

# User Manual

# MagniLink Vision

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In the interest of continued product development, LVI reserves the right to make improvements to this manual, and the products it describes, at any time, without notice or obligation.

## 1. General Information

MagniLink Vision (MLV) is a video magnifier which is available in several models. All models have the same structure, reading table and electronics. Thereafter, the module is chosen following 3 steps:

- Camera (available as Standard Definition (SD), High Resolution (HR) or High Definition (HD)).
- Screen size (integrated 18,5" or 23" wide-screen TFT)
- Panel (equipped either with push buttons or turn knobs which control different features)



Model	Camera	Screen	Control panel
MLV-BASIC-19	SD	18,5"	3 Turn
MLV-BASIC-23	SD	23,0"	3 Turn
MLV-01	HR	18,5"	3 Push
MLV-02	HR	18,5"	2 Turn
MLV-02-3	HR	18,5"	3 Turn
MLV-03	HR	18,5"	5 Push
MLV-04	HR	23,0"	3 Push
MLV-05	HR	23,0"	2 Turn
MLV-05-3	HR	23,0"	3 Turn
MLV-06	HR	23,0"	5 Push
MLV-07	HD	18,5"	3 Push
MLV-08	HD	18,5"	2 Turn
MLV-08-3	HD	18,5"	3 Turn
MLV-09	HD	18,5"	5 Push
MLV-10	HD	23,0"	3 Push
MLV-11	HD	23,0"	2 Turn
MLV-11-3	HD	23,0"	3 Turn
MLV-12	HD	23,0"	5 Push



The equipment complies with requirements for CE-approval of medical devices according to 93/42/EEG directives and MDD 93/42/ECC with amendment from directive 2007/47/EC.

## 2. Safety Information

MagniLink Vision is only intended for use as a reading aid in home, school or office environments.

- Before connecting, check the system and the mains cord to ensure that nothing is damaged. The enclosed power supply is only intended for use with the MagniLink Vision.
- Never operate the MagniLink Vision if the unit has been exposed to water or other liquids.
- Damaged mains cord or plugs may result in electrical shock or a fire hazard. Do not allow anything to rest or roll over the mains cord.
- If cleaning is required, unplug the MagniLink Vision, and then use a slightly damp (not wet) cloth. Only use water or a detergent specially made for cleaning monitors and computers. Do not use aerosol cleaners directly on the MagniLink Vision since it may overspray and cause an electrical shock.
- When operating the reading table, do not place hands under or behind the reading table as one's finger may get caught between the reading table and the stand or the slides. The MagniLink Vision should be placed at least 10 cm from the edge of the table.  
**Warning!** Do not apply excessive weight to the reading table when it is in its most extended position, as this may cause the system to turn over, which could lead to personal injuries.
- If the MagniLink Vision is to be transported, do not lift the unit by the screen or the reading table, as these are movable parts.
- If you are unable to restore normal operation by following the operating instructions, do not attempt any further adjustments. Unplug the set and contact your dealer or service technician. Only use replacement parts specified by LVI.

- Moving the system from a cold to a warm place may cause condensation (water droplets) on its internal surfaces or on the lens. To avoid condensation, install the system in the room where it is to be used at least 30 minutes before use. Do not expose the system to sudden or extreme changes in temperature.

If you are unsure, contact your dealer or service technician.



To prevent fire or shock hazard, do not expose the equipment to moisture. To reduce the risk of electric shock, do not remove the cover.

No user serviceable parts inside. Please refer service to qualified service personnel.



## 3. Unpacking

The equipment is delivered in one box containing:

- the unit
- the user manual

Inspect the package for exterior damage. Note that severe damages should be addressed with the transport company.

Open the box and take out the MagniLink Vision. Remove the packaging and place the unit on a table. The mains cord is placed on the back of the unit. Refer to the section "Installation", in the next chapter, for further information.

### 3.1 Packaging

The packaging of the unit contains the following:

- cellular plastic (EPP)
- corrugated cardboard
- polyethylene (LDPE4)

LVI recommends that all packaging material be kept, to be reused in case of future shipping.

## 4. Installation

Place the unit on a table. The MagniLink Vision should be placed at least 10 cm/3.9 inches from the edge of the table. Note that the system's reading table can be moved up to 30 cm/11.8 inches in three directions. MagniLink Vision is very light, which means that it is important to place the system correctly to ensure that it always remains stable, especially if the reading table is in its most extended position. An overload in this position may cause the system to turn over.

Connect the mains cord to the wall socket and press Power On. The unit is now ready to be used. The screen can be tilted 10 degrees and lowered 8,5 cm/3.4 inches from the highest position. Place your hands on the soft touch padding on both sides of the screen and adjust it to the desired position. Release the brakes on the reading table; you are now ready to start using the MagniLink Vision.

### Writing position

Place the reading table in the desired position. Lock the table by pushing the side way brake to the right end position and the depth way brake to the far end position (towards the back).

### Transport position

Place the table in the middle position and push it back as far as possible. Lock the table by pushing the side way brake to the right end position and the depth way brake towards the back.

### End User Configuration (EUC)\*

A configuration program is available which can individually modify the settings as per the user's requirements. The settings are: magnification (max + min), guiding line (colour + thickness), lighting settings and high contrast mode (colours + number of colours).

\*Not possible with MLV-BASIC

## 4.1 Work place

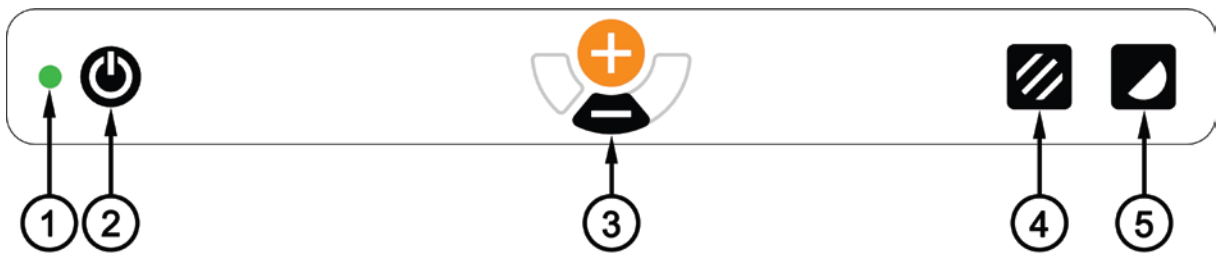
A comfortable work place around your MagniLink is important. It could be useful to keep the following in mind:

- The chair should have a back rest.
- The seat of the chair should be at a height which does not make your legs become numb.
- Let your feet rest on the floor.
- The reading table should be at a height which allows your forearm to rest horizontally on the table.
- Shield off daylight. Lights from ceiling lamps, table lamps and windows might be reflected on the monitor.

## 5. Instructions

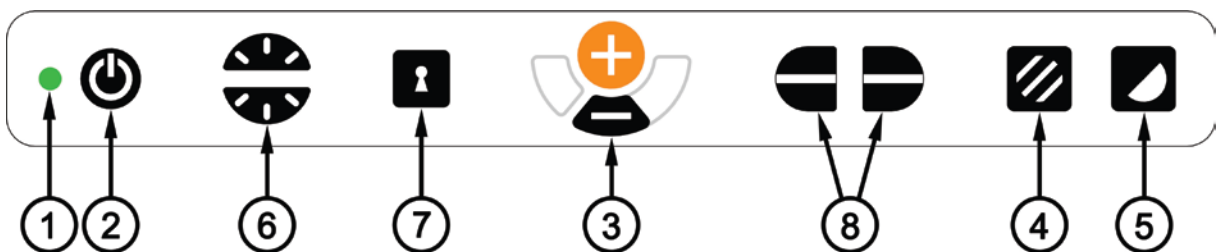
Four panels are available for MagniLink Vision. The functions on each panel are listed below, as well as the function of the reading table.

### 5.1 3 Push



1. LED indicator
2. Power on/off
3. Magnification buttons
4. Colour/Gray scale picture mode\*
5. High contrast mode with artificial colours

### 5.2 5 Push



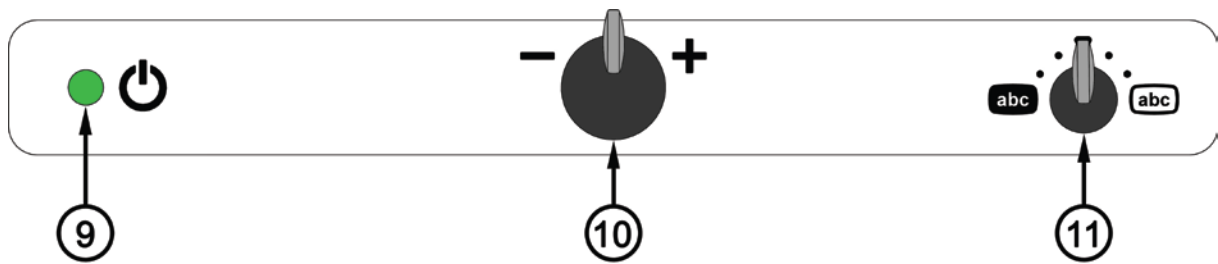
1. LED indicator
2. Power on/off
3. Magnification buttons
4. Colour/Gray scale picture mode (or Light adjustment)\*
5. High contrast mode with artificial colours
6. Brightness control
7. Autofocus on/off (or DVI switch)\*\*
8. Control for guiding line/curtain\*\*\*

\*Gray scale is not available for MLV-BASIC

\*\*Support for DVI switch is not available for MLV-BASIC

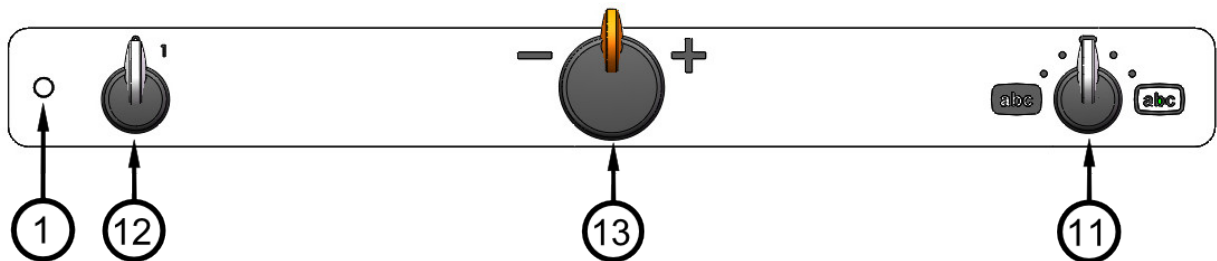
\*\*\*Curtain is not available for MLV-BASIC

### 5.3 2 Turn



- 9. Power on/off and LED indicator
- 10. Magnification control
- 11. Colour picture mode and high contrast mode

### 5.4 3 Turn



- 1. LED indicator
- 11. Colour picture mode and high contrast mode
- 12. Power on/off
- 13. Magnification control

### 5.5 Reading table



14. Side way direction friction adjustment
15. Depth way direction friction adjustment

## 5.6 Description of features

### 1. LED indicator

Green light indicates that the unit is on. Flashing green light indicates start-up. Slowly flashing yellow light indicates that the unit is in standby mode. Red light indicates an error; refer to the section "Troubleshooting".

### 2. Power on/off

Press the button to switch the unit on or off.

### 3. Magnification buttons

To decrease the magnification, press the lower button (minus) and to increase the magnification, press the upper button (plus).

(The magnification settings can be adjusted with the EUC software; please contact your dealer for more information.)\*

### 4. Colour/Gray scale picture mode

Press button for a picture mode with natural colours or gray scale picture.

#### Light Adjustment (5 Push panel only)

Press and hold the button to temporarily adjust the light by pressing brightness control (6) up or down. This could be used, for example, by light sensitive persons or when reading on glossy paper. The system will automatically switch between ROPC (Reading Optimized Picture Control) and DPC (Dynamic Picture Control) when the light reaches a certain level. There is no switching between natural colours and gray scale when the light adjustments are used.

#### Light on/off

The light can be turned on and off by pressing the button for three seconds. The system will automatically switch between ROPC (Reading Optimized Picture Control) and DPC (Dynamic Picture Control).

(The light settings and grey scale settings can be adjusted with the EUC

software; please contact your dealer for more information.)\*

## 5. High contrast mode with artificial colours

Press the button to switch between different combinations of colours. Colour combinations available in the standard configuration:

### Background/Text

White/Black  
Black/White  
Yellow/Black  
Black/Yellow  
Green/Black  
Black/Green

### Background/Text

Red/Black  
Black/Red  
Yellow/Blue  
Blue/Yellow  
White/Blue  
Blue/White

(The colour settings in high contrast mode can be adjusted with the EUC software; please contact your dealer for more information.)\*

## 6. Brightness control

By pressing the buttons it is possible to adjust brightness. Press up to increase and down to decrease the brightness. When button picture mode (4) is pressed, the lamps intensity is adjusted instead. In this way, the best conditions for reading in different situations can be achieved.

## 7. Autofocus on/off

Pressing the button locks the autofocus in the present position. This could be used, for example, when writing by hand without risk of disturbing the focusing system with the hand or the pen. A subsequent press of the button reactivates the autofocus system.

### DVI switch (5 Push panel only)\*

When the DVI switch is connected, press the button for three seconds to switch between the camera image and the computer image on the built-in screen.

## 8. Control for guiding line/curtain\*

Controls either the position of the guiding line or the size of the curtain. Press the right button to move the guiding line downwards. Continue to press the button and the guiding line switches from horizontal to vertical position and the guiding line will be moved from left to right. Further pressing the button and the guiding line turns into a horizontal curtain that reduces the visual area. Continue to press the button and the curtain becomes vertical. The left button gives the opposite result.

(The colour and size of the guiding line can be adjusted with the EUC software. It is also possible to select if the guiding line, the curtain or both should be active; please contact your dealer for more information.)\*

## 9. Power on/off and LED indicator

Press the button to switch the unit on or off. Green light indicates that the unit is on. Flashing green light indicates start-up. Slowly flashing yellow light indicates that the unit is in standby mode. Red light indicates an error; refer to the "Troubleshooting" section.

## 10. Magnification control

To decrease the magnification, turn the knob to the left (minus) and to increase the magnification, turn the knob to the right (plus).

(The magnification settings can be adjusted with the EUC software; please contact your dealer for more information.)\*

## 11. Colour picture mode and high contrast mode

With the knob in the upright starting position the colour picture, with natural colours, is displayed on the screen. Turn the knob to the left for a negative high contrast mode and to the right for a positive high contrast mode. There are four combinations in the standard configuration:

### Background/Text

White/Black

Black/White

### Background/Text

Yellow/Black

Black/Yellow

(The colour settings in high contrast mode can be adjusted with the EUC software; please contact your dealer for more information.)\*



**12. Power on/off**

Turn this knob to switch the unit on or off.

**13. Magnification control**

Turn this knob to the left to decrease the magnification or turn it to the right to increase the magnification. With this knob the magnification can be set to 16 different levels.

(The magnification settings can be adjusted with the EUC software; please contact your dealer for more information.)\*

**14. 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.

**15. 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.

\*Not available for MLV-BASIC

## 16. Troubleshooting

If nothing happens when turning the system on, refer to the section "Installation" and check that all connections are correct.

If the LED to the left of the main switch is solid red, something is wrong with the equipment and it cannot be used. Press the main switch once and MagniLink Vision will make three attempts to restart. If the light still indicates a solid red, turn off the equipment and contact an authorised service technician.

If the light is flashing red, it means that the wrong voltage is being supplied from the power supply. If the problem continues, pull out the power outlet cable and contact an authorised service technician.

Never disassemble any covers to try to repair the system yourself.

## 17. Technical specification

### MagniLink Vision with an 18,5" TFT widescreen

Magnification:	2,8 – 59x (SD), 2,5 - 50x (HR) or 1,7 - 60x (HD)
Resolution:	1366 x 768
Power consumption:	Max 28 W (SD), 31 W (HR) or 40 W (HD)
Power consumption, standby:	1,3 W
Weight:	11,8 kg

### MagniLink Vision with a 23" TFT widescreen

Magnification:	3,5 – 68 (SD), 3,0 - 50x (HR) or 2,0 - 60x (HD)
Resolution:	1920 x 1080
Power consumption:	Max 40 W (SD), 43 W (HR) or 50 W (HD)
Power consumption, standby:	1,3 W
Weight:	13,5 kg

### General properties

Refresh rate:	60 Hz
Luminance:	300 cd/m <sup>2</sup>
Contrast:	1000:1
Focusing distance:	0-60 mm (at max. magnification)
Working space:	110 mm – 195 mm
Lamp type:	2 LEDs (SD), 4 LEDs (HR), or 8 LEDs (HD)
Mains Voltage:	100-240 V, 50-60 Hz
Size of reading table:	420 x 300 mm (W x D)
Dimensions in use:	420 x 470 x 570 mm (W x D x H)
Dimensions of packaging:	620 x 590 x 610 mm (W x D x H)
Temperature limit:	Transportation and storage: -20°C – +60°C Operation: +5°C – +35°C
Relative air humidity:	<80%
Accessories:	DVI switch PC software (Not for MLV-BASIC)



**Disposal of old Electrical & Electronic Equipment (Applicable throughout the European Union and other European countries with separate collection programs).**

This symbol, found on your product or on its packaging, indicates that this product should not be treated as household waste when you wish to dispose of it. Instead, it should be handed over to an applicable collection point for the recycling of electrical and electronic equipment.

By ensuring this product is disposed of correctly, you will help prevent potential negative consequences to the environment and human health, which could otherwise be caused by inappropriate disposal of this product. The recycling of materials will help to conserve natural resources. For more detailed information about the recycling of this product, please contact your local city office, household waste disposal service or the retail store where you purchased this product.

## 18. FCC statement (USA and Canada only)

NOTE: 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.
- (2) This device must accept interference received, including interference which may cause undesired operation.

This equipment has been tested and complies with the limits for a Class B digital device, according to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation.

This equipment generates uses and can radiate radio frequency energy. If not installed and used in accordance with the instructions, it may cause harmful interference to radio communications. However, there is no guarantee that no interference will occur in a particular installation.

If this equipment causes harmful interference to radio or television receivers, (which can be determined by turning the equipment on and off) the user is encouraged to try one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the distance between the equipment and receiver.
- Connect the equipment to a different circuit from the one that the receiver is connected to.
- Consult LVI or an experienced radio/TV technician for help.

CAUTION: The Federal Communications Commission warns the user that changes or modifications of the unit not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

To comply with the FCC rules, the system should only be used with the enclosed LVI power supply.

# 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: *MLV*  
Product class: *Class 1.*  
Manufacturer: *LVI Low Vision International AB*  
Address: *Verkstadsgatan 5  
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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

2010-09-21



Managing Director

Clarification

Erik Bondemark