

User Manual

MagniLink AIR

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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 MagniLink AIR

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

MagniLink AIR is a product line of magnifying camera systems designed for people with visual impairment. The system is available with several different cameras that can be combined in various ways. MagniLink AIR Uno with a combined distance and reading camera. MagniLink AIR Duo with a distance camera and a reading camera. MagniLink AIR Distance is a distance camera that connects to a computer via a network cable. You can also connect various LVI reading cameras to the system. The system offers features such as the ability to pan and tilt the camera, magnification settings, autofocus, several artificial colours, reading mode, mirror mode and distance mode settings, amongst other things. MagniLink AIR can stream video to a PC, Mac or iOS device.



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

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

- 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.
- Please follow the instructions in the document called “Assembly and Installation”.
- Store cables and power supplies securely.
- LVI recommends having two persons present when mounting the unit to a ceiling.
- Make sure the system is installed correctly.
- Do not pull or hang on the system after installation.
- Be aware of crushing.
- Do not cover the system.
- Be cautious when moving the unit to avoid accidental personal injury or damage to the unit.
- Never operate the product if it has been exposed to water or other liquids. Damaged or wet product can cause electric shocks or fire.
- 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.

- 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.
- 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.
- 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.

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 (AIR Go)

- 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 T6 screwdriver. Open the battery compartment by loosening the two Torx T6 screws on the underside of the product and carefully lift out 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:

- Camera system
- User Guide
- USB memory stick with software

Make sure there is no external damage before opening the box. In the event of damage, contact the courier to report the damage. Open the box, take out the MagniLink AIR and remove the packaging parts. For further information, please see the chapter on 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 Variants

5.1 MagniLink AIR Duo

MagniLink AIR Duo (**MLAIR-DUO**) is a dual-camera system that streams video wirelessly to a computer.



5.2 MagniLink AIR Uno

MagniLink AIR Uno (**MLAIR-UNO**) is a single-camera system that streams video wirelessly to a computer.



5.3 MagniLink AIR Distance

The distance camera is connected using the included network cable. The distance camera is available with various brackets.



Table bracket (**MLAIR-DISTANCE**).



Ceiling bracket (**MLAIR-DISTANCE-C**).



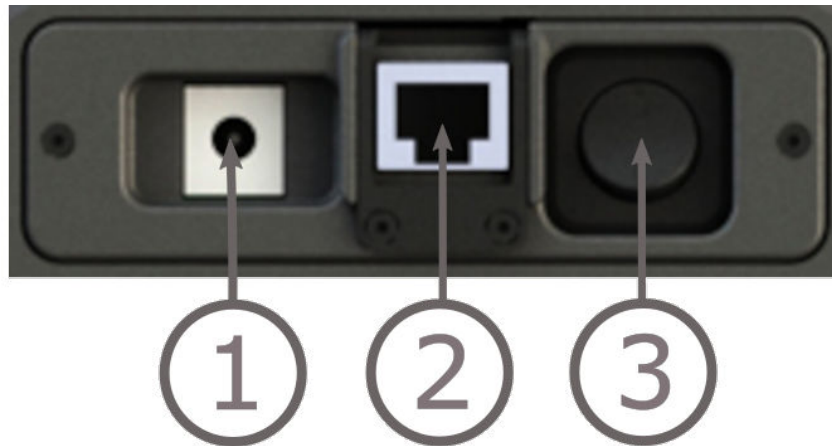
Wall bracket (**MLAIR-DISTANCE-W**).

5.4 MagniLink AIR Go

MagniLink AIR Go (**MLAIR-GO**) is a portable system with a built-in battery that streams video wirelessly to a computer.



5.4.1 Connection



1. Power supply

The AC adapter plugs in here.

2. Ethernet port

It is possible to connect the system directly to a computer via an Ethernet cable.

3. On/off switch

Used to turn on the device and to turn off the device.

5.5 Ethernet settings

In order to stream video to your computer from a MagniLink AIR Distance, the following must be met.

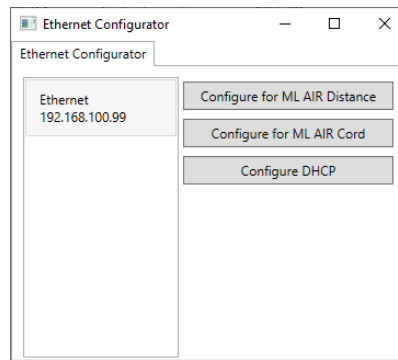
- The IP address of the computer ethernet card must be set to 192.168.100.99.

In order to stream video to your computer from a MagniLink AIR Go via an Ethernet cable, the following must be met.

- The IP address of the computer ethernet card must be set to 192.168.101.99.

For computers without an Ethernet port, an Ethernet to USB adapter must be used.

In the installation folder C:\Program Files (x86)\LVI\MagniLink PCViewer there is a program called EthernetConfigurator that helps with this.



6 Accessories



The controller (**MLAIR-A013**) can be used to control the system if you don't want to control the system from the computer.



The control unit (**MLAIR-A012**) is used if the system is not directly connected to a computer. The control unit contains pre-installed software and cameras are connected to the control box, which in turn is connected to a screen. Includes a hand held control.



MagniLink Framegrabber (**MLAIR-A004**). Used to transfer images from an external video source (e.i. a projector/smartboard) to the software.



Roof bracket (**MLAIR-A014**). Used if the ceiling is not using 60x60cm panels.



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

7 Control unit

Used to control the system if it is not directly connected to a PC. Comes with pre-installed software.

The control unit can be supplied with PC compatibility as an added extra. It can be controlled using a hand held controller, a mouse or keyboard.

The control unit along with the software offers the possibility of split function.

7.1 Connection



On/Off button.	Turns the system on and off.
Power supply	The power adaptor plugs in here.
USB 3.1	Used to connect the control box, mouse, keyboard or a USB camera.
Sound	Connects your headphones.
HDMI	Used to connect an external monitor.
Ethernet	Used to connect a distance camera.
Thunderbolt 3	Like USB 3.1, but also used to connect a monitor.

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 Technical information

MagniLink AIR Duo

Magnification, reading camera	0,56 - 34x (23" 16:9 screen, distance 2m)
Magnification, distance camera	0,16 - 27x (23" 16:9 screen, distance 5m)
Height recommendation	At least 1.5m above the table (otherwise the camera cannot focus at maximum magnification).
Power source	AC
Power consumption	30 W
Weight	8,5 Kg
Dimensions	600 x 600 x 170 mm (W x D x H)
Dimensions of packaging	730 x 730 x 390 mm (W x D x H)

MagniLink AIR Uno

Magnification, distance camera	0,1 - 14x (23" 16:9 screen, distance 5m)
Height recommendation	At least 1.5m above the table (otherwise the camera cannot focus at maximum magnification).
Power source	AC
Power consumption	17,5 W
Weight	5 Kg
Dimensions	600 x 600 x 170 mm (W x D x H)
Dimensions of packaging	730 x 730 x 390 mm (W x D x H)

MagniLink AIR Distance

Magnification, distance camera	0,1 - 14x (23" 16:9 screen, distance 5m)
Power source	AC
Power consumption	14,2 W
Weight with table mount	4,5 Kg
Dimensions with table bracket	170 x 170 x 700 mm (W x D x H)
Dimensions of packaging, table bracket	320 x 320 x 810 mm (W x D x H)

Weight with ceiling bracket	5.0 Kg
Dimensions with ceiling bracket	600 x 600 x 170 mm (W x D x H)
Dimensions of packaging, ceiling bracket	730 x 730 x 390 mm (W x D x H)
Weight with wall bracket	2.0 Kg
Dimensions with wall bracket	290 x 180 x 140 mm (W x D x H)

MagniLink AIR Go

Magnification, distance camera	0,1 - 14x (23" 16:9 screen, distance 5m)
Power source	Battery/AC
Battery, type	Lithium ion
Battery Capacity	65 Wh
Charging time	2.5 hours
Battery Life (Usage)	Up to 4.5 hours
Battery weight	322 g
Warranty period battery	1 year
Power consumption	14.2 W
Weight	5.3 Kg
Dimensions	205 x 205 x 340 mm (W x D x H)
Dimensions of packaging	260 x 270 x 390 mm (W x D x H)

General characteristics

Resolution	HD (1280x720)
Frame rate	60 Hz
Relative humidity	<80%
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.

10 Declaration of Conformity

DECLARATION OF CONFORMITY

Manufacturers name: *LVI Low Vision International AB*

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

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

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

Basic UDI-DI (GMN): *7330724MLAIRV9*

Brand name or trademark: *MagniLink*

Product code: ***MLAIR***

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

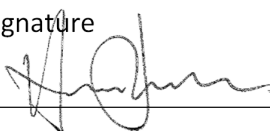
This declaration of conformity is issued under the sole responsibility of LVI Low Vision International AB. We hereby declare that the medical device(s) specified above meet the provision of the Regulation (EU) MDR 2017/745 for medical devices and Regulation (EU) 2023/1542 concerning batteries. This declaration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

28-06-2021

Signature



Clarification

Henrik Blomdahl

Position

Managing Director

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