



Vario 340

User Guide

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About BAUM

BAUM Retec AG has been a leading provider of products and services for blind and visually impaired people for more than 35 years. The high quality and innovative braille products, desktop magnifiers, reading machines, and software solutions are developed and manufactured in Germany, and are ideal for educational, professional and private use.

Our Mission

“We believe in independence for every person who is blind or visually impaired. We passionately apply our skills and experiences toward developing solutions that reinforce success at school and work, and improve quality of life.

We always question the way things have been done in the past. We explore new and innovative ways to solve problems. Our approach includes ergonomics, thoughtful design, and materials that meet the highest quality standards. We care deeply about our customers, and help and support them as much as we can. We care about our employees too, and support them to reach their highest potential, ensuring a secure and lasting working environment.

We develop innovative technology solutions that provide independence for people who are blind or visually impaired. Our high-quality solutions allow visually impaired people to magnify their world, and blind people to access electronic and print content with speech or braille output.”

A handwritten signature in blue ink, appearing to read 'W. Baum', with a stylized flourish at the end.

Wolfgang Baum, Chief Executive

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1 About this user guide

Thank you for choosing a Vario 340 from BAUM Retec. The purpose of this user guide is to provide the end user and/or their service provider with details on how to use Vario 340.

Vario 340 is a high-quality, German-made braille display, which will provide you many years of reliable service. This user guide contains everything you need to know to use your new device.

As you will learn, Vario 340 is very easy to use. In addition to instructions on how to operate the device, this user guide also includes recommendations what to do if anything goes wrong with the device, and important safety guidelines.

We advise that you store this user guide in a safe place for future reference.

Notice for End Users in Germany/Europe

This user guide is a part of the Vario 340 product, and should be kept with the product at all times. In the event Vario 340 is ever sold to a new end user, this user guide must be provided to them.

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2 About Vario 340

The Vario 340 is our new refreshable braille display of BAUM. It was design to be a high quality yet affordable braille display for computer users in need of a compact device. It has 40 braille cells and 6 display buttons. Vario 340 features a reversible USB Type C port, which means it doesn't matter which direction the USB plug is facing. No more need for testing and finding the right way to plug it in. Also the power will be delivered over the USB-Port. The device is so power efficient that no battery or additional power plug is needed. Like other BAUM refreshable braille displays, Vario 340 is a Human Interface Device (HID), which means a driver does not need to be installed to use it.

A specific feature of the Vario 340 is, that it can be used revers. This means that the braille cells are now in the back of the braille display.

3 Before you begin

Please read the safety instructions at the end of this user guide and check the contents of the packaging.

3.1 What`s in the box

- 1 Vario 340 Braille Display
- 1 USB C cable
- 1 Paper print in braille with download link of the manual file
- 1 Paper regular printed with download link of the manual file

4 Vario 340: Getting to know the Device



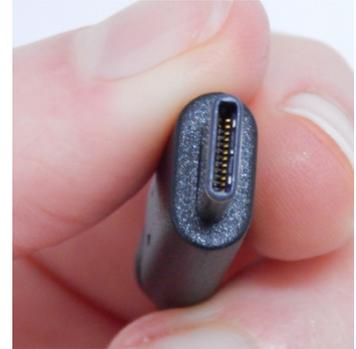
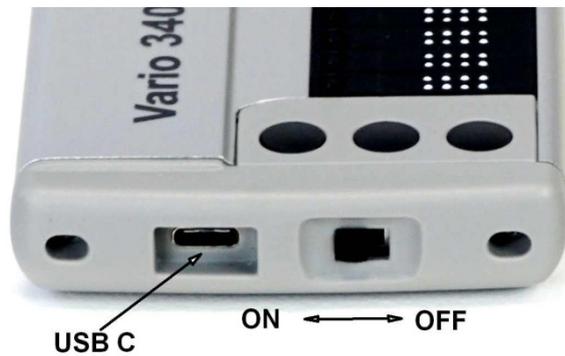
4.1 Top Side

The top of Vario 340 features a refreshable braille display with 40 braille cells, cursor routing buttons, 6 display buttons. Three of the display buttons are located on the left side of the braille cells, the other three on the right side. Let's take a closer look.

4.1.1 Braille Display and Display Buttons

To the left and right side of the braille display, you will find three small, round buttons. These are the display keys, which we refer to as D1, D2, D3, D4, D5, and D6. Think of these 6 buttons as a braille cell split in two, with D123 on the left and D456 on the right. These buttons are used to navigate the display left and right, up and down, and used to control the screen reader on a computer.

4.2 Left Side



On the left side of Vario 340 you can find the USB port, which is USB type C. Special about the USB Type C port is, that it doesn't matter which direction the USB plug is facing. No more finding the right position of the plug.

With this USB Port and the included cable the Vario 340 is connected to a computer. The cable is simultaneously used for power supply and USB connection.

Next to the USB port is the power switch, which slides away from you to power on the device. That means the switch has to be slid towards the USB port to be on.

The Vario 340 needs that less power, so it can be used as a low power device at the USB port. That means that in case it is used with a battery powered notebook, the runtime of the notebook is nearly not reduced.

As Vario 340 has no battery, you are never in need to change one.

5 First steps

Make sure that the power switch on the left side of the device is switched to the back, which means towards the USB port. In that position the Vario 340 is switched on. As soon as Vario 340 gets power via USB connection the device name and version number is shown on the braille cells. This message will disappear automatically after short time or when the screen reader sends his data.

If you want to power off the Vario 340 slide the power switch towards you, which means away from the USB Port.

5.1 Updates for Vario 340

From time to time, new Vario 340 firmware updates will become available for download on our website. Please visit “Support” at <http://www.baum.de> or for the USA go to <http://www.baumusa.com/support/>

5.1.1 Performing firmware updates

A small PC tool must be executed to install a new firmware version on Vario 340. Therefore Vario 340 must be switched on and connected to the computer. During the installation the braille display shows a progress bar. After the process is finished, Vario 340 will restart automatically and shows the new version number. The update process will take a few minutes to be completed.

6 Braille Display Functions

6.1 Introduction to Braille Display Functions

The following sections will explain how to connect the Vario 340 to other devices and use it as a refreshable braille display.

6.2 Use Vario 340 as a refreshable Braille Display

Make sure that the power switch on the left side of the device is switched to the back, which means towards the USB port. As soon as Vario 340 gets power via the USB cable it is switched on.

Insert the micro USB type C cable in the micro USB type C port on Vario 340. You do not need to check which side is up and down, because the cable on this end is reversible. Connect the other end of the USB cable into the USB port of your computer. The computer will recognize Vario 340 automatically as a USB HID Braille display. There is no need to install specific device driver.

In specific cases i.e. when using JAWS, device drivers needs to be installed.

The next sections will explain additional configurations when using different screen readers.

6.2.1 Vario 340 and COBRA (USB HID)

From COBRA Version 10.3 respectively COBRA 11 the screen reader will recognize Vario 340 automatically as USB HID braille display.

USB Connection

1. Plug in the micro USB type C cable to the micro USB type C port on Vario 340 and connect the other end of the USB cable into the USB port of your computer.

2. If not already happened, switch on the device. The computer will recognize that a new device is connected.
3. Restart COBRA and check if the Vario 340 is already identified and used correct. If yes, you are done at this point.
4. If COBRA will not recognize the Vario 340 correctly, open COBRA menu with a fast double tap on the left Shift Key. Choose item “Braille” and then “Braille Devices”.
5. Click on “manual configuration”
6. Chose “BAUM Vario 340” from the list and use “PNP” as port.
7. Click on “Add”. After a short period of time Vario 340 will be identified and used correctly.
8. Close the dialog with “OK”.

6.2.2 Vario 340 and JAWS (USB HID)

For JAWS there will be a certified device driver available soon. It will support the connection of Vario 340 as USB HID. Driver version 15.52 can be downloaded at “Support” on www.baum.de.

If JAWS driver is not installed, Vario 340 will not be shown in the list of available braille displays at JAWS.

Installation of JAWS driver

1. Download JAWS driver. It is a zipped archive called “baumjfwuni.zip”. This zip file contains an executable file called BAUMjfwuni.exe.
2. NOTE: When JAWS 15 or higher is used on your computer, it is likely that there is the old BAUM JAWS driver installed. This one does not support Vario 340. Unfortunately the old BAUM JAWS driver cannot be removed. If JAWS 14 or lower is used, we advise you to remove the old BAUM JAWS driver before installing the new one.
3. Now run the application to install the driver. It’s a simple process that requires you to select “next” a few times, and then you’re done.
4. If the installation process is finished, restart the computer and JAWS. When finished open the section in JAWS for choosing the braille display.
5. NOTE: In Case the old and the new BAUM JAWS driver are installed at the same time, the BAUM braille displays will be shown twice in the list. They have different names. Entrees from the old BAUM JAWS driver will have an additional “display” in their name.

6. To select Vario 340 via USB HID choose “BAUM UNIVERSAL USB” from the list.

USB Connection

1. Install the current driver for Vario 340 in JAWS.
2. Connect the micro USB type C cable with the micro USB type C port on Vario 340 and USB cable into the USB port of your computer.
3. If not already happened, switch on the device. The computer will recognize that a new device is connected.
4. Open JAWS menu and go to “Options” and “Braille”. A dialog window will appear.
5. Go to “Add braille display”-
6. A new dialog will appear in which you can choose the supported braille displays. Choose BAUM Universal USB from the list. Confirm it with a press on the space bar. Press return to go to the next step.
7. Please ensure that the output port is “USB”. In case you have configured more braille displays, the interface must be configured separated for every braille display.
8. In case you have configured more braille displays, chose the one that should be used first. For example Vario 340.
9. Confirm and close the dialog.
10. Restart JAWS. Vario 340 should now be recognized correctly.

6.2.3 Vario 340 and Window-Eyes (USB HID)

The German version of Window-Eyes not yet supports the Vario 340 as a USB braille display, but there is a newer English version already.

Download the Vario 340 driver for Window-Eyes and install it. It is an executable file called “BrailleSrvWe.exe. It can be downloaded at:

<https://www.dropbox.com/s/dxyb1sfrtbnmgbp/BrailleSrvWe.exe?dl=0>

Save the file on your computer and start the installation.

USB Connection

1. Connect the micro USB type C cable with the micro USB type C port on Vario 340 and USB cable into the USB port of your windows computer.
2. In Window-Eyes go to “Devices” and “Braille display”. Now chose “Vario 340” from the list.

3. As connection method use “USB”.

6.2.4 Vario 340 and NVDA (USB HID)

From NVDA 2016.4 the screen reader will recognize Vario 340 automatically as USB HID braille display.

1. Plug in the micro USB type C cable to the micro USB type C port on Vario 340 and connect the other end of the USB cable into the USB port of your computer.
2. If not already happened, switch on the device. The computer will recognize that a new device is connected.
3. Restart NVDA and check if the Vario 340 is already identified and used correct. If yes, you are done at this point.
4. If NVDA will not recognize the Vario 340 correctly, open the NVDA menu and choose Preferences > Braille.
5. In the Braille Display combo box, choose “BAUM/Humanware/APH Braille Displays”.
6. Choose connection port “automatic” and press enter.

Please note: NVDA has predefined only few key commands.: D2 and D5 to scroll left or right. D1 and D3 to move up or down a line. Navi-Stick to move the navigation (not moving the cursor)

6.2.5 Vario 340 and Dolphin SuperNova (USB HID)

SuperNova not yet supports Vario 340.

6.2.6 Vario 340 with Mac OS and VoiceOver

OSX not yet supports Vario 340.

6.2.7 Vario 340 and LINUX

Linux BRLTTY not yet supports Vario 340.

6.3 Reverse Braille Display

Vario 340 can be used in revers position. This is preferred by some users, because the hands can be put on the braille display case and the

braille cells are on the back of the device. Display buttons will change places and the braille output will be switched.

To use Vario 340 reversed, press D2+D5 while sliding the power switch towards the USB port, means switching on the device.

This setting is saved, Also after switching off the device and switching on for the next time it remains in reversed mode.

To change back to regular mode just do the same procedure again.

7 Common problems and solutions

The device does not switch on.

Check if the power switch is towards the USB port

Check if Vario 340 is connected to power supply, either by connecting to a living computer via USB cable or via USB Adapter and wall socket.

The braille display shows gibberish.

Probably the feature of the reverse Braille display has been activated by accident. Switch off Vario 340 by sliding the power switch away from the USB port. Connect Vario 340 to power supply. Hold D2+d5 pressed while sliding the power switch towards the USB port, to switch on the device.

8 Defects and repair

If Vario 340 is defective– what to do?

- Did you check all settings and connections according to the user guide?
- Are you sure the power supply is live?
- Are you sure the device has been switched on?

Do not use a broken device! Unplug broken device from mains! Please do not hesitate to contact your local BAUM dealer or BAUM Retec AG.

You can reach BAUM Retec AG at telephone number (+49) 6223 4909-0 in Germany. We will help you check your Vario 340 in case it is broken we can mail a service box for shipping Vario 340 to our repair department.

9 Compliances

9.1 CE Conformity

This product conforms to the guidelines of the European Union and takes the CE- and RoHS Marking.



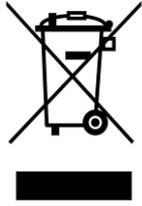
9.2 FCC Conformity

1. This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:
 - (1) This device may not cause harmful interference, and
 - (2) This device must accept any interference received, including interference's that may cause undesirable operation
2. Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.



NOTE: 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 Roles. These limits are designed to provide reasonable protection against harmful interference in a residential installation.

9.3 Environmentally friendly disposal according to EU-Directive 2012/19/EU



The symbol (crossed garbage can), which is also attached to the device, states that this device and its accessories, once come to the end of its lifetime, should not be regarded as household waste. An environmentally friendly way of final disposal is compulsory.

This device contains electronic components. In order to avoid risks or dangers for the environment through non-professional waste disposal, the disposal of this device and its accessories must correspond to the valid EC-Directives or other local regulations. Please check your local regulations for proper disposing of this device or consult your local distributor.

For data privacy protection reasons, please remove all personal data from the device prior to disposal.

Declaration of Conformity



We, **BAUM Systeme GmbH**
Industriestraße 15
74909 Meckesheim
Germany
info@baum.de
+49-6223-4909-0

declare in our sole responsibility, that our braille display named

Vario 340 (Rev.1)

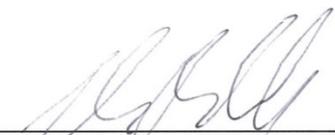
complies with the essential requirements of

2014/35/EC	Low Voltage Directive
2014/30/EC	EMC Directive
2011/65/EC	RoHS Directive

and conforms to the following normative documents

Safety	EN 60950-1:2006+A11:2009+A1:2010+A12:2011+AC:2011+A2:2013
EMC	EN 55022:2010/AC:2011
	EN 55024:2010+A1:2015

Meckesheim, 4/13/2017



Thomas Friehoff, CTO

10 Warranty

BAUM Retec AG warrants the device, 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. This device has been designed for the individual purchaser to be used in home or office environments. BAUM Retec AG reserves the right to repair or replace with a similar or better product. In no event shall BAUM Retec AG or its distributors be liable for indirect or consequential damages. The original users' remedies are limited to replacement of devices modules/parts. This warranty is valid only when service is done in the country of original purchase and with intact warranty seals. For additional warranty claims or service during or after warranty period, please refer to your local distributor. BAUM Retec AG does not take responsibility for use of this device other than described in this Manual.

- Warranty on new devices is 24 months.
- Warranty on used or refurbished devices is 12 months.
- Warranty on Consumable parts (Batteries, Braille Pins, Data carriers etc.) is 6 months.
- Warranty on storage media (SD-cards, CD-ROMS, DVD's, etc.) is 90 days.
- Warranty on repairs and spare parts is 12 months.

All defects caused by improper use or users fault are not covered by this warranty.

Warranty will be void if warranty seal is damaged.

Parts replaced during repair are transferred into ownership of BAUM Retec AG and will not be returned to the customer.

In case of repair the device must be properly packed into its original shipping box.

Costs for packing, shipping and insurance are not covered by BAUM.

11 For your safety

Important note: Failure to observe the following warnings may invalidate the guarantee and could cause damage of the device or serious injury.

Please check the contents of package before you use the device. If parts are damaged or missing, please do not hesitate to inform your dealer.

Please keep the shipping box, so you can safely pack the device in case you have to ship it for service, etc. Improper packaging could cause loss of warranty. In case you need a new shipping box, your dealer can send you one.

Please carefully read the user guide and safety instructions before you use the device for the first time.

This device may only be used in a home or office environment.

Do not place on an instable surface. It may fall causing serious damage to the device or injury to the user. Please follow the instruction on how to place the device especially in respect to avoidance of tilting and falling down by keeping proper space to edges of table.

Connect the power supply to a grounding-type power outlet only.

Do not use the device if you find any damages at device or wires.

If the device appears to be operating abnormally, or to be damaged in any way, please contact your BAUM dealer as soon as possible.

If you smell smoke or an odor coming out of the device, turn off the power immediately and unplug the cable.

Do not try to repair the device yourself. Opening or removal of housing may cause damage or injury.

Do not allow sand or dust to come into contact with the device as this may lead to serious damage and could make repair impossible.

Use the device with clean hands only.

Do not use in locations where strong radio waves are emitted or where there is radiation. Keep a distance of at least 30cm to mobile phones.

Only use original accessories. Use of second source accessories may damage the device or cause malfunction or safety issues.

Do not use a power supply not made for this device. Only use the original power supply!

Do not use the power supply with other devices.

Avoid liquids and food near the device.

Do not use or store the device in any of the following places as this may cause damage:

- Inside cars parked with the windows closed in the hot sun.
- In direct sunlight or close to heaters, radiators, etc.
- Locations subject to severe vibration such as on top of a washing machine.
- Locations subject to strong magnetism such as near loudspeakers.
- Humid places (bath room), in water, or near water.
- In rain or snow
- Do not use or store below 0°C / 41°F or above 40°C / 104°F.
- Humidity shall be within 20% to 80%
- Avoid fast temperature changes

If you bring the device from cold places into a warm room, humidity may condensate. Wait until the device is dry and well-tempered to room temperature before use.

Unplug from mains before cleaning.

Wipe dust and dirt from the device with a soft cloth dampened with a diluted neutral detergent, then wipe dry with a cloth. Do not bring in contact with water.

Do not insert objects into openings.

Do not use device during thunderstorms. Unplug from mains during thunderstorms. We recommend use of an overvoltage protection adapter, which can be bought from your local electro store. Please note, this does not provide a 100% protection from overvoltage.

Do not insert or remove the plug with wet hands.

Do not heat in a microwave oven, on a cooker or similar.

Never disassemble, attempt to repair or modify device yourself.

If liquids or metal fragments should enter device, switch it off and remove the power lead immediately.

Do not pull the plug out by the lead when removing the power plug.

Avoid shock. Do not throw or let fall.

Repairs may only be carried out by BAUM service personal or by service technicians authorized by BAUM Retec AG.

Care and Maintenance

Avoid damp and water.

Use only a clean, dry cloth to clean the housing of the device. Do not use any cleaning fluids or solvents. Wipe dust and dirt from the housing of the device with a soft cloth dampened with a diluted neutral detergent (stay clear from the Braille cells and Roll-bars!), then wipe dry with a cloth. Do not attempt to clean the Braille cells and/or Roll-bars yourself. Contact your dealer for intensive and professional cleaning of your device.

Protect the device from extreme heat, e.g. from the sun, heating units, hot cars etc.

With extreme cold and frost the device becomes inoperable and must be brought slowly back to room temperature. Under no circumstances must the device be warmed up or “thawed out” in a conventional oven, microwave oven or any other heating device!

Avoid any mechanical damage to the housing or accessories.

12 Technical details

- 40 Braille cells with integrated Cursor Routing buttons
- HID - Human Interface Device
- Six function keys
- Power switch
- USB Type C Port
- Housing: Aluminum, brushed
- Measurements: 30.2 x 2.1 x 7.2 cm (11.9 x 0.8 x 2.8 inches)
- Weight: 540 g (1.1 pounds)
- Power supply via USB
- Charging rate: 100mA max.

13 Appendix

In the following chapters you can find additional information for Vario 340.

13.1 JAWS commands

VarioUltra	Action
D1	Braille Prior Line
D2	Braille Pan Left
D3	Braille Next Line
D4	Braille Toggle Cursor
D5	Braille Pan Right
D6	Route Braille to Active Cursor
D1+D3	Braille Shift Tab
D1+D4	Top of File
D3+D6	Bottom of File
D1+D5	Braille Escape
D1+Cursorroutingtaste	Braille Describe Font
D2+D4	Route JAWS Cursor to PC Cursor
D2+D6	Braille Enter
D3+D4	Windows Start Menu
D3+ Cursorroutingtaste	Braille Select Text
D4+D5	JAWS Delete
D4+D6	Braille Tab
D5+D6	Braille Bottom
D1+D2+D3	Select a Link

D1+D2+D4	Select a Frame
D1+D2+D5	Keyboard Help
D1+D3+D4	Menu Bar
D1+D3+D5	Open List Box
D1+D3+D6	Mute Synthesizer
D1+D4+D5	Minimize All Applications
D2+D3+D4	Start JAWS Task List
D2+D3+D5	Braille Toggle 8 Dots
D2+D3+D6	Select a Heading
D2+D4+D5	JAWS Window
D2+D4+D6	Close List Box
D2+D5+D6	Close Document Window
D3+D5+D6	Hotkey Help
D1+D2+D3+D4	Previous Document Window
D1+D2+D3+D5	Braille Auto Advance
D1+D2+D3+D6	Set Braille Verbosity
D1+D2+D4+D5	Braille Grade 2 Translation
D1+D2+D5+D6	Braille Grade 2 Expand Current Word
D1+D3+D4+D5	Next Document Window
D1+D3+D4+D6	Braille Turn Marking Off
D1+D3+D5+D6	Say System Time
D2+D3+D4+D5	Braille Alt Tab
D2+D3+D4+D6	Read Box in Tab Order
D2+D3+D5+D6	List Task Tray Icons
D2+D4+D5+D6	Window Keys Help

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Please be advised that this user guide may contain errors, and is therefore subject to being changed or updated without prior notice.