![LVI Low Vision International logo]

User Manual

MagniLink Voice II

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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.

CE	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.

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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)
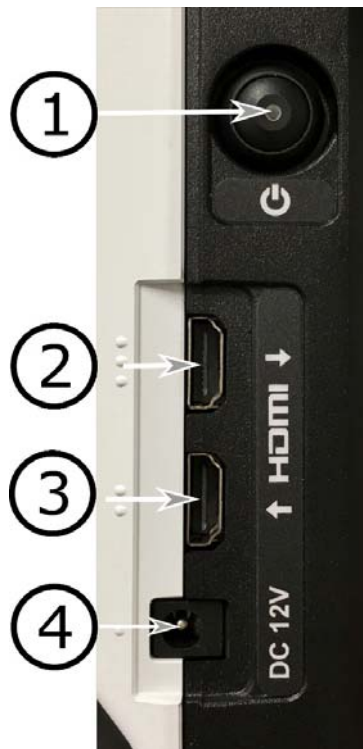- Polyethylene (LDPE4)

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.
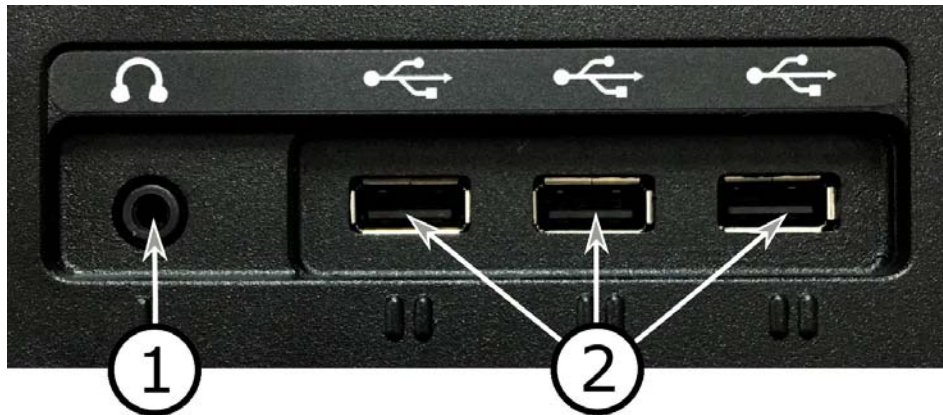
5   Installation

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. If the unit is turned off or in standby mode, pressing the button will turn on the unit. If the unit is running, a short press of the button will put the unit in standby mode and pressing the button for more than three seconds will turn off the unit.

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.

1. **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
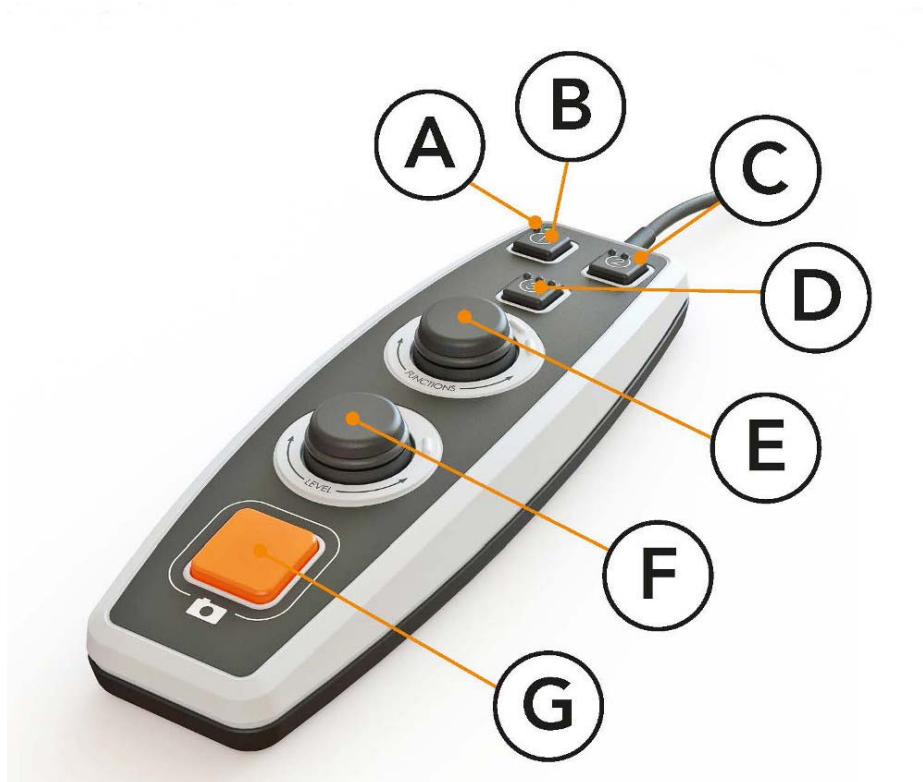
6.1   Placing paper

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 Basic mode

The unit can be configured to basic or default mode. For more information, please see the chapter on Configuration page 19. Below is a description of how the hand control is used in basic mode.

The hand control consists of two combined rotary and push button controls as well as an LED and four push buttons.
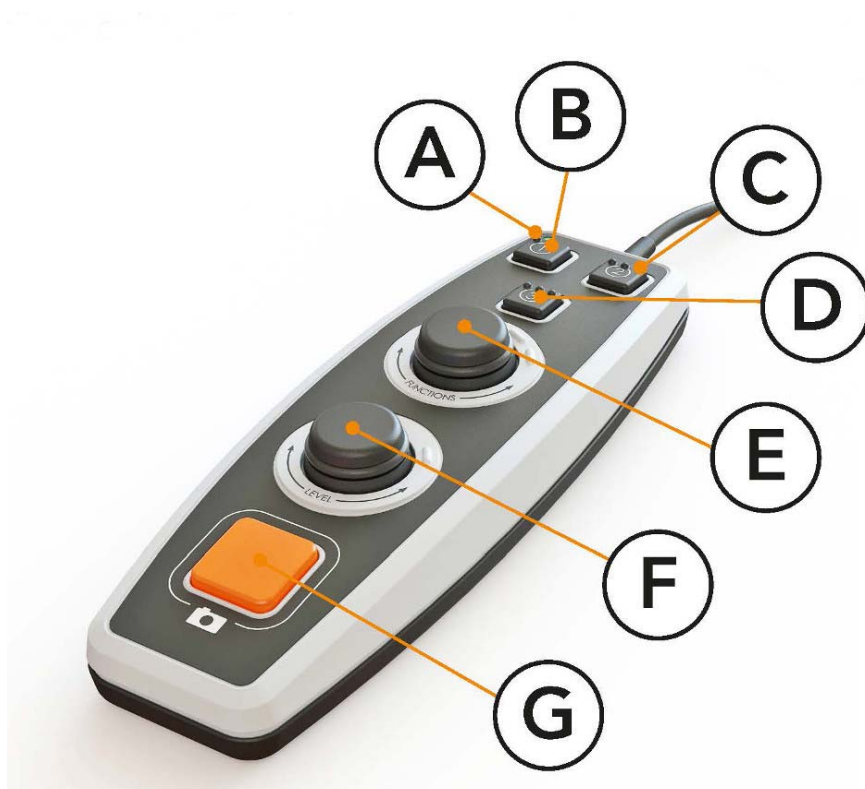

A.   **LED**
       When the unit has started, this LED shines green. When you switch
       to text mode, it shines blue. When the unit is in standby, it shines
       white.

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.   **Quick button for display mode** (only available if a monitor is
       connected)
       Use this button to switch between the different display modes.
       There are six different display modes: "word", "line", "page",
       "picture", "picture and word" and "picture and line".

E.   **Speed control**
      When you rotate the control, you adjust the speed of reading.

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.

6.3   Default mode

The unit can be configured to basic or default mode. For more
information, please see Configuration page 19. Below is a description of
how the hand control is used in default mode.

The hand control consists of two combined rotary and push button
controls as well as an LED and four push buttons.

A.   **LED**
      When the unit has started, this LED shines green. When you switch
      to text mode, it shines blue. When the unit is in standby, it shines
      white.

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. **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 enable or disable 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 volume level or speech speed. The control is also used to change the lighting or to navigate in the text.

G. **OCR button**
This button is used to take a picture, OCR-process the text and read aloud the result.

6.3.1 Functions and settings

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 its default mode. 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 conversion is complete, the reading begins.

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" as a .txt file.

Open 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 "open" and then press the control to open the document. 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.

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 with the function control(**E**) and press the control to select. 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".

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 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 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 different display modes: "word", "line", "page", "picture", "picture and word" and "picture and line".

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.

Reset to default settings
Rotate the function control(**E**) until the unit says "advanced settings" and then press the control. Then rotate the function control(**E**) until the unit says "default settings" and press the control. Confirm by pressing the function control(**E**) again.

Change lighting
Rotate the function control(**E**) until the unit says "advanced settings" and then press the control. 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**).

Append text
To change whether text shall be appended to existing text when OCR conversion is started. Rotate the function control(**E**) until the unit says "advanced settings" and then press the control. Rotate the function control again (**E**) until the unit says "append" and then press the control to change the setting.

Change automatic language detection
Rotate the function control(**E**) until the unit says "advanced settings" and then press the control. Then rotate the function control(**E**) until the unit says "automatic language detection" and press the control.

Change reading voice
Rotate the function control(**E**) until the unit says "advanced settings" and then press the control. Then rotate the function control(**E**) 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 settings

Rotate the function control(E) until the unit says "advanced settings" and then press the control. Then rotate the function control(E) 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.

Check battery status (only unit with battery)

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

Rotate the function control(E) until the unit says "advanced settings" and then press the control. Then rotate the function control(E) until the unit says "sound profile" and press the control. Rotate the function control again(1) until the desired sound profile is read aloud and then press the control to select. There are three different sound profiles: Base, treble and normal.

Change standby mode

To set the time after which the unit will switch to standby mode. Rotate the function control(E) until the unit says "advanced settings" and then press the control. Then rotate the function control(E) until the unit says "standby mode" and press the control. Rotate the function control(E) again until the desired time is spoken and then press the control to select this time.

Change font (only available if a monitor is connected)

Rotate the function control(E) until the unit says "advanced settings" and then press the control. 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 "font" and press the control. Rotate the control until the desired font is spoken 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 "advanced settings" and then press the control. 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 "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**) until the unit says "advanced settings" and then press the control. 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 "artificial colours" and press the control. Rotate the control until the desired colours are spoken and press the control to select these.

Change contrast level (only available if a monitor is connected)
Rotate the function control(**E**) until the unit says "advanced settings" and then press the control. 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 to natural colours (only available if a monitor is connected)
Rotate the function control(**E**) until the unit says "advanced settings" and then press the control. 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 "natural colours" and press the control.

Get information on the version of the software
Rotate the function control(**E**) until the unit says "advanced settings" and then press the control. Then rotate the function control(**E**) until the unit says "about" and 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.

Get information about the unit's serial number
Rotate the function control(**E**) until the unit says "advanced settings" and then press the control. Then rotate the function control(**E**) until the unit says "about" and 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.
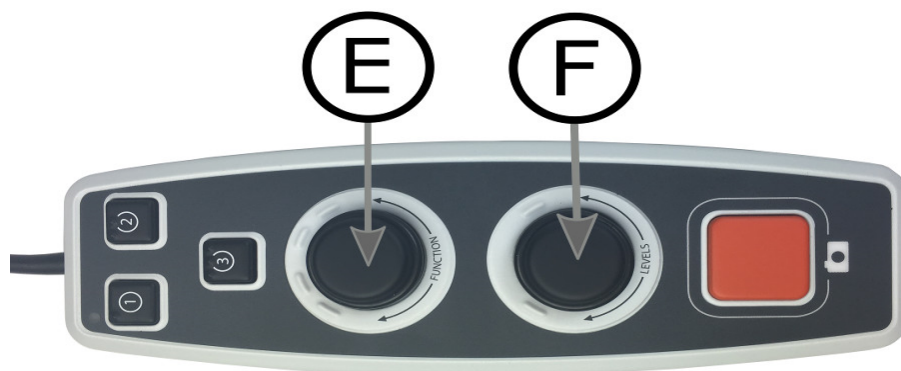
Update license

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 "advanced settings" and then press the control. Then rotate the function control(**E**) until the unit says "about" and 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

To update 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 "advanced settings" and then press the control. Then rotate the function control(**E**) until the unit says "about" and 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.

6.4   Configuration

It is possible to configure the system by removing menu options and by choosing standard function and quick function. It is also possible to switch the unit to a basic mode. To access the configuration menus. Press down the function control(**E**) and level control(**F**) and keep them held down until the system says "Configuring pressure for selecting standard function". This will bring you to the main menu for configuration. The following option will be found in the main menu.

Select standard function

To select which menu the unit will return to after a period of inactivity. Rotate the function control(**E**) until the unit says "standard function" and then 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 which menu the unit will return to when you press the quick button(**4**). Rotate the function control(**E**) until the unit says "quick function" and then 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.

Remove functions

To remove functions. Rotate the function control(**E**) until the unit says "functions" and then 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. When you have done this you will return to the main menu for configuration.

Basic configuration

To switch the unit to basic configuration. Rotate the function control(**E**) until the unit says "basic configuration" and then press the control.

Restore default configuration

To restore the configuration to the default configuration. Rotate the function control(**E**) until the unit says "default configuration" and then press the control.

Save and go back

To save and leave the configuration settings, rotate the function control(**E**) until the unit says "save configuration" and then press the control.

Go back without saving

To leave the configuration without saving, rotate the function control(**E**) until the unit says "close configuration" and then press the control.

6.5   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.

6.6   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.

6.7   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 x 65 x 325 (W x D x H)
Dimensions, opened up	230 x 310 x 320 (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 Standby 45 hours
Battery warranty period	1 year
Start-up time	Switched off 1 minute 35 seconds Standby 45 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

Disposal of old electrical and electronic equipment (applies for EU countries and all other European countries that have specific collection systems)

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
according to the Medical Devices Directive, 93/42/EEC with amendments from directive 2007/47/EC

Type of equipment:	*Reading Aid*
Brand name or trademark:	*MagniLink*
Type designation:	**MLVOICE-2, MLVOICE-2-BAT**
Product class:	*Class 1.*
Manufacturer:	*LVI Low Vision International AB*
Address:	*Verkstadsgatan 5* *S-352 46 Växjö* *Sweden*
Web:	http://www.lvi.se
Phone:	*+46 470 - 72 77 00*
Fax:	*+46 470 - 72 77 25*

As the manufacturer, we declare under our sole responsibility that:

➢ the product complies with the provisions of the Council Directive 93/42/EEC with amendments from directive 2007/47/EC.
➢ we will keep the technical documentation described in section 3 of Annex VII available to the national authorities for a period ending at least five years after the last product has been manufactured.
➢ the device meets the Essential Requirements of Annex 1 which applies to it, taking into account the intended purpose of the device.
➢ to follow the requirements regarding products placed on the market as described in section 4 of Annex VII.

☒ Manufacturer   ☐ Manufacturer's authorized representative

Date	Signature	Position
2016-06-14		Managing Director

Clarification

Erik Bondemark

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