



## User's manual

# MagniLink S Student Addition

- portable CCTV system with combined reading/distance camera for connection to a computer, or directly to a VGA or TV-monitor.



Copyright 2006 LVI Low Vision Int. AB - MagniLink® S Student Addition

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## General information

MagniLink S Student Addition (MLSSTA) is a portable auto focus camera system for connection to a laptop or stationary computer. The system can also be connected directly to a standalone VGA or TV monitor. MLS Student Addition is controlled by the keyboard or through an external control box.

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

The MagniLink S Series software is written in such way that it does not interfere with other software. It has been tested in combination with different software without any conflicts. LVI can however not guarantee the compatibility with all other software since their behaviour is outside of LVI's control.

### Minimum System Requirements\*

- Microsoft® Windows® XP Home/Professional with Service Pack 2 (SP2) or Microsoft® Windows® Vista Home/Business/Ultimate
- 1 integrated USB 2.0-port
- To use the system in minimum resolution and picture frequency you will need a computer with Intel® Celeron® M processor 1.6GHz or AMD® Sempron® 1.6GHz, 256MB working memory (RAM).

### Recommended System Requirements\*

- Microsoft® Windows® XP Home/Professional with Service Pack 2 (SP2) or Microsoft® Windows® Vista Home/Business/Ultimate
- 1 integrated USB 2.0-port
- To use the system in maximum resolution and picture frequency you will need a computer with Intel® Pentium® M processor 2.0GHz or AMD® Sempron® 2.0GHz, 512MB working memory (RAM), external graphics card with at least 128MB built in memory.

\* The MagniLink S Student has been tested on several computers at LVI without any problems, but there is no guarantee that it will work on all computers following the specification. LVI recommends that you test your MLS Student Addition together with the computer you intend to buy, in order to confirm the compatibility. Higher computer specifications render possible higher camera performance.

**Warning!** Do not connect the camera system before installing the MagniLink S software.

**NB!** The installation requires administrator's rights on the computer and that the installation is run in the context of the current user.

## Safety information

MagniLink S Student Addition is only intended for use as a reading aid in an indoor environment.

It is important that the only external power adapter used is the one belonging to the MLS Student Addition. The external power adapter has a red mark and is to be connected to the socket on the MLS Student Addition, also equipped with a red mark. Using wrong external power adapter can cause severe damage on both the system and the computer.

Devices that will be connected to the system such as VGA monitor, TV-set and/or computer must apply to general electrical safety regulations for current country.

The system is delivered with two different bases. The round base is used for free placing of the system. The rectangular base is used together with the laptop. In this case the weight of the laptop is needed to stabilize the unit and the product can not stand on its own. If wanted, the rectangular base can be attached to the laptop with the enclosed Velcro.

**Never lift the laptop without first removing the MLS Student Addition if the rectangular base is used.**

Never operate the product if the unit has been exposed to water, rain or other liquids, or if the casing is damaged. Unplug the unit and have it inspected by a service technician before further use.

If cleaning is required, unplug the product and use a slightly damp (not wet) cloth. Only use water or some detergent especially made for cleaning monitors and computers.

If you are unable to restore normal operation by following the operation instructions, do not attempt any further adjustments. Unplug the unit and call your dealer or service technician. Only use replacement parts specified by LVI.

In uncertainty, please contact your supplier.

## **FCC statement (USA and Canada only)**

This device complies with Part 15 of the FCC rules. Operation is subject to the following two conditions:

- (1) This device may not cause harmful interference.
- (2) This device must accept interference received, including interference that may cause undesired operation.

### **Class B Digital Device**

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

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

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

To comply with the FCC rules the system shall only be used with the enclosed LVI power adapter.

## Unpacking

MLS Student Addition is delivered in a box with the camera unit, a round and a rectangular base, external power adapter, control box, cable for connection to a TV-set and the CD-ROM with the software.

Inspect the package for exterior damages. Note that severe damages should be directed to the transport business company. If everything looks fine, put the camera unit in the rectangular base and place it on the right side under the laptop. Or place the camera in the round base if the user would like to place it separately. If the user is left-handed the best way is to place the camera in the round base, approximately 40 cm left of the laptop with the camera pointing in the direction of the laptop.

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



## Packing

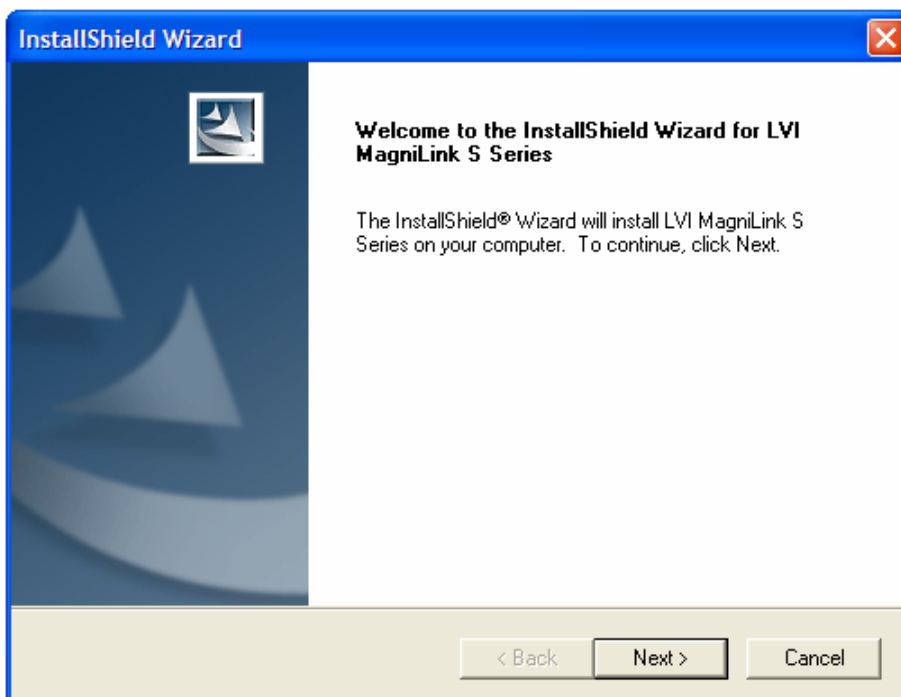
If the system for some reason will be moved or returned, it is important to place the parts in the same way as above, before placing them in the white box. The white box shall finally be placed in an external box.



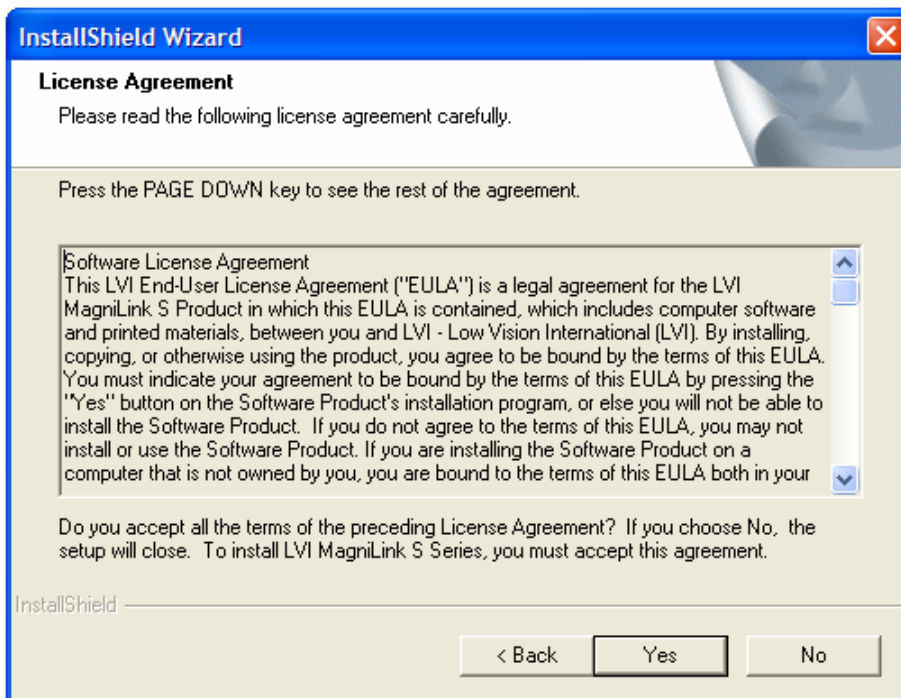
## Installation of MagniLink S Software

Insert the CD with **MagniLink S Software** into your CD-ROM drive and the installation should start in a few seconds. If the Autorun function does not start, type "**D:\autorun**" under the command "**Run**" in the Start menu, if "**D:\**" is the letter for your CD-ROM drive.

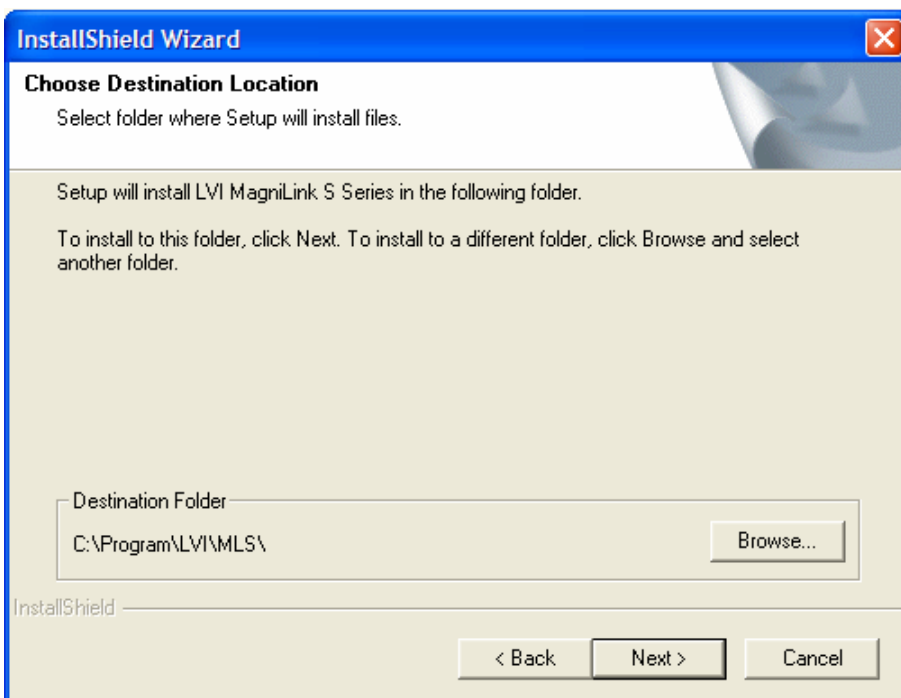
When the installation program starts, follow the instructions on the screen to complete the installation of the software or see below for a more detailed description.



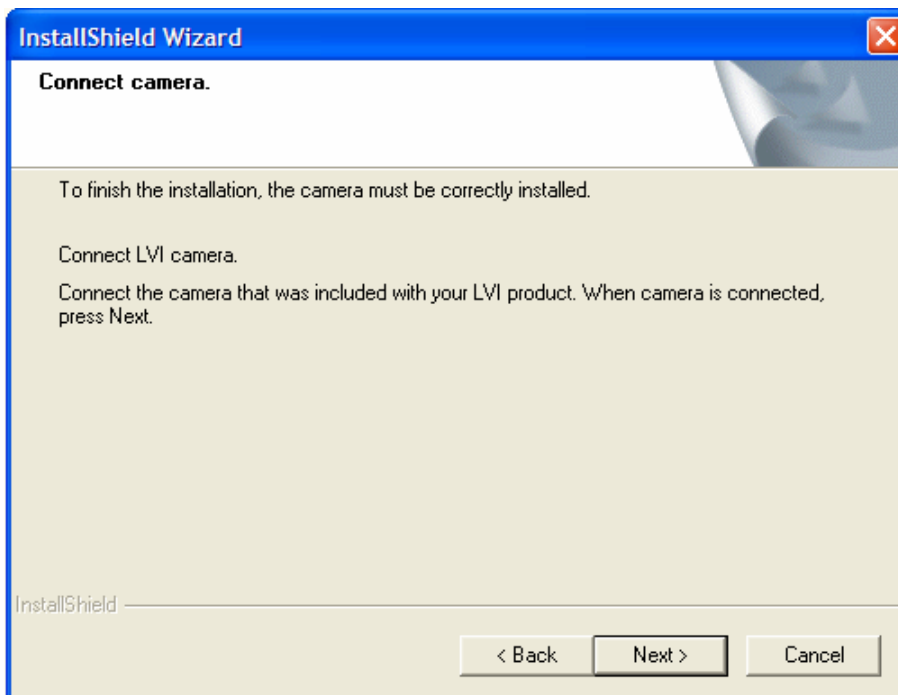
In the dialog box "**Welcome to the InstallShield Wizard for LVI MagniLink S Series**", click "**Next**".



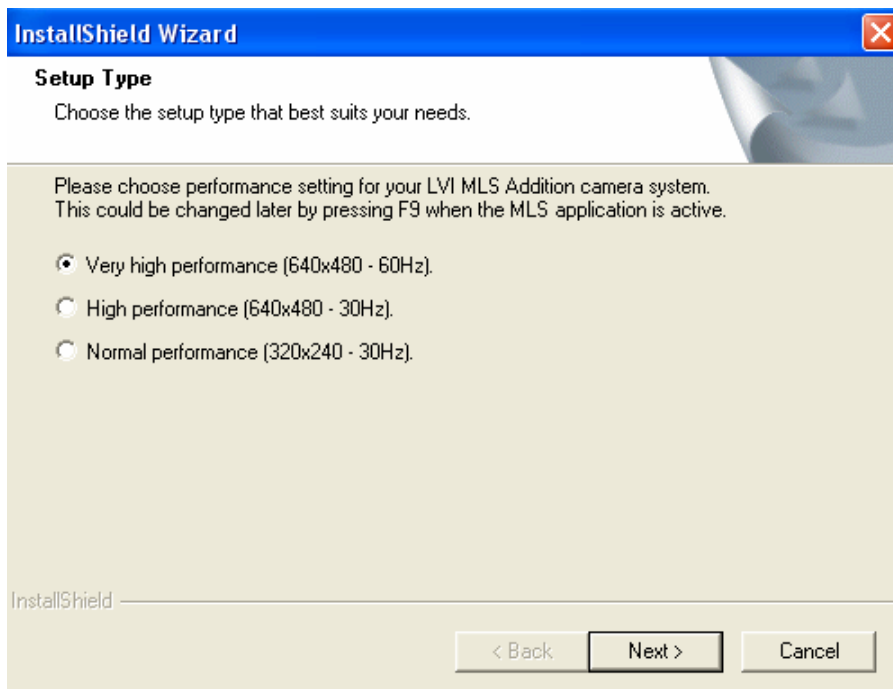
In the dialog box "**License Agreement**", read the text and agree by clicking "**Yes**".



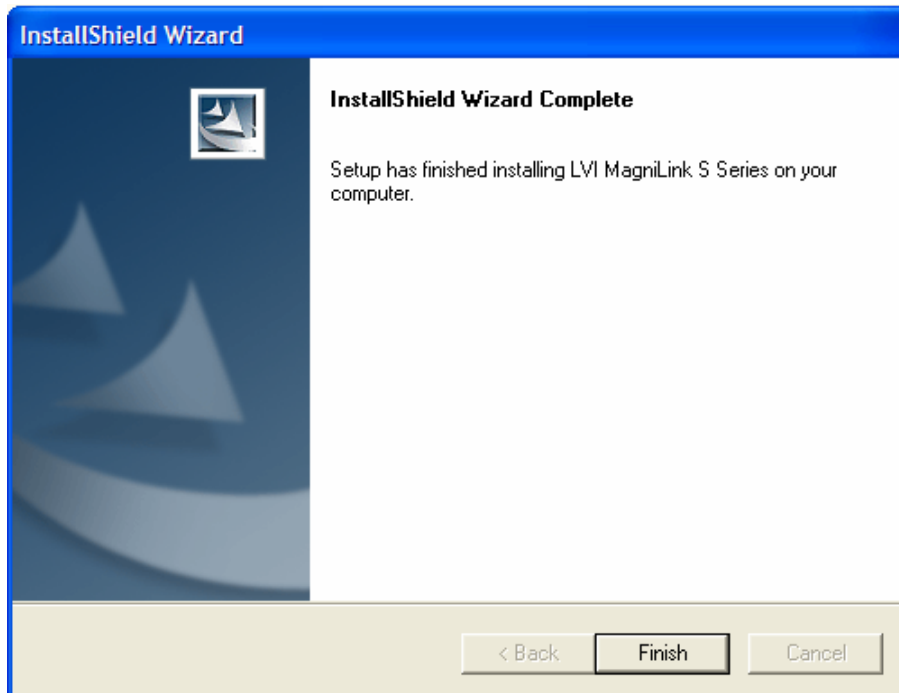
In the dialog box "**Choose Destination Location**", click "**Next**" to install the program in the default catalogue. It is possible to choose a new installation catalogue for the program.



Choose **“Next”** in the dialog box **"Connect camera"** after you have connected the camera system to your computer.



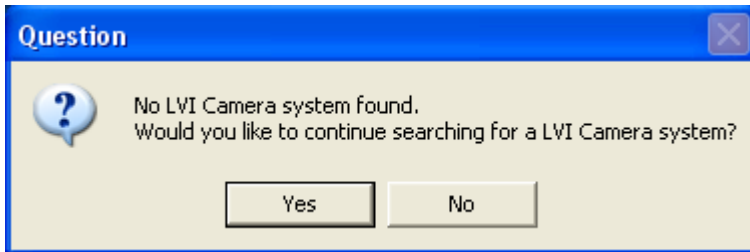
As default **“Very high performance”** is selected. If you have a computer with low specifications, please choose another selection. This option can be changed later by pressing F9, when the MLS application is active.



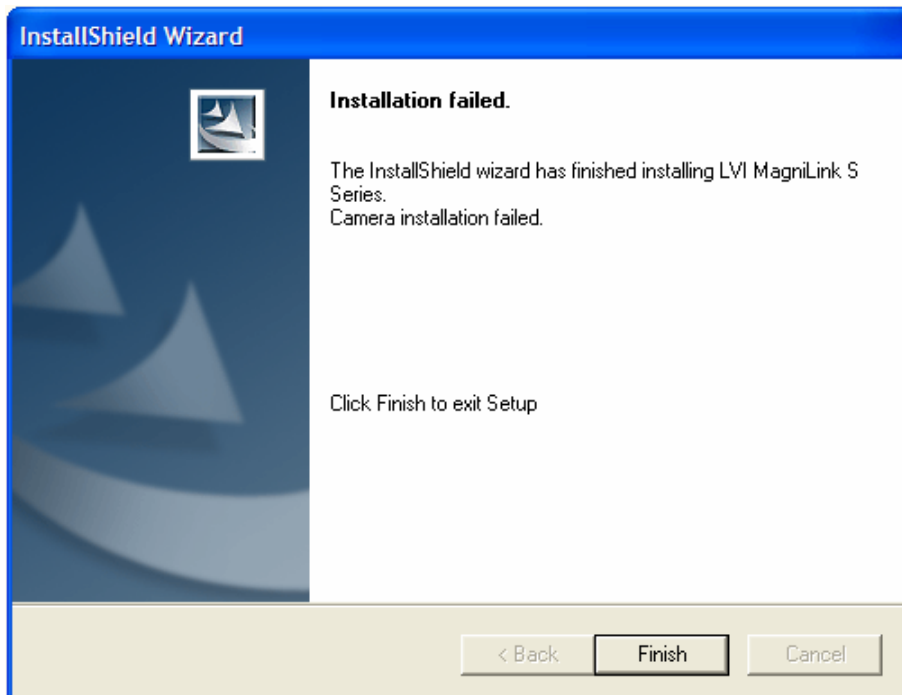
In the dialog box **"InstallShield Wizard Complete"**, click **"Finish"**.

**Start the software from the "LVI MLS" icon at the computer desktop or use the pre-set command CTRL + Alt + S.**

## Trouble during installation



If the camera is not connected within 90 seconds, the above message will appear. You could then choose to search for the camera for another 90 seconds or quit the installation for now.



In the dialog box "**Installation failed**", click "**Finish**" to finalise the installation.

The application is installed on the computer, but the installation of the camera system failed because the system was not connected to the computer in time.

Next time you connect the camera system to this computer the camera system will be installed automatically.

## Maintenance of the MagniLink S software

Insert the MLS CD in your CD-ROM drive and the installation should start in a few seconds. If the Autorun function does not start, type "**D:\autorun**" under the command "**Run**" in the Start menu, if "**D:\**" is the letter for your CD-ROM drive.

***Read the instructions on the screen for the desired action.***

If you want to modify the application choose "**Modify**".  
If there are any problems with the application choose "**Repair**".  
If you want to uninstall the application choose "**Remove**".

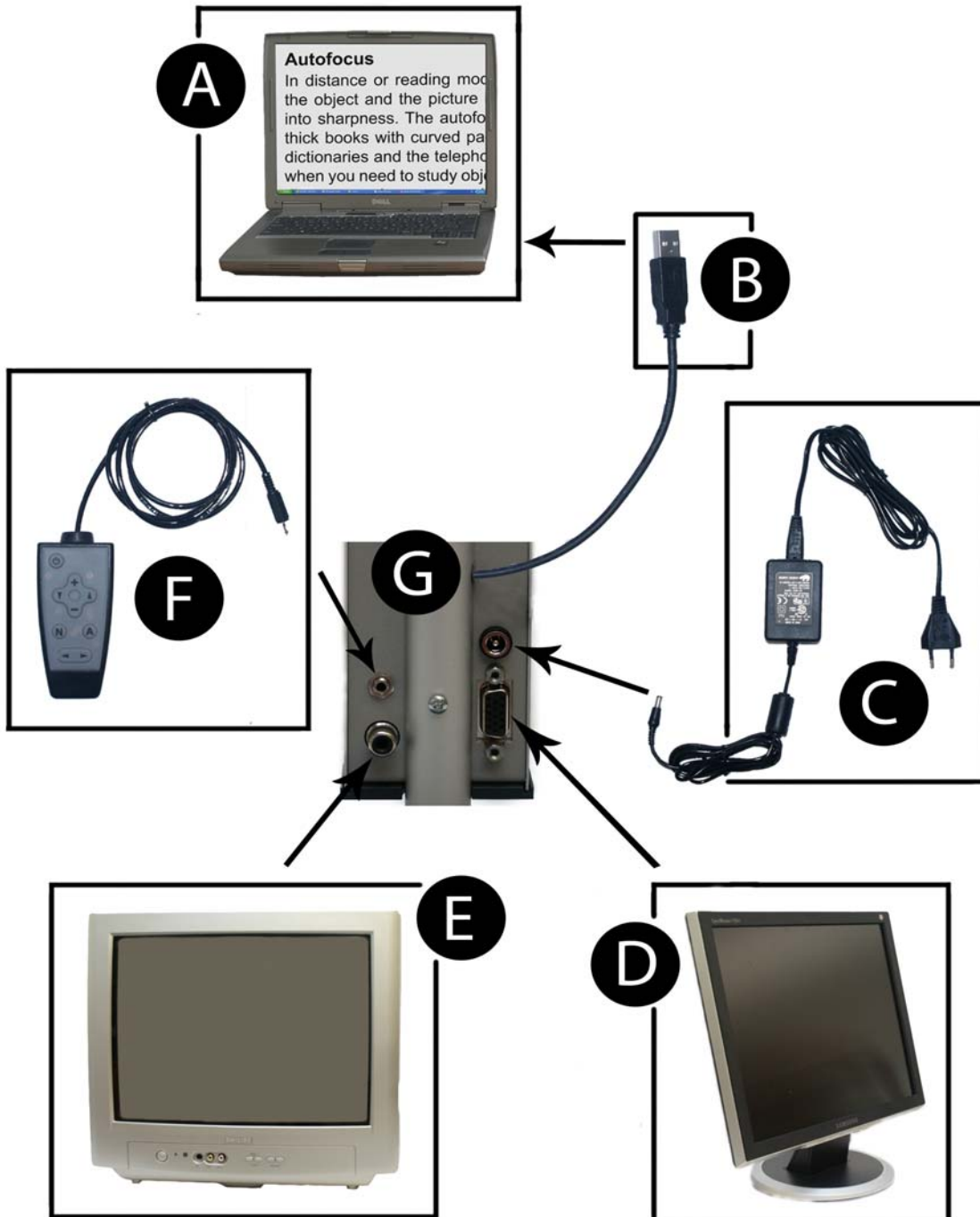


Choose the desired action and click "**Next**".

In the dialog box "**Maintenance components**", click "**Finish**" to finalise the maintenance.

**You can also remove the software from the Control Panel – add/remove software**

## Connection guide for the MLS Student Addition



**A. Computer**

**B. USB cable**

**C. Power adapter**

**D. VGA monitor**

**E. TV-monitor**

**F. Control box**

**G. The connections on the MLSSTA  
(backside)**

## Controlling the system

MLS Student Addition is presented in a MS Windows application and all features in the system are controlled from the keyboard.

### Default hotkey settings from the computer keyboard:

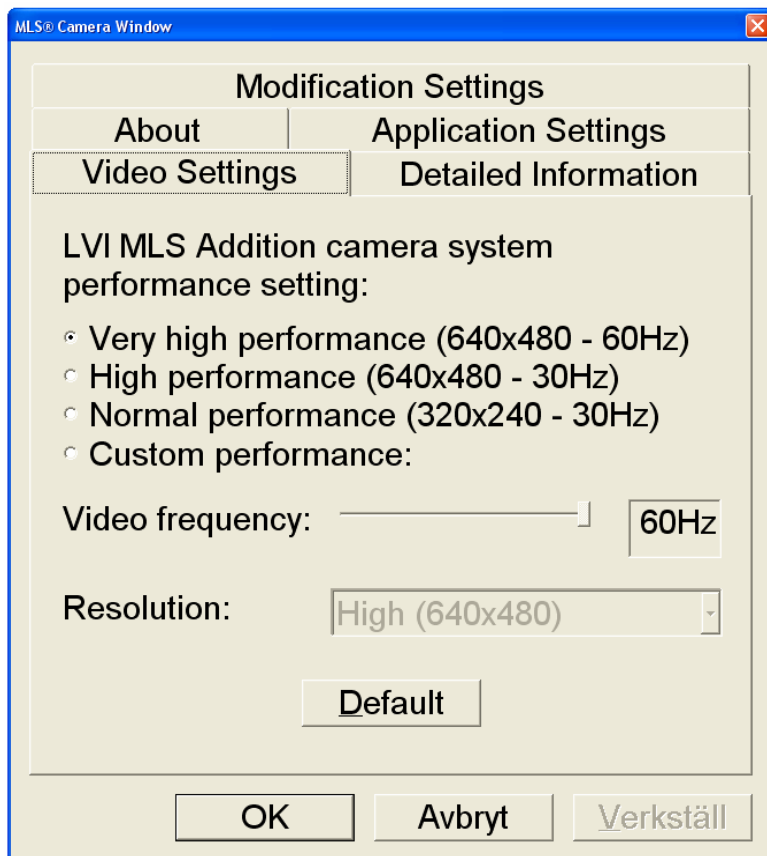
- |           |  |
|-----------|--|
| <b>F1</b> | <b>Natural colours</b>   |
| <b>F2</b> | <b>Positive picture with increased contrast</b><br><b>Artificial colours; White/Black, Yellow/Black, Green/Black Red/Black, Yellow/Blue, White/Blue</b><br>Press the button several times to toggle between the different colours. (Shift + F2 toggles backwards.)   |
| <b>F3</b> | <b>Negative picture with increased contrast</b><br><b>Artificial colours; Black/White, Black/Yellow, Black/Green Black/Red, Blue/Yellow, Blue/White</b><br>Press the button F3 several times to toggle between the different colours. (Shift + F3 toggles backwards.)  |
| <b>F5</b> | <b>Take picture snapshot</b><br>Press the button F5 to open the Picture saving dialog box. A file name (today's date and time) and folder (My Pictures) is automatically suggested. Just press Enter to save the picture. If you want to save the picture some-where else or with another name you can manually change this. |
| <b>F6</b> | <b>View stored snapshots</b><br>Press the button F6 to view the stored pictures. Mark the picture and press Enter or choose open. The picture is normally opened in the standard picture viewing program in Windows, where you can, for example, magnify the picture.  |
| <b>F8</b> | <b>Preset split modes</b><br>Press the button F8 several times to toggle between the preset split modes. The window can also be controlled by the mouse or the standard Windows commands (see page 15).  |

<b>F9</b>	<b>Information and settings window</b> Pressing F9 opens up a window in which you can optimize your MLS. The window contains five different headings (see <i>Information and settings window</i> below).
<b>F11</b>	<b>Return to default settings</b> Press F11 to return to default settings (normal window, natural colours, normal brightness)
<b>Arrow up</b>	<b>Zoom in</b>
<b>Arrow down</b>	<b>Zoom out</b>
<b>Arrow right</b>	<b>Increase brightness</b>
<b>Arrow left</b>	<b>Decrease brightness</b>
<b>Ctrl + Arrow left</b>	<b>Guiding line left/up</b>
<b>Ctrl + Arrow right</b>	<b>Guiding line right/down</b>
<b>Ctrl + R</b>	<b>Rotates the camera picture</b> Each time you press this key combination the picture rotates 90° (90°, 180°, 270°, 360°)
<b>Ctrl + C</b>	<b>Disable CCTV interface</b> The CCTV interface mode is activated as default, which makes the MLS compatible with ZoomText version 9.04 and Supernova/Lunar/Lunarplus 7.01. When working with older versions of these software, we recommend disabling the CCTV interface.
<b>Ctrl + Alt + S</b>	<b>Global hotkey (fast activating of MLS software)</b> (You could change this by right clicking the MLS icon on the desktop and changing the letter)

## Information and settings window

The information and settings window consist of five different headings that all contain either application information or application settings options.

### Video Settings:



The Video Settings heading offers the possibility to change the camera parameters such as resolution and video frequency. There are three preset performance settings to choose between, very high, high and normal. Best picture quality is achieved by choosing very high, but when running the application on low end computers, lower performance settings might be used.

## **Application Settings:**

### *Enable CCTV interface:*

Enabling this feature allows you to work with the MLS together with screen magnification software from Dolphin and AiSquared. MLS is compatible with ZoomText version 9.04 and Supernova/Lunar/Lunarplus

7.01 and newer. When working with older versions of these software's, we recommend disabling the CCTV interface.

### *Enable Automatic Updates:*

MLS will automatically search for new versions of the MLS software. You can choose to disable the automatic search for updates and instead choose to do it manually. (NOTE: Both these actions require that you are connected to the Internet). To update the software you will need to insert the MLS software CD into your CD drive.

## **About:**

Under this heading you will find the version number of your software and information regarding copyright law.

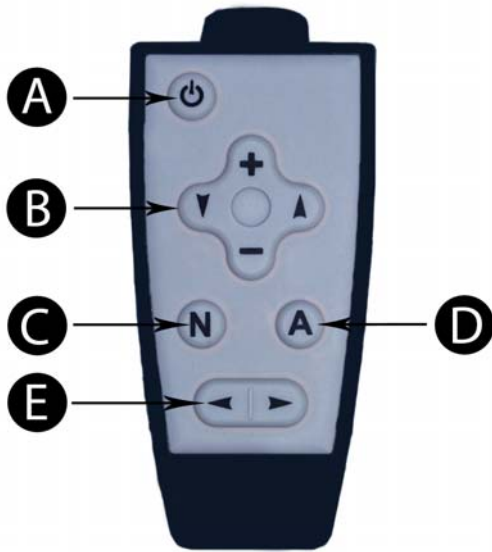
## **Detailed Information:**

Information about the hardware. Used for reparation and service purposes solely by the manufacturer.

## **Modification Settings**

Under this heading you find the rotation alternatives for the camera image, MLS supports rotation of the camera image in the following angles; 0°, 90°, 180° and 270°.

## Functions from the control box:



### A. Option 1. On/Off

### Option 2. Monitor switch\*

(this button is only used when there is an external monitor connected to the system)

### B. Control of zoom (+,-) and contrast range (arrows)

### C. Natural colors

**D. Artificial colours**  
Press the A button to change between the colours

### E. Guiding line

\*There are two different external monitor modes to change between. The system starts in VGA mode (factory default). To change mode, press and hold the button for 4 seconds until you get a picture on the TV set. This new mode will be saved as default until it is changed again.

Due to the interlacing and lower resolution used in TV-technique, the picture quality on a TV-monitor is normally slightly lower compared to the picture quality on a VGA monitor.

## Indication lamp on the system

Yellow light indicates: System is in standby position, power is connected.

Green light flashing indicates: System starts up.

Green constant light indicates: System is up and running.

Red light or flashing yellow light indicates system error. Restart the system by disconnecting all cables and start the system up again. If there is still a red light, please contact service technician.

## MS Windows Commands

The window can be controlled by the mouse or the standard MS Windows commands. The most common Windows commands in connection with MLS Student Addition are presented below. For more information about MS Windows, please consult your Windows user's manual. (Please note that if a compatible magnification software is used together with the MLS software, the application frame is not present).

### Switch between open applications

Press "**Alt**" + "**Tab**"

### Switch between full screen (maximized window) and normal window

*With the mouse:*

Click on the "**Restore**" icon in the upper right corner of the window (between maximize and minimize).

*With the keyboard:*

Press "**Alt**" + "**Spacebar**" and the application control menu opens. Choose "**Restore**" in the menu to go to normal window. Choose "**Maximize**" to go to full screen.

### Change size of the window

Make sure you are in the normal window mode (see above).

*With the mouse:*

Use the mouse to pull each side of the window to the preferred position.

*With the keyboard:*

Press "**Alt**" + "**Space**" and choose "**Change size**" in the application control menu. Set the preferred size of the window by using the arrow keys.

Ex. 1:

To change the height of the window: Start by pressing the "down arrow" key in order to move the bottom of the window and set the preferred position with the "up arrow" key.

Ex. 2:

To change the width of the window: Start by pressing the "left arrow" key in order to move the left side of the window and then set the preferred position with the "right arrow" key.

## **Accessories**

- Laptop bag with space enough for a 15” laptop and the MLS Student Addition
- Laptop rucksack with space enough for a 15” laptop and the MLS Student Addition
- MLS Reading Table (MLSRT), portable reading table
- USB lamp which is powered from a USB port and gives extra light in dark rooms

## Technical specifications

Magnification range	1,3 - 48 x (12,1" monitor) 1,4 - 51 x (14,1" monitor) 1,5 - 55 x 15,1" monitor)
Power consumption	5 W
Weight	1,2 kg (including the rectangular base)
Dimensions in use	300 x 100 x 330 mm (W x D x H)
Operation temperature	0 to 30°C (32 to 86°F)
Storage and transport temperature	-20 to 60°C (-4 to 140°F)



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

This symbol, found on your product or on its packaging, indicates that this product should not be treated as household waste when you wish to dispose of it. Instead, it should be handed over to an applicable collection point for the recycling of electrical and electronic equipment. By ensuring this product is disposed of correctly, you will help prevent potential negative consequences to the environment and human health, which could otherwise be caused by inappropriate disposal of this product. The recycling of materials will help to conserve natural resources. For more detailed information about the recycling of this product, please contact your local city office, household waste disposal service or the retail store where you purchased this product.