User Manual

MagniLink PRO - Chromebook

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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

CE	MagniLink PRO meets all the requirements for CE marking of medical devices in accordance with Directive 93/94/EEC. 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.
- 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.
- 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 your MagniLink PRO.
- 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.

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 DVI 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).

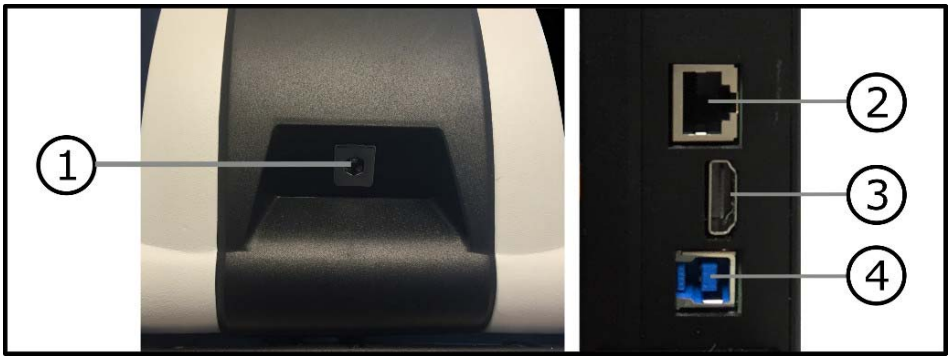
Text To Speech for PC (TTS-PC) or Mac (TTS-MAC).

6 Installation

6.1 Unfolding

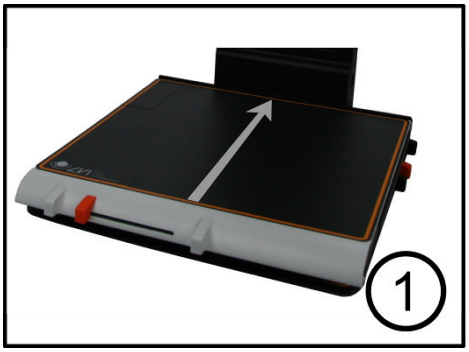
1. Place your MagniLink PRO on the table in front of your seat. Remember that the reading table can be pulled out approximately 30 cm in three directions. MagniLink PRO has a low total weight. Therefore, it is very important to place the system at least 10 cm from the edge of the table, particularly 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.

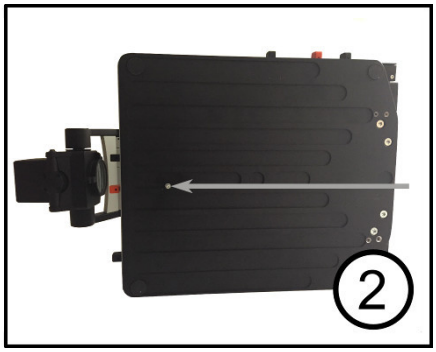
6.2 Connection



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

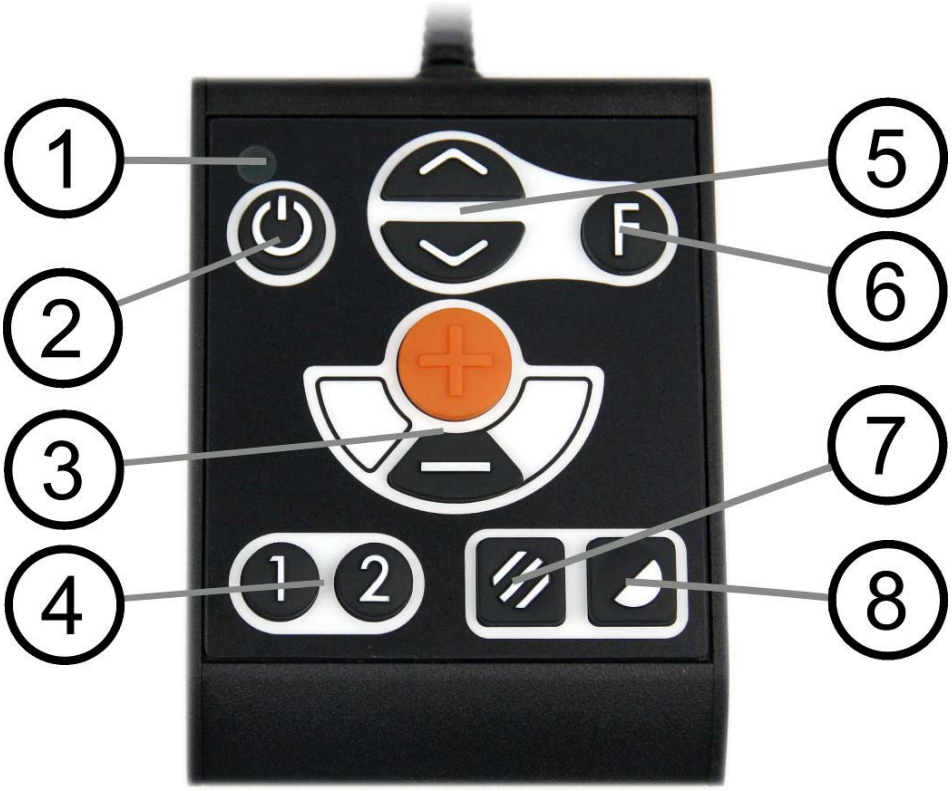




1. Install the reading table by pushing it in towards the unit.
2. In order to permanently install the reading table. Fasten the reading table securely with a screw on the underside.

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.

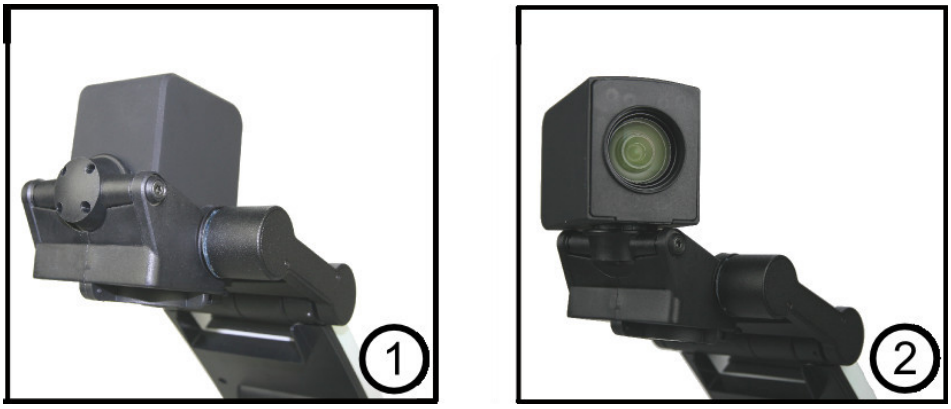
4. Focus ("FOCUS" is displayed on the screen)
   In this mode, you can press the function button. When you do so, "F-SET" is displayed on the screen and it is then possible to set the focus mode manually by pressing the navigation control. Manual focus may, for example, be useful for inspection. When 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

The following applies to the MagniLink PRO models that are equipped with a battery. If the battery charge level falls below 10 or 5%, a red battery symbol is displayed to indicate that it is time to connect the mains adapter and charge the battery. To remove the symbol, press the function control.

Maintenance charging

The MagniLink PRO models with a battery are 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 PRO twice a year with just the battery (disconnect the mains adapter) until the battery is completely discharged.

8 MagniLink ChromeViewer

MagniLink ChromeViewer is a programme used on a Chromebook to display images from a MagniLink camera system. The programme can control the camera properties, such as magnification level, artificial colours and brightness.

8.1 Minimum system requirements

- Chrome OS version 59
- Two integrated USB 2.0 ports.
- Intel Celeron, 2 GB RAM

8.2 Recommended system requirements

- One integrated USB 3.0 type A-port
- Intel i5 processor
- 4 GB RAM

LVI recommends using an Intel-based Chromebook together with a MagniLink camera, as we have experienced compatibility issues with some ARM-based Chromebooks.

A USB 3.0 Y-cable may be required in order to deliver enough power to the camera system. A USB Y-cable allows the use of two USB ports in order to run the MagniLink camera system.

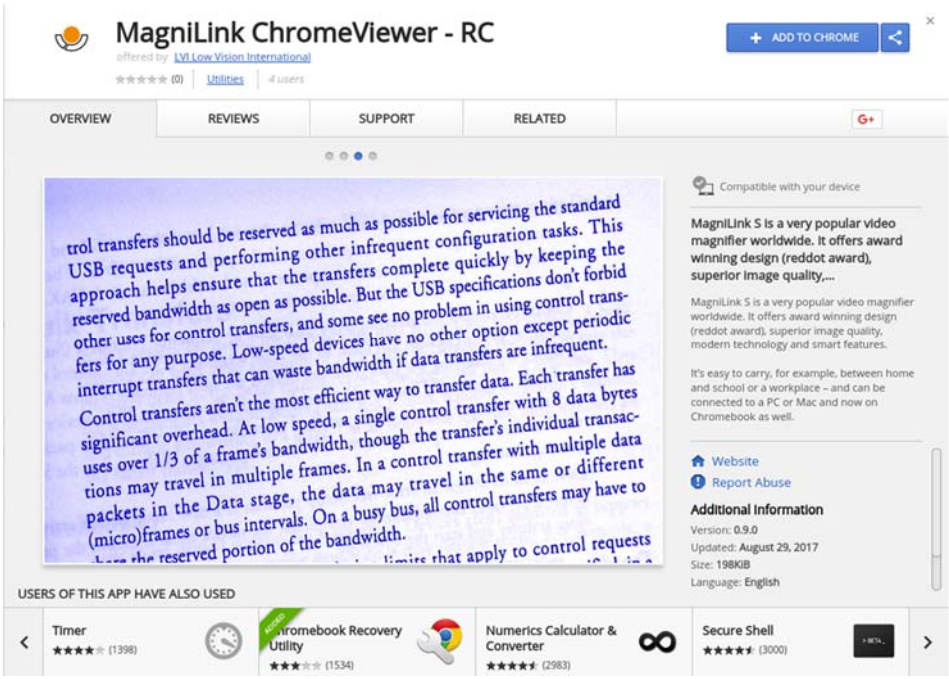
LVI has tested the software on several Intel-based Chromebooks without any issues, however there is no guarantee that the system will function on all computers that comply with the specifications. LVI recommends testing the software with the Chromebook which the system will be used with, in order to ensure compatibility. Better performing computers facilitate better camera performance.

Please note that an internet connection is required for licensing, as well as for use of OCR in ChromeViewer.

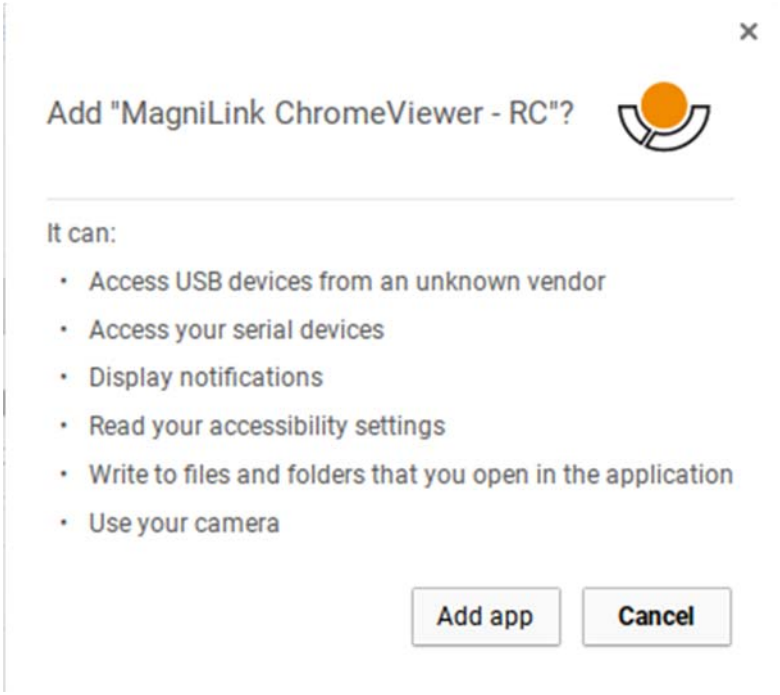
8.3 Installation of software

MagniLink ChromeViewer is available for download via the Chrome Web Store. If you cannot find the application with the search function on the Chrome Web Store, there is a direct link on our website that takes you to the installation page.

The link opens a new page with the Chrome Web Store and the MagniLink ChromeViewer is selected automatically.



Click **ADD** to start the installation.



You will then see an information box explaining what the application is able to do; click **Add app** to go on.

When the installation is finished, you can start the application by clicking START APP or search for the application via App Launcher.

Via App Launcher you can also permanently add MagniLink ChromeViewer to the start area.

8.4 Licensing

You must obtain a license in order to gain access to OCR with MagniLink ChromeViewer. An OCR license can only be purchased via ChromeViewer and is linked to the Google account that was used to make the purchase. This means that you will not be restricted to one computer and will be able to use whichever Chromebook you please with your Google account and still use OCR in ChromeViewer.

To purchase an OCR licence in ChromeViewer, click on the letter V on startup. A dialogue box will then be displayed with the exact price and a Purchase button. Click on “Purchase” and follow the steps. When you are finished you can return to ChromeViewer.

After obtaining a licence, you must allow MagniLink ChromeViewer to access your Google Drive. This is done by clicking on V once again and following the instructions. When you are finished you can return to ChromeViewer and begin the OCR process.

Note that OCR with ChromeViewer has the following limitations:

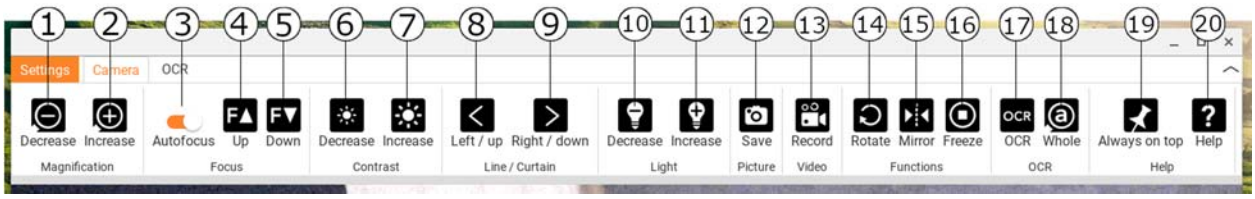
- An internet connection is required for licensing, as well as for use of OCR in MagniLink ChromeViewer.
- Lists, tables, columns, footnotes and final comments will probably not be identified.

8.5 Using the software

8.5.1 Functions via menus

The application consists of a window with tabs and groups of buttons. There is a tab for application settings and another tab for handling the camera. Depending on whether you have obtained a licence, there is also a tab for handling OCR-processed text.

8.5.1.1 Camera tab



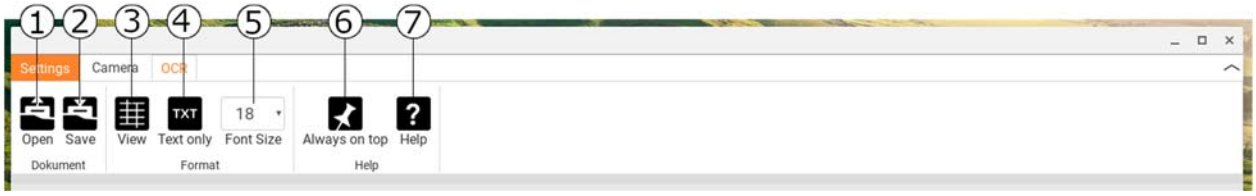
1. Reduce magnification
2. Increase magnification
3. Lock autofocus
   Locks the autofocus mode. This feature is useful for those who would prefer to write by hand. The autofocus is not affected, regardless of whether you use a pen or your hand. Press the button a second time to reactivate autofocus.
4. Focus up
   Reduce focus distance. When this function is used, autofocus is turned off.
5. Focus down
   Increase focus distance. When this function is used, autofocus is turned off
6. Reduce brightness/contrast
7. Increase brightness/contrast

8. Reference line/bar left/up
   Adjust the position of the reference line. Press the button to move the reference line to the left. Hold the button in to change the reference line to horizontal and to move it upwards. The reference line then becomes a vertical bar, which diminishes the viewing area. To make the bar horizontal, press the button again.
9. Reference line/bar right/down
   Same as the previous command although in the opposite direction.
10. Reduce lamp brightness
11. Increase lamp brightness
12. Take snapshot
    The "Save file as" dialogue box opens. A file name (with the day's date and time) and a folder (Downloads) are automatically suggested. Just press "Enter" to save the picture. If you wish to save the picture somewhere else, you can change this manually.
13. Start/stop video recording
    Press to open the "Save file as" dialogue box. A file name (with the day's date and time) and a folder (Downloads) are automatically suggested. Press Enter to save with the suggested name. If you wish to save the video in a different folder, or with another name, it is possible to change this in the dialogue box. Stop the recording by pressing the button again.
14. Rotate the camera image
    Rotates the camera image clockwise.
15. Mirror the camera image
    Press again to reverse the mirror image.
16. Freeze the camera image
    Press again to release the freeze.
17. OCR process
    Run an OCR process on the entire camera window.
18. Whole image
    When this is active, the whole camera image is shown. Otherwise edit in the image, depending on how large the camera window is.

19. Always on top
    Activates/deactivates "always on top" If "Always on top" is activated, the camera image will be placed over other open applications. This means that another programme can be in focus and that you can, for example, use Word while viewing the camera image.
20. Help
    Opens the user guide in the standard application for showing PDF files.

8.5.1.2 OCR tab

The following tab is only displayed if the user has obtained an OCR licence and if one MagniLink camera system has been connected within the last two weeks.



1. Open document (with OCR processing)
   A dialogue box opens. From the dialogue box, select the file you wish to open. It is possible to open PDF files and image files, .bmp, .jpg, .png, .gif and.tiff, as well as saved OCR processes.
2. Save documents
   A dialogue box opens. A file name (today's date and time) is suggested automatically.´
3. View
   Switch between list view and grid view.
4. Only text
   Switch between displaying only text and text + picture.
5. Font size
6. Always on top
   Activates/deactivates "always on top"
7. Help
   Opens the user guide in the standard application for showing PDF files.

8.5.2 Functions via the keyboard

The MagniLink camera is shown as a Chrome App and most functions can be managed via the keyboard. Various menus allow the short cut commands to be changed. Below are the standard settings for the short cut commands.

1	Natural colours
2	Positive image with heightened contrast Artificial colours; White/Black, Yellow/Black, Green/Black, Red/Black, Yellow/Blue, White/Blue. Press 2 repeatedly to switch between the various colours. (Shift + 2 to cycle backwards)
3	Negative image with heightened contrast Artificial colours; White/Black, Black/Yellow, Black/Green, Black/Red, Blue/Yellow, Blue/White Press 3 repeatedly to switch between the various colours. (Shift + 3 to cycle backwards)
Ctrl + P	Take a snapshot Press Ctrl + P to open the "Save file" dialogue box. A file name (with the day's date and time) and a folder (Downloads) are automatically suggested. Just press Enter to save the picture. If you wish to save the picture somewhere else, or with another name, it is possible to change this manually.
Ctrl + M	Start/stop video recording Press Ctrl + M to start recording. Stop recording by pressing Ctrl + M. When recording stops, the dialogue box "Save file" opens. A file name (with the day's date and time) and a folder (Downloads) are automatically suggested. Press Enter to save with the suggested name. If you wish to save the video in a different folder, or with another name, it is possible to change this in the dialogue box.
8	Preset split screen mode Press 8 repeatedly to switch between the preset split screen modes for the primary screen. The window can also be controlled via the mouse, or with Chrome OS standard commands.
9	Information and settings window Under this window, different settings for the application can be applied.

0	**Scan for LVI camera** Press 0 to scan for a MagniLink camera system. This can be useful if several LVI cameras are connected to the computer. In this case, a dialogue box opens from which the active camera for the application may be selected. If the camera does not start for whatever reason, it may also help to scan for a MagniLink camera system.
Up arrow	**Increase magnification**
Down arrow	**Reduce magnification**
Left arrow	**Reduce brightness/contrast**
Right arrow	**Increase light intensity**
Ctrl + Left arrow	**Reference line left/up**
Ctrl + Right arrow	**Reference line right/down**
Ctrl + R	**Rotate the camera image clockwise** Every time this key combination is pressed, the camera image will rotate 90° clockwise (90°, 180°, 270° and 0°).
Ctrl + Shift + R	**Rotate the camera image anticlockwise** Every time this key combination is pressed, the camera image will rotate 90° anticlockwise (270°, 180°, 90° and 0°).
Ctrl + I	**Reflect camera image** Reflects the camera image. This is a handy function if, for example, you want to use the camera as a magnified cosmetic mirror.
Ctrl + F	**Freeze camera image** By pressing this key combination, the camera image freezes; to release the image, press the same key combination again. To save a frozen image, press Ctrl + P.
Ctrl + A	**Deactivate/activate "always on top"** Short cut command activates the ”Always on top” function for the application window. If "Always on top" is activated, the camera image will be placed over other open applications. This means that another program can be in focus and that you may, for example, use Google Docs whilst viewing the camera image.
Ctrl + 6	**Reduce lamp brightness**
Ctrl + 7	**Increase lamp brightness**
?	**Open user guide**

Ctrl + J	Autofocus on/off
Shift + Up arrow	Increase focusing distance
Shift + Up arrow	Reduce focusing distance
Ctrl + Plus	Increase menu size
Ctrl + Minus	Reduce menu size
Ctrl + L	Whole image Switches between whole image and cropped image.

The following commands require a Google account with an OCR licence and that a MagniLink camera system has been connected within the last two weeks.

4	Start OCR It is also possible to use the mouse to run OCR processing.
V	Switches between the camera tab and OCR tab
Ctrl + S	Save all OCR-processed data
Ctrl + O	Open saved OCR-processed data
G	Switch between list view and grid view
T	Switch between displaying only text and text + picture

8.5.2.1 Use the built-in screen reading software.

The built-in screen reader software ChromeVox is used for reading OCR-processed text. You can activate or deactivate ChromeVox whenever you want using the short cut command Ctrl + Alt + Z.

ChromeVox supports reading in the following languages, without the need of installing an add-on via the Chrome Web Store:

- German
- Spanish
- French
- Italian
- Dutch
- English
- Brazilian Portuguese
- Indian English
- Indonesian
- Hindi
- Korean
- Android (If the Chromebook you are using supports Android apps)

If you are using a Chromebook which supports Android apps, you have access to even more voices. Choose Android in the list when you change voice for ChromeVox and then change the voice via Android settings. You will find the Android settings via Settings > Google Play Store > Manage Android Settings. Go to Accessibility > Text-to-speech and settings for Google's Text-to-Speech engine and other languages. Normally, the language is set to the system language and therefore does not need to be changed.

Languages available under Android include:

- Danish
- Finnish
- Norwegian
- Swedish

If your Chromebook does not support Android apps and your language is not available, you can buy voices from third parties via Chrome Web Store.

8.5.2.1.1 Navigate

With ChromeVox running, you can go through all of your OCR-processed documents with e.g. "Tab". You can also navigate line by line, word by word or by letters. The table below contains some common short commands.

Search + G	Skip to next picture
Search + H	Skip to next header
Search + Down arrow	Skip to next text line
Search + Down arrow	Skip to previous text line
Search + Shift + Ctrl + Right arrow	Skip to next word
Search + Shift + Ctrl + Left arrow	Skip to previous word
Search + Shift + Right arrow	Skip to next letter
Search + Shift + Left arrow	Skip to previous letter
Ctrl	Stop reading

You can also start the reading by clicking on the text you wish to have read aloud.

8.5.2.1.2 Change language

1. Hold down Search and click twice on the letter O.
2. Under "Voices" you can select a language from the list.
3. Hold down Ctrl + W or Alt + Tab when you have selected a new voice from the list.

8.5.2.1.3 Change speed

Click on Search + . and navigate to the second tab Speech.

- To slow down the reading, select Reduce Reading Speed.
- To speed up the reading, select Increase Reading Speed.

8.5.3 Mouse control

In camera mode, the mouse is used to mark a specific area for OCR processing. An area is marked by clicking and holding down on the left mouse button and dragging over an area. After an area has been selected, release the left mouse button in order to begin OCR processing.

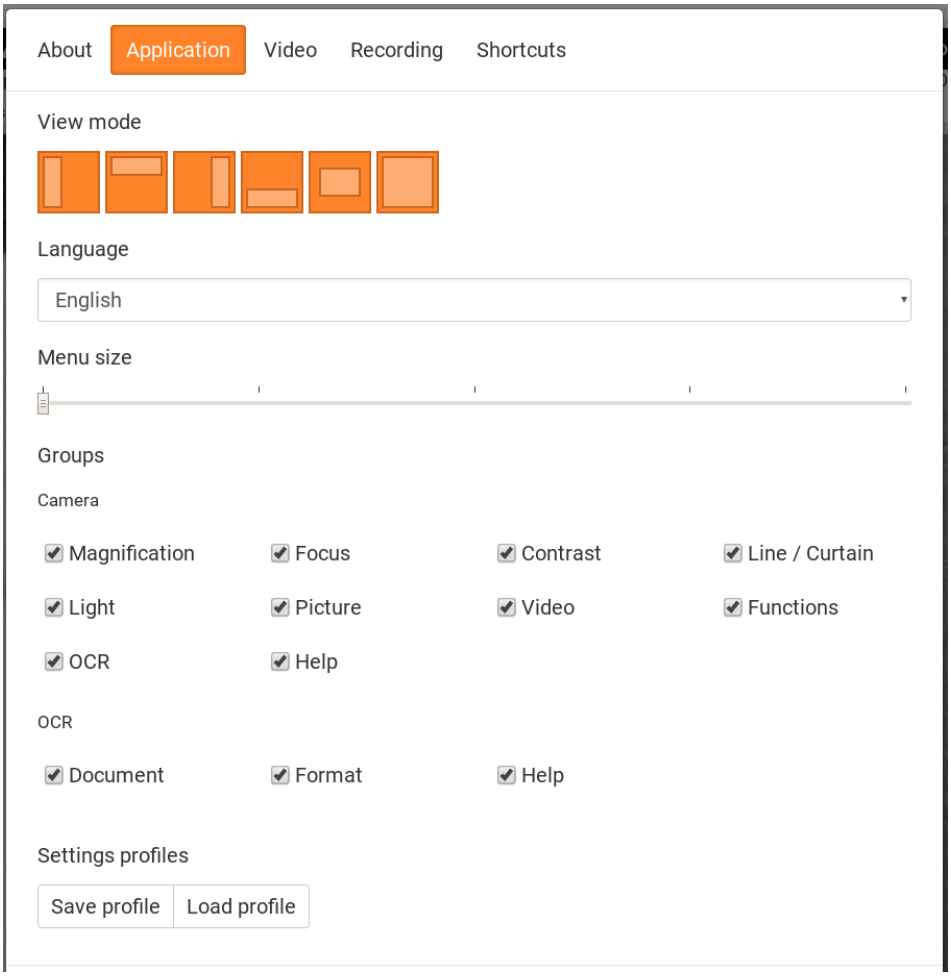
It is also possible to drag and drop pictures over the application in order to run them through OCR processing.

Please note that the above requires a Google account with an OCR licence and a MagniLink camera system which has been connected within the last two weeks, as well as an internet connection.

8.5.4 Information and settings window

The Information and settings window consists of a number of different tabs that contain application information and alternative settings.

8.5.4.1 Applications Settings



Split screen mode

Select which of the split screen modes to use by pressing 8.

Language

Change the language of the software. The software is set to use the same language as the computer's default. If this language is not available, English is automatically selected as default.

Available languages:

- Danish
- English
- Finnish
- French

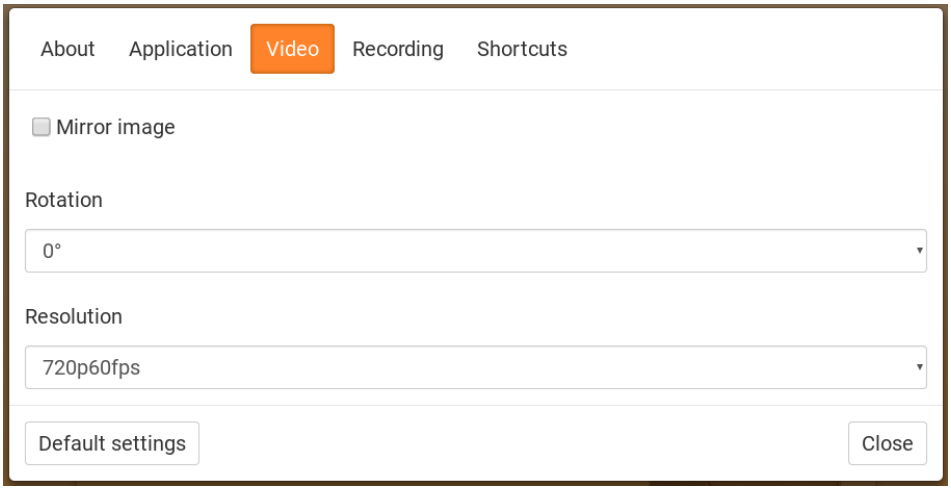
- Dutch
- Norwegian
- Spanish
- Swedish
- German

Menu size
The size of the menus and buttons can be changed here.

Groups
It is possible to choose which groups of buttons appear in the menus.

Profile
Import or export settings Use the Export Settings button to easily save the current settings configuration to the hard disc or to Google Drive, for example. Use the Import Settings button to import your exported settings.

8.5.4.2 Video Settings



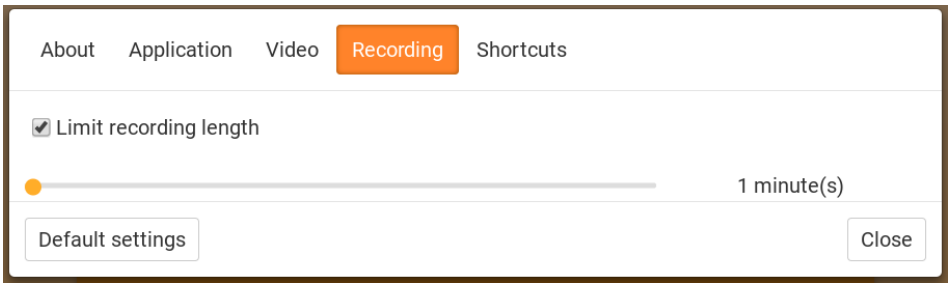
Mirror image
When this function is active the camera image is mirrored.

Rotate image
The angle of rotation of the camera image can be set here. MagniLink ChromeViewer supports rotation of the camera image to the following angles: 0°, 90°, 180° and 270°.

Resolution
Select from the camera's various resolution options. The best picture quality is achieved by selecting the highest resolution. A lower resolution

may be needed if the application is used on a computer with low performance.

8.5.4.3 Recording Settings



Limit recording length

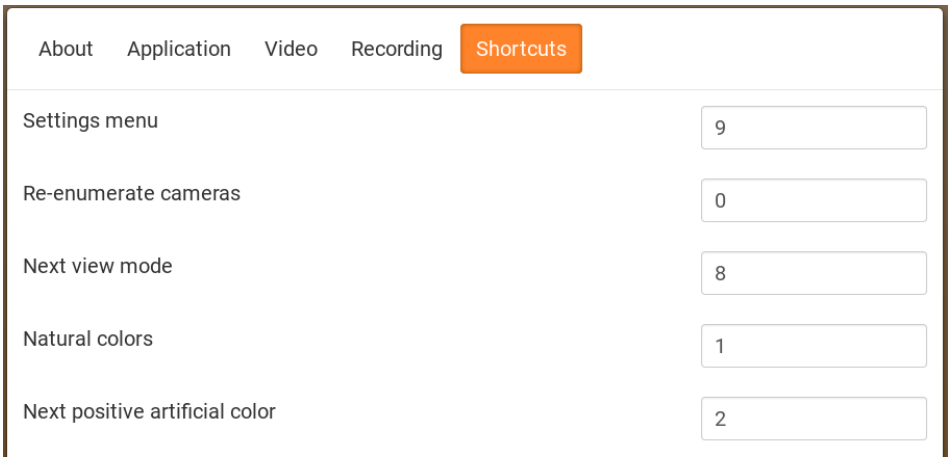
Activate this function if you wish to limit the length of recording.

Length in minutes

If you chose to limit the recording length, you can set the limit in minutes here, from 1 to 60 minutes.

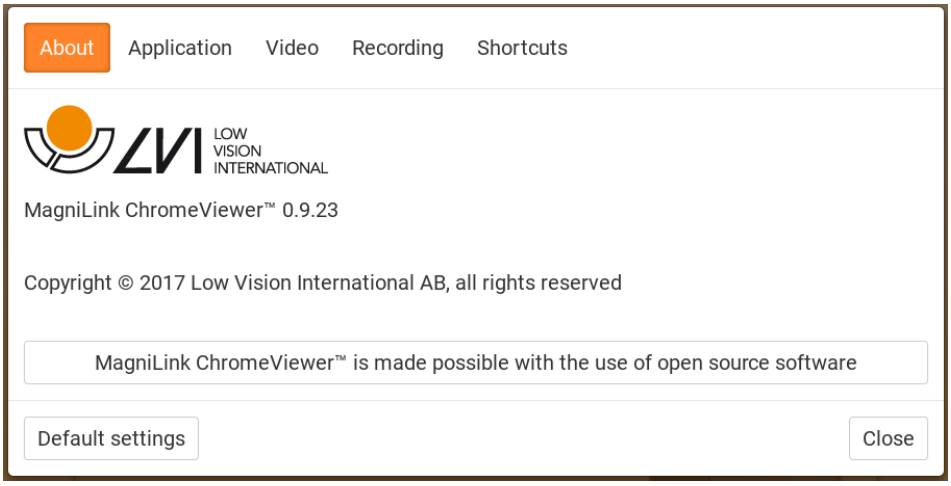
MagniLink Chromeviewer can record video sequences from the MagniLink camera in WebM (.webm) format. The video recording is started with the keyboard (Ctrl + M) and a red indicator is displayed at the bottom right of the video window while video is being recorded.

8.5.4.4 Settings for short cut commands



Here the short cut commands used for the application can be changed. To change a short cut command, tab to the command that is to be changed and then press Space or Enter and then enter the new keyboard combination. If a combination already being used for another command is entered, the other command will be erased. A new keyboard combination will need to be entered in order to change the command.

8.5.4.5 About the application



Information regarding the software version and copyright can be found under this tab.

9 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.

10 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.

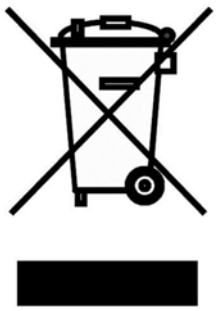
It is not possible to start the system and the On/Off button flashes (orange/red).

- 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.

11 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, operating time	5-9 hours
Battery, charging	2.5 hours
Battery, warranty period	1 year
Dimensions, collapsed	33x47x17 cm (13x18.5x6,7 in)
Dimensions, opened up	33x38x52 cm (13x15x20,5 in)
Weight	4.2 kg (9 lb 15 oz)
Power source	Battery or AC
Acceptable temperature ranges	Transport and storage -20°C - +60°C 68°F - 140°F Operation: +5°C – +35°C 41°F - 95°F



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.

12 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:	***MLPRO-FHD-***
Product class:	*Class 1.*
Manufacturer:	*LVI Low Vision International AB*
Address:	*Verkstadsgatan 5* *S-352 46 Växjö* *Sweden*
Web:	http://www.lvi.se
Phone: Fax:	*+46 470 - 72 77 00* *+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
2015-09-30		Managing Director

Clarification

Erik Bondemark

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