

User Manual

MagniLink PRO

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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 Introducing MagniLink PRO

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

MagniLink PRO is a video magnifier designed for people with visual impairment. The video magnifier offers features including the potential to set the magnification, autofocus, several artificial colours, the option of switching the magnifier between reading mode, mirror mode and distance mode and the option of adjusting the brightness. MagniLink PRO can be connected to any monitor, a PC or a Mac. It is also possible to collapse the system when it is not being used or for transportation.



MagniLink PRO offers genuine full-HD quality. Available accessories comprise a dockable reading table, battery as well as software for OCR-processing and reading text aloud.

Table of additions to the product code MLPRO-FHD- depending on which accessories have been ordered.

A	Dockable reading table with friction brake X/Y
B	Pre-installed battery
C	Text To Speech for PC
D	Text To Speech for Mac

	The systems complies with all CE certification requirements for medical devices in accordance with EU regulation 2017/745.
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3 Information

3.1 Reuse, installation and maintenance

The device may only be technically overhauled and prepared by an authorized company. Re-use may only be carried out after appropriate inspection and cleaning / disinfection.

3.2 Cleaning

Before equipment cleaning and maintenance note:

- Disconnect the device from the power supply before cleaning.
- Use a slightly damp (not wet) cloth and a cleaning / disinfectant agent intended for monitors and computers.
- Do not allow any liquids to enter the device.

3.3 Safety information

- Only use the power adaptor supplied with the product. Using an incorrect type of power adapter may cause damage to the system.
- Place the power cord in such a way that you can neither trip over it or that crush damages can occur.
- 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.
- Never operate the product if it has been exposed to water or other liquids. Damaged or wet product can cause electric shocks or fire.
- Be careful not to catch your fingers when collapsing your MagniLink PRO.
- Serious incidents that have occurred in connection with the product shall be reported to the manufacturer and to the competent authority in the Member State where the user is established.
- When MagniLink PRO is to be moved, collapse it and lift from beneath. If MagniLink Pro has a dockable reading table, this must be anchored and locked before moving the system.
- If the system requires cleaning, pull out all cables and use a slightly damp (not wet) cloth. Use only water or a cleaning agent that is intended for monitors and computers.

- Make no further adjustments, even if the product does not function normally after following the functional descriptions. Pull out the power cable and contact service staff or the product distributor. Only use spare parts that are specified by LVI.
- Always switch off the power when the system is not being used.

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.

3.4 Battery

- The product uses a lithium-ion battery. These batteries contain metals such as lithium, nickel, and cobalt, which can be harmful to the environment if not handled properly. Improper handling may cause the battery to catch fire or leak substances that are hazardous to both humans and animals. By recycling the battery correctly, you reduce environmental impact and help recover valuable materials.
- The battery is user-replaceable using a Torx T10 and T8 screwdriver. Open the device by loosening the two screws on the front, the two screws on each side, and the screw on the top using the T10 screwdriver. Then loosen the internal screws with the T8 and T10 screwdrivers. Carefully remove the battery.
- We recommend contacting LVI to obtain the correct replacement battery and instructions if you are unsure.
- When disposing of the product, the battery must be removed and treated as hazardous waste. Cover the battery terminals with electrical tape to prevent short circuits and place the battery in a plastic bag before disposal. The product itself should be disposed of as electronic waste.
- Discharge the battery through normal use before recycling, if possible. This reduces the risk of fire. Never attempt to short-circuit or puncture the battery.

4 Unpacking

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

- Reading camera
- Power adaptor
- Carrying case
- User Guide
- USB memory stick with software
- USB cable
- HDMI to HDMI cable

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 PRO; remove the packaging. For further information, please see Installation.

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 (EPEL E)
- 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 Accessories



Dockable reading table with friction brake X/Y (**MLRT-XY**).



Battery (**ML-BAT**).



LVI Monitor 19" (**MLS-A103**) and 23" (**MLS-A104**).



Text To Speech for PC (**TTS-PC**), Mac (**TTS-MAC**) or Chromebook (**TTS-CHROME**).

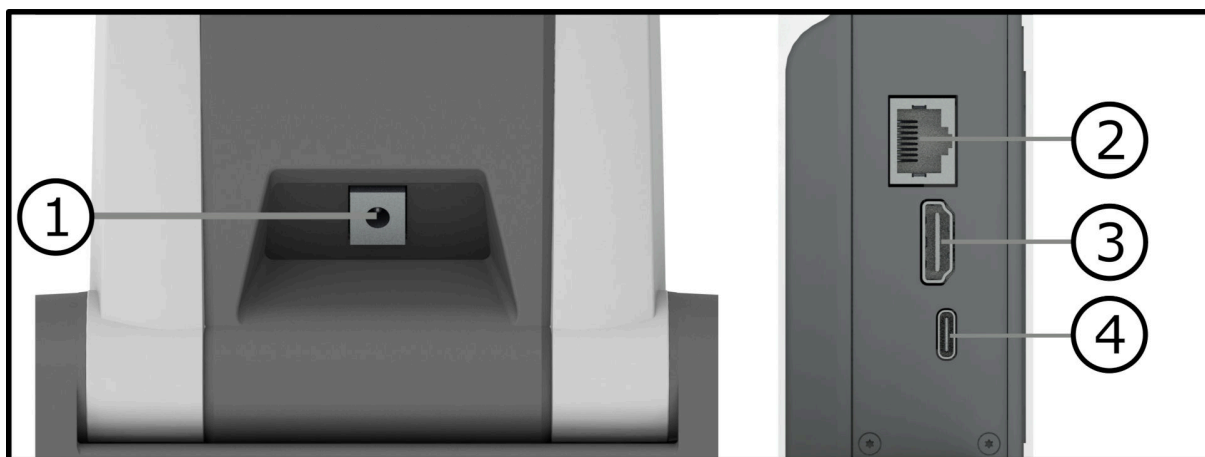
6 Installation

6.1 Unfolding



1. Place your MagniLink PRO on the table in front of your seat.
Remember that the reading table can be pulled out approximately 30 cm in three directions. MagniLink PRO has a low total weight. Therefore, it is very important to place the system at least 10 cm from the edge of the table, particularly when you are using the reading table in its most extended position. Excessive load in this position can cause the system to tip over.
2. Take hold of the unit's arm and turn it upwards to the upper end point.
3. Turn up the camera arm until it clicks into place. In order to get optimal focus range when a reading table is used with the system, the camera arm must be turned up until it clicks into place once more.

6.2 Connection



1. **Power supply**
Connect the mains adapter to the socket on the rear.
2. **Connection for control box**
Connect the control box to this socket.

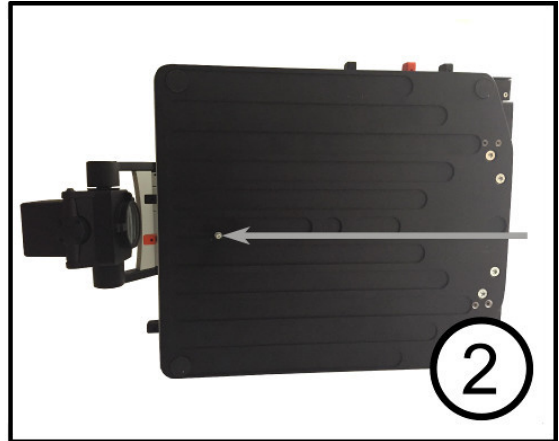
3. HDMI connection

Here the unit can be connected to a monitor that supports HDMI or DVI.

4. USB connection

Used to connect the unit to a computer.

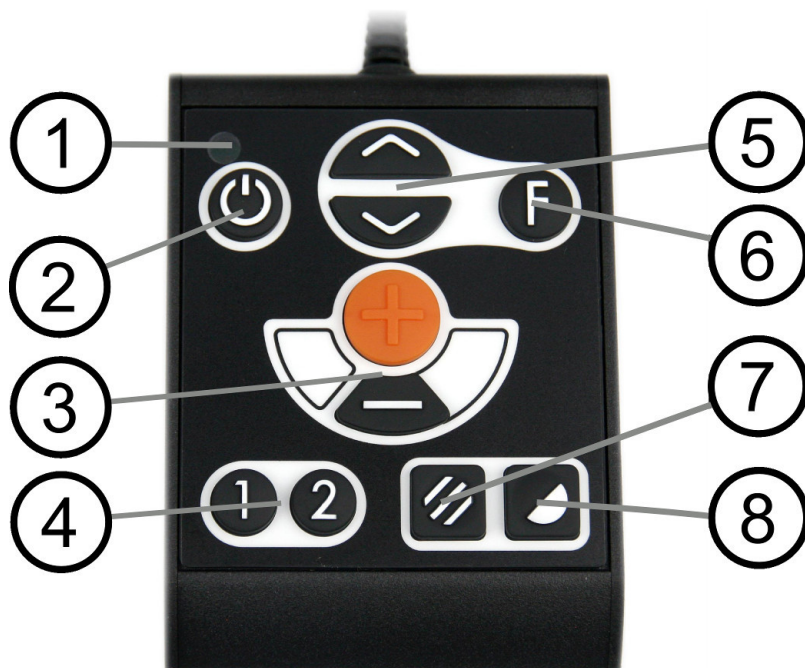
6.3 Installation of reading table



1. Install the reading table by pushing it in towards the unit.
2. In order to permanently install the reading table. Fasten the reading table securely with a screw on the underside.

7 Use

7.1 Control box



1. **LED**

A green light indicates that the unit is on. A flashing yellow light means that autofocus is switched off. The light flashes green when the system is starting. A red light for five seconds when the system is starting indicates that the battery needs to be charged.

2. **Power on/off**

Press to start or shut down the system.

3. **Magnification control**

Used to set the magnification. To reduce the zoom, press the lower key (minus) and to increase the zoom, pressure the upper key (plus).

4. **Programmable function buttons**

When the system is delivered, button 1 switches between automatic and manual focus and button 2 switches between overview mode and normal mode. It is possible to change the function of these buttons via the menu.

5. **Lighting configuration or navigation control**

Used to configure the light intensity in order to optimise reading conditions. Press the upper half to increase the light intensity and the lower half to decrease it. Also used to navigate in the menu.

6. **Function button**

When this button is pressed, a menu appears in which further settings can be made.

7. Picture mode

Press the button to switch the picture mode between natural colours and grey scale.

8. High contrast mode with artificial colours

Press the button to switch between the various colour combinations.

7.2 Menu

The menu is opened by pressing the function button. In order to navigate in the menu, press the navigation control. There thirteen main modes in the menu. The current mode is displayed on the screen. After 30 seconds of inactivity, the system returns to normal mode.

If you use the menu at the same time as the system is showing USB video on a computer. Press the short cut command to return to the program's standard values (F11 on PC and Alt + F11 on Mac). This causes the program to set the maximum window size and normal rotation, which is necessary in order for the menu to be displayed correctly.

1. **Autofocus** ("AF-ON" or "AF-OFF" is displayed on the screen)
In this mode, you can press the function button to turn autofocus on and off. Autofocus off can be used when you wish to write by hand. In this way, focus is not affected by the pen or your hand.
2. **Mirroring** ("MIRROR" is displayed on the screen)
In this mode, you can press the function button to mirror the image.
3. **Overview** ("VIEW" is displayed on the screen)
In this mode, you can press the function button to reduce the magnification to overview mode Press the button again to restore the magnification.
4. **Focus** ("FOCUS" is displayed on the screen)
In this mode, you can press the function button. When you do so, "F-SET" is displayed on the screen and it is then possible to set the focus mode manually by pressing the navigation control. Manual focus may, for example, be useful for inspection. When this has been done, press the function button again to return to the menu.
5. **Reference line/Bar** ("REFLINE" is displayed on the screen)
In this mode, you can press the function button. When you do so, "R-SET" is displayed on the screen and it is then possible to set the position of the reference line or the bar by pressing the navigation control. When you are satisfied with the position, press the function button again to save the position.

6. **Lighting** ("LAMP" is displayed on the screen)
Press the function button in this mode to access the settings for the lamp's brightness. "L-SET" is displayed on the screen and it is possible to reduce or increase the brightness by pressing the navigation control. When you are satisfied with the brightness, press the function button again to return to the menu.
7. **Shut-off time for screen and lamp** ("SLEEP" is displayed on the screen)
In this mode, you can set whether and after what length of time the system will turn off the lamp and the screen if the camera has not detected any movement. Press the button. It is then possible to select the time with the navigation control. When you are satisfied with the setting, press the function button again. To turn on the lamp and screen again, it is sufficient to move your hand under the camera.
8. **Shut-off time** ("SH-OFF" is displayed on the screen)
It is possible to set whether and after what length of time the system will be turned off if the camera has not detected any movement. Press the button. It is then possible to select the time with the navigation control. When you are satisfied with the setting, press the function button again.
9. **Programming of button 1** ("PRG-F1" is displayed on the screen)
In this mode, you can programme which function button 1 is to have. Press the function button. It is then possible to select the function with the navigation control. When you are satisfied with your choice, press the function button again to save the setting.
10. **Programming of button 2** ("PRG-F2" is displayed on the screen)
In this mode, you can programme which function button 2 is to have. Press the function button. It is then possible to select the function with the navigation control. When you are satisfied with your choice, press the function button again to save the setting.
11. **Battery status** (Battery symbol is displayed on the screen)
In this mode, the current battery status is displayed on the screen.
12. **Language** ("OSD" is displayed on the screen)
In this mode, you can set the language in the menu. Press the function button. It is then possible to select the language with the navigation control. There are four languages: English (ENG), German (DEU), French (FRA) and Spanish (SPA). When the desired language is displayed, press the function button again to save the language setting.
13. **Normal mode** ("EXIT" is displayed on the screen)
If you press the function button in this mode, you exit the menu and return to normal mode.

7.3 Reading table



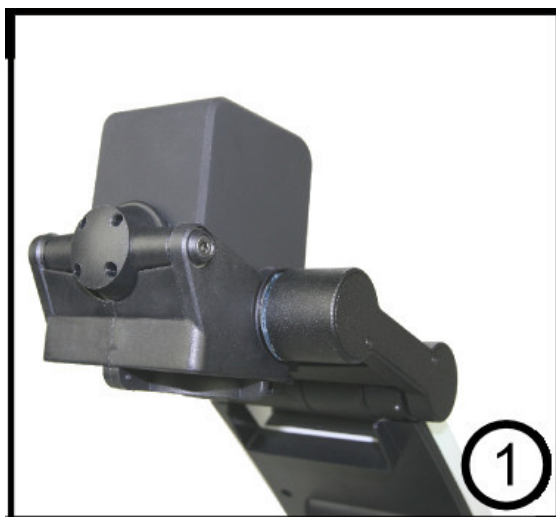
1. Side way direction friction adjustment

Set the side way friction by moving this handle. With the brake in the left end position, the reading table is unlocked. To increase friction, push the side way brake to the right (at the far right, the brake clicks into locked mode).

2. Depth way direction friction adjustment

Set the depth way friction by moving this handle. With the brake in the near end position, the reading table is unlocked. To increase friction, push the depth way brake towards the back. Push the brake in as far as possible to lock the reading table.

7.4 Camera



The camera has two modes. Reading mode and distance mode. Turn the camera to switch it from reading mode (1) to distance mode (2). When the camera is in distance mode, it can be angled laterally, depending on what you want to look at. In distance mode, the camera can also be turned to a mirror mode. The settings for both modes are automatically saved when you switch from one to the other.

Settings that are automatically saved for these modes are:

- Negative/Positive/Natural colours
- Magnification level
- Brightness/Contrast
- Reference line/Bar
- Mirroring of camera image
- Focus settings

7.5 Battery

För de modeller av MagniLink PRO som är utrustade med ett batteri gäller följande. Om batteriets laddningsnivå går under tio eller fem procent, visas en röd batterisymbol för att indikera att det är dags att koppla in nätadaptern och börja ladda batteriet. För att få bort symbolen skall man trycka på funktionsreglaget.

8 Ergonomics

Your reading camera is now ready to use. It is important that the workplace around your MagniLink is comfortable, and that you sit correctly. This is so that you can use the camera 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 reading 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 off 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.

9 Troubleshooting

No image is displayed on the screen after you start the system:

- Check that the power is on.
- Check that all connectors are properly connected as explained in the 'Installation' section.

The LED shines red for five seconds.

- The battery needs to be charged. Connect the mains adapter to the units to charge the battery.

It is not possible to start the system and the On/Off button flashes (orange/red).

- Press the On/Off button for more than six seconds to reset the system.

Never remove any panels or the casing in order to attempt to repair the system yourself. In the event of problems, contact your local dealer.

10 Technical information

Magnification, reading camera	1.1-70x (23" screen)
Camera, resolution	Full HD (1920x1080)
Monitor, resolution	1366x768 (18,5") widescreen (16:9) 1920x1080 (23") widescreen (16:9)
Computer, resolution	1280x720, 60Hz 1920x1080 30 Hz
Battery, type	Lithium ion
Battery time	5-9 hours
Charging time	2,5 hours
Warranty period battery	1 year
Dimensions collapsed	33x47x17 cm
Dimensions, opened up	33x38x52 cm
Weight	4,2 Kg
Power source	Battery/AC
Temperature range	Transportation & Warehousing -20°C - +60°C Operation: +5°C – +35°C



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.

11 Declaration of Conformity

DECLARATION OF CONFORMITY

Manufacturers name: *LVI Low Vision International AB*

Manufacturers Address: *Verkstadsgratan 5
S-352 46 Växjö
Sweden*

Web: *http://www.lviglobal.se*

SRN (Single Registration Number): *SE-MF-000004178*

Basic UDI-DI (GMN): *7330724MLPROY9*

Brand name or trademark: *MagniLink*

Product code: ***ML-PRO-FHD-***

Classification: *Class 1*

Type of equipment: *Reading Aid*

Conformity assessment 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 conformity declaration according to
Annex I + Annex II +Annex VII*

This declaration of conformity is issued under the sole responsibility of LVI Low Vision International AB. We hereby declare that the medical device(s) specified above meet the provision of the Regulation (EU) MDR 2017/745 for medical devices and Regulation (EU) 2023/1542 concerning batteries. 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.

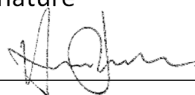
☒ Manufacturer

☐ Manufacturer's authorized representative

Date

20-05-2021

Signature



Position

Managing Director

Clarification

Henrik Blomdahl

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