braille

ALVA USB 640 Comfort

User Manual

Optelec

User Manual

Version 2

UDC-02067C

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Contents

1. Introduction

Congratulations on choosing the ALVA USB 640 Comfort, a Braille display with high quality Braille cells. The ALVA USB 640 Comfort offers optimal flexibility and productivity in an ultra compact design. Used in combination with a wide range of screen readers, the ALVA USB 640 Comfort can be used with most operating systems.

The ALVA USB 640 Comfort extends the navigational and operational possibilities of your screen reading software, and allows you to be in full control of your computer. Its ergonomic design allows for optimal efficiency when working with a computer. Note that the ALVA USB 640 Comfort 's functionality will depend on the Braille display options of your screen reader and your mainstream computing hardware.

The ALVA USB 640 Comfort was designed to adhere to the Open Standard philosophy to work with mainstream technology, enabling compatibility with most screen reading software and operating systems. For the latest information about screen readers that fully support the device, or for any questions or suggestions concerning the use of this Braille display, please contact your supplier or the Optelec office nearest to you by consulting the contact information page at the end of this manual. Your feedback is highly appreciated. We hope you enjoy working with your ALVA USB 640 Comfort.

1.1. About this manual

This manual will familiarize you with the features and operation of your ALVA USB 640 Comfort. Please read this manual carefully before using your device.

1.2. ALVA USB 640 Comfort package contents

The ALVA USB 640 Comfort package contains the following:
- The ALVA USB 640 Comfort Base Unit
- A sleeve
- USB cable
- The ALVA USB 640 Comfort driver software for Windows 7 and higher, and product documentation on CD-ROM.

If any of these items are missing from your package, please contact your supplier.
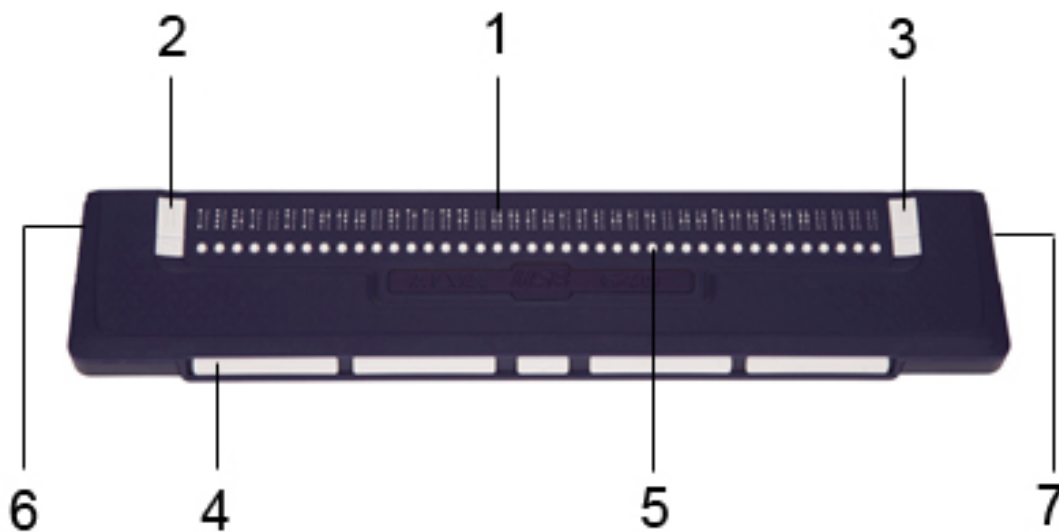
2.   Getting to know your ALVA USB 640 Comfort

This chapter will provide you with a detailed description of the ALVA USB 640 Comfort layout.

2.1. ALVA USB 640 Comfort

The ALVA USB 640 Comfort features:

1.   40-cell Braille display

2.   eTouch keys (left) for panning left and right, and for screen-reading functions

3.   eTouch keys (right) for panning left and right, and for screen-reading functions

4.   Thumb keys for panning left, right, up and down, and for returning to the cursor position

5.   40 Cursor Routing Keys

6.   Mini USB connector

7.   On/off switch

When the ALVA USB 640 Comfort is placed correctly in front of you, the Braille cells are located at the back of the flat surface, and the thumb keys are facing you.

2.1.1. Top and front panel layout

The ALVA USB 640 Comfort design features a row of 40 Braille cells, located at the back of the flat surface. In front of the Braille cells, you will find a row of small buttons, which are 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 are called eTouch keys, which can be used for Braille panning left and right, and also for various other screen reading functions.

2.1.2. Right side layout

The power switch is located on the right side of the ALVA USB 640 Comfort. The ALVA USB 640 Comfort is switched on when the rectangular push-button is pressed. Upon switching it on, the ALVA USB 640 Comfort will generate an audio signal.

2.1.3. Left side layout

The left side of the ALVA USB 640 Comfort features two connectors. From front to back, you will find a 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, eTouch navigation buttons and cursor routing keys

The names of the ALVA USB 640 Comfort keys listed in this section will be used throughout all of the documentation, including the screen reader documentation. This section will present the name of the keys, and describe their main function as supported by the screen reader. Their precise function is defined by the screen reader. Please refer to your screen reader documentation for detailed key function definitions.

eTouch keys
The two keys found on each side of the Braille line are called eTouch keys. They are used for panning left and right, and also for 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
Each cursor routing key corresponds to the Braille cell located immediately above it. These keys are typically 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 content of the Braille cell.

Thumb keys
At the front of the ALVA USB 640 Comfort, you will find five front panel keys known as thumb keys. These include four large keys symmetrically aligned along the front of the ALVA USB 640 Comfort, and one smaller button located in the centre. Pressing the four large thumb keys will allow you to navigate left, right, up or down respectively. Pressing the key in the middle will allow you to return to the cursor position.

3. Installation

This section will present a general description of the installation procedure for the JAWS, Dolphin and Window-Eyes screen readers on a Windows 7 or higher platform. To install and configure the Braille display with other screen readers and operating systems, please refer to the screen reader documentation for instructions.

3.1. Setting up the ALVA USB 640 COMFORT

The ALVA USB 640 COMFORT is compatible with Windows XP, Windows Vista and Windows 7. Previous versions of Windows are not supported. Windows XP, Windows Vista or Windows 7 will automatically detect the ALVA USB 640 Comfort, and install the necessary USB drivers.

1. Attach the USB cable to the ALVA USB 640 Comfort and then to the computer. Comfort Switch on the ALVA USB 640 Comfort. Windows will automatically install the necessary USB drivers. This does not require any further user input. Once the connection is established, the ALVA USB 640 Comfort will generate an audible signal, and will display the message "USB connected". This process will take approximately one minute. Please do not interrupt the installation or turn the ALVA USB 640 Comfort off.

3.2. Installing the ALVA USB 640 Comfort 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 6-series CD-ROM. Please refer to your screen reader documentation for more information on the setup of, and selection of the ALVA USB 640 Comfort and to select and configure the unit 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:

1. Insert the ALVA USB 640 COMFORT 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.

   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.

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 and manual.

4. Key assignments for JAWS, Dolphin and Window-Eyes

T = Thumb key

ALVA USB 640 Comfort key	JAWS	Dolphin Supernova / Hal
eTouch1	Left wiz wheel up	Braille document read back
eTouch2	Left wiz wheel down	Where am I
eTouch3	Right wiz wheel up	Braille document read forward
eTouch4	Right wiz wheel down	Read status line
eTouch1 + eTouch2	Press left wiz wheel	Braille line start
eTouch1 + eTouch3	Braille auto advance	
eTouch1 + eTouch4	Increase auto advance speed	
eTouch2 + eTouch3	Decrease auto advance speed	
eTouch2 + eTouch4	Braille toggle speech interrupt	
eTouch3 + eTouch 4	Press right wiz wheel	Braille line end
T3 + eTouch1	Braille toggle mode	Physical mode on/off
T3 + eTouch2	Braille toggle Cursor	Toggle virtual focus on/off
T3 + eTouch3	Braille moves active	Braille verbosity scheme cycle
T3 + eTouch4	Braille toggle 8 pixels per space	Expand gaps on/off
T1	Pan left	Braille back
T2	Braille prior line	Line up
T3	Route Braille to active cursor	Go to focus
T4	Braille next line	Line down
T5	Pan right	Braille forward
T1 + T2	Braille Top	Braille top
T1 + T3	Set Braille verbosity	
T1 + T4	Braille change cursor shape	Cursor style
T1 + T5	Braille toggle table reading	Braille input on/off
T2 + T4	Braille toggle 8 dots	Toggle 8 dots/6 dots
T2 + T3	Braille Grade2 translation	Literary Braille on/off
T2 + T5	Braille toggle marking off	Braille cursor visible on/off
T3 + T4	Braille Grade2 expand current word	
T3 + T5	Braille toggle marking	Enhance on/off
T4 + T5	Braille bottom	Braille bottom

ALVA USB 640 Comfort key	Window-Eyes
eTouch1	Scroll Braille left
eTouch2	Top line
eTouch3	Scroll Braille right
eTouch4	Bottom line
T3 + eTouch1	Scroll mode toggle
T3 + eTouch2	WE/Mouse toggle
T3 + eTouch3	Auto route cursor toggle
T3 + eTouch4	Spacing toggle
T1	Scroll Braille left
T2	Prior Braille line
T3	To focus
T4	Next Braille line
T5	Scroll Braille right
T1 + T2	Show attribute toggle
T1 + T3	Auto route cursor toggle
T1 + T4	Indent toggle
T1 + T5	Quick message rotor
T2 + T4	6 / 8 dot toggle
T2 + T3	Grade 2 Braille toggle
T2 + T5	Braille tracking toggle
T3 + T4	Auto untranslate at cursor
T4 + T5	Attribute to show rotor

Appendix: Safety and regulatory notices

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

$C\epsilon$ and   **FC**   for a Class B digital device, pursuant to part 15 rules.

Medical electrical equipment requires special precaution regarding EMC (Electro Magnetic Compatibility), and must be installed and put into service according to EMC guidelines.
WARNING: The use of accessories, transducers and cables other than those specified and sold by the manufacturer of the ALVA USB 640 Comfort as replacement component parts may result in increased emissions or decreased immunity of the ALVA USB 640 Comfort.

By design, the ALVA will shut down in case of an ESD 8kV test pulse. The ALVA USB 640 Comfort will have to be switched back on to resume operation.

CE Caution
- The input and output parts need to be connected correctly;
- The unit is designed for exclusive interconnection with IEC/EN 60XXX certified equipment outside of the user environment, and with IEC/EN 60601-1 certified equipment within the user environment.
- This device complies with EN 60601-1-2. To minimize interference from other equipment, a minimum distance of 0.5 m shall be kept from other potential electromagnetic sources, such as a mobile phone.
- Equipment connected to analog or digital interfaces must comply with the respective IEC/EN standards (e.g. IEC/EN 60950-1 for data-processing equipment, and with IEC/EN 60601-1 for medical equipment).
- Do not open the housing.
- Only qualified service personnel should service the unit.
- All possible forms of configuration must comply with the current version of the IEC/EN 60601-1-1 system standard directive.
- Please be aware that connecting additional equipment to the signal input part or signal output part of the device entails that a medical system is being configured. Therefore, the individual, who is configuring and interconnecting the system, is responsible for the entire system, and must make sure it is compliant with the current version of the requirements of the IEC/EN 60601-1-1 system standard. In case of any doubt about system compliance under the current version of the requirements of the IEC/EN 60601-1-1 system standard, please consult the technical service department or your local representative.

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 the receiver.
-Consult the dealer or an experienced radio/TV technician for help.

FCC Caution
To ensure continued compliance, follow the attached installation instructions, and use only shielded interface cables with ferrite core when connecting to a computer or peripheral device. 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 operated 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 made to this device (including the antennas) not expressly approved by the manufacturer may void the user's authority to operate the equipment.

Safety Logo:

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

Explanation of Graphical Symbols

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

This symbol alerts the user that important literature concerning the operation and maintenance of this unit is included. It should therefore be read carefully in order to avoid any problems.

Stand-by

Direct Current

Disposal of old products
-If you see this symbol-

Information on Disposal methods 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 authority or dealer to learn about the correct disposal method.

Environmental conditions

Environment	Operating temperature:	+0° C ~ +40° C
Conditions	Storage/transportation temperature:	-20° C ~ +60° C
	Operating 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 USB 640 Comfort, effective from the date of delivery, to be free of any defects in material and workmanship.
Warranty is not transferable. The ALVA USB 640 Comfort 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 USB 640 Comfort with a similar or better product.
In no event shall Optelec or its distributors be liable for indirect or consequential Comfort. The original user's remedies are limited to replacement of ALVA USB 640 COMFORT 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 the warranty period, please consult your supplier.
Optelec takes no responsibility for use of this device other than described in this manual.

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UDC-02067

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