

User Manual

MagniLink Mira

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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.

1. General information

MagniLink Mira is a video magnifier designed for people with visual impairments. The video magnifier offers autofocus, full colour and several artificial colours.

There are two versions in the **MagniLink Mira** family:

- MLMIRA-AD19 comes with a 18,5" widescreen (16:9).
- MLMIRA-AD23 comes with a 23" widescreen (16:9).



MagniLink Mira complies with all requirements for CE-approval of medical devices according to 93/42/EEG directives.

2. Safety information

The MagniLink Mira is only intended for use as a reading aid at home or for office work.

- The enclosed net adapter is only intended for use with MagniLink Mira. Before connecting, check the net adapter and the mains cord to make sure nothing is damaged. If something is damaged, call your service technician for replacement. Do not allow anything to rest or roll over the mains cord. Damaged mains cord or plugs may result in a shock or a fire hazard.
- Make sure that the openings of the unit are not covered. Caution children about dropping or pushing objects into the unit's openings. Object dropped into the MagniLink Mira may result in an electrical shock or a fire hazard.
- Never operate the MagniLink Mira if the unit has been exposed to water, rain or other liquids. Unplug the unit and have it inspected by a service technician before further use. If cleaning is required, unplug the unit, use a slightly damp (not wet) cloth. Only use water or some detergent specially made for cleaning monitors and computers. Do not use aerosol cleaners directly on the unit since it may overspray and cause an electrical shock.
- If the MagniLink Mira has to be moved, the reading table has to be locked in transport position by pushing the brakes in maximum position. Stand behind the unit and lift it by the aluminium bars at the back of the unit. Do not lift the unit's screen or the reading table.
- If you are unable to restore normal operation by following the operation instructions, do not attempt any further adjustments. Unplug the set and call 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.

Warning! MagniLink Mira has a low total weight, which means that the system is less stable when the reading table is in its most extended position. Do not overload the reading table when it is in this position. Doing so may cause the system to turn over which may lead to personal injuries.



Plastic bags in the packing material can be dangerous. To avoid danger or suffocation keep bags away from babies and children.

To prevent fire or shock hazard, do not expose the equipment to rain or moisture

To reduce the risk of electric shock, do not remove the cover. No user serviceable parts inside. Refer service to qualified service personal In uncertainty about any safety details, please contact your supplier.

3. Unpacking

MagniLink Mira is delivered in a box containing:

- Camera unit
- Net adapter
- Mains cord
- Manual

3.1 Packaging

The packaging of the unit contains the following:

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

LVI recommends the user to keep all packaging material, to be reused in case of future shipping.

Inspect the package for exterior damages. Note that severe damages should be directed to the transport company. Open the box and place the units parts on a table.

3.2 Packing

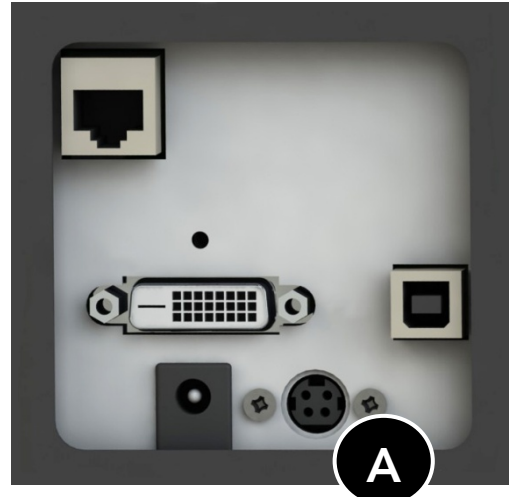
If the unit has to be moved or sent back, note the following:

Use the original packaging. Put the polyethylene bag over the system and place the transport support as well as packing material around it. Lift the system down in the box. Then tape the box together.

4. Installation

The unit comes fully assembled, the only thing needed is to connect the AC adapter (A), on the back of the camera unit. The device is then ready for use.

The AC adapter produce heat and may therefore not be covered!



4.1 Setting the screen position

The screen can be tilted forward / backward by holding on both sides of the screen and then tilt the the screen to the desired position . The screen can be raised / lowered by holding a hand under the screen, lift the screen a bit while the knob on the back is pulled out (placed under the camera), set the screen in the desired position then release the knob and the screen.

5. The 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 of 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 that allows your forearm to rest horizontally on the table.
- Shield off daylight. Lights from ceiling lamps, table lamps and windows can be reflected on the monitor.



When operating the reading table for MagniLink Mira, do not place hands under or behind the reading table. It could get one's finger caught between the reading table and the stand or the slides.

6. Functions

Here follows an overview of the controls of MagniLink Mira. Next pages have more information, both for camera unit and reading table.



6.1 Features, camera unit

- 1) On/off (standby)
- 2) Brightness control
- 3) Autofocus on/off
- 4) Magnification lever
- 5) Control for guiding line
- 6) Option 1: Button for colour picture mode
Option 2: Exposure mode Manual/Automatic
- 7) Button for high contrast with artificial colours
- 8) Depth direction friction adjustment
- 9) Sideway direction friction adjustment

1) On/off (standby)

Press the button to switch on or off the unit.

2) Brightness control

Press the button to adjust the brightness. This way best readability in different situations can be achieved.

3) Autofocus on/off

Pressing the button locks the autofocus in present position. This could be used for example when writing by hand without disturbing the focusing system with the hand or the pen. A new push at the button reactivates the autofocus system again.

4) Magnification lever

Lever for adjustment of the magnification. To decrease the magnification, push the left side of the button and to increase the magnification, push right side of the button.

5) Control for guiding line

Controls the position of the guiding line. Press the right side of the button to move the guiding line horizontally upwards. Continue to press and the guiding line switches from horizontal to vertical position and the guiding line will be moved from right to left. The left side of the button makes the guiding line go in opposite direction.

6) Option 1: Button for colour picture mode

When pushing the button it will show natural colours.

Option 2: Exposure mode Manual/Automatic

By pressing the button for three seconds, the camera switches from manual to automatic exposure. Pressing the button for another three seconds, switches the camera back to manual exposure.

7) Button for high contrast mode with artificial colours

Press the button to switch between different combination of colours.

Background / Text

white / black
black / white
yellow / black
red / black
black / red
yellow / blue

Background / Text

black / yellow
green / black
black / green
blue / yellow
white / blue
blue / white

6.2 Features, reading table



8) Depthway brake

It is used to set the depthway friction. With the brake in near end position, the reading table is unlocked. To increase friction, push the depthway brake towards the back.

9) Sideway brake

Is used to set the sideway friction. With the brake in the left end position, the reading table is unbraked. To increase the braking power the sideway brake is pushed to the right.

Writing position

Locate the reading surface in wanted position. Lock the table by pushing the sideway brake to the right end position and the depthway brake is pushed from the user to the end position (or 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 sideway brake to the right end position and the depth way brake towards the back.

7. Troubleshooting

If nothing happens when turning the system on, check that all connections are correct according to the section "Installation". If the installation is properly done, turn off the equipment and contact an authorised service technician.

Never remove the cover to repair the equipment.

If the led on the unit is red, something is wrong with the equipment. Restart the system by pulling out the mains cord from the wall socket for about 10 seconds, and then try to restart the equipment. If the light is still red, turn off the equipment and contact an authorised service technician.

7.1 Replacing the lamp

MagniLink Mira is equipped with one halogen lamp. If the lamp breaks and needs to be changed, first turn the unit off and let the lamp cool down. Then release the lamp holder and pull the lamp out.



8. Technical specifications

MagniLink Mira with 18.5" screen

Magnification range	2,8 - 59 x
Focusing distance	0 - 55 mm
Luminance	300 cd/m ²
Contrast	1000 : 1
Lamp type	Halogen 12V 20W 36°
Free space distance	110-220 mm
Refresh rate	60 Hz
Mains voltage	100-240 V, 50-60Hz
Power consumption	30 W
Weight	12 kg (26,5 pounds)
Net adapter	12V 3A AC adapter model ADPV16

Dimensions

Size of reading table	390 x 330
Dimensions in use	400 x 430 x 450 mm
Packaging Dimensions	620 x 590 x 610 mm

Temperature

Temperature limit	Transport / storing -20°C to +60°C, Operation +5°C to +35°C
Rel. air humidity	<80%

MagniLink Mira with 23" screen

Magnification range	3,5 - 68
Focusing distance	0 - 55 mm
Luminance / Contrast	300 cd/m ²
Lamp type	Halogen 12V 20W 36°
Free space distance	110-220 mm
Refresh rate	60 Hz
Mains voltage	100-240 V, 50-60Hz
Power consumption	30 W
Weight	13 kg (28.66 pounds)
Net adapter	12V 3A AC adapter model ADPV16

Dimensions

Size of reading table	390 x 330 mm
Dimensions in use	400 x 430 x 450 mm
Packaging Dimensions	620 x 590 x 610 mm

Temperature

Temperature limit	Transport / storing -20°C to +60°C, Operation +5°C to +35°C
Rel. air humidity	<80%



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.

9. FCC statement (USA and Canada only)

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 that may cause undesired operation.

Class B Digital Device.

This equipment has been tested and found to comply with the limits for a Class B digital device pursuant to Part 15 of the FCC 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 and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

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

Caution to the user: 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 shall only be used with the enclosed LVI power adapter.

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 trade mark: *MagniLink*

Type designation: *MLMIRA-AD19*
MLMIRA-AD23

Product class: *Class 1.*

Manufacturer: *LVI Low Vision International AB*

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

- Ø the product follows the provisions of the Council Directive 93/42/EEC with amendments from directive 2007/47/EC.
- Ø 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.
- Ø the device meets the Essential Requirements of Annex 1 which applies to it, taken into account the intended purpose of the device.
- Ø 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
<u>2010-04-21</u>	<u></u>	<u>Managing Director</u>
	Clarification	
	<u>Erik Bondemark</u>	