALVA BC6 Control Panel

This chapter describes the use of the ALVA BC6 Control Panel. The ALVA BC6 Control Panel is found in the *Start Menu/ Programs/ Optelec/ ALVA_BC6* folder. This application enables configuration of the connection settings of the Braille keyboard and mono and stereo Bluetooth® audio as well as the option to pair and configure the Bluetooth connection. See for pairing and configuring the Bluetooth connection chapter 3.

The ALVA BC6 Bluetooth® settings application enables the configuration of the automatic connection of the keyboard and audio upon activating the screen reader. If the connection is lost, the application automatically instructs the ALVA BC6 driver to reconnect the keyboard and audio.

To enable this functionality, the keyboard and audio connections will have to be created only one time (see chapter 3 for instructions on pairing and configuring the Bluetooth connection). When the ALVA BC6 driver creates the audio and keyboard connections for the first time, the Windows Bluetooth® will generate a sound and a popup window asking for permission to have the ALVA BC6 automatically reconnect the audio and keyboard.

To make sure the audio and keyboard automatically reconnect when a connection is lost or when Windows or the screen reader restarts, please select the checkbox to always allow the connection and click the OK button. Please follow this procedure for the keyboard connection, mono connection and stereo connection. Should the popup not appear at the Bluetooth® notification sound, click on the Bluetooth® icon in the system tray next to the clock.

6.1. *Configuring Audio*

There are two settings:

- Automatically connect Bluetooth® Braille keyboard;
- Manually connect Bluetooth® Braille keyboard.

If the first setting is selected, the ALVA BC640 will automatically connect the Braille keyboard upon activating the screen reader. If the connection is lost, the keyboard will attempt to reconnect automatically.

6.2. *Using the Braille keyboard*

The Bluetooth® audio settings are only available in Windows XP. The audio settings are greyed out in Windows Vista. The security restrictions of Windows Vista prevent the ALVA BC640 software from configuring the audio connections. It is therefore recommended to use the stereo connection in Windows Vista, as the stereo connection is more reliable and provides a better audio quality.

There are three settings:

- Automatically connect mono Bluetooth® audio;
- Automatically connect stereo Bluetooth® audio;
- Manually connect Bluetooth® audio

To correctly rout the sound to the ALVA BC640 in Windows XP, please select the audio playback devices for the default audio device, the Bluetooth® mono playback device and the Bluetooth® stereo playback device. Please note that these options are not available in Windows Vista.

The name of the default audio device depends on the brand and model of the sound card manufacturer. The mono Bluetooth® device is most of the time labeled as Bluetooth-audio. To select the stereo Bluetooth® audio device first, you will need to create a Bluetooth® stereo connection:

1. Open "My Bluetooth Locations";
2. Go to "Find Bluetooth Device";
3. Search for ALVA BC640 FP and make sure it is paired;
4. Press Enter on ALVA BC640 FP to create the stereo connection;
5. (Re)start the ALVA BC6 Bluetooth® settings application;
6. Select high quality Bluetooth® audio to set the stereo Bluetooth playback to audio device.

To save the settings all users, make sure the "Save to default user" is checked and press Enter on the "OK" button. To save the settings to the current user, make sure the checkbox is not selected.

6.3. Remember selected Braille connection

If this option is enabled, the ALVA BC6 driver will try to connect to the last known connection first. Checking this checkbox will speed up the start-up time of your screen reader.

7. Using the Braille keyboard

This chapter provides an overview of the Braille key combinations that emulate keyboard function keys. There are two types of function keys; chord commands to emulate keyboard function keys and prefix chord commands to emulate function key combinations.

7.1 Chord commands

Chord commands are Braille key commands that are combined with the space bar. These chord commands are used to emulate keyboard function keys such as Home, End, Backspace, Delete and Escape. Please refer to the figure below for an overview of the chord commands:

Chord command	Keyboard key
Backspace	Space + b12
Escape	Space + b15
Delete	Space + b45
Page up	Space + b13
Page down	Space + b46
Home	Space + b123
End	Space + b456
Tab	Space + b56
Shift-Tab	Space + b23
Shift-Space	Space + b7
Arrow up	Space + b1
Arrow down	Space + b4
Arrow left	Space + b3
Arrow right	Space + b6
Word left	Space + b2
Word right	Space + b5
Shift-Arrow up	Space + b17
Shift-arrow down	Space + b47
Shift-Arrow left	Space + b37
Shift-Arrow right	Space + b67
Shift-Page down	Space + b467
Shift-Page up	Space + b137
Shift-Home	Space + b1237
Shift-End	Space + b4567
Shift-Delete	Space + b457
Shift-Escape	Space + b157

7.2 Prefix chord commands

There four are prefix chord commands to emulate the function keys F1 to F12 (Space + b124 for activating F, followed by the number 1 to 12), Insert (Space + b24), Caps Lock (Space + b14) and Num Lock (Space + b136) combinations.

To press one of the function keys F1 to F12, press Space + b124 (Space + F) followed by a character. The function key number is represented by the characters "a" to "l" while the character "a" represents F1 and "l" represents F12. To press F1 using the Braille keyboard, first type space + b124 followed by the character "a" (Braille key 1). Press the Space + b124 combination once again to exit this function.

Similarly, the Insert, Caps Lock and Num Lock can be typed by pressing Space + b24 for Insert, Space + b14 for Caps Lock and Space + b136 for Numpad. To type an Insert + J command, press Space + b24 followed by a "j" (Braille keys 2, 4, 5). Typing the Insert, Num Lock or Caps Lock command twice will switch the status of this command on or off, depending on its current status.

7.3 Contracted Braille on/off

The chord + g command or Space + b1245 will turn contracted Braille (Grade 2) on or off. The contracted Braille table can be set in the *Local Menu/ Braille configuration/ Contracted Braille table*.

Before you can use contracted Braille input make sure the contracted Braille tables are installed. To install the contracted Braille tables:

1. Connect your ALVA BC640 with Feature Pack to the pc via USB and switch it on;
2. Start the ALVA BC640 installation by locating the Setup on the CD or on the internal ALVA BC6 USB drive;
3. Select the button "Install contracted Braille Tables" and wait until the setup is completed.

7.4 Special characters on/off

Space + b234 toggles special character input on / off. This option is being used for Arabic Braille input. Toggling this special characters on / off makes it possible to enter Arabic Braille and insert an English word or phrase without having to switch to another Braille table.

8. Notes

The Notes application enables you to write and save notes on the internal memory of the ALVA BC640 with Braille Audio Feature Pack. Notes contains a few elementary text adding and editing functions such as copy, cut, paste and a block function.

No PC connection is required to use Notes. When the ALVA BC640 is connected to a PC, you can continue working with the PC after having closed. The ALVA BC640 Braille keyboard has to be used to enter Notes. It is not possible to enter text in Notes via the PC keyboard.

Text entered in Notes will be saved in text format. To correctly translate the Braille input to text format make sure the correct Braille table is selected in the Local Menu, Braille Configuration. If you enter text in contracted Braille, the file will be saved in contracted Braille. To translate the file to text format, save the file using the menu option "Contracted to text" under the Notes Braille menu.

Notes is capable of reading text files created in Windows Notepad or Word that are saved as a "txt file". Files can be copied from and to the ALVA BC640 System drive with the Windows Explorer. Make sure that the files are copied to the Notes folder on the ALVA BC6 System drive.

8.1 Starting Notes

To start the Notes application:

Press Space + b1345 to start Notes. Alternatively, open the Local Menu by pressing Smartpad key 2 + Smartpad key 3 + the arrow down key simultaneously. Use the arrow down key to navigate to Notes and press the Smartpad Enter key to start Notes. A third option to start Notes is to press Smartpad key 2 + Smartpad key 3 + the arrow up key simultaneously to start Notes directly. In all three situations Notes will open a new file..

8.2 Using Notes

This paragraph will describe the different edition options of Notes in more detail.

8.2.1 Editing text

Use the following chord commands to edit text.

Chord command	Keyboard Key
Backspace	Space + b12
Delete	Space + b45

8.2.2 Navigating in Notes

Please use the following commands to navigate in the text:

Chord command	Keyboard Key
Previous character	Space + b3
Next character	Space + b6
Previous line	Space + b1
Next line	Space + b4
Previous word	Space + b2
Next word	Space + b5

The cursor routing keys can also be used to move the cursor and navigate through the text.

8.2.3 Defining a block

Please follow the procedure below to define a text block:

1. Place the cursor at the beginning of the defined block;
2. Press Ctrl+J to mark the beginning of the block;
3. Move the cursor to the end of the block;
4. Press Ctrl+K to mark the end of the block.

The defined block can be copied or cut and pasted elsewhere in the text. The shortcut keys commands for cut, copy and paste are, Ctrl+X, Ctrl+C and Ctrl+V. The commands can also be found in the Notes menu.

8.2.4 Reading in Notes

The following commands have been defined for reading text in Notes:

Command	ALVA BC640 Key
Scroll left	Thumb key 1
Line up	Thumb key 2
Back to cursor	Thumb key 3
Line down	Thumb key 4
Scroll right	Thumb key 5

8.3 The Notes Menu

The Notes menu can be activated by pressing the Alt key. Click on the cursor routing key to activate a menu item. To exit the menu, click on the Alt key once again. Notes menu options can be activated with shortcut key commands. Please refer to paragraph 8.4 for a list of short key combinations.

8.3.1 Notes main menu

To enter the main menu, press the Alt key. The Notes main menu consists of the following three submenus:

- File
- Edit
- Braille
- Help

Press the Alt key once again to exit the main menu.

8.3.1.1 File menu

To enter the File menu, click on File in the main menu, using the cursor routing keys. The File menu contains the following options:

- New
- Open
- Save
- Save As
- Delete
- Exit

New Note

To create a new note, click on New in the File menu. If the current note contains unsaved text, Notes will ask you to save the changes.

Open a Note

To open an existing note, click on Open in the File menu, using the cursor routing keys. A list containing existing notes will display. Navigate through the list using the Smartpad arrow up and down keys. Press the Smartpad Enter key to open the selected note.

Save a Note

To save a note, click on Save in the File menu. If the note does not have a name yet, you will be prompted to enter a new name.

Save As

Clicking on Save As will prompt you to name your current note. If the name already exists you will be asked to overwrite the existing file. Clicking on “No” will prompt you to enter a different file name.

Optelec

Delete a note

Clicking on Delete will prompt you to select the file to be deleted. You will need to confirm to delete the selected file by clicking on "Yes".

Exit Notes

Clicking on Exit will close Notes. If the current note has not been saved, you will be prompted to save the file. Clicking "Yes" will require that you enter a file name. Clicking "No" will close Notes without saving the file.

8.3.1.2 Edit menu

The Edit menu contains the following options:

- Undo
- Cut
- Copy
- Paste
- Find
- Find next

Undo

To undo the last change, click on "undo" in the Edit menu.

Cut

By clicking "cut", the selected block or character will be cut. The selected block or character may be pasted elsewhere in the text. The shortcut key command for "cut" is Ctrl+X.

Copy

By clicking "copy", the selected block or character will be copied. The selected block or character may be pasted elsewhere in the text. The shortcut key command for "copy" is Ctrl+C.

Paste

To paste a "cut" or "copied" block, click "paste". You can also use the shortcut key command Ctrl+V.

Find

To find a word or phrase in a text, click on find and enter the text to be searched for. To start the search press Enter.

Find Next

Find Next will continue the search for the same text string entered in Find.

8.3.1.3 Braille

If you enter text in contracted Braille, the file will be saved in contracted Braille. To translate the file to text format, save the file using the menu option "Contracted to text" under the Notes Braille menu.

8.3.1.4 Help

The Help menu displays the about screen. Press Space+b15 to exit this screen.

8.4 Notes Shortcut Key Combinations

Below you will find an overview of the most frequently used shortcut key combinations:

Command	Keyboard Key
Previous line	Space + b1
Previous word	Space + b2
Previous character	Space + b3
Next line	Space + b4
Next word	Space + b5
Next character	Space + b6
Backspace	Space + b12
Delete	Space + b45
Escape	Space + b15
Copy	Space + b14
Mark start of block	Space + b245
Mark end of block	Space + b13
New note	Ctrl + b1345
Open note	Ctrl + b135
Save note	Ctrl + b234
Paste	Ctrl + b1236
Open / Close Notes Menu	Alt

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 BC640 as replacement parts for components, may result in increased emissions or decreased immunity of the ALVA BC640.

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.

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:

<i>Specifications</i>	
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° ~ +40°
Conditions	Storage/Transportation Temperature: -20° ~ +60°
	Operation Relative Humidity: 20% ~80% Non-Condensing
	Storage/Transportation Relative Humidity: 10% ~95% Non-Condensing
	Atmospheric pressure: 500~1060 hPa

FCC:

FCC Notice:

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference in a residential 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 or more of the following measures:

- Reorient 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 dealer or an experienced radio/TV technician for help.

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.

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.

Optelec offices worldwide

Optelec U.S. Ltd

3030 Enterprise Court, Suite C
Vista, CA 92081
U.S.A.

T. +1 (800) 826-4200

www.optelec.com

Optelec Canada

1832, Boulevard Marie-Victorin
Longueuil, QC J4G 1Y9
Canada

T : +1 (800) 665-3005

www.optelec.com

Optelec Limited

2, Millfield House, Woodshots Meadow
Croxley Green Business Park
Watford, WD18 8YX
United Kingdom

T: +44 (0)1923 23 13 13

www.optelec.co.uk

Optelec Nederland BV

Breslau 4

2993 LT Barendrecht
The Netherlands

T: +31 (0)88 6783 555

www.optelec.nl

Optelec NV

Baron Ruzettelaan 29
B-8310 Bruges
Belgium

T: +32 (0)50 35 7555

www.optelec.be

Tieman GmbH

Fritzlärer Strasse 25
34613 Schwalmstadt
Germany

T: +49 (0)6691 96170

www.tieman.de

Optelec Corporate Headquarters: Breslau 4 - 2993 LT Barendrecht – The Netherlands – T: +31 (0)88 678 3444 – www.optelec.com