

User Manual

MagniLink Voice 2

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1 About LVI

LVI Low Vision International AB was founded in 1978 and is one of the world's leading manufacturers of equipment for persons with visual impairments. Development of new products takes place in close cooperation with users and professional staff within the low vision rehabilitation industry. LVI is quality-certified in accordance with ISO 9001 and environmentally-certified in accordance with ISO 14001.

The information in this manual has been carefully checked and is believed to be accurate. However, LVI assumes no responsibility for any inaccuracies that may be contained in this manual. In no event will LVI be liable for direct, indirect, special, exemplary, incidental, or consequential damages resulting from any defect or omission in this manual. In the interest of continued product development, LVI reserves the right to make improvements in this manual and the products it describes at any time, without notice or obligation.



2 Introduction to the MagniLink Voice

Thank you for choosing this reading machine. Our aim is for you to be satisfied with your choice of supplier and vision aid.

MagniLink Voice is a portable reading machine that makes it possible to OCR-process a text and have it read aloud.

MagniLink Voice is available as several different models. The choices available are with or without a battery and the possibility to connect a monitor.





MagniLink Voice meets all the requirements for CE marking of medical devices in accordance with Directive 93/94/EEG. Our products comply with MDD 93/94/EEC with additions from Directive 2007/47/EC



3 Safety information

- Only use the power adaptor supplied with the product. Using an incorrect type of power adapter may cause damage to the system.
- Never operate the product if it has been exposed to water or other liquids. Damaged or wet product can cause electric shocks or fire.
- Place the power cord in such a way that you can neither trip over it or that crush damages can occur.
- Only use the battery supplied with the product. If the battery needs to be changed, please contact LVI.
- Be careful not to catch your fingers when collapsing the camera arm.
- If the product is moved from the cold into a warm room, condensation (moisture) can form inside the unit or on the camera lens. To prevent problems with condensation, the apparatus should be installed in the room at least 30 minutes prior to usage.
- If the system requires cleaning, detach all cables. Use a slightly damp (not wet) cloth to clean the system. Use only water or a cleaning agent that is intended for monitors and computers.
- Do not rely 100 per cent on the results of an OCR conversion; the OCR engine can misinterpret the text. This is particularly important to bear in mind when processing sensitive information such as a medical prescription.

If in doubt, contact your supplier.

Warning



The product is supplied packed in a plastic bag. To avoid risk of suffocation, keep the bag out of the reach of children and infants.



4 Unpacking

The system is supplied in a box with the following contents:

- Reading machine
- User Guide
- USB memory stick
- Power adaptor
- Hand control

Check first that the box has no external damage. In the event of damage, contact the delivery company and file a notification of damage.

Open the box and take out the MagniLink Voice; remove the packaging.

4.1 Packaging

The packaging consists of the following packaging material (LVI recommends that the packaging be kept in case you have to return the system or you need to move it):

- Packing material (EPP)
- Box (corrugated cardboard)
- Polyethylene (LDPE4)

For sorting and collection of packaging material, please call the packaging collection customer service department for information on the rules that apply in your municipality.

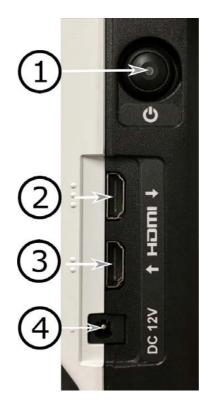
Note that the product and its accessories must be recycled as electronic waste. A worn-out battery is recycled as electronic waste.



5 Installation

Place your MagniLink Voice far enough in on the table in front of your seat. Open the camera's arm, connect the power cable and press the start button.

The following connection options can be found on the right side of the unit.



1. On/Off button

Used to turn the unit on or off.

2. **HDMI out** (only active if Monitor output is selected) Here you can plug in an external monitor.

3. HDMI in

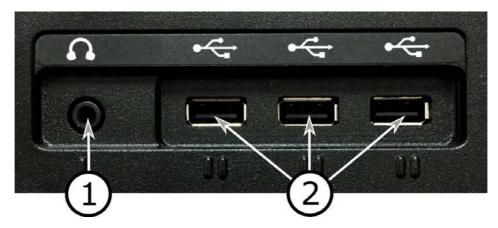
Here you can plug in an external image source. It is then possible to switch the image source using the hand control.

4. Power supply

The power adaptor is plugged in here.



The following connection options can be found on the rear of the unit.



Port for headphones Here you can plug in headphones.

2. USB ports

The unit has three USB ports. The hand control must be connected to one of these ports. If you wish to save or open a document, you can connect a USB memory stick.



6 Use

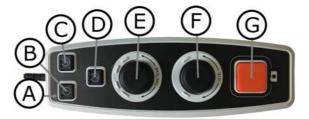
6.1 Placing paper



The unit is able to OCR-process an A4 sheet of paper. Position the short side of the paper between the guides on the unit's foot.



6.2 Profiles and settings



The unit can be used in simple profile or advanced profile. When the unit is in simple profile the LED lights green. When the unit is in advanced profile the LED lights blue. There is also a settings mode. When the unit is in settings mode it lights yellow.

To switch between simple and advanced profile, hold the control (E) pressed for five seconds.

To go into settings, hold the controls (E) and (F) pressed for three seconds.

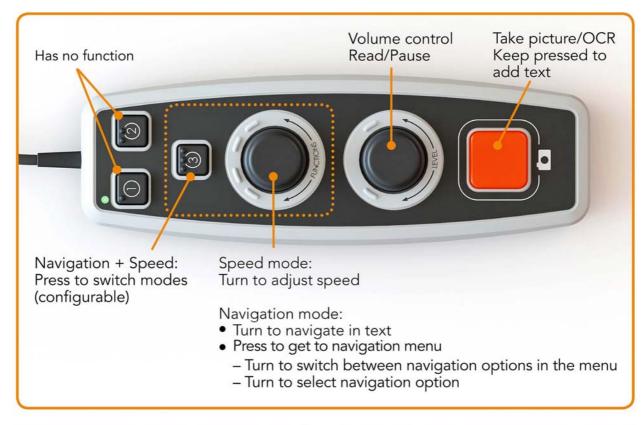


6.3 Simple profile

6.3.1 Quick guide simple profile without monitor









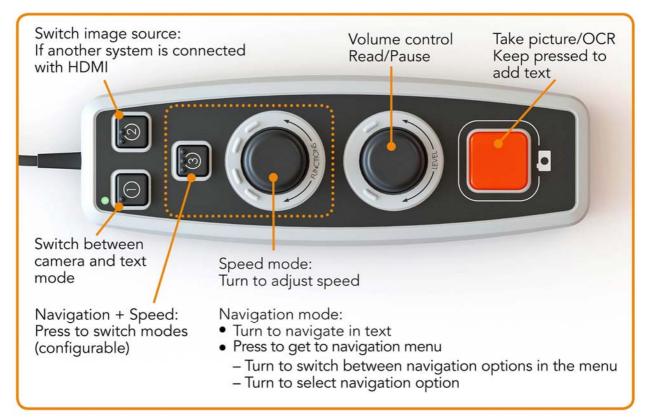




6.3.2 Quick guide simple profile with monitor





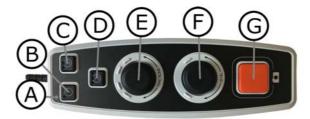








6.3.3 Functions in simple profile



A. LED

In simple profile this LED lights green.

B. Switch between camera and text mode (Only with monitor) This button switches between the OCR camera and the OCR processed text.

C. Switch image source

If another system is connected to HDMI in, this button switches between the image sources.

D. Quick button for navigation

When this button is pressed it switches to navigation mode. It is possible to configure this button so that it has another function.

E. Speed control

When you rotate the control, you adjust the speed of reading aloud.

In navigation mode you can navigate in the text by turning the control. It is also possible to select navigation mode by pressing the control, turning it to the desired mode and then pressing it again.

F. Volume control

This is a combined push button and rotary control. When the control is pressed, you can start and pause the reading. When you rotate the control, you adjust the volume level.

G. OCR button

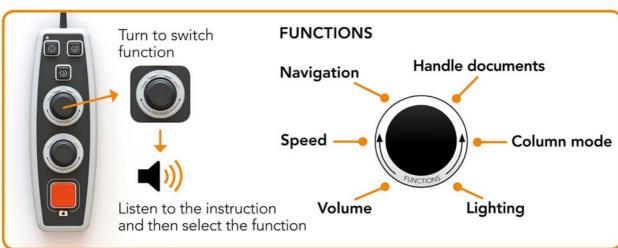
This button is used to take a picture, OCR process the text and read aloud the result. If you hold the button in for more than two seconds the text is added to a new page.

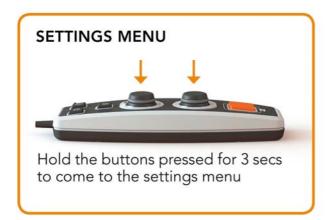


6.4 Advanced profile

6.4.1 Quick guide advanced profile without monitor



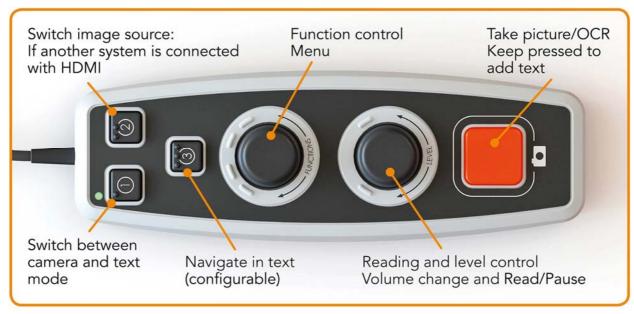


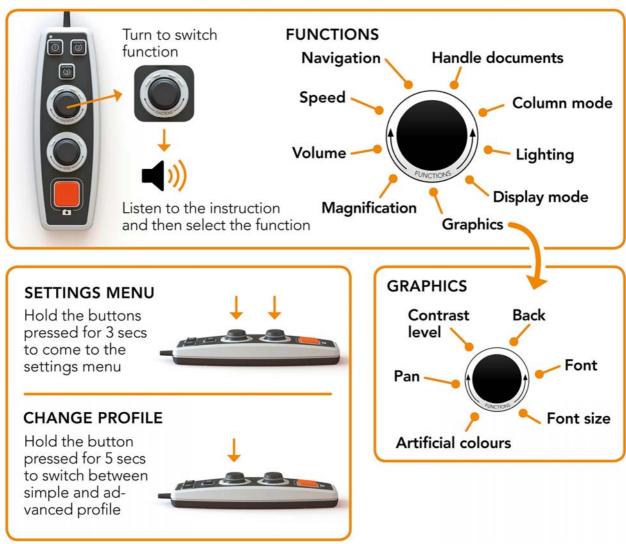






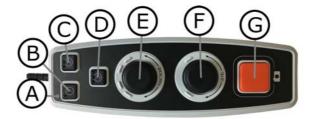
6.4.2 Quick guide advanced profile with monitor







6.4.3 Functions in advanced profile



A. LED

In advanced profile this LED lights blue.

- B. **Switch between camera and text mode** (only with monitor) This button switches between the OCR camera and the OCR processed text.
- C. **Switch image source** (only with monitor)
 If another system is connected to HDMI in, this button switches between the image sources.

D. Quick button for navigation

When you press this button you are brought to navigation, and it is now possible to navigate in the text by rotating the "Level control".

E. Function control

This is a combined push button and rotary control. The control is rotated until the desired function is read aloud. Some functions have a sub-menu and pressing the control will enter this menu. Other functions have a setting that you can switch on or off by pressing the control.

F. Reading and Level control

This is a combined push button and rotary control. When the control is pressed, you can start and pause the reading. When you rotate the control, you adjust the relevant function.

G. OCR button

This button is used to take a picture, OCR process the text and read aloud the result. If you hold the button in for more than two seconds the text is added to a new page.

6.4.4 Describing functions in advanced profile

The unit's various functions and settings are controlled using the hand control. After a period of inactivity by the user, the unit returns to basic



function. Below is a list of the unit's functions and descriptions of how they are performed.

Take a picture and start the reading

Press the OCR button(**G**) to take a picture to be OCR processed. When the OCR process is complete, the reading begins. If you hold the button in for more than two seconds the text is added to a new page.

Pause reading

Press the reading control(F) to pause the reading. Press it again to resume the reading.

Adjust the volume

Rotate the level control(F) to increase or decrease the volume.

Adjust the speech speed

Rotate the function control(E) until the unit says speed. Then rotate the level control(F) to increase or decrease the speech speed.

Save documents

Make sure that a USB memory stick is plugged into the unit. Rotate the function control (E) until the unit says "handle document" and then press the control. Rotate the function control again (E) until the unit says "save" and then press the control to save the document. The document is saved in the directory "lvi_text".

Change file format

To change the format that you save to. Rotate the function control (E) until the unit says "handle document" and then press the control. Rotate the function control (E) again until the unit says "file format" and press the control. Rotate the control until the desired format is spoken and press the control to select it.

Open document

Make sure that a USB memory stick is plugged into the unit. Rotate the function control (E) until the unit says "handle document" and then press the control. Rotate the function control (E) again until the unit says



"open" and press the control. Turn again until the desired document is read aloud and press the control to open the document. The unit can open documents of the following file formats: .txt, .pdf, .rtf, .zip and image files: .png, .jpg, .tiff and .bmp. The documents must be in the directory "lvi_text" or the root directory of the USB memory stick in order for the unit to find them.

Delete documents

Make sure that a USB memory stick is plugged into the unit. Rotate the function control (E) until the unit says "handle document" and then press the control. Rotate the function control (E) again until the unit says "delete" and press the control. Turn the control until the file you wish to delete is read aloud and then press the control to delete the file.

Navigate in the text

Rotate the function control(E) until the unit says "navigation". Then rotate the level control(F) to navigate forward of backwards in the text.

Change navigation mode

Rotate the function control (E) until the unit says "navigation" and then press the control. Then chose the navigation mode using function control (E) and then press again. It is now possible to navigate in the text using the level control (F). There are five different navigation modes: "page", "block", "sentence", "word by word" and "letter by letter". If the display mode is set to silent mode, there is also the navigation mode "view".

Change column mode

To change column mode, rotate the function control(E) until the unit says "column mode" and then press the control. Normally the column mode in on, but it is necessary to turn it off when you are processing text that you do not want to have read aloud in column form.

Change display mode (only available if a monitor is connected)
To change display mode, rotate the function control (E) until the unit says
"display mode" and then press the control. Then select display mode by
rotating the function control (E). When you are satisfied with your
selection, press the control (E) again. There are six display modes with



speech: "word", "line", "page", "picture", "picture and word" and "picture and line". There are also two silent modes. One where the text is moved horizontally on one line and one where the text is moved vertically in a column.

Change magnification (only available if a monitor is connected)
Rotate the function control(E) until the unit says "magnification". Then
rotate the level control(F) to increase or decrease the magnification.

Change lighting

Then rotate the function control (E) until the unit says "lighting". It is now possible to turn the lighting on and off by pressing the function control (E) and adjust the lighting by rotating the level control (F).

Change font (only available if a monitor is connected)
Rotate the function control (E) until the unit says "graphics" and press the control. Rotate the function control (E) again until the unit says "font" and press the control. Rotate the control until the desired font is read aloud and press the control to select this.

Change font size (only available if a monitor is connected)
Rotate the function control (E) until the unit says "graphics" and press the control. Rotate the function control (E) again until the unit says "font size". It is now possible to change the font size by rotating the level control (F).

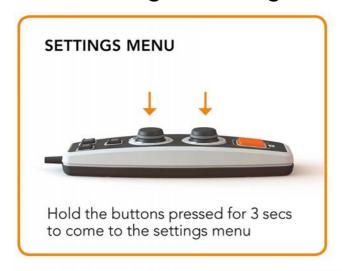
Change artificial colours (only available if a monitor is connected)
Rotate the function control (E) again until the unit says "graphics" and
press the control. Rotate the function control (E) again until the unit says
"artificial colours" and press the control. Rotate the control until the
desired colours are read aloud and press the control to select these.

Change contrast level (only available if a monitor is connected)
Then rotate the function control (E) until the unit says "graphics" and press the control. Rotate the function control (E) again until the unit says "contrast level". It is now possible to change the contrast level by rotating the level control (F). This setting only has an effect if any artificial colours are selected.

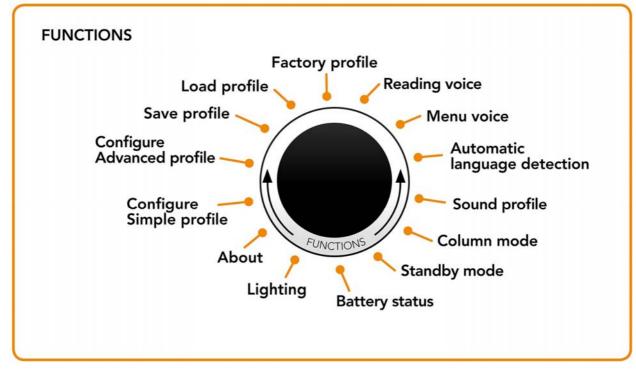


6.5 Settings

6.5.1 Quick guide settings without monitor

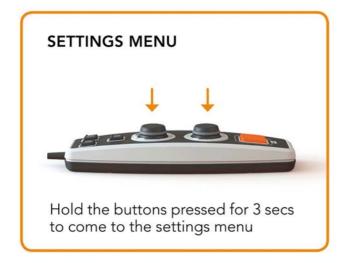




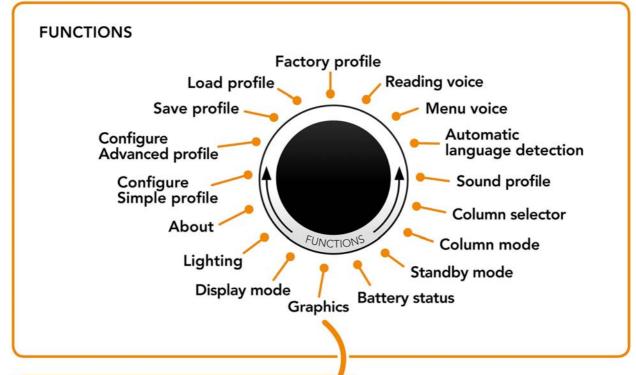


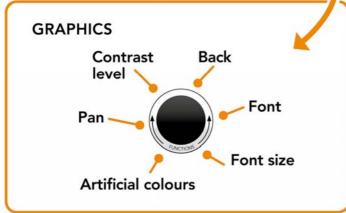


6.5.2 Quick guide settings with monitor



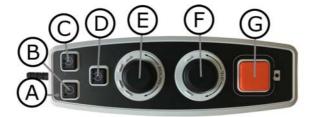








6.5.3 Functions in settings



A. LED

When the unit is in the settings menu it lights yellow.

B. Button for switching between camera and text mode
This button switches between the OCR camera and the OCR
processed text.

C. Button for switching image source

If another system is connected to HDMI in, this button switches between the image sources.

D. No function

E. Setting control

The control is rotated until the desired setting is read aloud. Some settings have a sub-menu and pressing the control will enter this menu. Other settings have a setting that you can switch on or off by pressing the control.

F. Level control

Used to set font size and lighting.

G. Button

This button is used to exit the settings menu.



6.5.4 Describing the settings options

Change reading voice

Rotate the function control (E) again until the unit says "reading voice" and press the control. Rotate the function control again (E) until the desired voice is spoken and then press the control to select the voice.

Change menu voice and language setting

Rotate the function control (E) again until the unit says "menu voice" and press the control. Rotate the function control again (E) until the desired voice is spoken and then press the control to select the voice.

Change automatic language detection

Then rotate the function control (E) until the unit says "automatic language detection" and press the control to change the setting.

Change sound profile

Then rotate the function control (E) until the unit says "sound profile" and press the control. Rotate the function control again (E) until the desired sound profile is read aloud and then press the control to select. There are three different sound profiles: "normal", "bass" and "treble".

Change column selector (only available if a monitor is connected) To change column selector, rotate the function control(E) until the unit says "column selector". It is now possible to adjust the column selector by pressing the control. There are three options: vertical, horizontal or off. When the column selector is on, only those columns that are intersected by the column selector are OCR-processed.

Change column mode

To change column mode, rotate the function control(E) until the unit says "column mode" and then press the control. Normally the column mode in on, but it is necessary to turn it off when you are processing text that you do not want to have read aloud in column form.

Change standby mode

To set the time after which the unit will switch to standby mode. Rotate the function control (E) again until the unit says "standby mode" and press the control. Rotate the function control again (E) until the desired time is read aloud and then press the control to select it.



Change font (only available if a monitor is connected)

Rotate the function control (E) until the unit says "graphics" and press the control. Rotate the function control (E) again until the unit says "font" and press the control. Rotate the control until the desired font is read aloud and press the control to select this.

Change font size (only available if a monitor is connected)
Rotate the function control (E) until the unit says "graphics" and press the control. Rotate the function control (E) again until the unit says "font size". It is now possible to change the font size by rotating the level control (F).

Change artificial colours (only available if a monitor is connected)
Rotate the function control (E) again until the unit says "graphics" and press the control. Rotate the function control (E) again until the unit says "artificial colours" and press the control. Rotate the control until the desired colours are read aloud and press the control to select these.

Change contrast level (only available if a monitor is connected)
Then rotate the function control (E) until the unit says "graphics" and press the control. Rotate the function control (E) again until the unit says "contrast level". It is now possible to change the contrast level by rotating the level control (F). This setting only has an effect if any artificial colours are selected.

Change display mode (only available if a monitor is connected) To change display mode, rotate the function control (E) until the unit says "display mode" and then press the control. Then select display mode by rotating the function control (E). When you are satisfied with your selection, press the control (E) again. There are six display modes with speech: "word", "line", "page", "picture", "picture and word" and "picture and line". There are also two silent modes. One where the text is moved horizontally on one line and one where the text is moved vertically in a column.

Check battery status (only unit with battery)

Then rotate the function control (E) until the unit says "battery status" and press the control. The battery status will now be read aloud.

Change lighting

Then rotate the function control (E) until the unit says "lighting". It is now possible to turn the lighting on and off by pressing the function control (E) and adjust the lighting by rotating the level control (F).



Get information about the unit's serial number

Rotate the function control (E) until the unit says "about" and then press the control. Rotate the function control again (E) until the unit says "serial number" and press the control. The unit's serial number will now be read aloud.

Get information on the version of the software

Rotate the function control (E) until the unit says "about" and then press the control. Rotate the function control again (E) until the unit says "version" and press the control. The unit will now read aloud information about the software version.

Update license

Updating the unit's license requires a USB memory stick with a license file to be plugged into the unit. Rotate the function control (E) until the unit says "about" and then press the control. Rotate the function control again (E) until the unit says "update license" and press the control. The unit will then notify you if the licence update was successful.

Update software

Updating the unit's software requires a USB memory stick with new software to be plugged into the unit. Rotate the function control (E) until the unit says "about" and then press the control. Rotate the function control again (E) until the unit says "update software" and press the control. When the update is complete, the unit will notify you of this.

Save profile

Make sure that a USB memory stick is plugged into the unit. Rotate the function control (E) until the unit says "save profile" and then press the control.

Load profile

Make sure that a USB memory stick is plugged into the unit. Rotate the function control (E) until the unit says "load profile" and then press the control. Rotate the function control again (E) until the desired profile is read aloud and then press the control to load it. The profiles must be in the root directory of the USB memory stick in order for the unit to find them.

Factory profile

Rotate the function control (E) until the unit says "factory profile" and then press the control.



Select basic function

To select which menu the unit will return to after a period of inactivity. Then rotate the function control (E) until the unit says "configure advanced profile". Rotate the function control again (E) until the unit says "basic function" and press the control. Rotate the function control again (E) until the desired option is read aloud and then press the control. It is possible to choose between volume, speed, magnification and navigation.

Select quick function

To select quick function move quick button (D). Then rotate the function control (E) until the unit says "configure advanced profile" and press the control. Rotate the function control again (E) until the unit says "quick function" and press the control. Rotate the function control again (E) until the desired option is read aloud and then press the control. It is possible to select between display mode, column selector, column mode, navigation, automatic language identification and speaking voice.

Remove functions

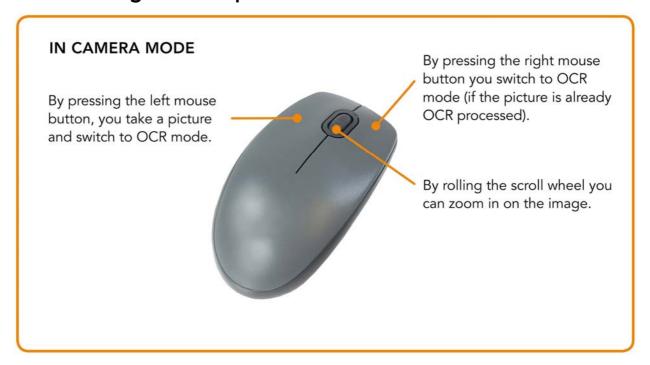
To remove functions. Then rotate the function control (E) until the unit says "configure advanced profile" and press the control. Rotate the function control again (E) until the unit says "functions" and press the control. It is now possible to navigate and remove functions using the function control. Press the control to remove or restore the selected function. When you have selected the functions you wish to be available, navigate with the function control (E) until the unit says "back" and press the control.

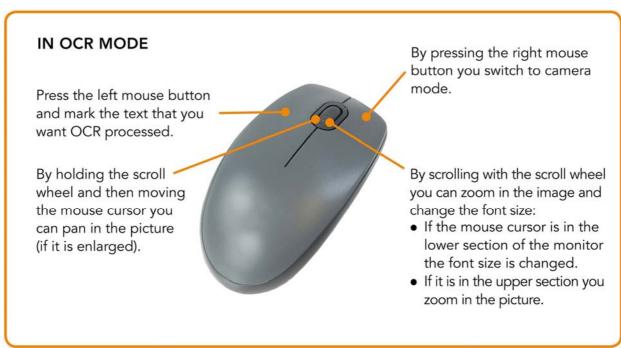
Configure simple profile

It is possible to configure the quick button (D). Then rotate the function control (E) until the unit says "configure simple profile" and press the control. Rotate the function control again(E) until the desired option is read aloud and then press the control. It is possible to select between display mode, column selector, column mode, navigation, automatic language identification and speaking voice and no function.



6.6 Quick guide computer mouse







6.7 Computer mouse

Certain functionality can be controlled with the mouse.

In camera mode.

- By pressing the left mouse button, you take a picture and switch to text mode.
- Rolling the scroll wheel can zoom in on the image.
- By pressing the right mouse button you switch to text mode (If a picture has been taken).

In text mode

- By pressing the left mouse button and marking the text that you want OCR processed.
- By scrolling with the scroll wheel you can zoom in the image and change the font size. If the mouse cursor is in the lower section of the monitor the font size is changed. If it is in the upper section you zoom in the picture.
- By holding down the scroll wheel and then moving the mouse cursor you can pan in the picture (If it is enlarged).
- By pressing the right mouse button you switch to camera mode.

6.8 Extra voices on a USB stick

It can be possible to use voices that are on an external USB drive. To enable the voices, connect the USB stick to one of the unit's USB ports and wait until the unit says "voices are ready to be used". It is then possible to go into the menu and change voices and language settings to one of the new voices.



6.9 Quality of OCR conversion

In order to optimize the results of the OCR conversion, you should bear in mind the following.

- Make sure that the text is large enough. If the text is too small, the OCR results will be bad. At least 12pt is recommended.
- Avoid glossy paper as this results in reflections in the image. This
 impairs the results of the OCR conversion. If you intend to use
 glossy paper, we recommend that the light on the unit is switched
 off.
- Certain fonts can be difficult for the OCR engine to interpret.
- It is important that the text contrast is sufficient.
- It is important that the chosen spoken language is the same as that of the text.
- The paper should be rotated as little as possible.

6.10 Maintenance charging

MagniLink Voice with a battery is also equipped with a smart battery charger that uses maintenance charging to keep the battery in good condition. To further extend battery life, we recommend that you use your MagniLink Voice once a month with just the battery (disconnect the mains adapter) until the battery is completely discharged.



7 Ergonomics

It is important that the workplace around your system is comfortable, and that you sit correctly. This is so that you can use it for as long as possible without putting undue strain and stress on your neck and back.

You should bear the following in mind.

- Your chair should be positioned close to the table on which the equipment is located, and you should not sit in the chair for too long. We recommend a good office chair with adjustable height.
- The seat of the chair should be at a height that does not cause your legs to become numb; legs should be at an angle of 90 degrees and you should rest your feet on the floor.
- The table should be at a height at which you can rest your lower arm horizontally on it. It is important that the table is neither too high nor too low for you. The ideal solution is if the screen is slightly below eye level and in as straight a line in front of you as possible.
- Shield out daylight. Lights in the ceiling, table lamps and light from windows can cause reflections on the monitor. For this reason, avoid placing lights where they shine directly at the screen or at yourself.
- If you use the device for long periods of time, there is a risk of repeated movements causing you pain in your neck, shoulders and back. Your eyes can also get tired from looking at a screen for too long.



8 Troubleshooting

If the unit does not produce a voice message when it starts.

• Ensure that all cables are connected. If it is battery operated, the battery may be dead.

If the unit gives the voice response "No text in the document" after an OCR conversion.

• Check that the document is not rotated through more than 15 degrees.

If the above has been checked and it is still not possible to make the unit function normally. Contact a competent service engineer or LVI.



9 Technical information

Dimensions collapsed $230 \times 65 \times 325 \text{ (W x D x H)}$

Dimensions, opened up $230 \times 310 \times 320 \text{ (W x D x H)}$

Weight (excluding hand control) Without battery: 2.0 Kg

With battery: 2.5 Kg

Power 17 W

Battery capacity 65 Wh

Charging time 2.5 hours

Battery time In use 5 hours

Battery warranty period 1 year

Start-up time Switched off 1 minute 15 seconds

Acceptable temperature ranges Transport and storage -20°C – +60°C

Operation: +5°C - +25°C

Relative humidity <80%

Document size A4

Light LED

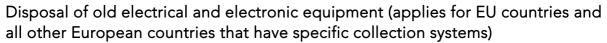
File format TXT, RTF, PDF

Language options BE, DE, DA, NL, UK, US, FI, FR, IT, NO,

ES, SE







If the product or its packaging has this symbol on it, it is not to be handled as regular domestic waste. It should instead be deposited at a suitable collection centre for the recycling of electrical and electronic equipment. By ensuring that this product is properly taken care of, you are helping to prevent the negative impact on health and the environment that might otherwise result from inappropriate disposal of this product. Recycling helps in the management of our natural resources. For more detailed information regarding the recycling of this product, you can contact your municipality, your waste management company or the store where you purchased the product.





10 Declaration of Conformity

DECLARATION OF CONFORMITY

Manufacturers name:		LVI Low Vision International AB			
Manufacturers Addres	s:	Verkstadsgatan 5			
		S-352 46 Växjö			
		Sweden			
Web:		http://www.lviglo	obal.se		
SRN (Single Registration Number):		SE-MF-000004178			
Basic UDI-DI (GMN):		7330724MLVOICE3F			
Brand name or trademark:		MagniLink			
Product code:		MLVOICE-2, MLVOICE-2-BAT			
Classification:		Class 1			
Type of equipment:		Reading Aid			
Conformity assessmen	t route:	LVI Low Vision International AB uses the following procedures for the CE-labeling of their products according to the Regulation MDR 2017/745:			
		Class [1]: EC confor Annex I + Annex II	mity declaration according to +Annex VII		
This declaration of conformity is issued under the sole responsibility of LVI Low Vision International AB. We hereby declare that he medical device(s) specified above meet the provision of the Regulation (EU) MDR 2017/745 for medical devices. This declaration is supported by the Quality System approval to ISO 9001 issued by Intertek. All supporting documentation is retained at the premises of the manufacturer. Manufacturer Manufacturer's authorized representative					
Date	Signature		Position		
20-05-2021	Africa		Managing Director		
	Clarification				
	Henrik Blomdah	<u> </u>			



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