SmartView 360 User Guide

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About HumanWare

HumanWare (http://www.humanware.com/) is the global leader in assistive technologies for the print disabled. HumanWare creates products for people who are blind, have low vision and/or have learning disabilities. The innovative range of HumanWare products includes BrailleNote, the leading productivity device for the blind in education and business, as well as for personal use; the Victor Reader line, the world's leading digital audiobook players; myReader2,
HumanWare’s unique "auto-reader" for people with low vision and SmartView Synergy.
Important Safety Instructions

Follow all warnings, cautions, and instructions marked on the product.

Carefully read the instructions described in this user guide prior to using the SmartView 360.

Only use or store the SmartView 360 on stable and solid surfaces.

Keep away from water or high humidity. Do not submerge.

Turn the power off prior to cleaning the 360.

Only use cables provided with the SmartView 360.

The power supply cord is a disconnect device for pluggable equipment. The socket-outlet should be installed near the equipment, and be easily accessible.

This product should be operated from the type of power indicated on the marking label. If you are not sure of the type of power available, consult your dealer or local power company.

When removing the 360 from its shipping packaging or placing the unit in the optional carrying case, always use the built-in handle.
Only use the 360 indoors. Do not expose unit to sudden or extreme changes in temperature or humidity conditions. The SmartView 360 should not be placed near a heat source or exposed to direct sun light for a prolonged period of time.

Refer all servicing of this product to qualified service personnel. Do not attempt to service it yourself, as opening or removing covers may expose you to dangerous voltage points or other risks.

The above exclamation point within an equilateral triangle is intended to inform the user to the presence
of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.
Susceptibility to Interference

There may be temporary degradation of the image when the SmartView 360 is subjected to a strong radio-frequency field, electro-static discharge or transient electrical noise. An electro-static discharge (caused by static electricity) may cause the screen to go blank. If this happens, switch the unit off and on again.

Medical Compliance Warnings

This product is equipped with a 3-wire grounding type plug as a safety feature. This plug has a third (grounding) pin and can only be plugged into a grounding-type power outlet. If necessary, contact an electrician to replace your power outlet with a grounding-type power outlet.

Electromagnetic compatibility: The use of accessories and cables other than those specified by HumanWare may result in increased emissions or decreased immunity of the SmartView 360.

Placement of equipment: The SmartView 360 should not be used adjacent to or stacked with other equipment.
**FCC Warning**

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 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 the dealer or an experienced radio/TV technician for help.
Notice for Canada.

This Class B digital apparatus meets all requirements of the Canadian Interference-Causing Equipment regulations.
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1 Overview of SmartView 360

1.1 Introduction

SmartView 360 is an electronic desktop magnifier that enlarges text, objects and actions to help restore and maintain independence for people with macular degeneration, diabetic retinopathy or other low vision eye conditions.

The SmartView 360 can best be described as an LCD screen mounted with an articulated arm equipped with a camera.

Because the camera is installed on an articulated arm, it can be oriented in any direction. It can be used to view objects that are far away, it can be pointed down towards the table, or even turned towards you to act as a mirror.

An attached control panel allows you to operate the device and adjust its settings.

1.2 Unpacking the system

The package contains the following items:

- SmartView 360 Base unit
- Control panel
- Power cord
1.3 Setup

1. Lift Base unit from the box by holding the built-in handle. IMPORTANT, do not lift by holding the arm.

2. Place the SmartView 360 on a flat and level surface.

3. Connect the Control panel to the unit.

4. Connect the power cable to the unit and then connect it to an outlet.

5. Turn on SmartView 360 to verify connectivity.
Warning: Do not lift the unit by the arm. Use the built-in handle to lift the 360 out of the box/optional carry case.

1.4 Physical description of SmartView 360

1.4.1 SmartView 360

Figure 3: SmartView 360 components

1- LCD Screen
2- Control Panel
3- Articulated Arm
4- Camera
5- Rear Panel

1.4.2 Rear panel

Figure 4: Rear panel

1- Power connector
2- USB maintenance port
3- Control panel connector
2 Using the 360

The 360 has 3 different viewing modes: Desktop, Distance, and Self-viewing. Each mode is activated automatically depending on the position of the Camera.

2.1 Desktop viewing mode

Swing the arm over the area of your desk that you wish to view.

Turn the camera downwards. Because objects will be relatively close to the Camera, you will need to use the Close-up lens. This mode is perfect for reading, writing and for performing manual tasks.
2.2 Distance viewing mode

To view objects that are further away, point the camera towards the desired direction. To view objects that are more than a couple feet (60 cm) away from the Camera, remove the Close-up lens. The Distance mode is perfect for viewing a blackboard or watching TV. The Close-up lens is not used in Distance viewing mode.
2.3 Self-viewing mode

To use the SmartView 360 as a mirror, turn the camera so that it points in your direction when positioned in front of the screen. The Self-viewing mode is ideal for shaving, applying makeup, etc. Make sure to use the Close-up lens.
3 Control panel and buttons.

From left to right, the Control panel is comprised of the following buttons and knobs:
Figure 8: The Control panel

1- Enhanced contrast button
2- Color Mode button
3- Freeze / Find button
4- Zoom knob
5- Function button
6- Brightness/Navigate knob
7- Power button

3.1 Description of control panel buttons

3.1.1 Power button

The Power button is the last button on the right. It is used to power on and off the SmartView 360. When the Power is on, the Power button will glow green.

3.1.2 Enhanced contrast mode button

The Enhanced contrast mode button is the first button on the left. When in Color mode, use the Enhanced contrast button to switch to Enhanced contrast mode.
Enhanced contrast colors can make text easier to read. The 360 allows you to view the text with different color combinations.

You can also limit the range of color combinations. You can choose the Restricted color set or the Full color set. To toggle between Restricted color set (Default setting) and Full color set, press and hold the Enhanced contrast button for five seconds, a confirmation beep will be heard if Beep option is enabled in the main menu.

**Enhanced contrast mode Full color set**

When in Enhanced contrast mode, press the Enhanced contrast button to cycle through the 16 foreground and background color combinations. The selected color combination will be saved as your preferred selection when the unit is powered off.

**Enhanced contrast mode Restricted color set (Default)**

This is the default setting. In this mode, you will have access to black on white and white on black. You can also add a preferred background and foreground color (and inverted values) from the 16 color combinations of the Full color set.
To add a specific color to the Restricted color set:

1. In the Full color set mode, select the color of your choice.

2. Press and hold *Enhanced contrast* button for five seconds. This will toggle you back to Restricted color set. The Color combinations will be limited to: current foreground and background colors, inverted foreground and background colors, black on white and white on black.

Note that activating restricted colors when current selection is black on white or white on black will limit the available choices to these 2 combinations.

Note: The *Enhanced contrast* button is also used to Exit the menu and the Line and Blinds feature.

### 3.1.3 Color mode button

When in Enhanced contrast mode, use the *Color* button to switch to Color mode. In this mode, images will be displayed in full color.

Note: When in viewing mode, pressing and holding the *Color* button for 2 seconds will activate the Main menu. When in this menu, the *Color* button will be used to make selections.
3.1.4 Freeze / Find button

Press the *Freeze / Find* button to freeze an image in place. To unfreeze the image, press the *Freeze / Find* button again. Moving the camera to a different angle, modifying the Zoom or changing color modes will also unfreeze the image.

The Find feature is useful if you wish to quickly find what you are looking for on a page or at a distance. To activate the Find feature, press and hold the *Freeze / Find* button. This lowers the zoom level to a minimum thereby allowing you to get a global view of what is in front of the camera. While still holding the *Freeze / Find* button, move the camera towards what you want the camera to focus on. For Desktop view, instead of moving the camera, you can rearrange the position of the object you wish to view. When you release the *Freeze / Find* button, the system returns to the initial zoom level.

3.1.5 Zoom knob

The *Zoom* knob is used to change the magnification factor of the image seen on the screen. Turn the knob clockwise to increase magnification or turn counterclockwise to decrease magnification. There are 24 different magnification levels.
3.1.6 Function button

Two functions are associated with the Function button: Lines and Blinds and Focus Lock. By default, the Function button is set to Lines and Blinds. To alternate between Lines and Blinds and Focus Lock, select the Function key option in the main menu.

Line and Blinds is a feature that can help you control what appears on screen. The line can help you by making it easier to follow a line of text or column while the blinds can be useful to block unwanted sections of the text.

Short presses of the Function button will cycle through the following options:

- One horizontal line over the display
- One vertical line over the display
- Horizontal blinds over the display
- Vertical blinds over the display
- No line or blinds

The position of the line/blinds and the width of the blinds can be adjusted. Use the Brightness knob to adjust the position of the line/blinds. To modify the width of the blinds, press and hold the Function button for two seconds. After a short beep, you will be able to
use the \textit{Brightness} knob to adjust the width of the blinds.

\textbf{Focus Lock} is an option that allows you to temporarily disable the camera's auto-focus feature. This can be useful if you don't want the camera to focus on objects that appear between the camera and what you wish to focus on. For example, in desktop viewing, you want to focus on what you are writing, not your hand or pen. In distance viewing mode, you may also want to use focus lock to prevent the camera from focusing on someone passing in front of a blackboard. To deactivate Focus Lock, press \textit{Function} again. Note that Focus Lock will also be disabled when the camera angle is modified, when zoom is used or when changing color modes.

\textbf{3.1.7 Brightness knob}

While in Enhanced Contrast or Color mode, turn the \textit{Brightness} knob clockwise or counterclockwise to increase or decrease the Brightness level. Separate brightness levels will be saved for Enhanced Contrast or Color modes.

Notes: When in the Menu, the \textit{Brightness} knob is used to cycle through menu options. The \textit{Brightness} knob is also used to adjust Color or Contrast through the menu.
When Using the Line and Blinds option, the **Brightness** knob is used to move and adjust the line and blinds.

When used to navigate menu options or to adjust Line and Blinds, the **Brightness** button will not modify current Brightness levels.

### 4 Main Menu

To access the main menu, press and hold the **Color** button for two seconds. A beep will be heard and the Main menu will appear on the screen. Note that non-error beeps can be disabled in the Main menu.

#### 4.1 Navigating the menu

While in the menu, the normal functions of the control panel will be replaced by menu functions.

The **Brightness** knob is used to move up and down the menu items.

The **Color** button is used to select an option.

The **Enhanced contrast** button is used to move up from the Display submenu to the Main menu. It is also used to exit the Main menu back to the application.

### 4.2 Using Sliders

Sliders are used when accessing the Contrast and Color menu items. When a slider is displayed, use the
Brightness knob to make adjustments. A clockwise rotation of the Brightness knob will increase the value of the parameter while a counter-clockwise rotation will decrease the value of the parameter. To confirm the new value, press the Color button. To cancel the changes made to the selected parameter and return to the menu, press the Enhanced contrast button.

4.3 Main menu items

The Main menu is comprised of the following items:

Contrast (Color mode only)

Selecting this menu item will display a Contrast slider bar that will allow you to adjust contrast levels. Contrast can only be adjusted in Color mode. Any attempt to adjust contrast in Enhanced contrast mode will result in an error beep.

Color (Color mode only)

Selecting this menu item will display a Color slider bar that will allow you to adjust color levels. Colors can only be adjusted in Color mode. Any attempt to adjust color in Enhanced contrast mode will result in an error beep.
**Color Preset (Color mode only)**

This feature allows you to quickly alternate between two sets of color levels. By default, these are set as natural colors and enhanced colors. They act as preset values that you can select and modify.

**White Balance**

This function allows you to calibrate how the device displays the color white. The other colors will be adjusted accordingly. Options include: Auto, Warm, Neutral, Cool.

**Function key**

Depending on how the Function is set up in the main menu, the Function key is used to activate/deactivate the Lines and Blinds (default setting) or the Focus Lock features.

**Beeps**

This menu item allows you to disable non-essential system beeps. Error beeps will remain activated.

**Language**

This menu item allows you to select the screen display language. The following languages are supported: English US, French Canadian, English UK, German,

**Region**

Selecting a different region setting will change the technical support telephone number listed on the splash screen.

None, United States, Canada, United Kingdom, New Zealand, Australia and Asia, Netherlands, Sweden, Australia.

**Zoom Display**

Select this option to enable or disable the zoom level display when adjusting magnification.

**Lighting**

Two options are available: *Florescent* and *Normal*. Select *Normal* in most situations. Select *Florescent* if there are florescent lights in the room and you notice pulsing of the image.

**Light intensity**

Three levels are available: Medium, High and Low. Select the level of ambient light in the room to improve the quality of the image.
Splash Screen
This menu item is used to enable or disable the splash screen when the system is started.

System Information
Selecting this option will display the splash screen normally seen when starting the system.

Factory Defaults
Use this option to return the system to its original settings.
5 Maintenance and Troubleshooting

5.1 Maintenance

Wipe your SmartView 360 with a clean, soft cloth.

5.2 Troubleshooting

If the screen is blank:

- Make sure the AC power cable is connected to the electrical outlet and the other end is connected to the SmartView 360.
- Check that the power is switched on at the wall socket.
- Check that the green power light is glowing.
- Check that all cables are properly plugged in.
- Check that the monitor is switched on. The LCD screen is automatically powered when the unit is turned on. However, because the screen may be turned off, you should verify that the monitor light is on, indicating that is powered on.
- Check that the Brightness and Contrast levels are turned up.
- Turn the Zoom knob anti-clockwise for minimum magnification.
If the image is out of focus:

- In Desktop or Self-view mode, make sure that the close-up lens is in place.
- In Desktop viewing mode, try moving your reading material and then putting it back again. In distance or self-viewing mode, with Automatic focus set to on, try moving the camera and bringing it back into position.
- Check if the Focus is set to Automatic or Fixed. For additional information, please look for Focus lock in the Function button section.
- Clean the monitor screen with a glass cleaning solution.

If the text looks gray or low in contrast:

- Press the Enhanced contrast button to set the unit in High Contrast mode.
- Check the Brightness and Contrast. They should be set to at least 50%. Note that the Contrast cannot be adjusted when in Enhanced Contrast mode. Please consult the Enhanced Contrast mode section for additional information.
- Check if you have sufficient ambient light.

If the colors are difficult to detect:

- Check that the color setting in the menu is 100%.
If the contrast is low:

- Check the Contrast setting in the menu. The contrast can only be adjusted in Color mode.

If the brightness is low:

- Check the Brightness. Use the Brightness knob to make adjustments. Remember that there are different settings for Color and Enhanced contrast modes.
- Check if you have sufficient ambient light.

If there is a lot of glare:

- Reduce the Brightness.
- Reduce the external lighting effects.
- Tilt object in a different direction to reduce glare.

If there is a limited number of false colors:

- Press the Enhanced contrast button to make sure that the SmartView 360 is in Enhanced contrast mode.
- Press and hold the Enhanced contrast button for five seconds until you hear a beep.
If you are stuck in the menu:

- Press the *Enhanced contrast* button.
- Press the *Power* button to switch off the machine, then press the *Power* button again to switch on and restart.

If the Start-Up screen stays on:

- Press the *Power* button to switch off the machine, then press the *Power* button again to switch on and restart.
- Contact dealer or technical support.

If the SmartView 360 resets:

- Check all the connections and make sure that they are plugged in properly.
- Contact Help Desk if the machine keeps resetting.

Other problems:

- Turn the SmartView 360 on and off.

6 Returning for Service

If you have a problem with your SmartView 360, please contact your dealer or Technical support.
7 Disposal

At the end of the life of the SmartView 360, its internal components must be disposed in compliance with the local authorities.

The SmartView 360 contains no hazardous materials. For disposal, return to HumanWare or follow local governing ordinances or hospital procedure.

8 Technical Specifications

Product Dimensions and weight

<table>
<thead>
<tr>
<th>Width</th>
<th>Depth</th>
<th>Height</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>412 mm</td>
<td>250 mm</td>
<td>550 mm</td>
<td>7.75 kg</td>
</tr>
</tbody>
</table>

Magnification range

Desktop mode: 1.5x to 55x magnification for objects 16 inches away from the camera

Distance mode: 0.2x to 9.0x magnification for objects 10 feet away from the camera

Self-view mode: 2x to 8x magnification for objects 11 inches away from the camera
**Power Supply**

Input voltage: 100-240 V AC  
Frequency: 50-60 Hz  
Input current: 1.0 A  
Power usage: Max ON <53W

**Equipment Classification (IEC 601-1)**

Type of Protection        Class 1  
Enclosure Degree of Protection  IP20  
Mode of Operation        Continuous

**Environmental**

Operating Temperature    10 to 40° C  
Transport & Storage Temperature  -20 to 60° C  
Operating Humidity       20% to 80% (RH)  
Transport & Storage Humidity  10% to 95% (RH)  
Operating Altitude       -200 to 2000 m  
Transport & Storage Altitude  -200 to 12 000 m  
Transport & Storage Barometric Pressure  70-103 kPa
9 Manufacturer Warranty

This device is a high quality product, built and packaged with care. All units and components are guaranteed against any operational defects for a period of two (2) years.

Warranty covers parts and labor. If any defect should occur, please contact your local distributor or the manufacturer.

Note: Warranty terms may periodically change, please consult our website for the latest information.

Conditions and Limitations:

No replacement or repair covered by the warranty will be carried out unless the unit is accompanied by a copy of the original bill of purchase. Please retain your original. If the unit has to be returned, please use the original packaging. This warranty applies to all cases where the damage is not a result of improper use, mistreatment, negligence or acts of God.

Please contact HumanWare or check on our website for versions of this manual in other languages.
10 Customer support

For customer support, please contact the HumanWare office nearest you or visit our Web site at: www.humanware.com

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Customer support

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