

User Manual

MagniLink PRO - PC

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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

	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.
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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



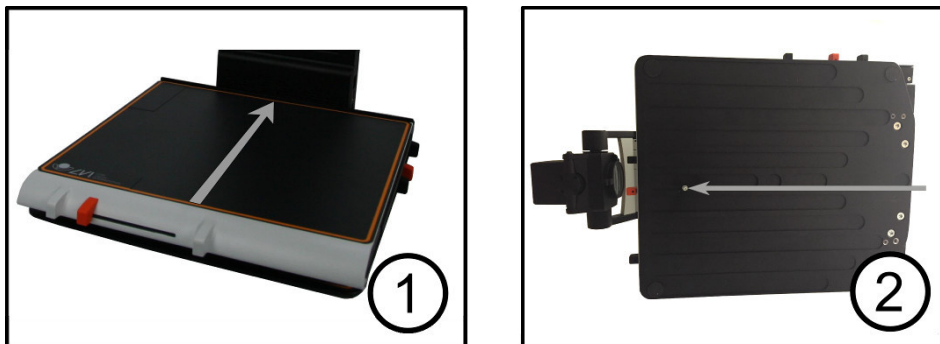
1. Place your MagniLink PRO on the table in front of your seat. Remember that the reading table can be pulled out approximately 30 cm in three directions. MagniLink PRO has a low total weight. Therefore, it is very important to place the system at least 10 cm from the edge of the table, particularly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

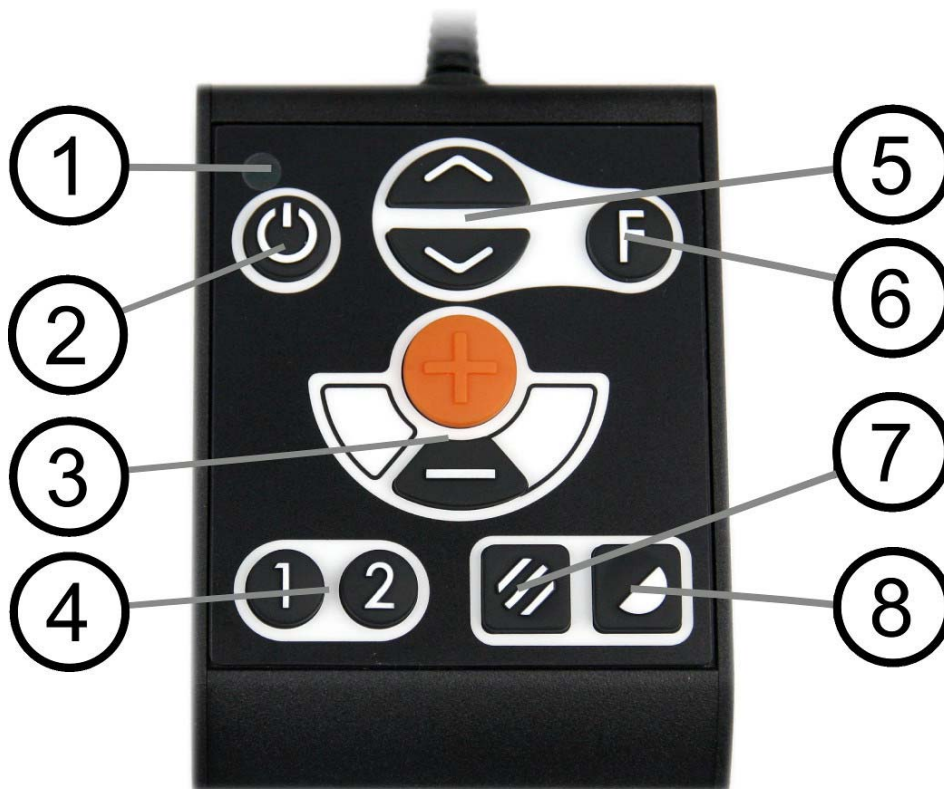
6.3 Installation of reading table



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.

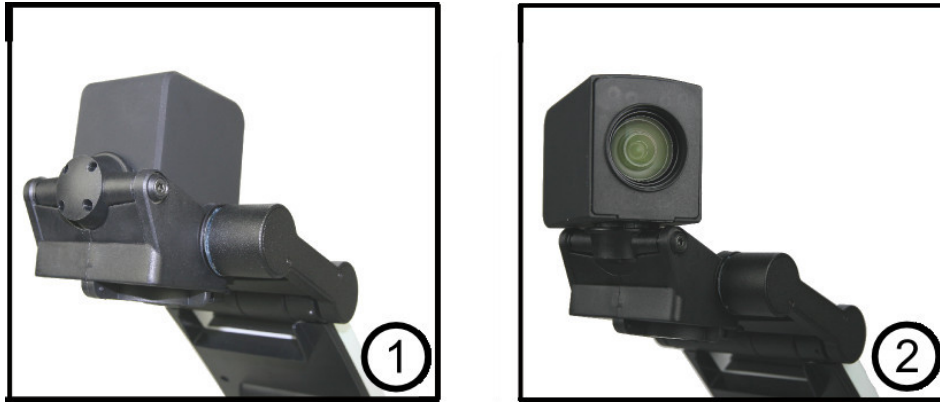
10. **Programming of button 2** ("PRG-F2" is displayed on the screen)
In this mode, you can programme which function button 2 is to have. Press the function button. It is then possible to select the function with the navigation control. When you are satisfied with your choice, press the function button 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 PCViewer

MagniLink PCViewer is a programme used on a computer to display images from a MagniLink camera system. The programme can control the camera properties, such as magnification level, artificial colours and brightness. If the camera supports OCR it is possible to OCR process a text and have it read aloud by a speech synthesiser. The programme also enables the computer screen to be shared with the ZoomText or SuperNova programmes.

8.1 Minimum system requirements

- Microsoft Windows 7.
- 2 integrated USB 2.0 ports.
- i3 processor, 1 GB RAM (32 bit) 2 GB RAM (64 bit).

8.2 Recommended system requirements

- Microsoft Windows 7.
- 1 integrated USB 3.0 port.
- i5 or i7 processor, 4 GB RAM, external graphics card with at least 512 MB inbuilt memory.

LVI has tested the software on several computers without any problems, but there is no guarantee that the system will function on all computers that comply with the specifications. LVI recommends testing the software on the computer where the system is to be used, in order to ensure compatibility. Better performing computers will facilitate better camera performance.

8.3 Installation of software

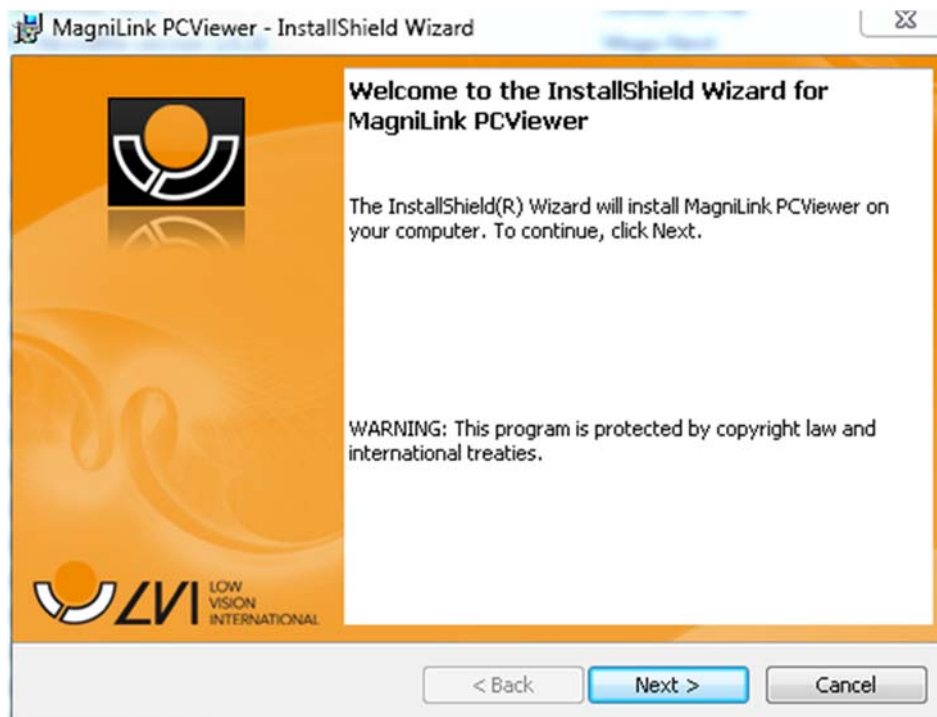
NOTE



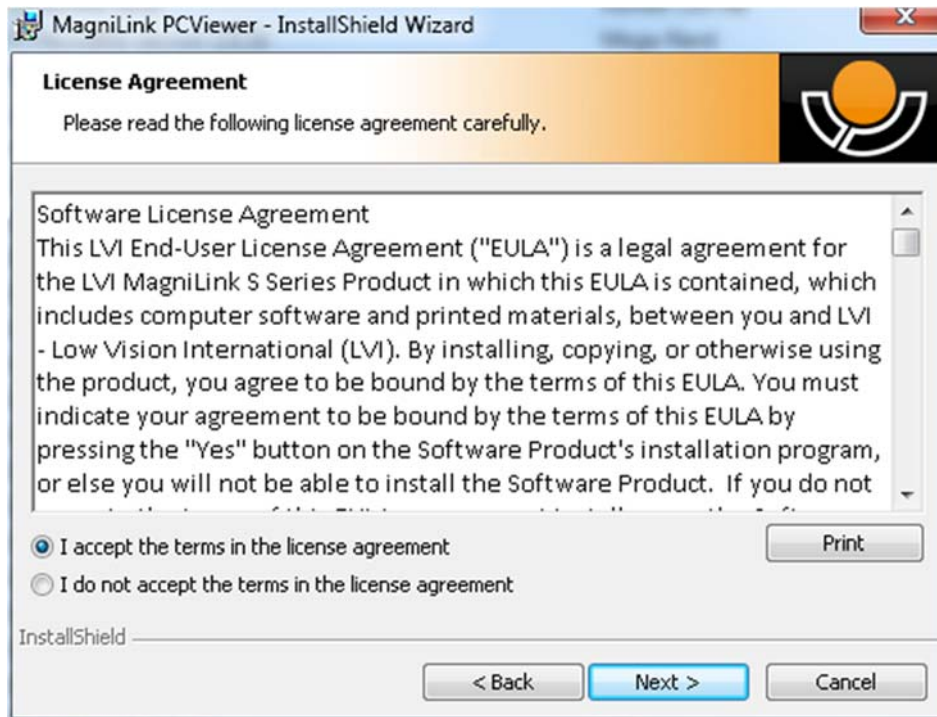
Installation requires administrator privileges on the computer in question and is performed on the user account currently in use.

Insert the USB stick containing the software into one of the computer's USB ports. Start the installation by clicking on the **"Setup"** file, which can be found in the **"MagniLink PCViewer"** folder.

When the installation program starts, follow the instructions on the screen to complete installation of the software, or see below for a more detailed description.



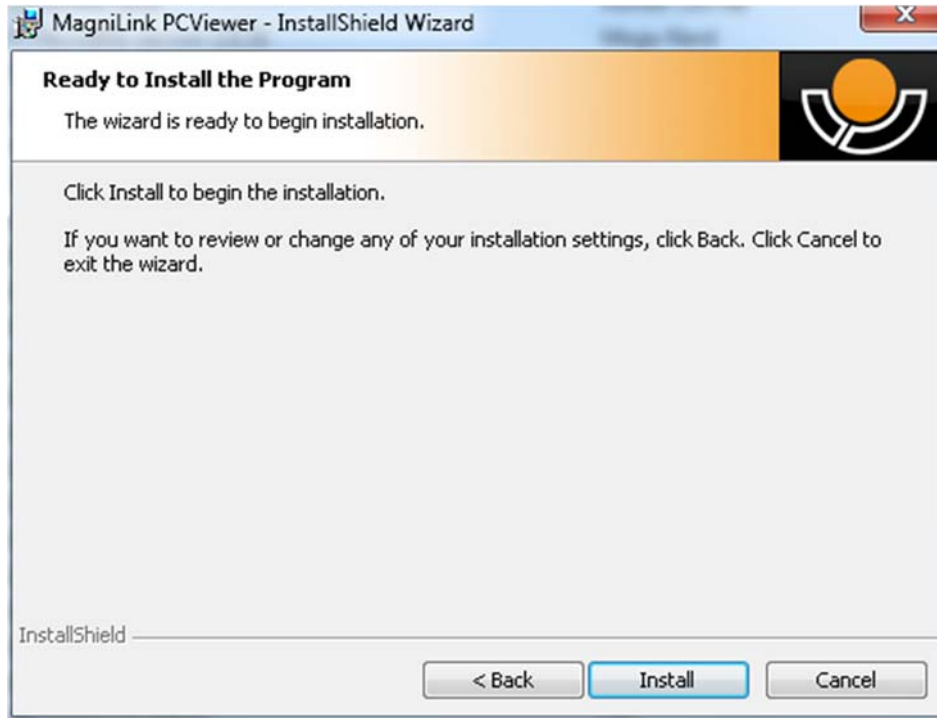
Select **"Next"** in the dialogue box **"Welcome to the InstallShield Wizard for MagniLink PCViewer"**.



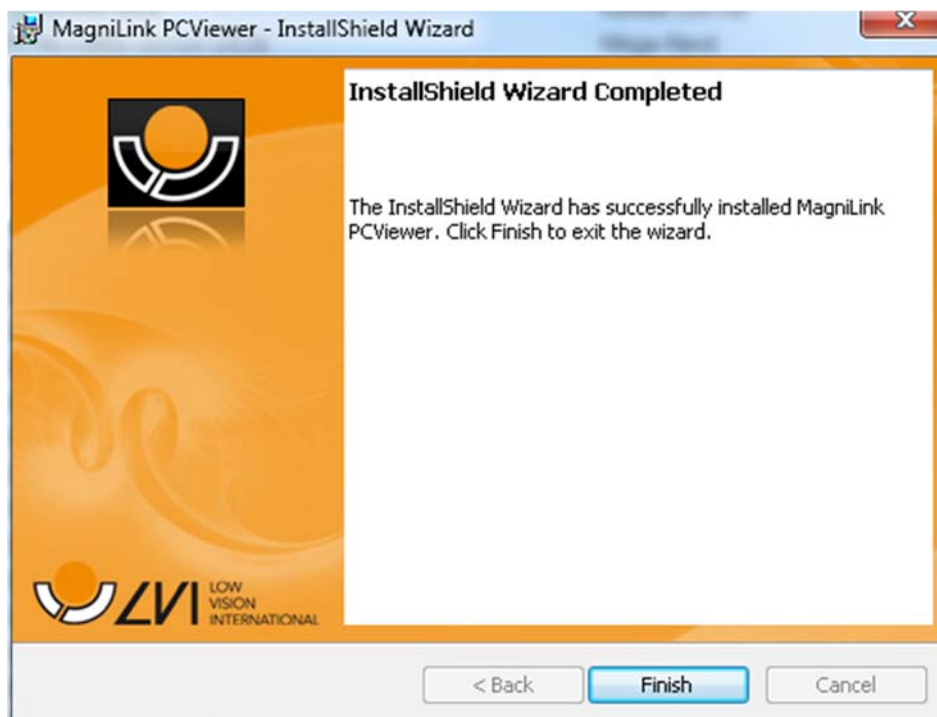
Read the text in "License Agreement", approve this by selecting "I accept the terms of the license agreement" and click on "Next" to start the installation.



If you have a camera with OCR functionality, then mark the language(s) for which you have a license. If you do not have OCR functionality, then do not select any languages. Then click "Next" to continue with the installation.



Select "Install" in the dialogue box "Ready to Install the Program".



Select "Finish" in the dialogue box "InstallShield Wizard Complete".

8.4 Licensing

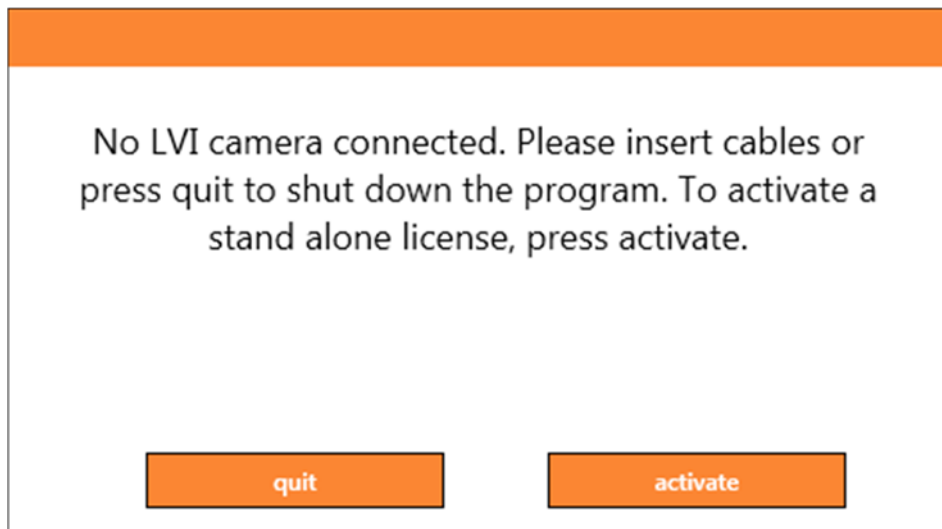
The camera system that is used with the software can be licensed with different functions.

- It is possible to license the system with or without OCR functionality.
- It is possible to license the system so that the software does not communicate with the internet.
- It is possible via the licence to remove the functions video recording and take picture.
- It is possible to license the system with voices in the following languages:
English (US), English (UK), German, French, Finnish, Italian, Dutch (BE), Dutch (NL), Swedish, Danish, Polish, Spanish, Portuguese, Norwegian, English (AU), Russian, French (CA), Arabic, Hebrew, Hungarian, Rumanian, Bulgarian, Czech, Slovakian, Croatian, Turkish, Greek.

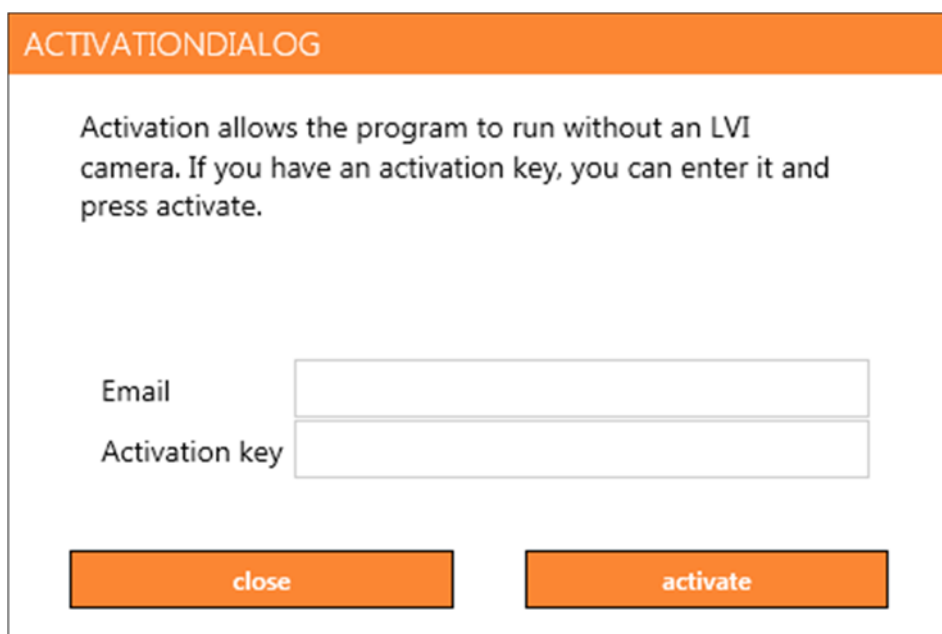
8.4.1 Computer license

The application can be licensed to a computer. It is then possible to use the application even if a camera is not connected. Licensing requires an activation key. An activation key can be purchased from your LVI distributor.

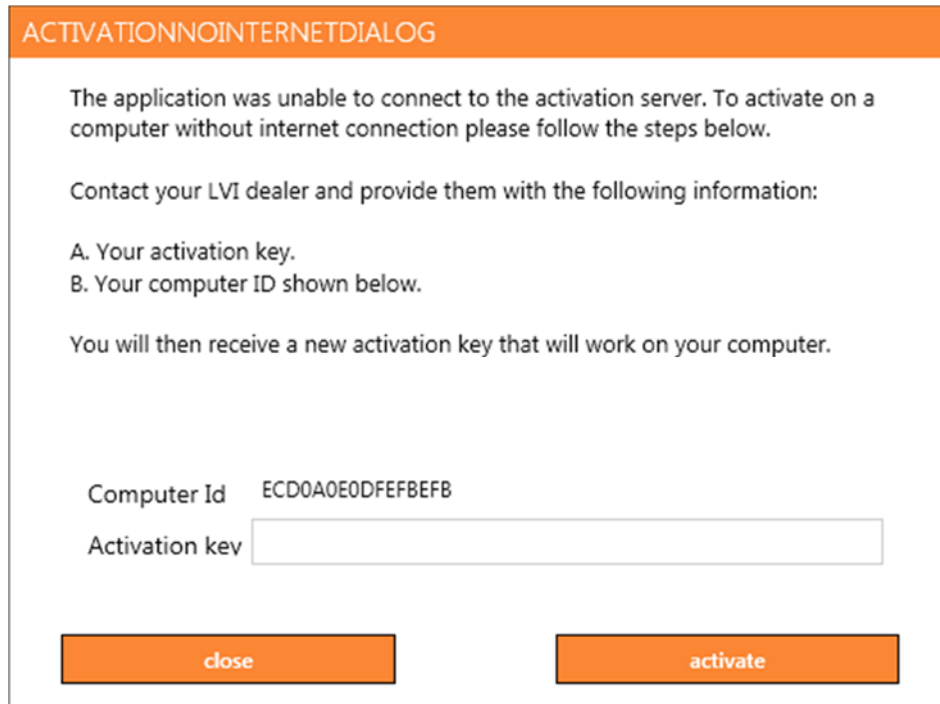
To activate a computer license, start the application without a camera plugged in. The following dialog will then appear.



Click "activate". If the application can connect to the activation server, the following dialog will appear.



Enter your email address and your activation key. Click "activate". It is now possible to use the application without a camera.



If no internet connection is available or if the application can not connect to the activation server, the following dialog will appear. Follow the instructions and contact your local LVI distributor to activate the application.

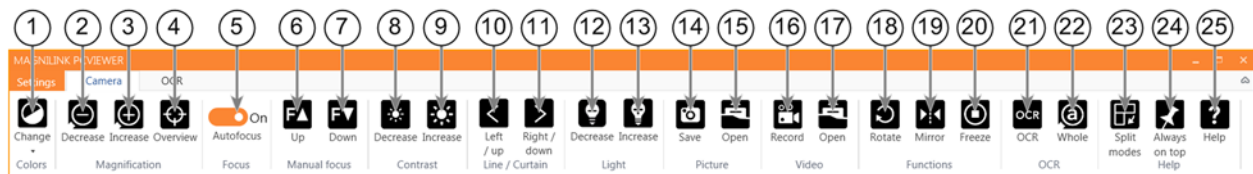
8.5 Using the software

The software can be started from the icon on the desktop, from the start menu or using the short cut command Ctrl + Alt + S.

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 the system is licensed for OCR, there is also a tab for handling the OCR processed text.

This tab is only shown when a camera is connected.



1. **Change colours**
Used to change between natural and artificial colours.
2. **Decrease magnification**
3. **Increase magnification**
4. **Overview mode**
Reduces magnification to overview mode. Click again to restore the magnification. When overview mode is active, a sight is displayed in the middle of the video window.
5. **Lock autofocus**
Locks the autofocus mode. This can be used when you wish to write by hand. In this way, autofocus is not affected by the pen or your hand. Press the button a second time to reactivate autofocus.
6. **Focus up**
Reduce focus distance. When this function is used, autofocus is turned off.
7. **Focus down**
Increase focus distance. When this function is used, autofocus is turned off.
8. **Reduce brightness/contrast**
9. **Increase brightness/contrast**
10. **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 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.

11. **Reference line/bar right/down**
Same as the previous command but in the opposite direction.
12. **Reduce lamp brightness**
13. **Increase lamp brightness**
14. **Take snapshot**
A dialogue box "Save pictures" opens. A file name (with the day's date and time) and a folder (My Pictures) are automatically suggested. Just press "Enter" to save the picture. If you wish to save the picture somewhere else, or with another name or in another format, (the standard is JPG), you can change this manually. To save a picture quickly, hold down "Shift" when you press the button.
15. **Show pictures**
Press to view the saved pictures. Mark the picture you wish to view and press Enter or select Open. The picture is normally opened in Windows' standard picture-viewing programme where, among other things, the picture can be enlarged. To view the most recently saved picture quickly, hold down "Shift" when you press the button.
16. **Start/stop video recording**
Press to open the "Save video clip" dialogue box. A file name (with the day's date and time) and a folder (My video clips) 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, you can change this in the dialogue box. Stop the recording by pressing the button again. To start video recording quickly, hold down "Shift" when you press the button.
17. **Show video recording**
Press to view the saved video files. Mark the video you wish to view and press Enter or select Open. The video is normally opened in Windows' standard media player software. To view the most recently saved video recording quickly, hold down "Shift" when you press the button.
18. **Rotate the camera image**
Rotates the camera image clockwise. To rotate anti clockwise, hold down Shift when you press the button.
19. **Mirror the camera image**
Press again to reverse the mirror image.

20. Freeze the camera image

Press again to release the freeze.

21. OCR process (Only shown if the system has a licence for OCR)

When OCR processing is complete, the programme changes to the OCR tab and the text is read. If there is already text under the OCR tab this is replaced. Hold down Shift when you press the button to insert the text on a new page.

22. Whole image (Only shown if the system has a licence for OCR)

When this is active, the whole camera image is shown. Otherwise edit in the image, depending on how large the camera window is.

23. Next split mode

Switches to the next split mode. To switch to the previous split mode, hold down Shift when you press the button.

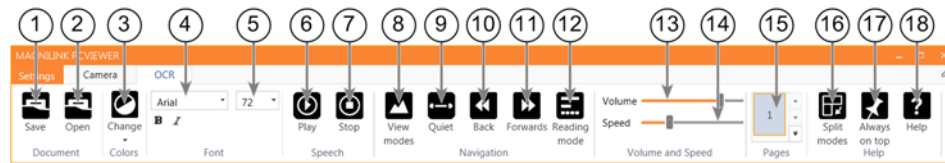
24. Always on top

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 looking at the camera image.

25. Help

Opens the user guide in the standard application for showing PDF files.

This tab is only shown if the system has a licence for OCR.



1. Save documents

A dialogue box opens. A file name (today's date and time) is suggested automatically. It is possible to save the text as a Word file (.docx), PDF file, text file (.txt), WAV file (.wav) or zip file.

2. Open documents

A dialogue box opens. From the dialogue box, select the file to be opened. It is possible to open PDF files and image files, .bmp, .jpg, .png, .gif and .tiff, as well as saved zip files.

3. Change colours

Changes colours of the OCR processed text.

4. Font

Changes the font of the OCR processed text. It is also possible to choose bold and italic text. The font that is used has no effect on the result of the OCR processing.

5. Font size

6. Start/Pause reading

7. Stop reading

The next reading will begin from the start of the text.

8. Change display mode

Changes the display mode for OCR processed text. The display modes available are "page view", "row view", "word view", "image view", "image and word" and "image and row".

9. Silent mode

Switches to silent display mode. There are two silent modes. One where the text moves horizontally on a line and one where the text moves vertically in a column.

10. Read previous

With this button, the user can go backwards through the text. If the reading mode is set to character, one character is read for each keystroke. If the reading mode is word, you move backwards through the text word by word. If the reading mode is sentence, you move backwards one sentence. If the reading mode is block, you move backwards one block.

11. Read next

With this command, the user can move forward in the text. If the reading mode is set as character, one character is read for each keystroke. If the reading mode is word, you move forward through the text word by word. If the reading mode is sentence, you move forwards one sentence. If the reading mode is block, you move forwards one block.

12. Switch reading mode

This command selects the reading mode that is to be employed when the "Read previous" or "Read next" command is entered. The modes are, character, word, sentence, view and block. Which modes can be selected depends on the display mode.

13. Volume setting

14. Speed setting

15. Pages

Shows all OCR processed pages. Click one of the pages to change page.

16. Next split mode

Switches to the next split mode. To switch to the previous split mode, hold down Shift when you press the button.

17. Always on top

Activates/deactivates "always on top"

18. Help

Opens the user manual in the standard application for showing PDF files.

8.5.2 Functions via the keyboard

Most functions can be handled using the keyboard. The short cut commands can be changed in settings. Below are the standard settings for the short cut commands.

F1	Natural colours
F2	Positive colours forwards
Shift + F2	Positive colours backwards
F3	Negative colours forwards
Shift + F3	Negative colours backwards
Up arrow	Increase magnification
Down arrow	Decrease magnification
Ctrl + O	Overview mode
Ctrl + J	Autofocus on/off
Shift + Up arrow	Increase focusing distance
Shift + Down arrow	Decrease focusing distance
Right arrow	Increase brightness/contrast
Left arrow	Reduce brightness/contrast
Ctrl + Left arrow	Reference line left/up
Ctrl + Right arrow	Reference line right/down
Ctrl + 6	Reduce lamp brightness
Ctrl + 7	Increase lamp brightness
Ctrl + R	Rotate image clockwise
Ctrl + Shift + R	Rotate image anti clockwise
Ctrl + I	Reflect camera image
Ctrl + F	Freeze camera image
Ctrl + A	Always on top
Ctrl + H	Hide menus
F12	Open user guide
F9	Settings
F11	Standard settings
F7	Change camera resolution

Ctrl + C	Copy image or text
Ctrl + M	Minimise application
F8	Next split mode
Ctrl + F8	Previous split mode
Ctrl + Minus	Reduce menu size
Ctrl + Plus	Increase menu size
F5	Save picture
Shift + F5	Save picture quickly
F6	Open picture
Shift + F6	Open picture quickly
Ctrl + F5	Start video recording
Ctrl + Shift + F5	Start video recording quickly
Ctrl + F6	Open video
Ctrl + Shift + F6	Open video quickly

The following commands are only available together with cameras that are licensed for OCR.

F4	Start OCR The text from OCR processing replaces existing text.
Shift + F4	Start OCR enter The text from OCR processing is entered on a new page.
Ctrl + L	Whole image Changes between whole image and cropped image.
Ctrl + V	Paste The pasted text replaces existing text.
Ctrl + Shift + V	Paste and add The pasted text is added to a new page.
Ctrl + S	Column selector Activates or deactivates the column selector. When the column selector is active, only those columns that are intersected by the column selector are OCR-processed.
V	Changes between camera tab and OCR tab
Alt + F5	Save documents

Alt + F6	Open documents
Up arrow	Increase magnification
Down arrow	Decrease magnification
Shift + Plus	Increase font size
Shift + Minus	Decrease font size
1	Start reading
2	Stop reading
B	Change display mode
N	Silent mode
3	Read previous
4	Read next
5	Switch reading mode
Page Down	Next page If several pages have been scanned, you move to the next page.
Page Up	Previous page If several pages have been scanned, you move to the previous page.
Delete	Remove the page in question If several pages have been scanned, you remove the page in question.
8	Reduce volume
9	Increase volume
6	Reduce speaking speed
7	Increase speaking speed
Ctrl + 0	Next voice
A	Pan left (If the document is magnified)
D	Pan right (If the document is magnified)
W	Pan up (If the document is magnified)
S	Pan down (If the document is magnified)

8.5.3 Functions via the mouse

Some functions can be controlled by the mouse.

In camera mode.

- The scroll wheel can be used to zoom in or out.

In OCR-mode

- Left mouse button is used to start or pause the speech.
- By rolling the scroll wheel, the picture and font size can be increased or reduced.
- Press and hold the right mouse button or the scroll wheel and move the mouse to navigate the picture (only possible if picture has been magnified).

It is possible to open a document by dragging it into the application.

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 About the application

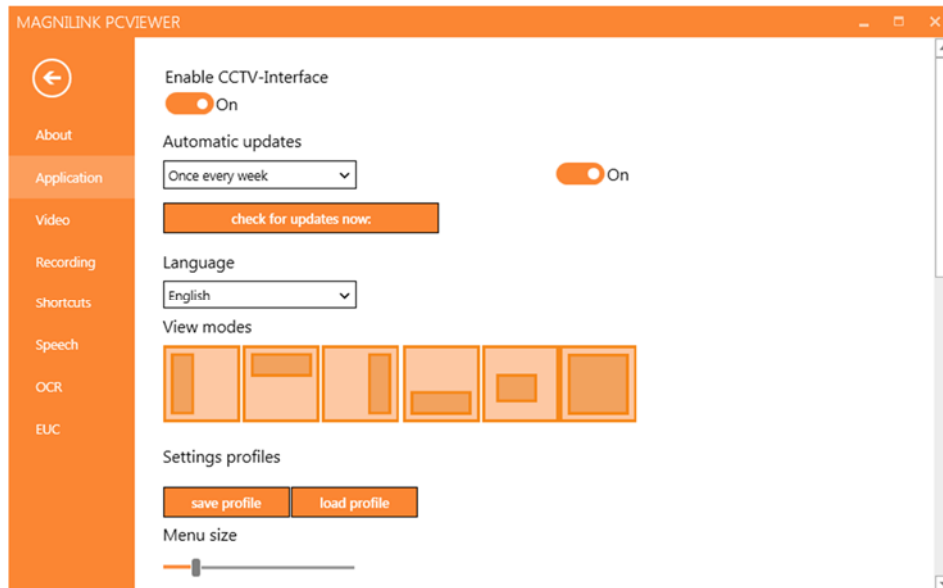


Information regarding the software version and license can be found under this tab.

To deactivate a computer license, press "remove license". The license will then be deactivated on the server and it will be possible to activate it on another computer.

If you want to update the camera license or activate a computer license, you can do it by pressing the "enter license" button.

8.5.4.2 Application Settings



Activate CCTV interface

If this function is activated, MagniLink PCViewer supports working with the magnification software from ZoomText and SuperNova.

Automatic updates

This can be set if MagniLink PCViewer is to search for updates. You can also set how often it will search: "Once per day", "Once per week" or "Once per month". You can also choose to make updates manually by clicking "search for updates now" (note: an internet connection is needed for both automatic and manual updates).

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:

- English
- German
- Danish

- Spanish
- Finnish
- French
- Dutch
- Norwegian
- Swedish

Split screen mode

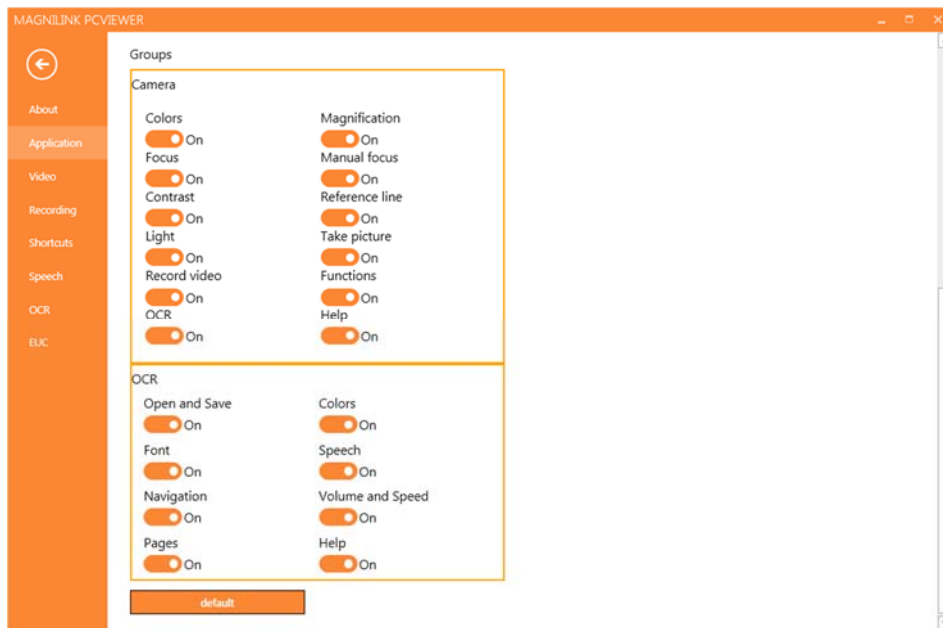
It is possible to choose the mode you want when changing split screen mode.

Settings profiles

It is possible to save and load settings profiles.

Menu size

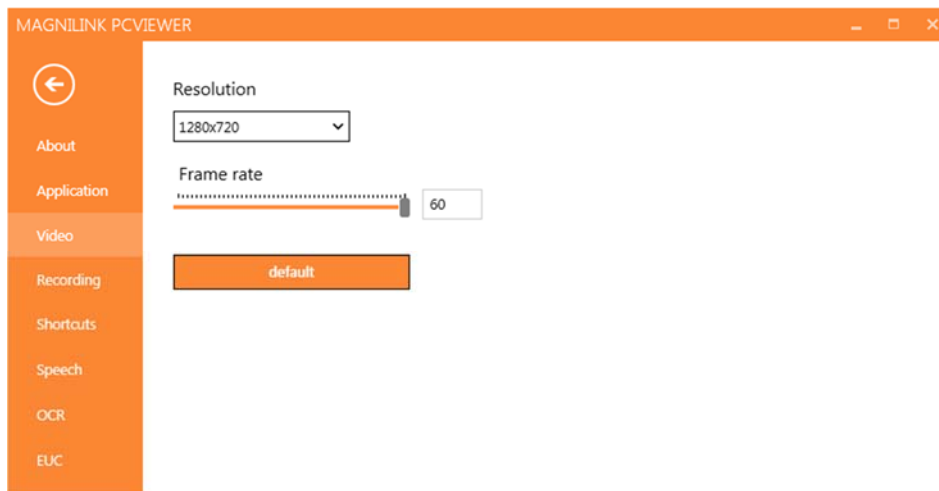
The size of the menus and buttons can be changed here.



Groups

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

8.5.4.3 Video Settings



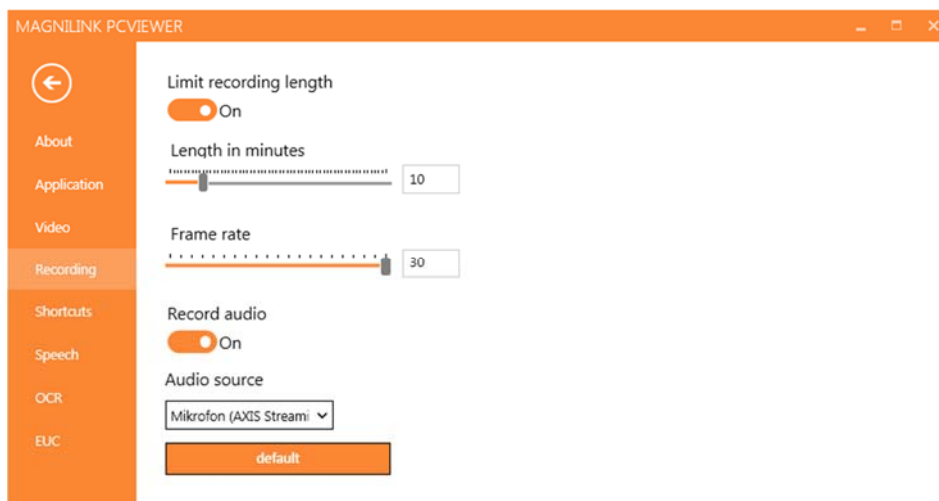
Resolution

Select from the camera's various resolution options. At resolution 1280x720, the frame rate can be set up to 60 Hz. At resolution 1920x1080, only 30 Hz is possible.

Frame rate

This setting allows the user to limit the frame rate. For the best video quality, the frame rate should be 60 Hz, but it may be appropriate to set the frame rate at 30 Hz for computers with a lower level of performance.

8.5.4.4 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.

Frame rate

The recording frame rate, the number of images recorded per second, can be set from 10 to 30 frames per second. A lower frame rate means a poorer quality video recording, but takes up less space on the hard disc.

Record sound

If your computer has a microphone (internal or external), sound can be added to the recording.

Sound source

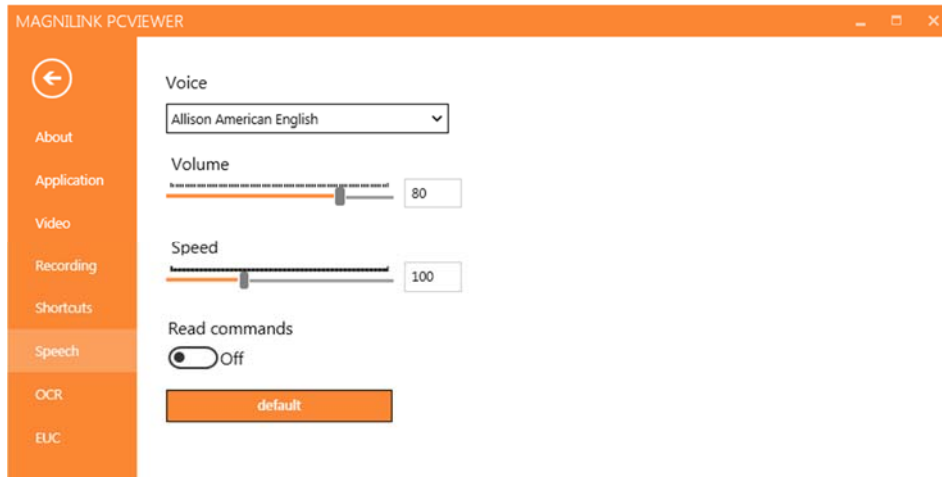
Select which microphone is to be used to record sound for the video. Normally only one sound source may be selected.

8.5.4.5 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 enter the new keyboard combination. It is possible to set two different combinations for the same command. 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 for the other command.

8.5.4.6 Speech Settings



Voice

If several voices are available, the user can choose between them.

Volume

Setting the sound level of the voice.

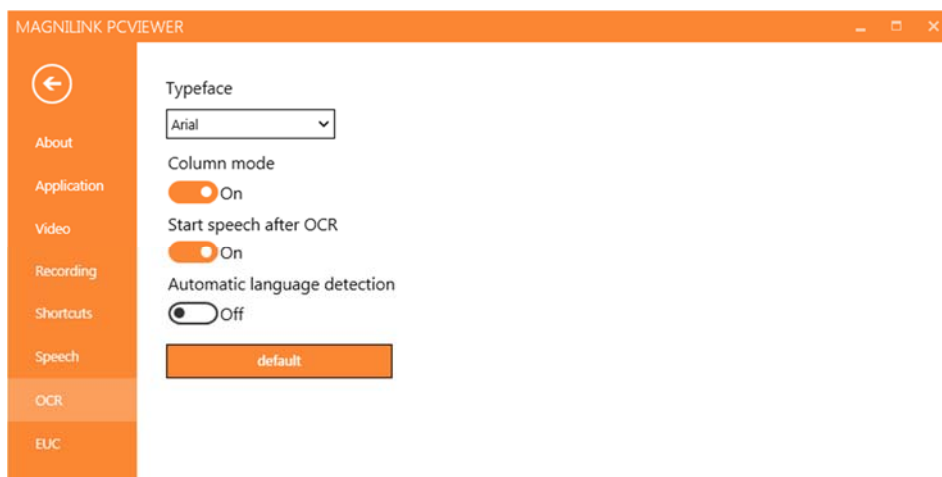
Speed

Setting the speaking speed.

Read command

When this is checked, the application reads out the menus when you use them.

8.5.4.7 OCR Settings



Font

Here the user can set which font is to be used to display the OCR processed text. The font that is used has no effect on the result of the OCR processing.

Column mode

When this setting is active, the OCR engine processes the text by column, which is useful if text from a newspaper is to be OCR processed.

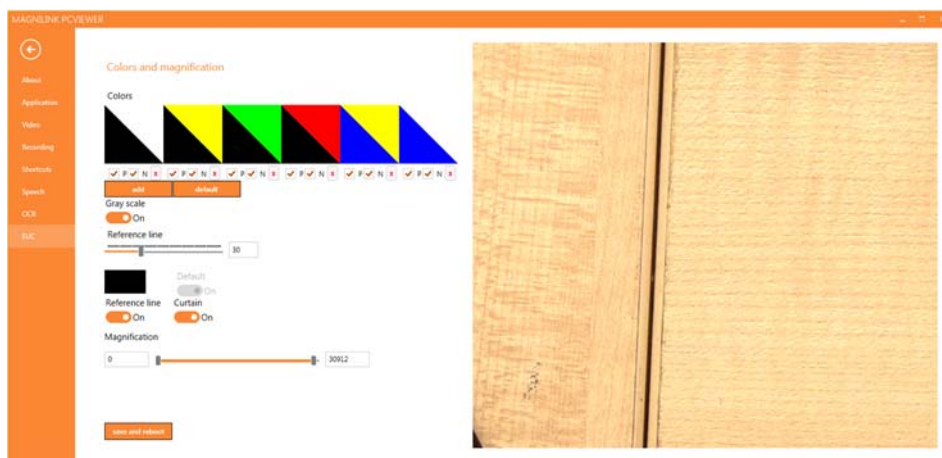
Start speech after OCR

If this box is ticked, text will automatically be read aloud after an image has been OCR processed.

Automatic language identification

When this function is activated, the application attempts to identify the language that has been OCR processed and change the voice accordingly.

8.5.4.8 EUC



The camera can be configured under this tab. If you wish to save changes in the camera, press "Save". When you do this, the camera restarts and the configuration has been saved.

Artificial colours

It is possible to remove and change the camera's artificial colours.

- To remove a colour combination, press X
- To add to a colour combination, press enter.
- To change a colour combination, press one of the triangular zones and a colour dialogue will appear. Select colours and press OK.
- To remove either the positive or the negative component. Click out box P or N.
- To restore the colours, press Standard.

Grey scale

Choose if you wish to have grey scale or not.

Reference line

Set the size and colour of the reference line and choose if you wish to have reference line, bar or both.

Magnification

Set the maximum and minimum magnification.

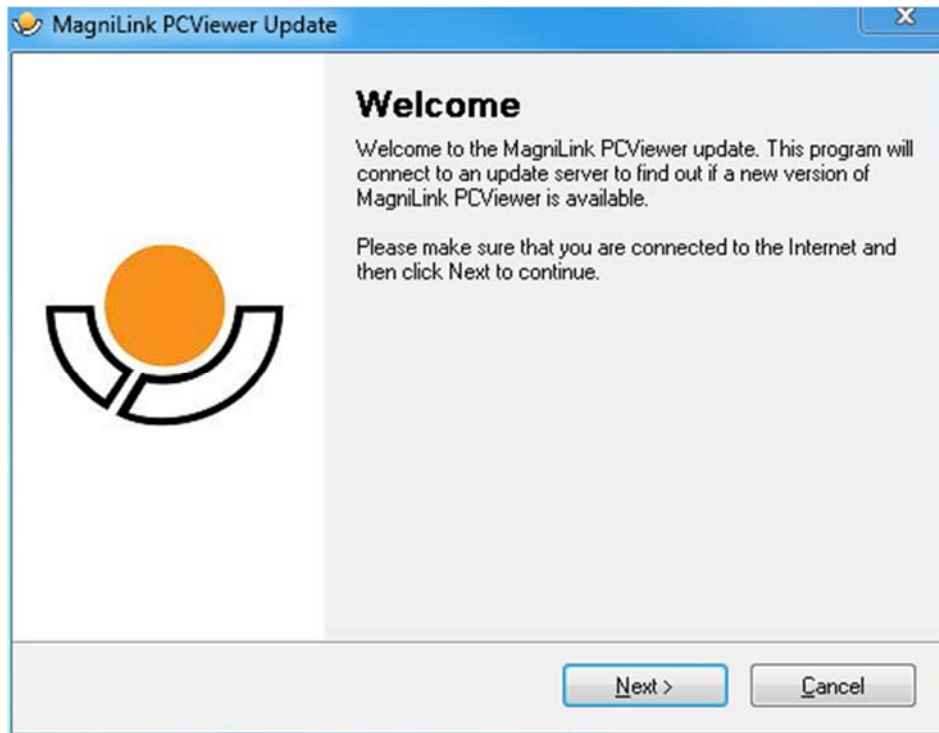
8.5.5 Quality of OCR processing

In order to optimize the results of the OCR conversion, you should bear in mind the following.

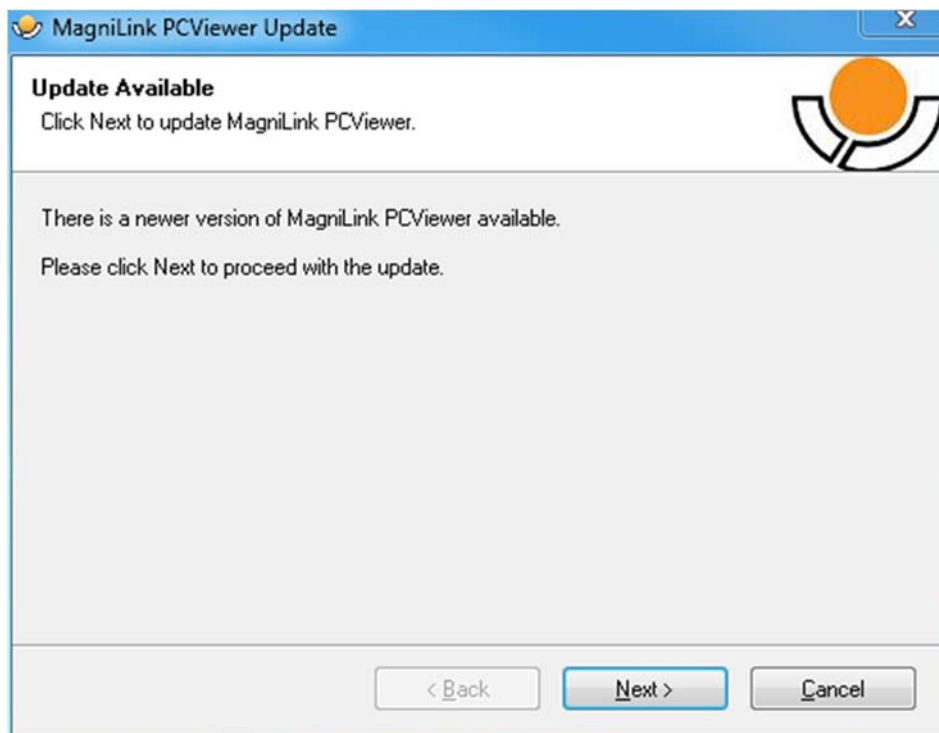
- Ensure the magnification is sufficient. Very small text produces poor results in the OCR software. A minimum of 12pt is recommended for the lowest magnification on the reading camera.
- Avoid glossy paper as this results in reflections in the image. This impairs the results of the OCR conversion. If you intend to use glossy paper, we recommend that the light on the unit is switched off.
- Certain fonts can be difficult for the OCR engine to interpret.
- It is important that the text contrast is sufficient.
- It is important that the OCR engine's language is the same as that of the text.
- The camera's resolution should be set to at least 1280x720, see Video settings for more information.

8.6 Update software

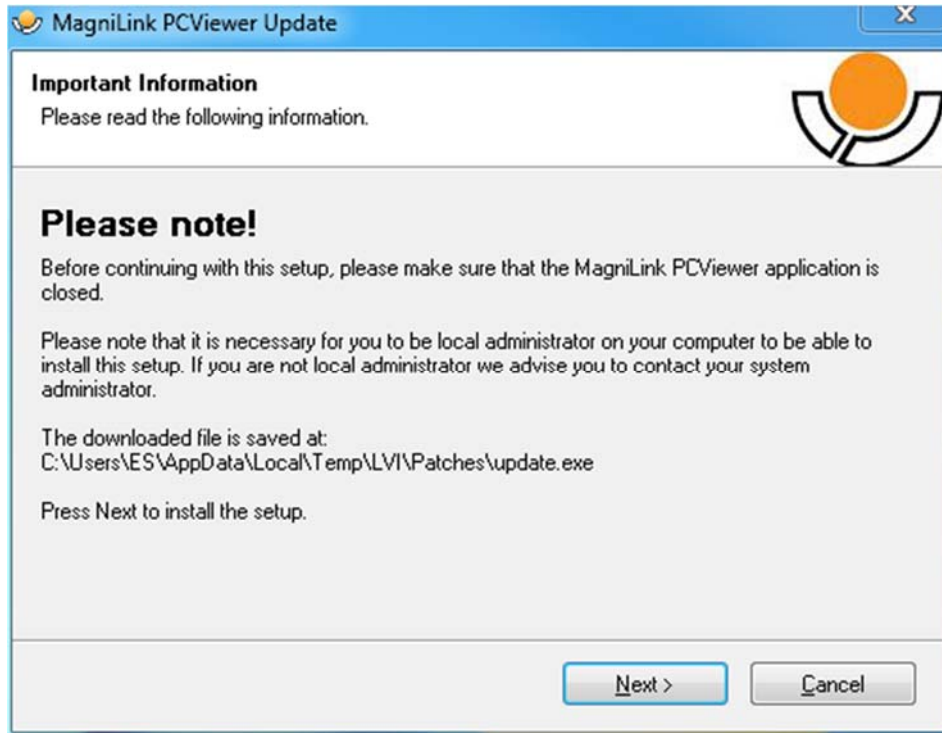
When a new version of the software is released, an update can be made. Follow the instructions below when the application finds a new version.



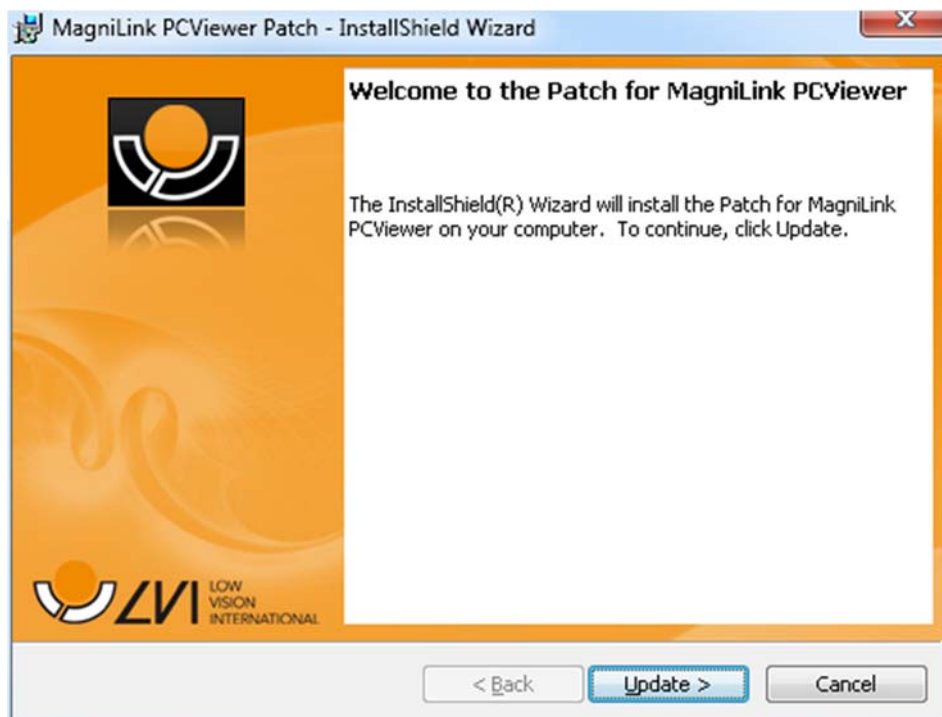
Click "Next" in the dialogue box "Welcome". If there is an update, the following dialogue box is shown.



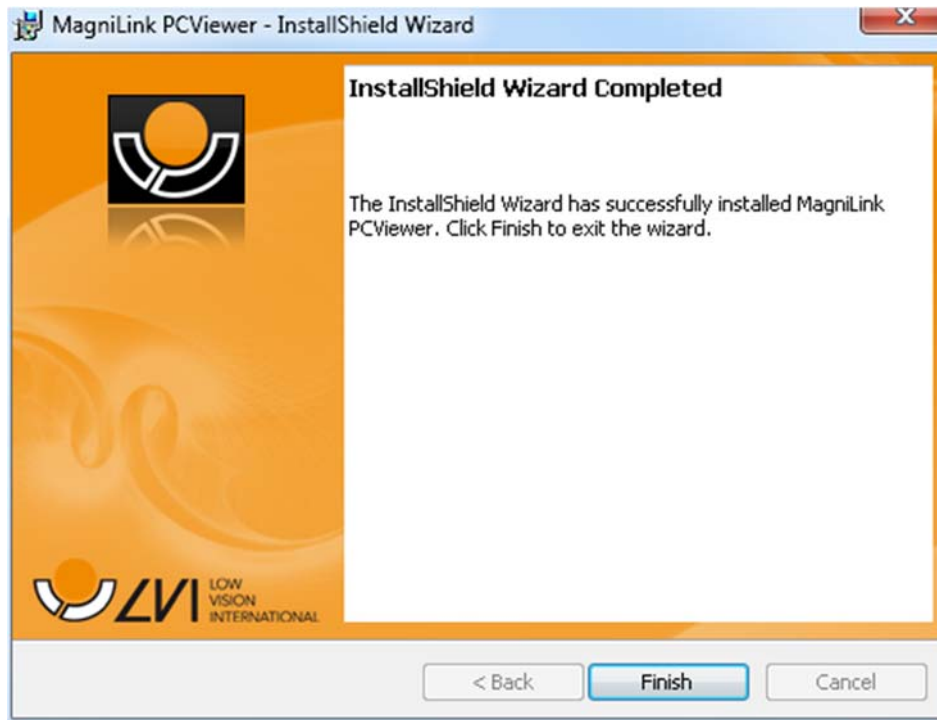
Click "Next" in the dialogue box "Update available" to start downloading the update.



Ensure that you close MagniLink PCViewer before clicking "Next" in the dialogue box "Important information".



Click "Next" in the dialogue box "Welcome to the Patch for MagniLink PCViewer".



Click "Finish" in the dialogue box "Installshield Wizard Completed".

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:	<i>Reading Aid</i>
Brand name or trademark:	<i>MagniLink</i>
Type designation:	<i>MLPRO-FHD-</i>
Product class:	<i>Class 1.</i>
Manufacturer:	<i>LVI Low Vision International AB</i>
Address:	<i>Verkstadsgratan 5 S-352 46 Växjö Sweden</i>
Web:	http://www.lvi.se
Phone:	<i>+46 470 - 72 77 00</i>
Fax:	<i>+46 470 - 72 77 25</i>

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

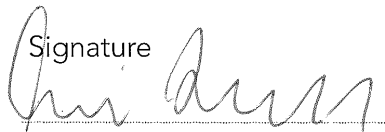
Manufacturer's authorized representative

Date

Signature

Position

2015-09-30



Managing Director

Clarification

Erik Bondemark

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