magnification

TwinView

User Manual
Gebruikershandleiding
Manuel d'utilisation
Manual del usuario
Manuale Utente

Optelec

User Manual

English

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1. Introduction

Congratulations on choosing the Optelec TwinView, the true low vision 24 inch monitor featuring intelligent split screen functionality.

Discover the power of split screen functionality for a low vision workstation by combining the images of both a video magnifier and a PC simultaneously on a single monitor.

1.1. About this manual
At Optelec, we are constantly improving our products and their functionalities. Therefore, it is possible that this manual is not the latest version. Please download the most up-to-date manual on www.optelec.com at the Support section.

This manual will help you to become familiar with the TwinView features and operation. Please read this manual thoroughly before using your TwinView.

If you have any questions or suggestions concerning the use of this product, please contact your Optelec distributor or Optelec's headquarters by consulting the contact information page located at the end of this manual. We greatly appreciate your feedback.

We hope you enjoy working with your TwinView!

1.2. Getting to know the TwinView
The Optelec TwinView 24 inch screen is a wide viewing angle low vision monitor that redefines the use of split screen functionality. Simply connect both a video magnifier and a PC to the TwinView monitor, and the split screen function of your screen magnifier software is set automatically. Then use the TwinView buttons to select the preferred split screen orientation – horizontal or vertical. No further adjustments are required within MAGic, ZoomText or SuperNova.

Video magnifier   TwinView   Computer

The high contrast ratio of the TwinView delivers distortion-free images, whilst the wide viewing angle ensures an ultra-sharp image for low vision users, even when sitting in close proximity to the screen. As a free-standing flexible monitor, the height and viewing angle of the TwinView can be adjusted to provide a comfortable reading position. With its stand of 35 cm (13,8 inches) high, 5 cm (2 inch) height adjustment, 20 degrees pivot and 60 degrees swivel panel adjustment, virtually every low vision user can adjust the display to their exact comfort level to help reduce eye and neck strain.

The TwinView supports all resolutions from VGA 640x480 to full HD 1920x1080. For an optimal image quality, however, your PC system must be able to support a resolution of 1920x1080.

2.   Unpacking, Installation and Setup

Please unpack the TwinView carefully before proceeding with the installation, and consult the accompanying installation guide. Please contact your Optelec distributor for further instructions if required.

Your TwinView consists of the following:
- **The Optelec TwinView monitor** with stand;
- **Two VGA cables**;
- **Two DVI cables**;
- **One USB cable**;
- **12V DC monitor power cable** to connect and power the TwinView monitor from the ClearView+ monitor power socket;
- **Adaptor cable** to enable use of a standard ClearView+ power supply;
- **An installation poster**;
- **CD containing the TwinView driver software**;
- **This user manual**.

2.1.   Installation
This chapter describes how to set up and connect the TwinView and install the TwinView intelligent split screen software.

2.1.1. Monitor Adjustment
The height and viewing angle of the TwinView can be adjusted to provide a comfortable reading position. With its stand of 35 cm (13,8 inches) high, 5 cm (2 inch) height adjustment, 20 degrees pivot and 60 degrees swivel panel adjustment, virtually every low vision user can adjust the display to their exact comfort level to help reduce eye and neck strain.

Alternatively, for those using the PC frequently, the TwinView can be mounted on an off-the-shelf monitor arm (purchased locally, for example).

To adjust the height of the TwinView stand, the transport lock needs to be unlocked first. Press and hold the button located at the back of the stand and gently increase the height of the stand. The TwinView can be adjusted in both height and viewing angle for an optimal reading position. Grip the flat panel on both sides to adjust to your preferred position.

2.1.2. Connections

All connections are located on the back of the TwinView. When the back of the TwinView is facing you, the connections from left to right are:
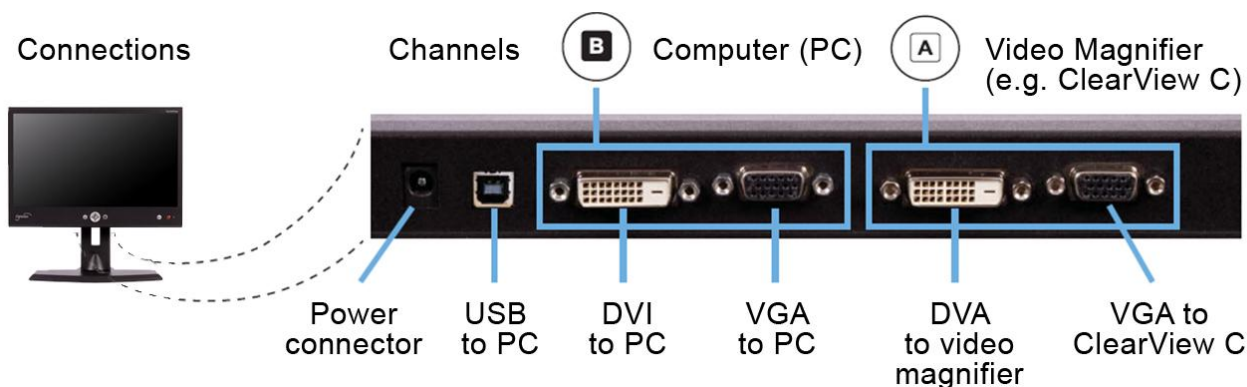
- **Power connector**
  - o Use the 12V DC monitor power cable to connect and power the TwinView from the ClearView+ monitor power socket, or
  - o Use the included adaptor cable to connect a standard ClearView+ power supply to the TwinView monitor's DC jack.
- **USB to PC connector** – to connect the TwinView to the PC and establish the communication between the TwinView and the MAGic, ZoomText or SuperNova magnifier intelligent split screen adjustment.
- **DVI channel B to PC connector** – to connect the PC to the TwinView over DVI.
- **VGA channel B to PC connector** – to connect the PC to the TwinView over VGA.
- **DVI channel A to video magnifier connector** – to connect a video magnifier or other device to the TwinView over DVI.
- **VGA channel A to video magnifier connector** – to connect a video magnifier or other device to the TwinView over VGA.

2.1.3. Powering the TwinView

To power the TwinView, there are two options:
- When using the TwinView with a ClearView+, use the 12V DC monitor power cable to connect and power the TwinView from the ClearView+ monitor power socket, located on the back of the ClearView+ (please refer to the Installation Guide).
- When using the TwinView with another video magnifier than the ClearView+, use the adaptor cable to connect a standard ClearView+ power supply to the TwinView monitor's DC jack. The ClearView+ power supply needs to be ordered separately. Please contact your Optelec distributor for more information.

2.1.4. Connecting the TwinView to a video magnifier

The TwinView supports two input channels, channel A and channel B. Per channel, the TwinView has a VGA and DVI connection. To connect a device either the VGA or DVI connection can be used, depending on the device to be connected and your personal preference. The two connections per channel make it possible to connect a maximum of four devices to the TwinView, of which the output from two devices can be displayed simultaneously in a horizontal or vertical split.

Channel A is reserved to specifically connect the TwinView to a video magnifier. To connect the video magnifier, use the included VGA or DVI cable and connect the video magnifier VGA or DVI monitor connection to the TwinView channel A VGA or DVI connection.

Please note: If you connect a video magnifier via DVI, the video source selection in menu A needs to be set to DVI. Please refer to chapter 4, "The TwinView Menu Setup".

2.1.5. Connecting the TwinView to the PC

The TwinView supports two input channels, channel A and channel B. Per channel, the TwinView has a VGA and DVI connection. To connect a device either the VGA or DVI connection can be used, depending on the device to be connected and your personal preference. The two connections per channel make it possible to connect a maximum of four devices to the TwinView, of which the output from two devices can be displayed simultaneously in a horizontal or vertical split.

Channel B is reserved to specifically connect the TwinView to a PC. To connect a PC, use the included VGA or DVI cable and connect the PC to the TwinView channel B connection.

Please note: If you connect the PC using the channel B DVI connection, the video source selection in menu B needs to be set to DVI. Please refer to chapter 4, "The TwinView Menu Setup".

Please note: For optimal image quality, Optelec recommends to set the PC's resolution to full HD 1920x1080. Please refer to your Microsoft Windows or operating system's manual or help system on how to change the monitor resolution.

2.2.   TwinView Intelligent Split Screen Software Setup

To use the intelligent split screen functionality of the TwinView and combine the images of both the video magnifier and a PC simultaneously on a single monitor, connect both the video magnifier and a PC to the TwinView as described in the previous two paragraphs. Connect the USB cable to the TwinView and the PC.

If you are using MAGic version 13.1, ZoomText version 10.1 or SuperNova version 15.02 or later, install the included TwinView software from the Optelec TwinView CD. To determine the version of MAGic, ZoomText or SuperNova that you work with, check the "About" box in the help menu.

Simply use the TwinView buttons to select the preferred split-screen orientation – horizontal or vertical – and the split screen functionality of MAGic, ZoomText or SuperNova is set automatically. No further adjustments are required within MAGic, ZoomText or SuperNova.

Please note: Earlier versions of MAGic, ZoomText and SuperNova, as well as other screen magnification software, are not supported by the TwinView software. If you are using an older version of MAGic, ZoomText or SuperNova, or other screen magnification software, you will need to adjust the split screen functionality manually. Please refer to your screen magnification manual for instructions on how to manually configure the split screen function.

3.   Operation

The control buttons of the TwinView are located on the front panel of the unit, below the screen.
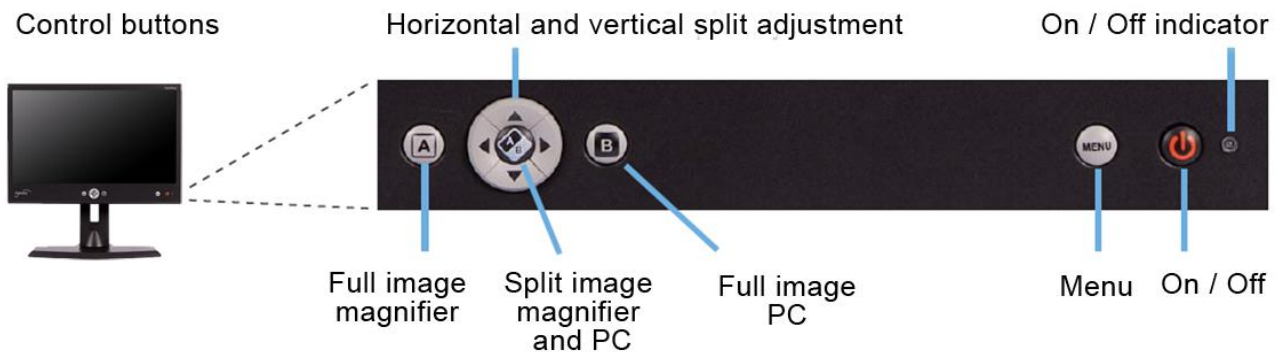
3.1.   Switching on and off
To power the TwinView, press the On / Off button located at the bottom right of the monitor. When no signal is detected, the TwinView will switch off automatically.

3.2.   On / Off indicator
When the TwinView is switched on, the indicator will be lit green. When no input signal is detected, the indicator will be lit orange. When the unit is switched off, the indicator will not be lit.

3.3.   Switching between the computer and the ClearView C or another device
Press the button located at the left below the screen (labelled A) to display the full video magnifier image. To display the full PC image, press the button labelled B (to the right of the cursor cross). When no input signal is detected, the TwinView will automatically switch channels after 5 seconds.

Please note: to display the PC image correctly on your TwinView monitor, make sure that the resolution of your PC is set to 1920x1080.

3.4.   Activating the split screen functionality
Pressing the A/B button – the centre button of the cursor cross – enables the split screen, displaying both the PC and the video magnifier images simultaneously.

3.5.   Switching between vertical and horizontal split screen
To switch between a vertical or horizontal split, press the left or right arrow for a vertical split, or the up and down arrow for a horizontal split.

3.6.   Resizing split screen
When the vertical or horizontal split screen is activated, pressing the up or down arrow or left or right arrow will move the split up, down, left or right respectively.

4.   The TwinView Menu Setup

4.1.   Introduction
The TwinView has two menu's: one menu for channel A and one menu for channel B. This allows you to change all of the settings, such as brightness and contrast, per channel. For instance, it is possible to increase the brightness and contrast for the PC output (channel B) and decrease the contrast and brightness for the video magnifier output (channel A).

4.2.   Activating the menu
To activate the menu, first select the channel (A or B) by pressing the A or B button. The A button can be found to the left of the cursor keys, the B button to the right. Then press the menu button located to the left of the On / Off switch – this will activate the menu for the selected channel. All menu changes will only apply to the selected channel. Pressing the menu button will close the menu.

4.3.   Navigating the menu
Use the up and down arrows to navigate between the menu items. The A/B button located in the middle of the cursor cross will activate the menu item or selection.

4.4.   Main Menu Setup
The main menu of the TwinView contains the following menu items:
-    **General**: to set brightness and contrast settings
-    **Color**: to adjust the color settings
-    **Image**: to calibrate the image (this option is only available when the input is set to VGA)
-    **Information**: to display the resolution and frequency
-    **Language**: to select the preferred menu language
-    **Settings**: to configure the menu timeout
-    **Factory defaults**: to restore all settings to the factory default
-    **Select DVI/VGA**: to set the DVI or VGA port for the selected channel
-    **Exit**: to leave the menu

4.4.1. Menu General
The menu General contains the submenu's Brightness and Contrast. The default value of both Brightness and Contrast is 50%. To configure the brightness and contrast settings of the TwinView:
-    Select the channel of which you would like to change the brightness and contrast settings by pressing the channel A or channel B button;
-    Activate the menu by pressing the menu button;
-    Select General by using the up and down cursor keys and activate the option by pressing the A/B button;
-    Select Brightness or Contrast and confirm the choice with the A/B button;
-    To adjust the brightness and contrast, use the left and right arrow keys and confirm the choice with the A/B button;
-    Use the menu Exit or press the Menu button to leave this submenu.

4.4.2. Menu Color
The color temperature can be adjusted using the submenu Color. There are three settings in this menu:
-    6500 Kelvin
-    9300 Kelvin
-    Custom

The default setting is 6500 Kelvin. The change this, follow these steps:
- Select the channel of which you would like to change the color temperature by pressing the channel A or channel B button;
- Activate the menu by pressing the menu button;
- Select Color by using the up and down cursor keys and activate the option by pressing the A/B button;
- In the submenu Color, select Color again and confirm the choice with the A/B button;
- To adjust the color temperature, use the left and right arrow keys and confirm the choice with the A/B button;
- If you selected the custom color setting, the value for red, green and blue can be adjusted individually;
- Use the menu Exit or press the Menu button to leave this submenu.

4.4.3. Menu Image
Please note: *Optelec recommends not to change the settings in the Image menu. The TwinView will automatically adjust all image settings when turning on the monitor. Especially the Audio White Balance setting should not be activated, as that may offset the color calibration of the TwinView.*

The menu Image contains image adjustment settings for the VGA connections. If a PC or video magnifier is connected using the DVI connection, the Image menu will not be available and will be greyed out. The first item in the Image menu is Auto Adjust. Activating this menu item will automatically configure the image settings. As the adjustment will take place when turning on the TwinView, there is no need to activate this option.

4.4.4. Menu Information
The Information menu displays the screen resolution and frequency.
- Select the channel of which you would like to view the resolution and frequency by pressing the channel A or channel B button;
- Activate the menu by pressing the menu button;
- Select Information by using the up and down cursor keys and activate the option by pressing the A/B button;
- Use the menu Exit or press the Menu button to leave this submenu.

4.4.5. Menu Language
This menu option configures the language setting of the TwinView menu. The menu language can be changed individually for channel A and channel B. To set the language:
- Select the channel of which you would like to change the menu language by pressing the channel A or channel B button;
- Activate the menu by pressing the menu button;
- Select Language by using the up and down cursor keys and activate the option by pressing the A/B button;
- Select the language of your choice by using the up and down cursor keys and activate the chosen language by pressing the A/B button;
- Use the menu Exit or press the Menu button to leave this submenu.

4.4.6. Menu Settings
Use the menu Settings to adjust the menu timeout. This is the time that the TwinView menu will be displayed on screen when no button is pressed. By default, the menu timeout is set to 30 seconds. To change the timeout setting:

- Select the channel of which you would like to change the timeout settings by pressing the channel A or channel B button;
- Activate the menu by pressing the menu button;
- Select Settings by using the up and down cursor keys and activate the option by pressing the A/B button;
- Select menu Timeout by using the up and down cursor keys and activate the chosen option by pressing the A/B button;
- Use the left and right arrow keys to adjust the Timeout value;
- Use the menu Exit or press the Menu button to leave this submenu.

4.4.7. Menu Factory Defaults
Activating this menu will restore the TwinView settings to the factory defaults for the selected channel:
- Select the channel of which you would like to restore the factory default settings by pressing the channel A or channel B button;
- Activate the menu by pressing the menu button;
- Select Factory Defaults by using the up and down cursor keys and activate the option by pressing the A/B button;
- The settings will now be restored to the factory defaults;
- Use the menu Exit or press the Menu button to leave this submenu.

4.4.8. Menu Select DVI/VGA
Select the DVI or VGA port of the selected channel to which a ClearView C (or other video magnifier) or PC has been connected. By default, the VGA port is selected. To select a port:
- Select channel A or B by pressing the channel A or channel B button;
- Activate the menu by pressing the menu button;
- Select DVI/VGA by using the up and down cursor keys and activate the option by pressing the A/B button;
- Select DVI or VGA from the submenu by using the up and down cursor keys and activate the chosen option by pressing the A/B button;
- Use the menu Exit or press the Menu button to leave this submenu.

4.4.9. Menu Exit
Activating this menu item will exit the menu.

5.   Troubleshooting

Manufacturer's default settings
>   If you experience any difficulty operating the TwinView, you can reset the factory default settings in the menu. You will need to reset the factory default settings in both menu A and menu B.

No image on the TwinView monitor after it is switched on
-   Check that all cables and hardware are connected properly and securely.
-   Check that the unit is receiving power by verifying that the LED light is lit on the front of the TwinView when the unit is switched on.
-   Ensure that the correct VGA or DVI video source is selected in the TwinView menu. The video source can be set per channel. Make sure both for channel A in menu A and channel B in menu B that the correct input is selected.

Image has low contrast
-   Ensure that the contrast and brightness levels are set correctly in the menu. The contrast and brightness can be set per channel. To set the contrast for channel A, select channel A prior to activating the menu. The same applies for channel B.

The computer image is not displaying
-   Verify the computer's video (VGA or DVI) connection to the TwinView and the PC.
-   Ensure that the PC is connected to channel B.
-   Ensure that the correct input, VGA or DVI, is selected in the menu.
-   Check the display settings of your PC to ensure that the TwinView monitor is selected.

The PC image is not clear
-   Ensure that the computer's video resolution is set to 1920x1080.

The split screen of the screen magnifier is not adjusting automatically
-   Verify that the USB cable is connected to the TwinView and your PC.
-   Verify that you are using MAGic version 13.1, ZoomText version 10.1 or SuperNova version 15.02 or later.
-   Ensure that the TwinView software is installed and the TwinView controller is running. The TwinView controller icon can be found on the taskbar next to the clock. If the TwinView controller is not running, you can manually launch it from the start menu.
-   Ensure that the TwinView controller is enabled by double clicking on the icon and checking the status.

Appendix A: Safety and Regulatory Notices

Please read the instructions carefully before setting up your Optelec TwinView. Keep this user manual for future reference.

- Use the TwinView indoors. Do not expose the TwinView to extreme or rapid changes in temperature or humidity.
- Do not place the TwinView near a radiator or heater, or where it may be exposed to direct sunlight. These conditions may damage the TwinView's electronic components.
- Do not place the TwinView on an unstable surface. It may fall, causing serious damage to the unit, or injury to the user.
- The monitor stand contains movable parts. Please be careful when adjusting the stand and screen position as to prevent fingers or any loose clothing from getting caught in the operating mechanism. If you have difficulty operating the TwinView safely, please seek assistance or contact your Optelec distributor.
- Contact your Optelec distributor to service this device if necessary. Do not open your TwinView; this will void the warranty.
- Always turn the power off when the TwinView is not in use.
- Always unplug the TwinView before cleaning it. Use a soft, damp cloth to clean the exterior surfaces. Do not use any cleaning agents or any abrasive materials as these will damage your TwinView.
- Only use the power supply or included power connection cable for your TwinView.

Warranty Conditions

Optelec warrants the TwinView, effective from the date of delivery, to be free of any defects in material and workmanship.

The warranty is not transferable and does not apply to groups, multi-users and agencies. The TwinView was designed for the individual purchaser to be used at home and work. Optelec reserves the right to repair or replace any purchased TwinView with a similar or improved product.

In no event shall Optelec or its suppliers be held liable for any indirect or consequential damages. The original user's remedies are limited to replacement of the TwinView. This warranty is valid only when serviced in the country of original purchase, and with intact seals. For additional warranty claims or service during or after warranty period, please contact your Optelec distributor.

Optelec is not responsible for any uses of this device other than those described in this manual.

Compliance

This product complies with the safety and EMC requirements under the following directives:

FCC:	C-Tick	EMC:	Safety:
FCC part 15 Class B	CISPR 22	EN 50081-1	UL 60950
		EN 55022	
		EN 55024	

Electrical medical equipment requires special precaution with regard to EMC (Electro Magnetic Compatibility) and must be installed and put into service according to EMC guidelines.

WARNING: The use of accessories and cables other than those specified and sold by the manufacturer of the TwinView, as replacement parts for components, may result in increased emissions or decreased functioning of the TwinView.

This device bears the CE, FCC and UL approval mark.

Appendix B: Specifications

- 24 inch full HD low vision monitor with an 178 degree wide angle view, ensuring an ultra sharp image for low vision users, even when sitting in close proximity to the screen.
- Free standing, height adjustable monitor stand for a more comfortable reading position.
- More overview and more characters on the screen with the same magnification level as a 22 inch or smaller monitor.
- Easy to use buttons with high contrast icons.
- TwinView menu settings are displayed in large font for easy adjustment by a visually impaired user.

Split screen
- Simplicity with just a few user controls on the monitor itself (no need for extra software or control panel).
- Split screen from VGA (640x480) up to full HD (1920x1080) resolution.
- Intelligent, fully automatic split screen; no further adjustments are required within the PC magnification software (ZoomText, MAGic and SuperNova), due to the TwinView software.
- Horizontal and vertical split screen adjustment.
- Fast en responsive split screen in real time at 60 frames/second; no stuttering or delays in the image.
- PC-connectivity trough USB for fully automatic split screen functionality.

Technical specifications
- Full HD resolution 1920x1080
- High contrast ratio 3000:1
- High brightness screen 300 cd/m2
- Response time: 8 ms
- 178 degree wide viewing angle using A-MVA 3 technology
- Supports VGA and DVI input
- Weight: 6.7 kg / 14.8 lbs including stand; 4 kg / 8.8 lbs excluding stand
- Dimensions: 568 x 339 x 50 mm / 22.4 x 13.35 x 1.97 inch
- Supports: VGA and DVI input
- Power supply: 12V / 4A
- Net frequency: 50-60 Hz

Operating conditions
Temperature   : +10°C to +35°C
Humidity   : < 70%, no condensation

Storage & transportation conditions
Temperature   : -10°C to +40°C
Humidity   : < 95%, no condensation

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