

merlin  
*elite Pro* HD  
OCR

enhanced  
**vision**  
A VISPERO® BRAND



# User Manual

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## Before You Start

Merlin elite Pro is a fully integrated solution, offering the advantages of both CCTV and OCR (Optical Character Recognition). Merlin elite Pro enables individuals with low vision to read by listening or by viewing the text in color or in enhanced high-contrast positive or negative modes. With easy-to-use buttons and dials, you can enlarge or reduce the text in seconds, and change viewing options for easier visibility.

Prior to using this system, please carefully review and follow the instructions provided within this booklet. Your Merlin elite Pro is ready to use right out of the box. By reviewing all the Merlin elite Pro features and controls before use and following the directions carefully, you will be able to enjoy all the great benefits from your purchase. Enhanced Vision products are designed to give you the highest quality image, OCR accuracy, convenient easy-to-use features, and years of reliable service. Thank you for choosing the Enhanced Vision Merlin elite Pro.

## About This Manual

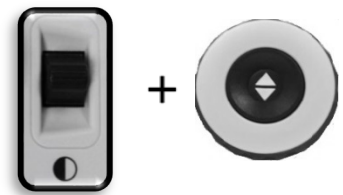
Reference the illustrations in this book as you follow the instructions. The next section provides an overview of everything included in your package. The buttons on the control console are explained in “[CCTV Mode](#)” on page 10 and “[OCR Mode](#)” on page 17.

Some features on Merlin elite Pro are accessed by pressing a button or a combination of buttons. When steps refer to a button on the device or its control console, the button name is capitalized, such as the Color Mode button. When steps refer to text displayed on the Merlin elite Pro screen, the text is bold. For example, the **Product Settings** menu is in boldface, as well as the **Extended Zoom** option on that menu.

Instructions for going to a menu option are given using right angle brackets >. When you see, **Settings > Audio > Volume**, for example, you use the Zoom wheel to select **Settings** and press the Find button, then do the same for **Audio**, then again for **Volume**.

To view a quick reference of the control console buttons, do the following:

1. If your screen does not show a full-screen live image, go to CCTV mode by pressing the center button on the front panel under the LCD screen.
2. Go to the main menu by pressing up on the Color Mode button and pressing the Find button on the control console.
3. Use the Zoom wheel (around the Find button) to select **Help**.
4. Press the Find button.



## Merlin elite Pro Packaging and Accessories



## Merlin elite Pro Packaging and Accessories

Take a few moments to familiarize yourself with the Merlin elite Pro controls and accessories, which are illustrated on the previous page.

1. Power button
2. Speakers
3. Audio jack (3.5mm) for headphones  
**Note:** *Sound from the speakers is unavailable while the headphone jack is in use.*
4. Color Mode button
5. OCR/CCTV toggle button and front panel CCTV Zoom wheel
6. 19V power supply
7. Power cord (power cord style may vary based upon country)
8. Control console & console cover: Allows you to control Merlin elite Pro functions. Can be used in cover on or cover off configuration.  
**Note:** *The device must be plugged in to use Merlin elite Pro and access menu items for OCR/text-to-speech.*
9. Lens cloth: permits cleaning of the LCD screen or lenses
10. USB 2 in 1 Hub: Adds an additional USB port to use, which is necessary for software upgrades, downloading files, and placing voice tags on saved files via our microphone accessory.

**Note:** *Optionally, you can use a microphone (not pictured and not included in your package) to record a custom voice tag while saving files. You must also use a USB hub to connect both the microphone and control console. When the microphone is connected, you are prompted to save with a voice tag.*

## Setting Up Merlin elite Pro

To set up Merlin elite Pro, follow these steps:

1. Find a steady and level location, such as a table or desk, where you will be comfortable using Merlin elite Pro.
2. Carry Merlin elite Pro only by the recessed handles on the underside of the device for a secure grip. Gently place it on the table or desk.

**Note:** Do not lift Merlin elite Pro device by the Merlin body, camera chassis, or monitor.

3. Connect the control console cord to the USB port on the back of your Merlin elite Pro.



4. Connect the power cord to the power supply.





5. Connect the power cord to an available electrical outlet.



6. Connect the other end of the power supply to Merlin elite Pro where it is labeled "19VDC."

**Note:** To offer additional protection during an electrical storm, a surge protector is recommended.



7. Press the Power button to turn on the device.



## Control Console

The control console and its cover are required to use Merlin elite Pro. Familiarizing yourself with the console will be helpful because how you configure the console will affect your user experience.

The control console for Merlin elite Pro has an intelligent design that allows you to customize features on demand and switch between “Basic” and “Advanced” modes. When the cover is on the control console, you are in Basic mode. When the cover is off, you are in Advanced mode. If you add or remove the cover, Merlin elite Pro immediately detects the change and modifies available features.

### **Basic Controls**

Beginners may be more comfortable with the Basic control console, whether in CCTV or OCR mode. With the cover on the console, fewer features are available but the product is easier to use. You still have access to the essential features necessary to magnify an object or perform an OCR scan.



### Advanced Controls

When you remove the control console cover, you are in Advanced mode. This enables features such as the **Library** option, which is otherwise grayed out in the menu, as well as saving, recall, OCR zone identifiers, and OCR line navigation.



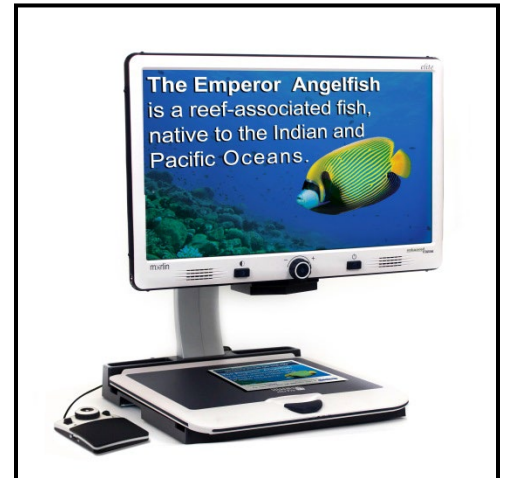
### Modes of Operation

Merlin elite Pro has two main modes of operation that can be toggled by pressing the center button on the front panel under the LCD screen: CCTV mode and OCR mode.



CCTV is the default mode that will display immediately after you power on the device. This high-quality live image is designed for real-time 1080p high-definition viewing.

OCR mode is available to assist you in reading documents by automatically scanning documents for OCR, then reading the text using text to speech (TTS).



## Turning Off the Device

You can either put your device into standby or shut it down. If you are going to be gone a short time, consider standby, but when you are done for the day, consider a shutdown.

### **Standby**

When your Merlin elite Pro is not in use you may want to place it into standby. Placing your device into standby mode saves power and allows a quicker return to normal operation than compared to a full shutdown.

To place your device into standby, briefly press the Power button on the front panel. The LCD display dims, and the front panel LCD indicator lights blink several times before turning off.

To resume, press the Power button again. It takes approximately 15-20 seconds until the device is ready to use after it has been in standby.

## **Shut Down**

When your Merlin elite Pro is not in use, you may want to power it off. Placing your device into a full shutdown saves the most power but takes a little longer to start up when compared with standby.

To perform a full shutdown, hold down the Power button on the front panel for five seconds. A message indicates you are entering into the shutdown sequence and asks you to wait until the status LEDs are no longer illuminated and the message is no longer displayed before removing your Merlin elite Pro from the power source. Shutdown takes approximately 10 seconds.

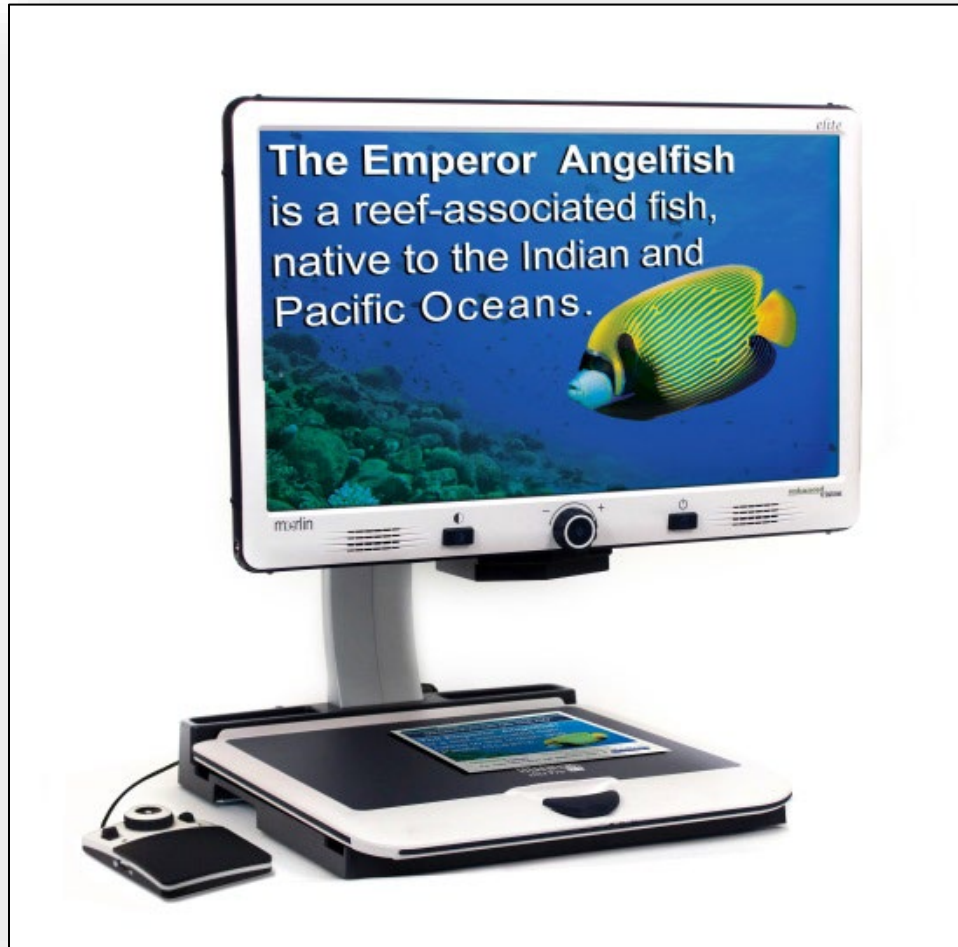
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***Warning:*** *To maximize the life of your product, do not disconnect Merlin elite Pro from power while in standby or during the shutdown sequence. Wait until the shutdown sequence has completed to disconnect your device.*

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## CCTV Mode

This mode is used for reading, writing, and enjoying crafts or hobbies. Merlin elite Pro can slide targets freely, up, down, left, or right, using the specially designed X/Y table mechanism. Adjust the magnification level via the Zoom wheel to a size that suits your reading preference and then smoothly glide your material left or right.



### *Enhanced Vision*

The camera is attached to a stand, lighting system, adjustable monitor, and movable X/Y table. The LCD screen is mounted onto a bracket that allows you to tilt and adjust the screen height to find the best viewing position and most comfortable angle. The following photo illustrates the LCD range of motion.

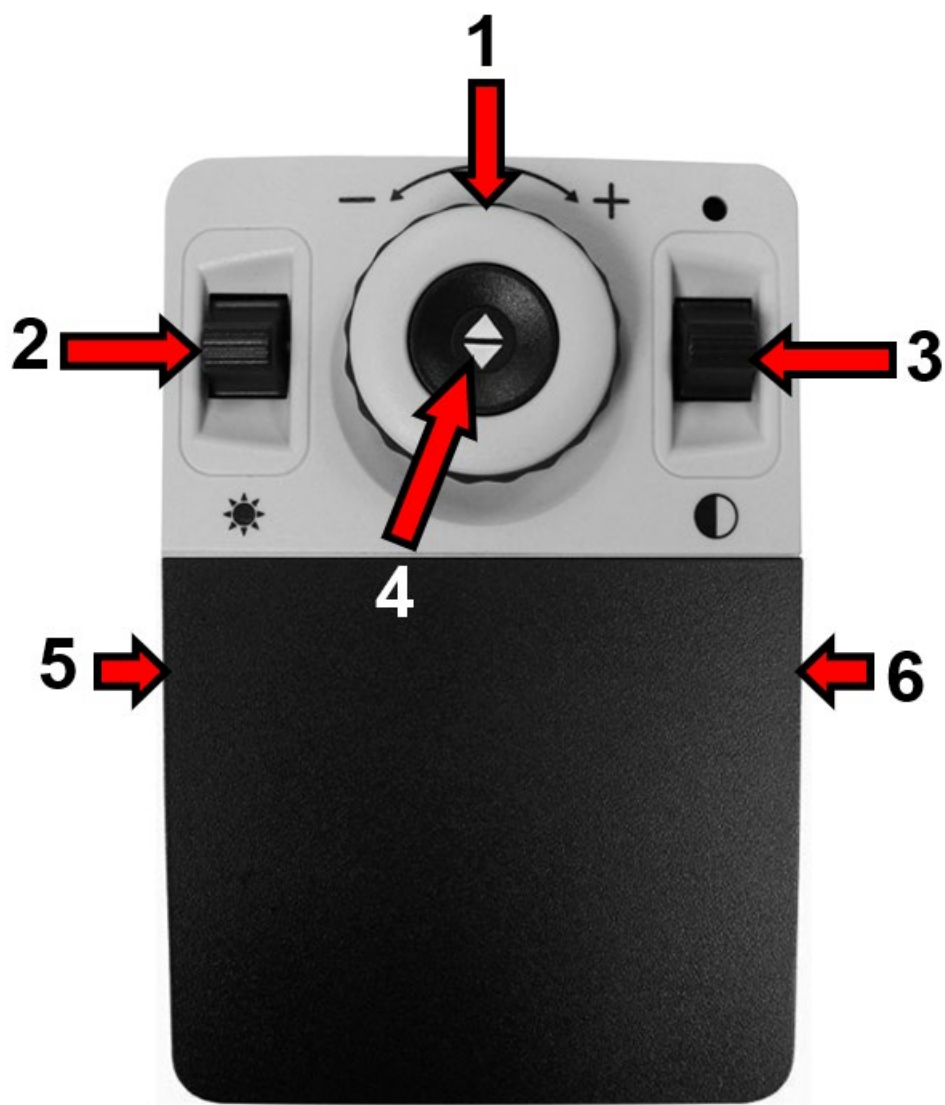




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## ***CCTV Basic Control Console***

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## CCTV Basic Control Console

Basic mode is when the cover is on the control console. You do not have access to the Library button and other features, which are described in “Advanced Mode.”

You can take the cover off or put it back on at any time. With the cover on, the OCR button configuration changes to a more basic format but still provides the essential features needed for a document scan.

Some features on Merlin elite Pro are accessed through a combination of buttons on your control console, meaning that the buttons should be pressed at the same time. For example, you might be instructed to press up on the Color Mode button while pressing the Find button. If neither the front panel nor control console is specified, then the button is available on either one.

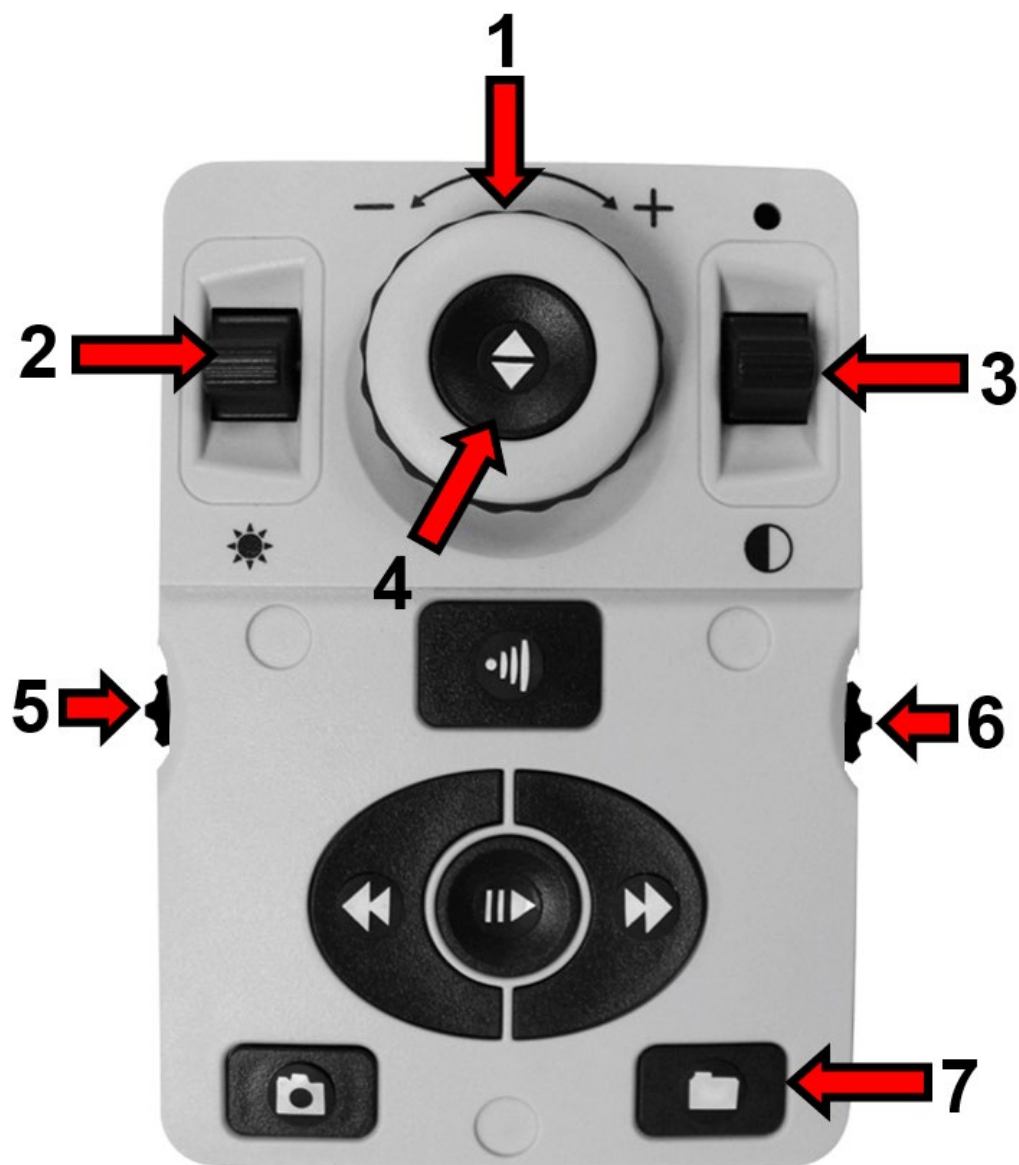
The Basic controls are shown on the previous page and described in the following table.

Label	Name	Description
1	Zoom Wheel	Turn clockwise or counterclockwise to increase or decrease the zoom level.
2	Brightness	Press up or down to increase or decrease the screen brightness.
3	Color Mode	Press up or down to toggle through color viewing modes.
4	Find	Press and hold to minimize your magnification level. When you release the button, it returns to your previous magnification level.  <b>Note:</b> <i>You can use this feature to find your target easily, which can sometimes be challenging at higher magnification levels.</i>
5	Volume	Rotate to increase/decrease system volume.
6	Markers	When in live CCTV mode, rotate to toggle through the marker options, which are dependent on your user settings.

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## CCTV Advanced Control Console

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## CCTV Advanced Control Console

Advanced mode is when the cover of the control console is off. You have access to additional buttons and features, such as saving, zone identifiers, and line navigation as detailed in “OCR Mode.” You can take the cover off or put it back on at any time.

In CCTV mode, the button functions are the same except for the addition of the Library button (#7) at the bottom of the console .

Label	Name	Description
1	Zoom Wheel	Turn clockwise or counterclockwise to increase or decrease the zoom level.
2	Brightness	Press up or down to increase or decrease the screen brightness.
3	Color Mode	Press up or down to toggle through color viewing modes.
4	Find	Press and hold to minimize your magnification level. When you release the button, it returns to your previous magnification level.  <b>Note:</b> You can use this feature to find your target easily, which can sometimes be challenging at higher magnification levels.
5	Volume	Rotate to increase/decrease system volume.
6	Markers	When in live CCTV mode, rotate to toggle through the marker options, which are dependent on your user settings.
7	Library	Press and hold for two seconds to enter the library. Rotate the Zoom wheel to navigate. Select <b>Exit</b> and press the Find button to return to live CCTV mode (or hold the Library button for three seconds).

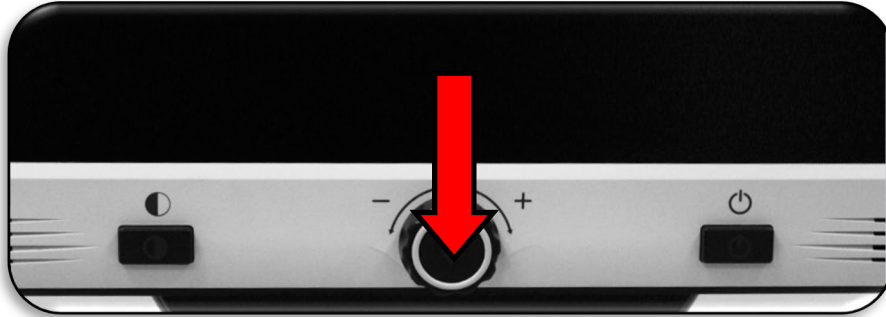
**Note:** You can use the following blank page to take your own notes while learning the product.

## Notes

This image shows a single sheet of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.

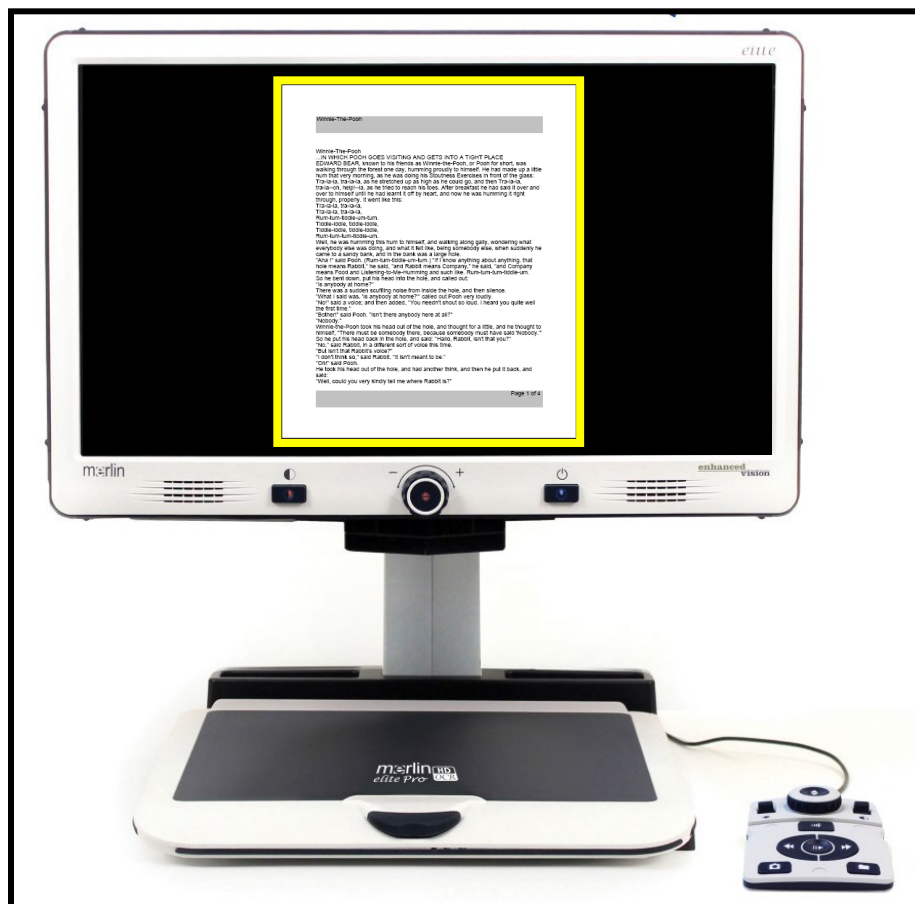
## OCR Mode

To switch to OCR mode, press the center button on the front panel. Place your document in the frame that is displayed, which is the area that will be read.



In Basic mode, reading (text to speech or TTS) begins immediately after a scan is completed. In Advanced mode, you control where reading starts by selecting a zone, so reading does not start automatically.

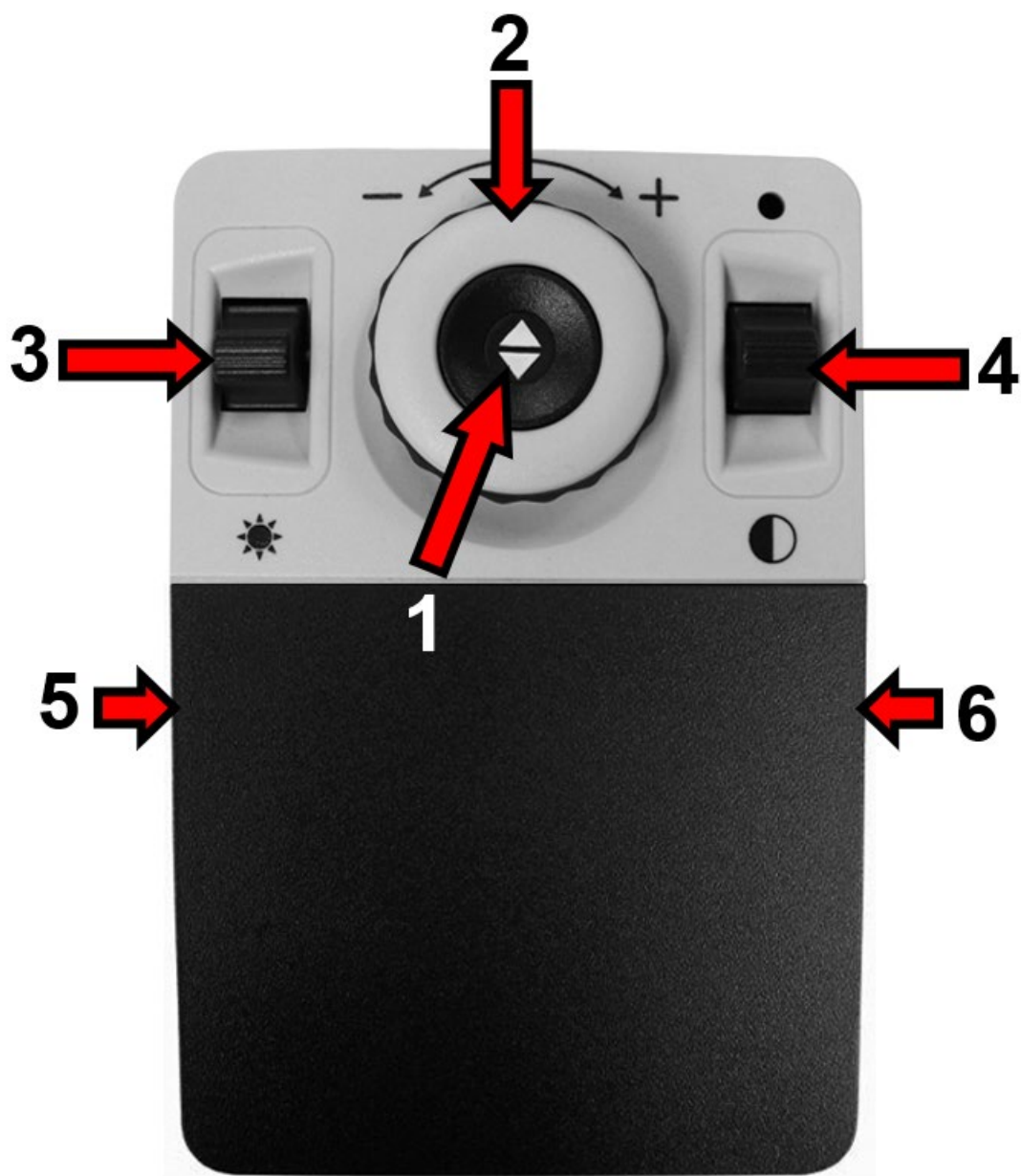
**Note:** After five minutes of inactivity in OCR mode, your device reverts to live CCTV mode.



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## OCR Basic Control Console

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## OCR Basic Control Console

Basic mode is when the cover is on the control console. You do not have access to the many OCR features, which are described in [“OCR Advanced Control Console”](#) on page 21.

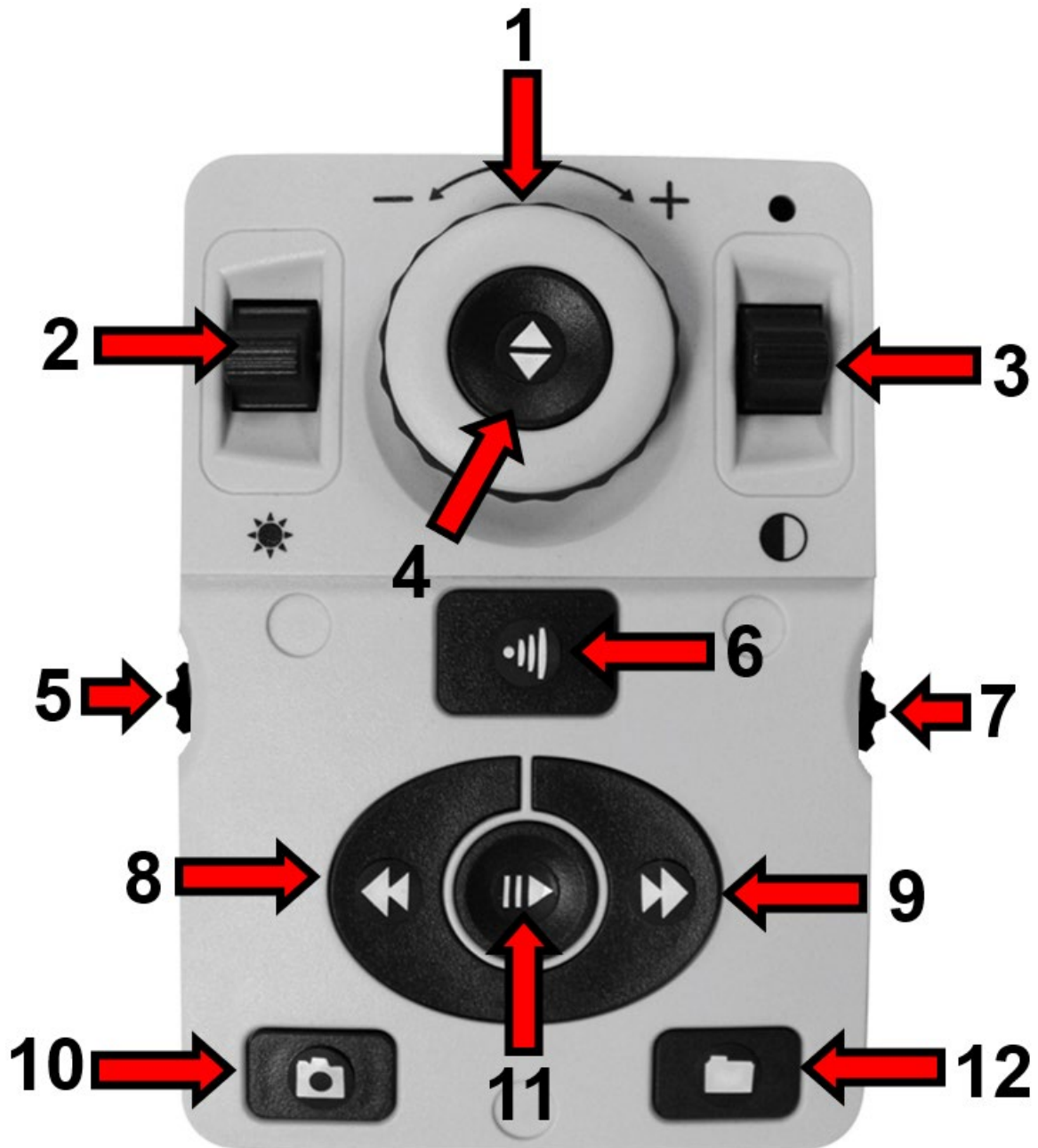
The following buttons are active while you are in OCR Basic mode.

Label	Name	Description
1	Capture	Press this button to capture an image for OCR. Merlin elite Pro begins reading back to you immediately and automatically. Press again to exit OCR and go back to the OCR guide frame.
2	Zoom Wheel	Turn clockwise or counterclockwise to increase or decrease the zoom level.
3	Play/Pause	After performing an OCR capture, press up or down to pause or resume OCR reading.
4	Color Mode	Press up or down to toggle through color viewing modes.
5	Volume	Rotate to increase/decrease system volume.
6	Voice Speed	Rotate to increase/decrease OCR playback speed.

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**OCR Advanced Control Console**

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## OCR Advanced Control Console

Advanced mode is when the cover is off the control console, giving you access to many additional OCR features. The following buttons are active while you are in OCR Advanced mode.

Label	Name	Description
1	Zoom Wheel	When in OCR readback only, turn clockwise or counterclockwise to increase or decrease the zoom level.
2	Brightness	When the guide frame is displayed, press up/down to increase/decrease brightness.
3	Color Mode	Press up or down to toggle through color viewing modes.
4	Find/Enter	Press to choose a menu or menu option. For example, you would press the Find button to select the Audio option on the Settings menu.
5	Volume	Rotate to increase/decrease the volume during readback.
6	OCR/Capture	Press to capture an image for OCR. Press again to exit OCR and go back to the OCR guide frame.
7	Voice Speed	When in OCR mode, rotate to increase/decrease OCR playback speed.
8	Previous Line	Press to move to the previous line while reading or to move to the previous zone while in Zone Overview.
9	Next Line	Press to move to the next line while reading or to move to the next zone while in Zone Overview.
10	Save	After performing an OCR scan (either during OCR playback or while paused), press and hold for two seconds to save the current OCR file. Perform the same operation while viewing the OCR guide frame to save the image as a picture.
11	Play/Pause	Press to toggle between pause and resume play during OCR playback.

Label	Name	Description
12	Library	Press and hold for about three seconds to enter and exit the library. Rotate the Zoom wheel to navigate. Press the Library button briefly to return one level. Press the Find button to select your target.

## Scanning a Document

The control console is required for OCR and text to speech (TTS). To scan a document and have it read aloud (TTS or text to speech), follow these steps:

1. Press the center button on the front panel to go from CCTV mode to OCR mode.

**Note:** Display enhancements, such as zoom or contrast, are not available in the OCR camera preview. However, they can be applied to the text/document after the OCR scan is complete.

2. Place the document under the camera and position the text within the guide frame.

**Note:** Merlin elite Pro supports multiple orientations for documents when they are scanned assuming they are viewable under the camera chassis.

3. To capture the image for Optical Character Recognition (OCR), press the Capture (Basic) or OCR/Capture (Advanced) button. A camera shutter sound indicates that the system has taken a snapshot of the document, then OCR processing begins.



Basic



Advanced



Play/Pause

4. When OCR processing has completed, the document is immediately read aloud in Basic mode. If you are in Advanced mode with Full Page Picture, you must select the zone using the Previous Line or Next Line buttons and then press the Play/Pause button.
5. Adjust the volume of the readback voice using the Volume button on the left side of the console. You can also change the colors by pressing the Color Mode button and how quickly the text is read by turning the wheel on the right edge of the console.
6. To exit OCR mode, press the Capture (Basic) or OCR/Capture (Advanced) button. You are now ready to scan another document.

**Note:** To return to CCTV mode, press the OCR/CCTV toggle button on the front panel.

## Setting the OCR Mode

OCR modes control the way the text is captured and presented to you, and each mode provides different results in Basic or Advanced mode. You can use only one mode at a time. To select a mode, go to **Settings > OCR Text Recognition > OCR Mode**.

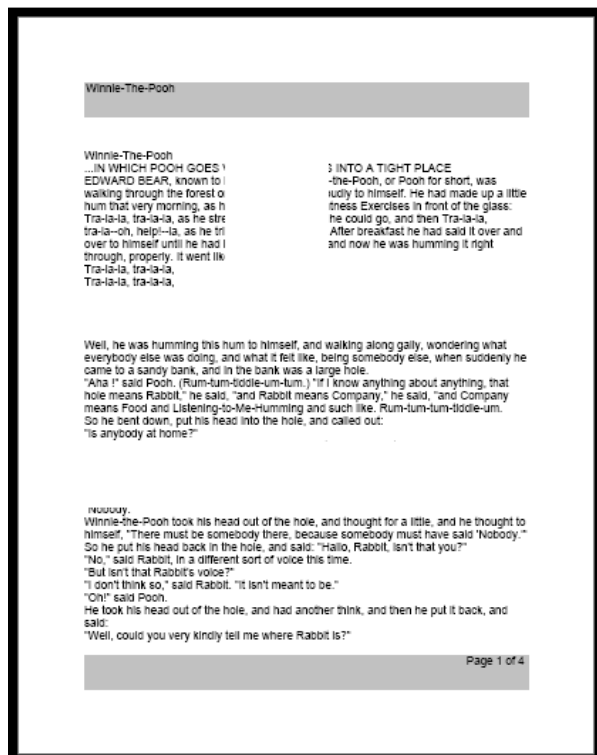
The text is read first horizontally, then vertically, in any mode.

**Note:** Table mode is not on the OCR Mode menu. It is available only by using the shortcut provided in this section.

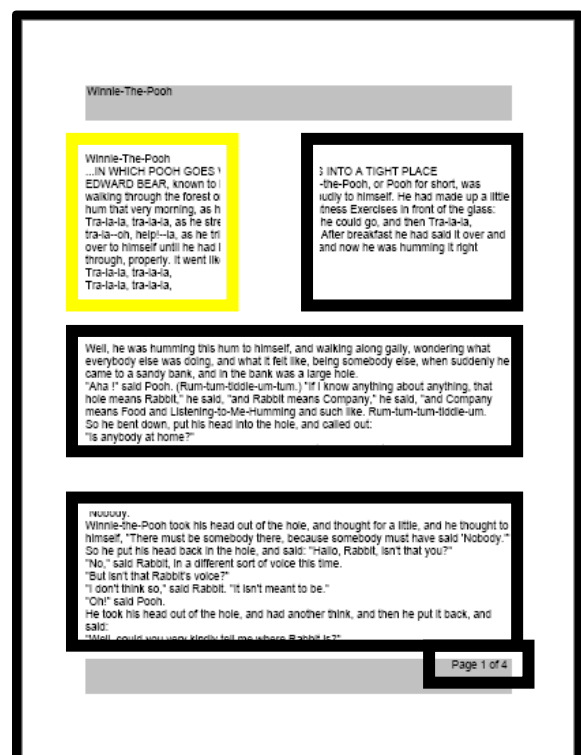
### Full Page Picture Mode

In this mode, a photo of your target OCR scan is displayed and organized into zones. The current word is highlighted as it is read. Magnification is available for the document using the Zoom wheel.

**Basic:** Using the Basic console, the page is displayed as it appears in the guide frame during OCR readback. Words are highlighted as they are read to show you the current reading position. To return to the OCR guide frame, press the Capture button.



Basic



Advanced

**Advanced:** Using the Advanced console, a picture of the image in the guide frame is displayed with zones to divide the target material. By default, boxes are used to indicate zones, or blocks of text, which you can highlight and navigate. OCR readback will not

engage automatically in this mode since you are given the option of choosing where to start reading. When you have highlighted the desired area, press the Play/Pause button. At any time, pressing OCR/Capture returns you to the OCR guide frame.

### **Full Page Text Mode**

This default viewing mode gives a crisp and clear representation of the text, which is displayed digitally in a word-wrapped columnar format. Magnification changes will dynamically adjust your material to ensure that it always extends the entire width of the screen.

**Basic:** Using the Basic console, the page is displayed as a full page of text during OCR readback. Words are highlighted as they are read to show you the current reading position. To return to the OCR guide frame, press the Capture button.

**Advanced:** Using the Advanced console, you can save and quickly navigate. The text is organized into lines that can be navigated one at a time by pressing the Previous Line or Next Line buttons. To move quickly through the lines, you can hold down the Previous Line or Next Line buttons. The appearance of the word highlighting is based on your selected color mode.

**Specific terminology is used to describe flowers and their parts. Many flower parts are fused together; fused parts originating from the same whorl are connate, while fused parts originating from different whorls are adnate; parts that are not fused are free. When petals are fused into a tube or ring that falls away as a single unit, they are sympetalous (also called gamopetalous). Connate petals may have distinctive regions: the cylindrical base is the tube, the expanding region is the throat and the flaring outer region is the limb. A sympetalous flower, with**

This mode displays the target text digitally one line at a time in the center of the screen to make the text as large as possible. Each word is highlighted as it is read, and the text scrolls so that the highlighted word is always in the middle of the screen.



Specific terminology is used

**Basic:** Using the Basic console, the page is displayed one line of text at a time during OCR readback. The current reading position is shown by highlighting the word being spoken. To return to the OCR guide frame, press the Capture button.

**Advanced:** Using the Advanced console, press the Play/Pause button to begin reading or use the Previous Line or Next Line buttons to move through the text one word at a time. The word being spoken is highlighted, and the highlight color is based on your selected color mode. To return to the OCR guide frame, press the OCR/Capture button.

### ***Table Mode***

This is a special mode designed to accurately read documents with many tables, such as bank statements or receipts. The text is read strictly left to right, top to bottom, regardless of format.

To use this mode, press and hold the Capture button for more than five seconds.

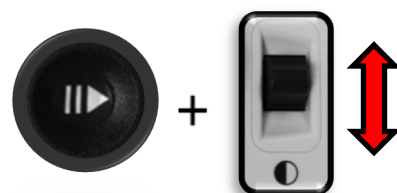
Table mode is activated for a single OCR scan and is available only in Full Page Text mode. After the scan is complete and you exit, you are returned to the previous OCR mode.

## Quick Language Swap

When you are in the OCR preview screen, you can cycle through the available languages one by one. This feature is particularly useful for situations where you are multi-lingual and change between several different languages but do not want to use the Auto-Language option. To cycle through the language list, press the Play/Pause button and then press the Color Mode button.

### Language Quick Swap Next/Previous Language

Press and hold the Play/Pause button and then press the Color Mode up or down to cycle through the language list.



Depending on your location, you can also change your language either from American English to German (Western language set) or from British English to Cantonese (Eastern language set). Press and hold Play/Pause, then press Color Mode up or down for five seconds.

### Switch Between English and German or Cantonese

Press and hold the Pause/Play button and then press and hold the Color Mode button for five seconds to swap between English and German (or Cantonese).



#### Western

Color Mode Up—English-US  
Color Mode Down—German



#### Eastern

Color Mode Up—English-UK  
Color Mode Down—Chinese-Cantonese

## Adjusting User Settings

You can customize the Merlin elite Pro by adjusting user settings. For example, you can change the magnification, adjust the volume, and change the brightness of the display. This section provides instructions for features commonly customized by users. To review all the available user settings, see “[Menus](#)” on page 34.

To adjust settings, you need to navigate the **Settings** menu by using the tips in the following table.

Action	Tip
Display the main menu	Press up on the Color Mode button while pressing the Find button.
Highlight an option	Scroll using the Zoom wheel until the option that you want to select is selected. You can go left or right and up or down using the Zoom wheel.
Display a menu	After selecting a menu name, such as <b>Settings</b> , press the Find button.
Move around menus 	To move down in a menu, scroll until the line with the upside-down triangle is selected and press the Find button. To move up, scroll until you reach the triangle is selected and press the Find button. To leave a menu, select <b>EXIT</b> and press the Find button.
Enable a setting 	Some settings have black/white squares to indicate whether they are enabled. A black square indicates that the feature is enabled while a white square indicates that it is disabled. To enable/disable a setting, select it using the Zoom wheel and press the Find button.
Change a setting	Some settings have a number that represents a level, such as <b>Brightness</b> . To change the number, select the option and press the Find button to select it. Next, rotate the Zoom wheel to change the number up (right) or down (left). Press the Find button again to set the new value.

## Lights

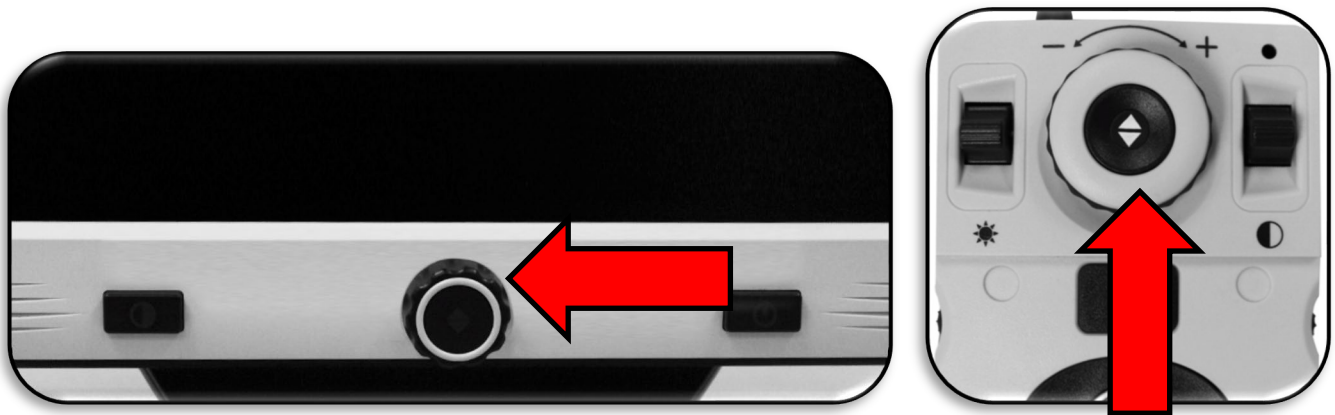
Lights on the Merlin elite Pro can be turned on or off by simultaneously pressing and holding the Previous Line and Next Line buttons.



## Magnification

Merlin elite Pro offers a large range of magnification capabilities. The following directions can be used with the Merlin elite Pro front panel controls or the control console.

To adjust the magnification, turn the Zoom wheel until you reach the desired magnification. Turning the wheel clockwise will increase magnification, and turning the wheel counterclockwise will decrease magnification. Zoom wheels on the front panel (left) and control console (right) are shown in the following graphics.



When you are increasing or decreasing magnification in desktop mode, the zoom level is displayed in the upper-left corner of your screen. An indicator shows when you reach the maximum or minimum magnification. The upper magnification limit can be extended by going to **Settings > Extended Zoom Levels**. Follow these steps:

1. On the control console, press up on the Color Mode button while pressing the Find button. The main menu is displayed.
2. Use the Zoom wheel to scroll right and select the **Settings** menu, then press the Find button.



3. Scroll down to select **Extended Zoom Levels**. A black square indicates that the color combination is enabled while a white square indicates that it is disabled.
4. Enable **Extended Zoom Levels** by pressing the Find button.

## Volume

On the control console, turn the Volume wheel on the left edge to increase or decrease the volume during OCR readback. You can also adjust the volume by going to **Settings > Audio > Volume**.



To change the volume, follow these steps

1. On the control console, press up on the Color Mode button while pressing the Find button. The main menu is displayed.
2. Use the Zoom wheel to scroll right and select the **Settings** menu, then press the Find button.
3. Scroll down to select **Audio** and press the Find button.
4. Scroll down to select **Volume** and press the Find button. A square appears around the number, which is the volume level.
5. Use the Zoom wheel to scroll left for a lower volume or right for a higher volume.
6. Press the Find button to set the new volume level. The square around the number disappears.

## Brightness

In either CCTV or OCR mode, press the Brightness toggle switch on the left side of the control console to adjust the brightness of the display. You can also adjust the brightness by going to **Settings > Display > Brightness**. Follow these steps:



1. On the control console, press up on the Color Mode button while pressing the Find button. The main menu is displayed.
2. Use the Zoom wheel to scroll right and select the **Settings** menu, then press the Find button.
3. Scroll down to select **Display** and press the Find button.
4. Scroll down to select **Brightness** and press the Find button. The current level is shown inside a square.

5. Use the Zoom wheel to scroll left for a lower luminosity or right for a higher luminosity.
6. Press the Find button to set the new value. The square around the number disappears.

## Colors

Merlin elite Pro offers a range of choices in both text and background colors to provide optimum viewing for people with certain visual conditions. Press the Color Mode button on the front panel or the control console to cycle between full color and six color combinations. You can choose from 31 color combinations by going to **Settings > Display > Preferred Color Modes**.

### *Changing Color Combinations*

To change the color combinations included in the rotation of choices when you press the Color Mode button, follow these steps:

1. On the control console, press up on the Color Mode button while pressing the Find button. The main menu is displayed.
2. Use the Zoom wheel to scroll right and select the **Settings** menu, then press the Find button.
3. Scroll down to select **Display** and press the Find button.
4. Scroll down to select **Preferred Color Modes** and press the Find button. A black square indicates that the color combination is enabled while a white square indicates that it is disabled.
5. Disable one of the defaults by selecting it and pressing the Find button.
6. Enable a new color combination by selecting it and pressing the Find button. When enabled, the color combination is included in the rotation of choices when you press the Color Mode button. You can choose up to six color combinations.

### *Factory Defaults*

Factory defaults, which provide commonly used color combinations, are described in the following table. Color will always be available, but you can change the other defaults.

Name	Description
Color	Gives a true color representation of the image being magnified.

Name	Description
Black on white	Provides an enhanced positive representation of the image being magnified, providing a white background with black text. It increases the contrast to offer crisp text images for reading.
White on black	Provides an enhanced negative representation of the image being magnified, providing a black background with white text. It increases the contrast to offer crisp text images for reading.
Green on black	Provides a black background with green text.
Yellow on black	Provides a black background with yellow text.
Yellow on blue	Provides a blue background with yellow text.
Black and white	Gives a black and white representation of the image being magnified.

## Line and Window Markers

Line and window markers make your target easier to read by either framing it with lines or by covering up peripheral viewing space. You can enable or disable line and window markers based on your preference. You must enable markers before you can cycle between them or adjust them.

### ***Enabling Line and Window Markers***

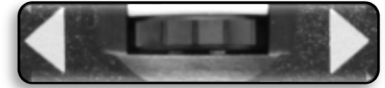
Markers can be toggled on or off only in CCTV mode. To make line and window markers available:

1. On the control console, press up on the Color Mode button while pressing the Find button. The main menu is displayed.
2. Use the Zoom wheel to scroll right to **Settings** and press the Find button.
3. Scroll down to **Display** and press the **Find** button.
4. Scroll down to either **Line Markers** or **Window Markers** and press the Find button.
5. Scroll down to either **Horizontal** or **Vertical** and press the Find button to select it. A black square indicates that the feature is enabled while a white square indicates that it is disabled. When enabled, the option is displayed when you rotate the Markers wheel on the right side of the control console.

6. To exit each menu, scroll to **EXIT** and press the Find button.

### ***Cycling Between Line and Window Markers***

In CCTV mode, you can rotate the Markers wheel on the right side of the control console to toggle through the marker options. These options are dependent on the settings you selected in the previous section, "[Enabling Line and Window Markers](#)" on page 31.



### ***Adjusting Position of Marker***

In CCTV mode, adjust the position of a marker by following these steps:

1. Rotate the Markers wheel on the right side of the console to scroll to your desired marker.
2. Press and hold the Play/Pause button while pushing the Brightness button up or down to adjust the line or window position.

#### **Control Console Shortcut to Adjust Marker/Window Position**

Press and hold the Play/Pause button while pressing the Brightness button up/down.



### ***Adjusting Size Between Markers***

In CCTV mode, adjust the size of a marker by following these steps:

1. Rotate the wheel on the right side of the console to scroll to your desired marker.
2. Press and hold the Play/Pause button while turning the Zoom wheel clockwise or counterclockwise to adjust the line or window size.

#### **Control Console Shortcut to Adjust Marker/Window Size**

Press and hold the Marker wheel and scroll Zoom wheel left or right.



## HDMI/VGA Toggle

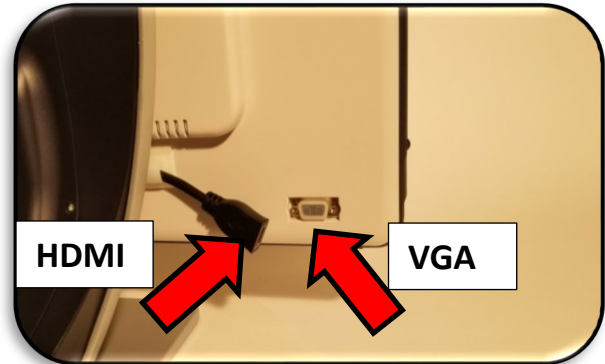
You can attach a computer or tablet and use the Merlin elite Pro as a computer monitor to save desk space. When using Merlin elite Pro as a computer monitor, the controls for the camera (such as zoom, color mode, and markers) will not work for the computer image.

On the back of the Merlin elite Pro monitor is an HDMI dongle and VGA port, where a computer or tablet can be attached to the Merlin elite Pro (additional peripherals may be required).

Using the Merlin elite Pro LCD as a computer monitor is like attaching a typical computer monitor to your computer or connecting a secondary display to your laptop. Refer to your computer or laptop user manual on how to connect a display. The Merlin elite Pro LCD supports resolutions up to 1920 x 1080.

To toggle between the camera image and the computer image, press and hold Play/Pause while pressing Find/Enter on the control console. When toggling back to the camera image, keep pressing Play/Pause and Find/Enter until you see the desired display. Three video channels are available:

- CCTV
- PC Input 1-VGA
- PC Input 2-HDMI



### Control Console Shortcut for HDMI/VGA Toggle

Press and hold the Play/Pause button and press the Find/Enter button.



## Focus Lock

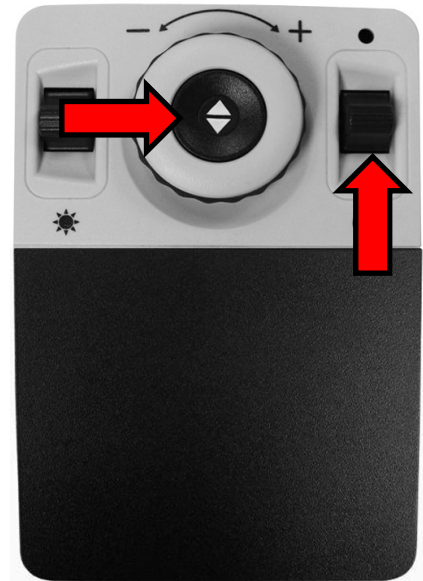
Focus lock maintains a steady focus when you want to keep the focus on one item, such as a paper, while something else enters the field of view, such as a hand to sign the paper. This feature is toggled on and off by pressing the Previous Line and Next Line buttons simultaneously. For more information, see "[Focus Locked](#)" on page 45.

## Menus

You can personalize your Merlin Pro settings using the menus. This section provides a description of each menu and its options in the order in which they appear on the screen.

To access the menus, follow these steps while in CCTV mode:

1. On the control console, press up on the Color Mode button while pressing the Find button.
2. Turn the Zoom wheel to scroll to a menu or menu option.
3. Press the Find button to open a menu.
4. Enable/disable an option by selecting it and pressing the Find button. Black is enabled, while white is disabled.
5. When an option is defined by a numerical value, select the option and press Find to display a box around the number. Rotate the Zoom wheel to increase/decrease the number, then press the Find button to set it.
6. To exit menus, either press up and hold the Color Mode button while pressing the Find button or return to CCTV mode by pressing the center button on the front panel.



## Introduction

An introduction video has been included with your Merlin Pro to provide an overview of its features. Use your control console to pause, play, or exit the video playback.

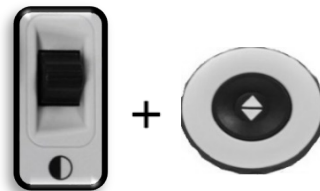
To play the video from the Main Menu, select it and press the Find button. Use the Advanced console to pause, play, and exit the video.

**Note:** The introduction video can be replaced if you choose. Contact your Enhanced Vision representative for more information.



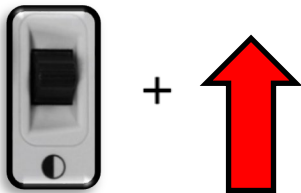
### Exit from Introduction Video and Return to Menu

To exit, press up and hold the Color Mode button while pressing the Find button.



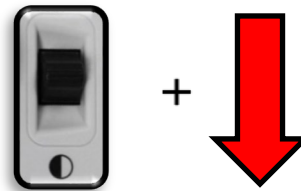
### Pause the Video

Press up on the Color Mode button to pause video playback



### Resume the Video

Press down on the Color Mode button to resume video playback





## Games

All games require a mouse, which you connect using the USB port on the back of your Merlin elite Pro. You can optionally add a second port using the two-port USB hub included in your package. You are prompted to connect a computer mouse before starting any game if you have not done so.

- Move through the games using the Zoom wheel on the control console.
- To select a game, press the Find button.
- To confirm a choice, press the Find button.
- To exit, press up and hold the Color Mode button while pressing the Find button.





Game	Description
Sudoku	A popular logic-based number puzzle
Solitaire	The classic card game
Free Cell	A solitaire game with variant rules
Reversi	Strategy game played against a computer opponent on an 8x8 grid
Tic-Tac-Toe	Played against a computer opponent, be the first to put 3 x's or o's in a row to win
Simon Memory	Test your memory skills by remembering colors and tones in an expanding sequence





## Settings

The Settings Menu contains configurable options to fine tune your user experience.

- To navigate through the menus, turn the Zoom wheel.
- To select an option, press the Find button. A black box  means the option is enabled, while white  is disabled.
- To move to the last three options, select the triangle at the bottom of the menu and press the Find button.
- To leave each menu, you must select **EXIT** and press the Find button.

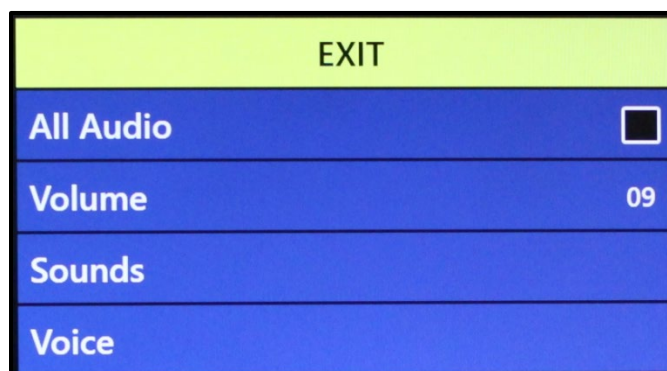


Menu	Action
Audio	Set your hardware sounds, mechanical sounds, and voices.
Display	Control all graphical user interfaces, icons, and visuals.
OCR Text Recognition	Determine Optical Character Recognition (OCR) characteristics, such as colors, zones, and highlighting.
Set System to 50/60hz	Configure the light frequency for your locale and the environment.
Extended Zoom Levels	Select extended magnification levels.
Working Distance	Elevate the optimal focal distance to allow several additional inches of height on a target material.
Languages	Set the primary language.
Auto-Language	Set multiple languages for Merlin elite Pro text and prompts.
White Balance	Configures the image temperature and affects the viewing characteristics of the CCTV image.
Screen Saver	Adjust the time it takes for the screen saver to engage.


Menu	Action
Focus Locked	Maintain focus on a specific object, so that object remains in focus after changing the magnification or moving items into the field of view.

## Audio

The Audio menu allows you to set your audible features and preferences. Audible features consist of sounds and voices. Sounds include hardware and mechanical sounds, such as button clicks and chimes. The **Audio** menu has four options, which are explained in the following table.



Menu	Action
All Audio	<p>Enable or disable all audible sounds and voices.</p> <ul style="list-style-type: none"> <li>• <b>On</b> – All the default voices and sounds are available.</li> <li>• <b>Off</b> – All sounds are turned off and the other menu options are unavailable.</li> </ul>
Volume	<p>Set the default volume level for all audio (1 is lowest and to 10 is highest). See “<a href="#">Volume</a>” on page 29 for instructions on changing the volume level.</p> <p><b>Note:</b> You can use Volume wheel on the console to increase or decrease the volume.</p>

Menu	Action
Sounds	<p>Toggle these options on or off by pressing the Find button:</p> <ul style="list-style-type: none"> <li>• <b>All Sounds (on/off)</b> – Enables or disables button clicks and chime sounds.</li> <li>• <b>Button Clicks (on/off)</b> – Enables or disables the button click sound exclusively.</li> <li>• <b>Chime Sound (on/off)</b> – Enables or disables the chime sound exclusively.</li> </ul> 
Voice	<p>Select from the following options:</p> <ul style="list-style-type: none"> <li>• <b>All Voices (on/off)</b> – Enables or disables the voice prompts on the system.</li> <li>• <b>Menu Voice (on/off)</b> – Enables or disables the voice prompts in the system menus.</li> <li>• <b>Message Voice (on/off)</b> – Enables or disables voice prompts for all on-screen messages.</li> <li>• <b>Alerts and Warnings (on/off)</b> – Enables or disables voice prompts for system text-to-speech messages that warn of system conditions such as “No files found” or “Document saved.” Also includes OCR messages, such as “Please align your document inside the frame.”</li> <li>• <b>Voice Gender (male/female)</b> – Specifies the gender of the announcing voice. If only one selection is shown, then only one voice is available in the selected language.</li> <li>• <b>Voice Speed (speed level)</b> – Specifies the speed that the voice reads.</li> </ul>

## Display

Display settings control all graphical user interfaces, icons, and other visuals on Merlin Pro, as described in the following table.

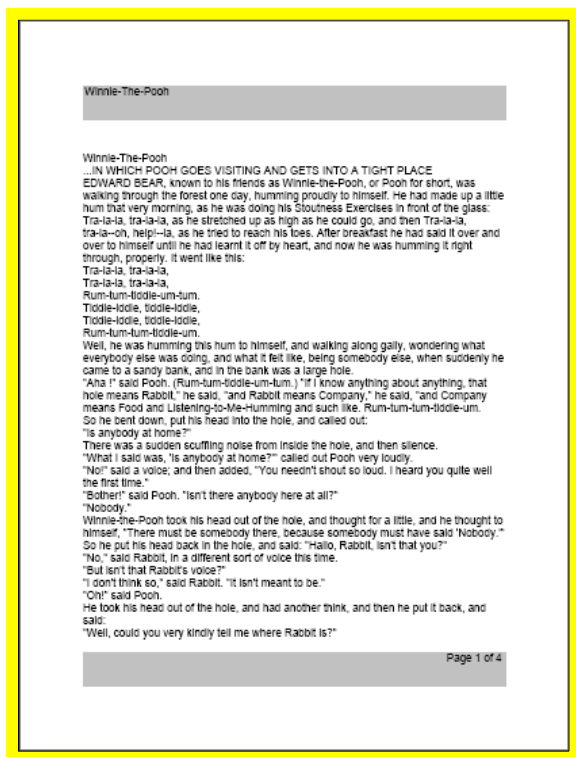
Menu	Action
Screen Messages	Specify whether you want messages to display, including system and software notifications, warnings, and alert messages. When lights are turned on, for example, the message would read “Lights on,” or when saving a file, “Saving,” as well as “Export complete” and “Factory settings restored.”
Brightness	<p>Select the brightness level (1-10) for the LCD display and user interface.</p> <ol style="list-style-type: none"> <li>1. Select <b>Brightness</b>. The current level is shown inside a square.</li> <li>2. Press the Find button.</li> <li>3. Rotate the Zoom wheel left for a lower level or right for a higher level.</li> <li>4. Press the Find button to set the new value. The square no longer appears around the number.</li> </ol>
Icons & Visuals	Enable or disable the display of lights icons and panning icons, such as lights on/off or icons indicating preview, live, or freeze mode.
Line Markers	Enable or disable vertical or horizontal line markers, which help you focus on segments of text while in CCTV mode.
Window Markers	Enable or disable vertical or horizontal window markers, which help you focus on segments of text while in CCTV mode.
Preferred Color Modes	Select the color combinations that are cycled through using the Color Mode button on either the control console or the front panel of the device. The device comes pre-loaded with several color defaults but these can be changed. See <a href="#">“Changing Colors”</a> on page 30.

**OCR Text Recognition**

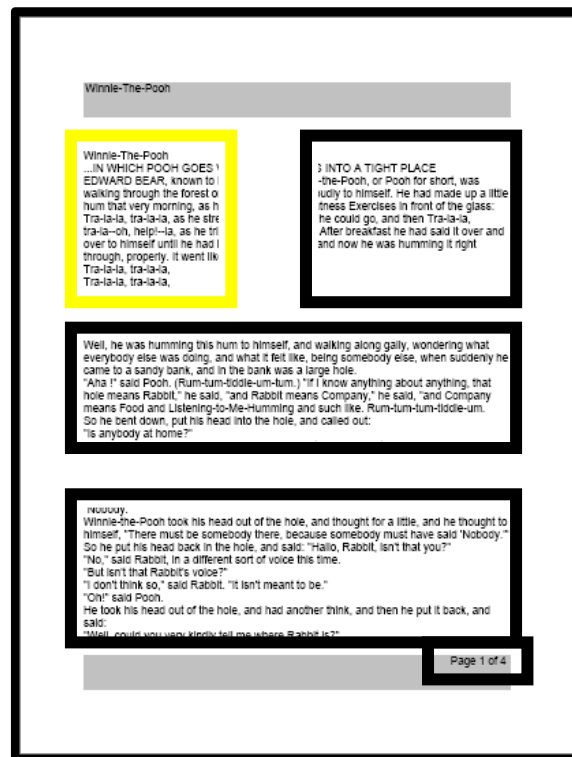
Specify how you want to capture text using the options in the following table.

Menu	Action
Guide Frame	Set the color of the boundary while in OCR mode. The frame helps you position your text before an OCR scan.
Zone Identifier	Determine how zones are identified—with rectangular boxes or numbers. Scanned text is broken up into blocks called zones to help you organize the content.
Zone Boundary Color	Specify the color of the Zone Identifier features mentioned above.
Reading Highlight	Specify the color of the box around the word currently being read in OCR readback mode.
OCR Tune	Determine the type processing sound that occurs after an OCR scan.
OCR Attributes	<p>Choose between a faster processing times or higher OCR accuracy.</p> <ul style="list-style-type: none"> <li>• <b>High Performance</b> uses a processing method designed to provide a good OCR result relatively quickly. If your target document is using common fonts and is not very complex, then this method will suit your needs.</li> <li>• <b>High Precision</b> is designed to achieve more accurate results but will do so more slowly when compared with High Performance Mode. If you are concerned with the overall accuracy of your OCR scan results or have a complex document with smaller fonts, it is recommended that you use High Precision.</li> </ul>

Menu	Action
OCR Modes	<p>Select how OCR text is displayed:</p> <ul style="list-style-type: none"> <li>• <b>Full Page Picture Mode</b> – Displays a picture of your OCR scan and organizes it into zones. See example below.</li> <li>• <b>Full Page Text Mode</b> – Displays a digital text version of your OCR scan. It fully covers the screen in a columnar format. This is the default setting.</li> <li>• <b>Single Line Text Mode</b> – Displays a digital text version of your OCR scan. It covers a single line on the screen and features the largest text magnification level.</li> </ul>



Preview image



Processed image

### ***Set System to 50/60 Hz***

This configures the light frequency for your locale and the environment in which you are using Merlin Pro. If you notice any visible flicker in the live image you may need to adjust the frequency by following these steps:

1. Select **Set System to 50/60 Hz**.
2. Press the Find button.
3. Rotate the Zoom wheel left for **50** or right for **60**.
4. Press the Find button to set the frequency.

### ***Extended Zoom Levels***

Select this option to add 73.0x to the magnification range, which is the maximum magnification on the device.

### ***Working Distance***

Select this option to allow several more inches of height on a target. This feature is particularly useful when viewing an object that is very close to the camera, such as a pill bottle or your hands while performing arts and crafts. It is also helpful for viewing a large book, such as an encyclopedia or product box, that does not lay flat against the X/Y table.

### ***Languages***

This menu sets the default primary language for Merlin elite Pro. The factory default is English-US. All the text and prompts are displayed in the selected language. To change your language preference, follow these steps.

1. Select **Languages**.
2. Press the Find button.
3. Rotate the Zoom wheel until your desired language is selected. To see more languages, select the triangle at the bottom of the menu and press the Find button.
4. When your desired language is selected, press the Find button. A black box next to that option indicates that the option is on. After a moment, the system screen changes to the language you selected.



### **Auto Language**

To enable this feature, select the **Auto-Language** option and press the Find button. Once this feature is active, a box appears next to each language in the list. Select each language that you need.

With this feature, multiple languages are automatically detected and read during OCR without having to reset the language. Language-specific characters are detected in each portion of text, and once processing is complete, text-to-speech begins reading in the correct language.

The Auto-Language feature is recommended for those who read multi-lingual materials or swap between a variety of languages frequently. If you only tend to read in a single language, it is recommended that you leave this feature disabled.

See “[Quick Language Swap](#)” on page 26 for more information on changing languages during OCR preview.

### **White Balance**

This option configures the image temperature and affects the viewing characteristics of the CCTV image. Options are:

- **Auto** – Automatically adjusts image for your environment.
- **Normal** – Vibrant true color.
- **Warm** – Sets the image for warmer tones, deeper red, yellow, etc.
- **Cool** – Sets the image for cooler tones, darker blue, purple, etc.

### **Screen Saver**

You can adjust the overall time it takes for the screen saver to engage or toggle it on and off. The screen saver is activated after a certain time interval where the device is not in use and the camera does not detect any motion under the camera.

- **Set Screen Saver Time** – Specifies how long the device must remain idle before it enters screensaver mode. Options are 5, 10, 20, and 30 minutes.
- **OFF** – Enables or disables the screensaver feature.



### **Focus Locked**

Focus lock maintains a steady focus when you want to keep the focus on one item, such as a paper, while something else enters the field of view, such as a hand to sign the paper. When active, the focal distance remains locked. If you reposition material in the field of view, it may not automatically be in optimal focus.

**Note:** One auto focus operation is performed after zooming even when Focus Lock is engaged.

#### **Control Console Shortcut for Auto Focus/Focus Lock**

Simultaneously press and hold the Next and Previous buttons on the control console to engage and disengage Focus Lock/Auto Focus.



### **Help**

The Help Menu defines buttons in both Basic and Advanced modes.

To exit this menu using the control console, press up and hold the Color Mode button while pressing the Find button.



## Library

The Library is used to store your pictures, pages, and books.

### *Saving Files*

You can save an image as a picture, page, or book:

- **Picture** – While you are in OCR mode, press and hold the Save button.
- **Page** – While in OCR readback mode, press and hold the Save button. When prompted, choose **Page**.
- **Book** – While in OCR readback mode, press and hold the Save button. When prompted, choose **Book**. You are prompted to either select a green checkmark to add pages or select a red X when you are done. To create a book, you save multiple document scans as one file name.



### *Entering the Library*

To enter the library while in CCTV mode or OCR mode, press and hold the Library button on the Advanced control console. You then choose **Pictures** or **Documents** by using the Zoom wheel to select the icon, and then pressing the Find button.

When you choose **Pictures**, an image of each saved picture file is displayed.

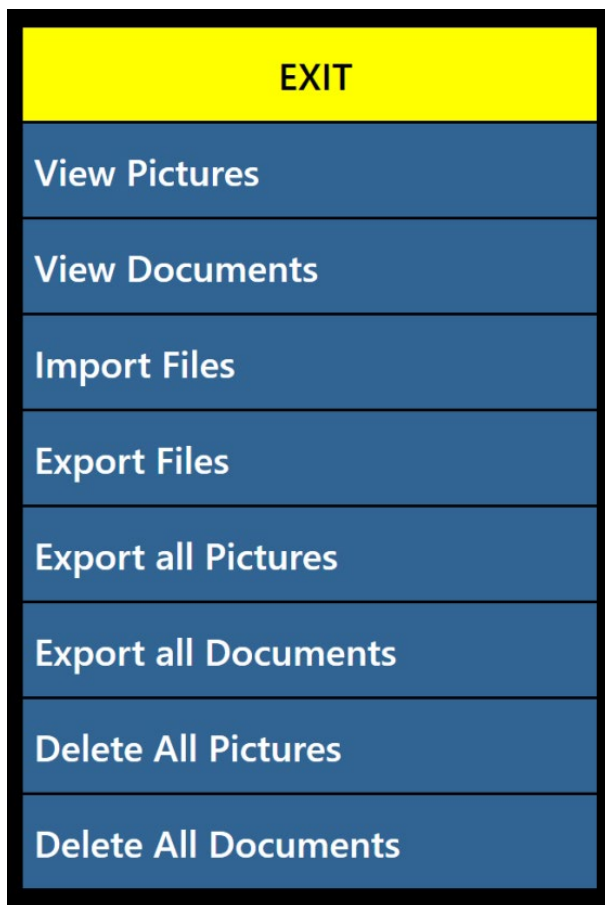


When you choose **Documents**, you must make another choice of **Page** (single-page) or **Book** (multiple pages). A preview of your file is displayed.



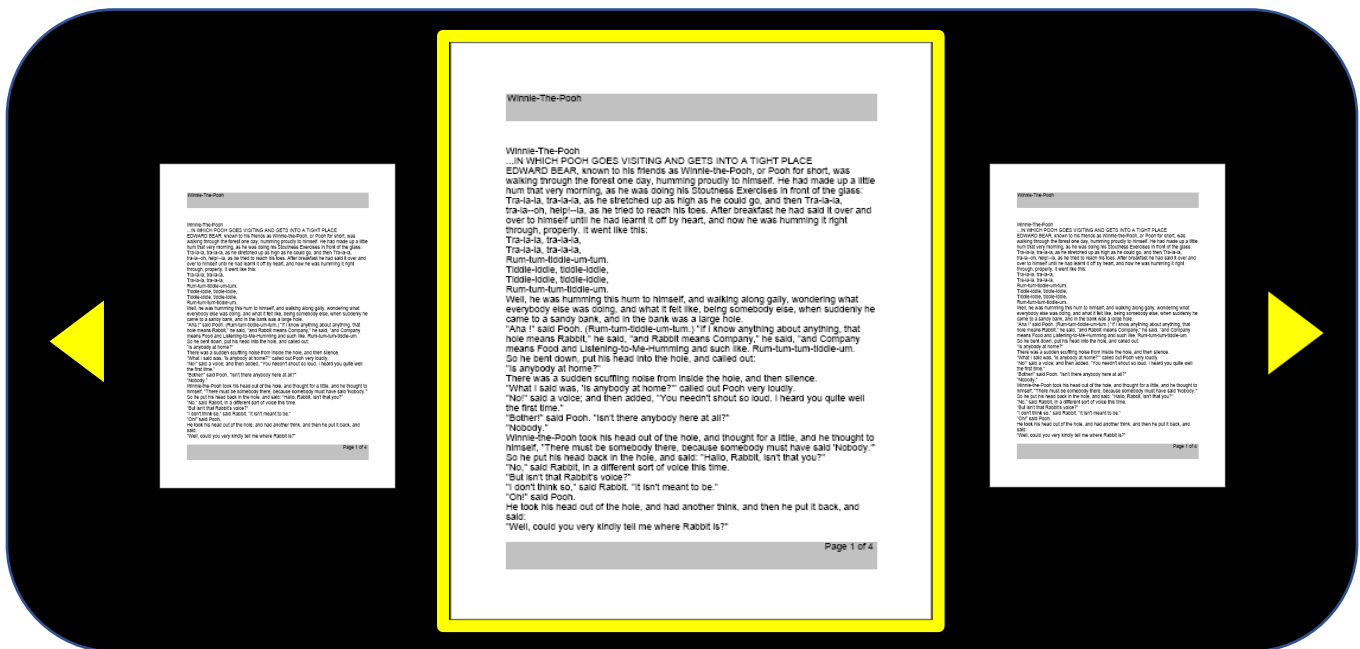
### ***Displaying Library Menu Options***

Library menu options are displayed when you choose **Library** from the main menu. You use these options to view, import, and export files that you have saved as pictures or documents.



## Viewing Your Saved Files

Use the Zoom wheel to cycle through your saved files. Previews for the next and previous lines will change as you navigate. Press the Find button to select a file and either preview pictures or begin OCR readback for documents.



## Paging Through a Book (Next and Previous)

To look through a book, you must simulate turning pages by using shortcuts for next page and previous page. To go forward, press and hold the Play button while pressing the Next Line button. To go back a page, press and hold the Play button while pressing the Previous Line button.

### Next and Previous Page Shortcuts

Press and hold the Play button while pressing the Next Line or Previous Line button.

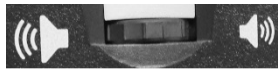


## Viewing Pictures

The same color selections and magnification options are available when you view pictures. In addition, panning allows you to adjust the field of view (FOV) for your saved image. Use the side wheels on your control console. Rotate the left Volume wheel to

move the FOV left and right. Rotate the Markers wheel on the right side of the console to move the FOV up and down.

### Pan Around a Magnified Image Using the Side Wheels



Moves left and right



Moves up and down



### Downloading Files to a USB Drive

To export your files and documents to a USB flash drive, you must connect the two-port USB hub (included in your package) and insert a USB flash drive in the available USB port. Instructions are provided for exporting files three ways: one file at a time (**Export Files** option), all pictures (**Export All Pictures** option), or all documents (**Export All Documents** option).

### Export Files

To export one file at a time, follow these steps:

1. Go to **System Menu > Library > Export Files**.
2. Select the type of file (.txt, .rtf, .jpg, .pdf or .doc) that will be exported and press the Find button.
3. Select **Export** and press the Find button.
4. Select either the **Pictures** icon or the **Documents** icon, and press the Find button.
5. Select the image of the file that you want export.
6. Press and hold the Save button for at least two seconds.
7. Once exported, the Save icon is displayed to indicate that the image has been saved to the USB drive.



EXIT	EXIT
View Pictures	.TXT <input type="checkbox"/>
View Documents	.RTF <input type="checkbox"/>
Import Files	.JPG <input type="checkbox"/>
Export Files	.PDF <input type="checkbox"/>
Export all Pictures	.DOC <input type="checkbox"/>
Export all Documents	Export
Delete All Pictures	
Delete All Documents	

### ***Export All Pictures***

To automatically export all your saved images, follow these steps:

1. Go to **System Menu > Library > Export All Pictures**.
2. Upon activation, the Save Icon is displayed to indicate that you are downloading the images.
3. When complete, a chime indicates that it is safe to remove the drive.



### ***Export All Documents***

To automatically export all your saved documents (pages and books), follow these steps:

1. Go to **System Menu > Library > Export All Documents**.
2. Upon activation, the Save Icon is displayed to indicate that you are downloading the images.
3. When complete, a chime indicates that it is safe to remove the drive.

### ***Deleting an Image or Page***

You can delete a single picture or page while viewing it in the Library:

1. Go to **System Menu > Library**.
2. Use the Zoom wheel to scroll to the image or page that you want to delete.
3. Upon activation, the Delete icon is displayed to indicate that you are deleting a picture or page.
4. When complete, a chime indicates that the image has been deleted.



You can also delete a picture or page using the Control Console. While viewing a saved image, simultaneously press and hold the Previous Line and Next Line buttons. A garbage pail icon is displayed to indicate that the image has been deleted.

### ***Deleting All Pictures***

To delete all saved images, follow these steps:

1. Go to **System Menu > Library > Delete All Pictures**.
2. Upon activation, the Delete icon is displayed to indicate that you are deleting all the images.
3. When complete, a chime indicates that the images have been deleted.

### ***Deleting All Documents***

To automatically delete all saved documents (both pages and books), follow these steps:

1. Go to **System Menu > Library > Delete All Documents**.
2. Upon activation, the Delete icon is displayed to indicate that you are deleting all the documents.
3. When complete, a chime indicates that the documents have been deleted.

### ***Import Files***

To import your files from a USB flash drive, you must connect the two-port USB hub (included in your package) and insert a USB flash drive in the available USB port. Supported file formats are .TXT, .RTF, .JPG, .PDF, and .DOC.

1. Go to **System Menu > Library > Import Files**.
2. Select the file formats you are importing (.TXT, .RTF, .JPG, .PDF, and .DOC).

3. Select **IMPORT** and press the Find button. When complete, the **Save** icon is displayed.

## Factory Settings

This menu is used to check the status and revision numbers of your device or to return the device to its original configuration.

## Product Information

This option contains important system information, such as the software version, languages, and product number.

## Restore Factory Settings

Selecting this option returns your system to its default conditions at the time it left the Enhanced Vision Factory. It resets any custom settings or changes you have made as a user.

**Note:** Using this option will not delete your saved images, pages, or books.

## EXIT

To exit any menu, select **EXIT** and press the Find button on the control console. You also can press up and hold the Color Mode button while pressing the Find button.

You can also exit the menu structure and go to CCTV mode by pressing the center button on the front panel under the LCD screen.





## Tips and Tricks

### Improving OCR Accuracy

To improve the accuracy of OCR, follow these tips:

- Before you begin a document capture, ensure that the lighting in the room is evenly distributed over your target document. Avoid hotspots.
- Flatten out books, especially ones with a large spine or with an observable curvature.
- For optimal OCR readback, position your material within the guide frame in its entirety. You can rotate target material in any orientation to ensure that it fits completely within these boundaries.
- Turning the LED on or off can improve accuracy on some materials. To toggle the LED, simultaneously press and hold the Previous Line and Next Line buttons.
- Try changing from High Performance to High Precision mode. Go to **Settings > OCR Text Recognition > OCR Attributes**. The High Precision mode is tuned to make the fewest errors during OCR processing so you should notice a big improvement with problematic documents.
- For small OCR targets, such as a business card or letter, place a clean white sheet of paper behind it to eliminate any distracting patterns in the background.

### Using Multiple Orientations

Merlin elite Pro supports all available viewing angles, both portrait and landscape. If your target document is too large or unusually shaped, you can reposition it at another angle to fit it within the guide frame.

### Restarting Your System

If your system exhibits any odd behavior, perform a full [shutdown](#) (see page 9) and power it back on. If the unit is completely unresponsive, reset it by simultaneously pressing the Find/Enter button on the control console and the Power button on the front panel. This should immediately power down the system. Do not reset it unless absolutely necessary.

### Configuring Your System

You can use the **Settings** menu to configure your user interface, system sounds, and system display to suit your preferences. Once you are familiar with the system, try changing these options to develop the perfect user experience customized to fit you.

## Control Console Shortcuts

Many actions can be performed by pressing a combination of buttons on the control console. The following table provides some of the shortcuts.

Change	Shortcut
Marker position	Play/Pause + Brightness up/down
Window position	Play/Pause+ Brightness up/down
Marker size	Play/Pause + Zoom wheel
Window size	Play/Pause+ Zoom wheel
HDMI/VGA	Play/Pause button + Find
Menus	Color Mode + Find
Image type	Find + Play/Pause
Focus lock	Previous Line + Next Line (short press)
Lights on/off	Previous Line + Next Line (long press)

## Troubleshooting

### Device Not Powering On

Try these steps:

1. Ensure the power supply from Merlin elite Pro is securely connected to a working outlet.
2. Make sure the two parts of the power supply cord are securely connected.
3. Ensure the power supply cord is completely plugged into the DC 19V jack on the back of the base.
4. If you are using a power strip or surge protector, be sure it is switched on.
5. Check the circuit breaker and reset it if needed.
6. Push the Power button on the front panel. When the power is turned on, a blue light is illuminated near the Power button and a blue light is illuminated on the control console.

### Poor OCR Results

The following tips will help with OCR:

- Clean polarizing filter on the underside of the OCR camera with the nonabrasive lens cleaning cloth provided with your Merlin elite Pro (avoid using cleaning solutions).
- Make sure the target material is steady and flat. It might take a few moments for the camera to achieve focus after motion has stopped.
- Toggle the LED camera lamp on or off to try to achieve even ambient lighting, which helps create a better image.

### Slow Text-to-Speech

If text-to-speech seems to be taking too long, try the following:

- Cycle the power on and off by pressing the Power button.
- If the device is not responding to button presses, then press and hold the Power button for more than five seconds to force a shutdown. Do not physically remove the device from its power source while it is shutting down.

## **Replacement LED lamps**

Your Merlin elite Pro has an LED lamp designed to provide years of trouble-free service. In the unlikely event that a replacement LED is needed, contact your place of purchase or Enhanced Vision at (800) 440-9476 extension 2 (international +001 714-465-3400 extension 2) Monday through Friday, from 8 a.m. to 5 p.m. Pacific Standard Time (UTC-8).

## **Firmware Update**

To keep your device up-to-date, visit our software support page at <https://www.enhancedvision.com/support/software/merlin-elite-pro.html>.

## **Technical Assistance**

If you have any questions or require technical assistance with your product, please call (800) 440-9476 extension 2 (international +001 714-465-3400 extension 2) Monday through Friday, from 8 a.m. to 5 p.m. Pacific Standard Time (UTC-8).

## FCC Compliance Notice

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, and (2) this device must accept any interference received, including interference that may cause undesired operation. 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 some instances. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, you are 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 to a wall outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Unauthorized changes or modifications to this system can void your authority to operate this equipment.

If your low vision device has an option to connect to a TV, it must be used with shielded interface cables in order to meet FCC emissions limits for Class B digital devices. It is your responsibility to use the shielded interface cables supplied with the equipment.

## Safety and Care

To ensure your safety and obtain the most benefit from Merlin elite Pro, review these safety precautions carefully.

Merlin elite Pro enlarges and enhances text and objects in order to improve the quality of life for people who are visually impaired. The extent to which this product can improve the ability to see images depends on a person's individual condition and level of visual impairment.

Merlin elite Pro is not designed to restore vision, correct eye conditions, or halt degenerative vision loss. An eye care professional can determine the usefulness and suitability of Merlin elite Pro for a patient's individual condition.

### Precautions for Use

- Follow all warnings, cautions, and instructions marked on the product.
- Use Merlin elite Pro on a stable, level surface such as a solid desk or table, according to its intended design specifications.
- Avoid placing Merlin elite Pro on an unstable table, cart, or stand. It may fall, causing serious damage to the device or bodily injury.
- Use Merlin elite Pro indoors only—it should NOT be exposed to extreme or rapid changes in temperature or humidity. Do not place Merlin elite Pro near a radiator, heater, or areas exposed to long hours of direct sunlight. These conditions may cause damage to the device's electronics or optics.
- At least once per week, clean Merlin elite Pro with a soft dry cloth or an electrostatic dusting cloth. DO NOT use liquid cleaners on its plastic surfaces. No additional methods of sterilization or cleaning are recommended or required.
- Do not use Merlin elite Pro near flammable materials or liquids.

## Additional Electrical Safety Precautions

Be familiar with these safety precautions:

- The power supply cord is a disconnect device for electrical equipment. The socket-outlet should be installed near the equipment and be easily accessible.
- 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.
- Do not use Merlin elite Pro in, near or around water. Merlin elite Pro is not designed to offer protection against contact with liquids of any kind.
- Use only the power supply provided with your Merlin elite Pro. Using unauthorized power supplies may cause serious damage to Merlin elite Pro's electronic components.
- Using any other power supply than the one provided by Enhanced Vision for Merlin elite Pro will void the warranty.
- Always place the power cord away from traffic areas to avoid damage of power supply.
- Prevent the risk of electrical shock by NOT attempting to disassemble the device. Refer all service to an authorized repair facility.
- Ensure that your connections match those shown in the setup instructions.

## Transporting Merlin elite Pro

Before moving the device, disconnect and secure all power and video cables. If you are moving Merlin elite Pro across a desk or table, be cautious and do not pull on any power cords or connector cables.

Carry the device only by the recessed handles located on the undersides of device.

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***Warning: Do not carry Merlin elite Pro by the camera assembly/chassis.***

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## Caring for Merlin elite Pro

Before cleaning, ensure that your Merlin elite Pro is completely off. Always turn the power off by pressing the Power button on the front of the device for five seconds when Merlin elite Pro is not in use. Do not try to shut down the device by disconnecting the power cord while the device is in operation.

When you are not using the device, either place it in standby or shut it down. To put it into standby, which saves power, press the Power button for less than five seconds. For cleaning, however, turn it off completely.

Clean Merlin elite Pro with a soft dry cloth or an electrostatic dusting cloth. Do not use liquid cleaners on its plastic surfaces. The protective glass covering the camera can be cleaned as needed with the lens cloth provided with the Merlin elite Pro.

## Susceptibility to Interference

There may be temporary degradation of the image when Merlin elite Pro is subjected to a strong radio frequency field, electrostatic discharge, or transient electrical noise. An electrostatic discharge (caused by static electricity) may cause the screen to go blank. If this happens, disconnect the AC power from the electrical outlet, wait 30 seconds, and connect the AC power again.





## Merlin elite Pro Specifications

### Product Measurements

24" LCD: 27.75" H x 22.75" W x 20" D (70.5 cm H X 57.8 cm W x 50.8 cm D)

### Camera

High Definition 1080p full HD camera

### Product Weight

40.1 lbs (18.2 kg)

### Magnification Range

Normal Range: 2.4x – 41x

Extended Range: 2.4x – 73x

### Power Supply

Input voltage/current: 120-240 VAC / 0.3-0.5A (nominal)

Output voltage: 19 VDC

Frequency: 50 or 60 Hz

Power usage: while on, 30W; while in standby, less than 5W; while off, less than 1W

### Equipment Classification (IEC 601-1)

Type of Protection: Class 1

Degree of Protection: Type B

Mode of Operation: Continuous

Operating temperature range: 0-40°C / 32-104°F

Storage/transport temperature range: 0-60°C / 32-140°F

### OCR Storage Capacity

The file size of an OCR scan varies based on text density. Minimally, 1,000 full-page scans can be stored on Merlin elite Pro.

### Warranty: 3 Years

**Note:** Product specifications subject to change without notice.

## Service Process

If technical support or repair service is needed, contact your local Enhanced Vision representative or the Enhanced Vision warranty service center.

If warranty service is required, contact Enhanced Vision at 800-440-9476 extension 2 (international +001 714-465-3400 extension 2) Monday through Friday, from 8 AM to 5 PM, Pacific Standard Time to request a return authorization number.

Warranty repairs will not be accepted without a valid return authorization number. You may wish to keep the original product packaging in case warranty service is required. The manufacturer cannot provide packaging for warranty repairs.

## Documentation and Product Updates

Product enhancements and revisions are integral to what we do here at Enhanced Vision. The most up-to-date version of this document is at <https://www.enhancedvision.com/support/user-manuals.html>.

You can download product updates at <https://www.enhancedvision.com/support/software.html>. A technical bulletin provides instructions for installing the updated firmware and software.

## Technical Assistance

If you have any questions or require technical assistance, contact Enhanced Vision at 800-440-9476 extension 2 (international +001 714-465-3400 extension 2) Monday through Friday, from 8 AM to 5 PM Pacific Time. Worldwide Support

## Worldwide Support

[www.enhancedvision.com](http://www.enhancedvision.com)

800 440 9476 (US Office, toll-free)

+001 714 465 3400 (US Office)

+44 (0) 0800 14561 (UK Office)

Tel. + 49 (0) 6078 9698270 (DE Office)

Fax + 49 (0) 6078 96982733 (DE Office)

## Notes

This image shows a single sheet of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.



merlin  
*elite Pro* **HD  
OCR**

**enhanced**  
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