

merlin **HD**  
*elite Pro* **OCR**

enhanced  
**vision**



# User Manual

## **Merlin Elite Pro User Manual**

Congratulations on your purchase of Merlin Elite Pro with OCR (Optical Character Recognition) from Enhanced Vision.

Merlin Elite Pro is a fully integrated solution, offering the advantages of a CCTV and OCR combined into one system. Merlin Elite Pro enables individuals with low vision to retain the joys of reading by listening along or viewing in color, enhanced high-contrast positive or negative modes. With easy-to-use buttons and dials, you can enlarge or reduce the text in seconds, change viewing options for easier visibility and much more.

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'll 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.

**Product enhancements and revisions are an integral part of what we do here at Enhanced Vision. Please visit -**

**<http://www.enhancedvision.com/low-vision-product-line.html>**

**and select your Enhanced Vision Product. You will find the most up-to-date version of the User Manual at the bottom of the page**

## FCC COMPLIANCE NOTICE

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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 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, 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 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.

Unauthorized changes or modification 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.

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## SAFETY AND CARE

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

Merlin Elite Pro is designed to enlarge and enhance text and read print aloud 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 unit 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 unit'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.

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## Additional Electrical 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 unit. Please refer all service to an authorized repair facility.
- Please ensure that you make connections that match those shown in Figure 2 on page 10.

## Transporting Merlin Elite Pro

- Use caution if you are repositioning Merlin Elite Pro a short distance across a desk or table. Make sure you do not pull on any power cords or connector cables.
- Disconnect and secure all power and video cables before moving the unit.
- Carry the unit only by the recessed handles located on the undersides of device. **Do not carry Merlin Elite Pro by the Camera Assembly/Chassis. (See Figure 1 Safe Transport Page 10)**

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## Caring for *Merlin Elite Pro*

- 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 spontaneously removing from power while device is in operation)
- Optionally you may also place the device into “Standby” state which is a power saving mode by pressing the power button for less than 5 seconds.
- Ensure that your Merlin Elite Pro is completely OFF before cleaning.
- 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 within the packaging of 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, 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, disconnect the AC power from the electrical outlet, wait 30 seconds, and connect the AC power again.







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## Merlin Elite Pro Packaging & Accessories

Take a few moments to familiarize yourself with the *Merlin Elite Pro* Controls and Accessories.

### Controls & Important Components:

1. Power button
2. Speaker (x2)
3. 3.5mm jack for Headphones

*Note: Sound from Merlin Elite Pro speakers will not be available while the headphone jack is in use.*

4. Color Mode Button
5. OCR/CCTV Toggle Button & Front Panel CCTV Zoom Wheel

### Product Accessories:

6. Merlin Elite Pro 19V power supply
7. Merlin Elite Pro Power Cord (power cord style may vary based upon country)
8. Control Console & Console Cover: This allows you to control Merlin Elite Pro functions. Can be used in cover on or cover off configuration.  
\*Must be plugged in to use Merlin Elite Pro and have access to the menu items for OCR/Text-To-Speech
9. Lens Cloth: permits cleaning of the LCD display or lenses
10. USB 2 in 1 Hub: Adds an additional USB port to use which is necessary for software upgrades, the USB Download Feature and to make use of Voice Tags on saved files via our microphone accessory.

### Optional Accessories:

11. Microphone (Not Pictured): Use to Record a Custom Voice Tag while saving files. You must also make use of an approved USB Hub to connect both the microphone and control console. You will be automatically prompted to save with a voice tag when the microphone is connected.

# Setting Up Merlin Elite Pro

1. Find a steady and level location, such as a table or desk, where you will be comfortable using Merlin Elite Pro. Carry Merlin Elite Pro only by the recessed handles on the underside of the unit for a secure grip. **DO NOT lift Merlin Elite Pro unit by the Merlin body, camera chassis or monitor.** Gently place it on the table or desk (see handles in Figure 1 Safe Transport).



Figure 1 Safe Transport

2. Connect the Control Console cord to the USB Port on the back of your Merlin Elite Pro, (See Figure 4 Rear Panel Connections).

3. Connect the power cord to the power supply (See Figure 2 Power Supply). Connect the power cord to an available electrical outlet (See Figure 3 Connecting to an Outlet). Connect the other end of the power supply to Merlin Elite Pro where it is labeled “19VDC” (Also Shown Figure 4 Rear Panel Connections). To offer additional protection during an electrical storm, a surge protector may also be used and is recommended.



Figure 2 Power Supply

4. To turn Merlin Elite Pro on, Press the Power Button once. A Merlin Elite Pro Logo should appear followed by a message indicating that the device is initializing with a startup chime. Afterwards an image should appear on your Display and enter into “Live CCTV View”.

5. **IMPORTANT: To maximize the life of your Merlin Elite Pro always allow Merlin Elite Pro to do a complete Shutdown before removing from wall power. Press the power button and hold it for 5 seconds to initiate the shutdown sequence. This process takes an additional 10 seconds when the Status LED Indicators also turn off.**



Figure 3 Connecting to an Outlet



Figure 4 Rear Panel Connections

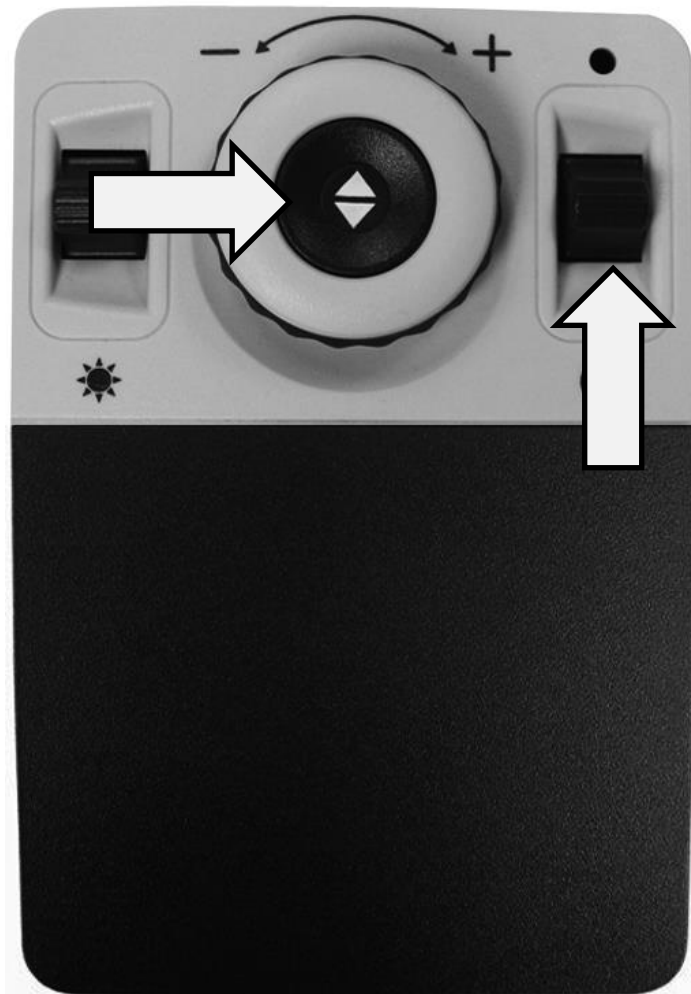
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## Using Merlin Elite Pro for the First Time

Merlin Elite Pro is a CCTV & OCR product that can function in a variety of modes. The unit consists of the Built in Monitor, Cameras and Mechanical assembly. The OCR & CCTV camera structure can be moved or tilted depending on your target. Whichever mode you choose for your Merlin Elite Pro you will have several options in how you customize it to fit your unique needs and preferences. Please familiarize yourself with these options to discover which settings are right for you. Once the device is connected press the Power button shown as Item 1 on Merlin Elite Pro and Accessories on page 8. This will turn on your Merlin Elite Pro. Figure 4 Rear Panel Connections on page 10 shows where to connect your Control Console to the USB Ports. After your Device is on and connected it will be ready for you to use.

### Button Combinations

Some Features on Merlin Elite Pro are accessed through a combination of buttons on your control console. Throughout the User Manual there will be references to these 'button combinations' (e.g. Press "[Mode Up] and [Find/Enter]"). This indicates that the buttons should be pressed together. Control buttons, levers, etc. are enclosed in [ ].

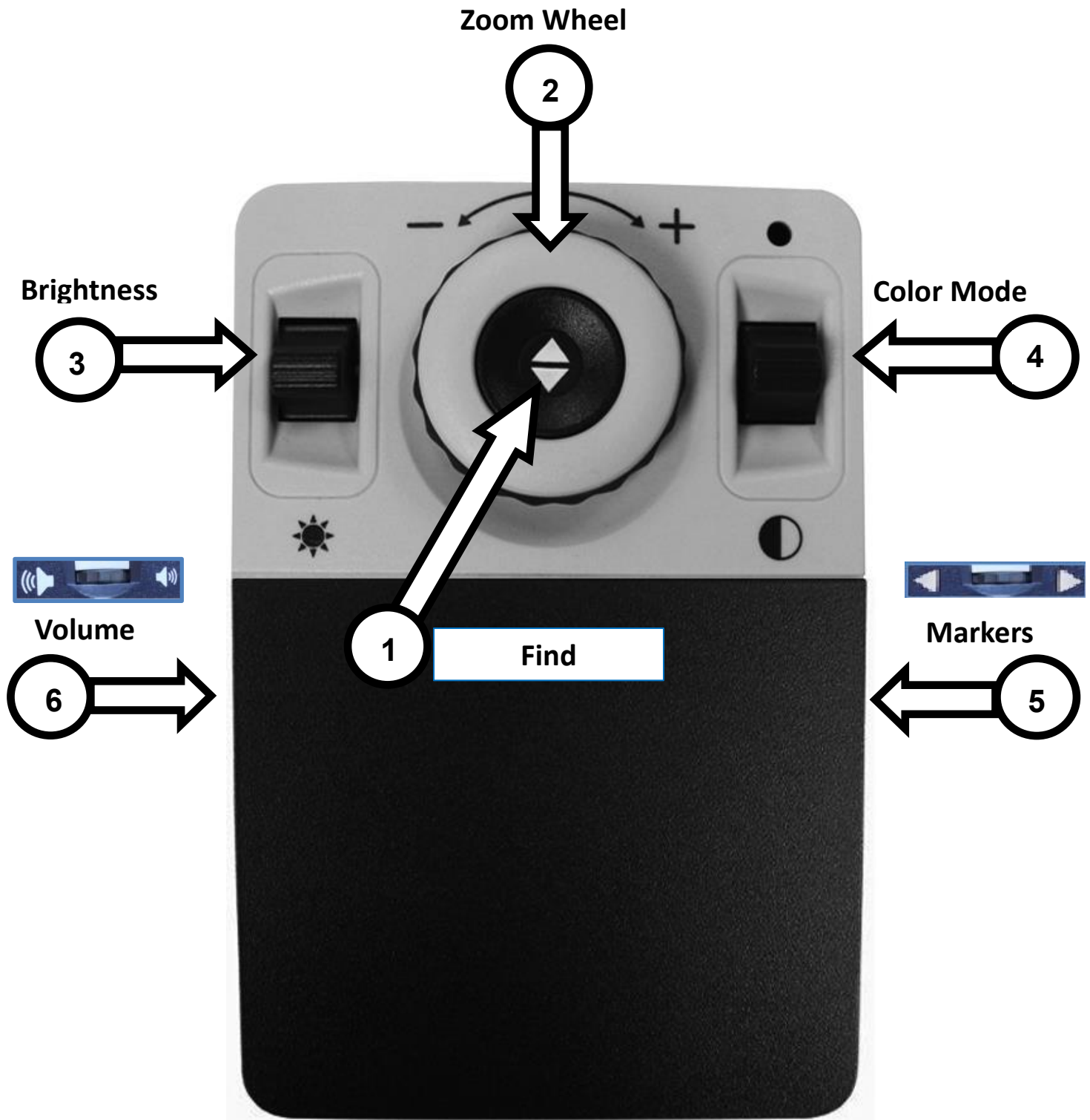


*Figure 5 Combination Keys*

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# Merlin Elite Pro Basic CCTV Control Console

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*See the following Page for Basic Console Controls in Detail*

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## BASIC CCTV CONTROL CONSOLE BUTTONS DEFINED

1. **Find** – Press and Hold to activate the “Find” feature which will minimize your magnification level.

When you release the button it will return to your previous magnification level.

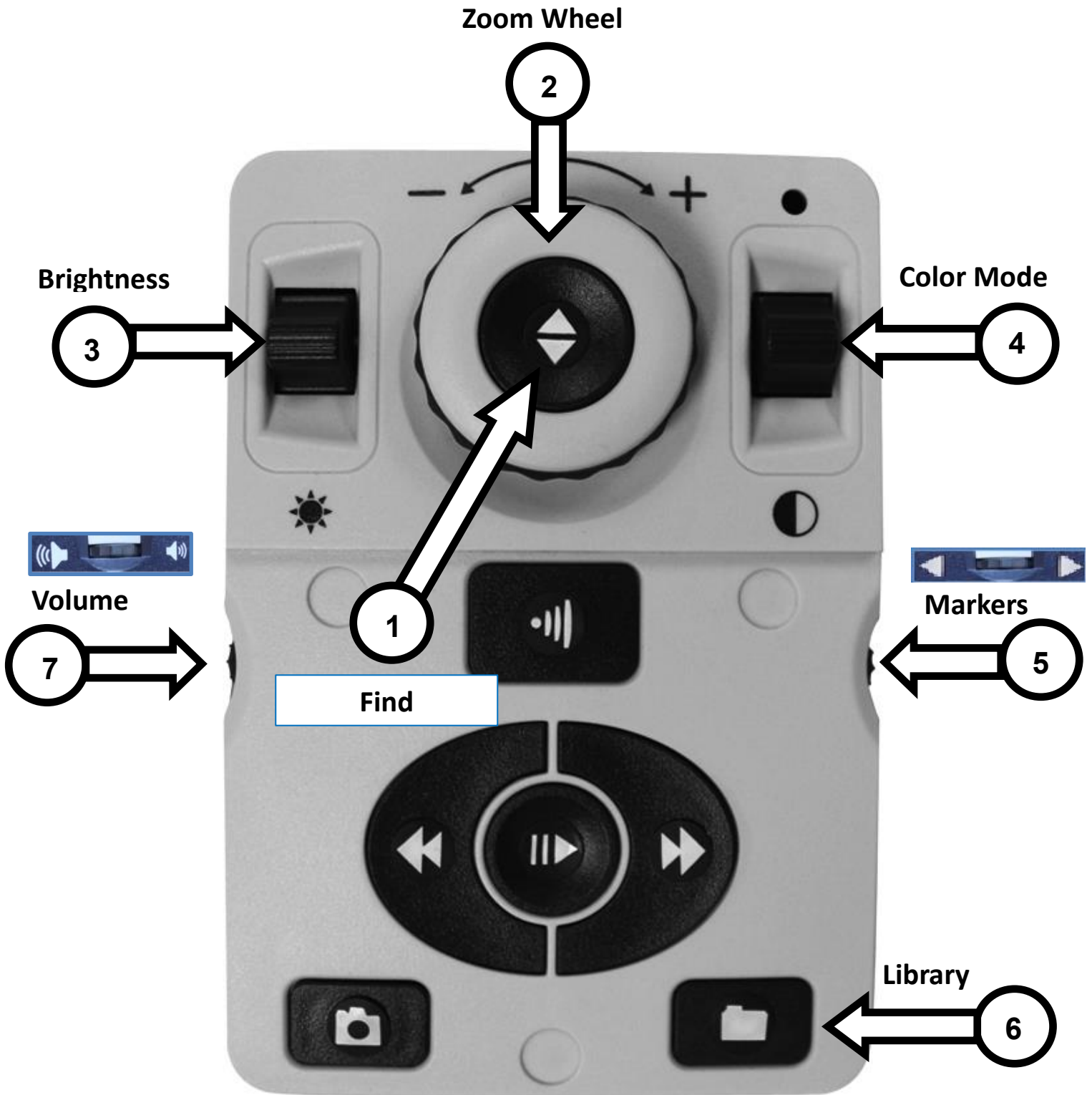
*You use this feature to “Find” your target easily which can sometimes be challenging at higher magnification levels.*

2. **Zoom Wheel** – Turn clockwise/counter-clockwise to increase/decrease the zoom level.
3. **Brightness** – Press Up/Down to increase/decrease the screen brightness.
4. **Color Mode** – Press Mode Up/Down to toggle through different color viewing modes.
5. **Markers** – When in Live CCTV Mode scroll wheel up or down to enable Line and Window Markers (If enabled in the menus).
6. **Volume** – Rotate to increase/decrease system volume.

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# Merlin Elite Pro Advanced CCTV Control Console

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*See the following Page for Advanced Console Controls in Detail*

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## ADVANCED CCTV CONTROL CONSOLE BUTTONS DEFINED

1. **Find** – Press and Hold to activate the “Find” feature which will minimize your magnification level.

When you release the button it will return to your previous magnification level.

*You use this feature to “Find” your target easily which can sometimes be challenging at higher magnification levels.*

2. **Zoom Wheel** – Turn clockwise/counter-clockwise to increase/decrease the zoom level.
3. **Brightness** – Press Up/Down to increase/decrease the screen brightness.
4. **Color Mode** – Press Mode Up/Down to toggle through different color viewing modes.
5. **Markers** – When in Live CCTV Mode scroll wheel up or down to enable Line and Window Markers (If enabled in the menus).
6. **Library** – Press and Hold Library for 2 seconds enters the Library. Rotate Zoom Wheel to Navigate. Select Exit & Press find to go back to live mode or Hold Library Button for approximately 3 seconds.
7. **Volume** – Rotate to increase/decrease system volume.

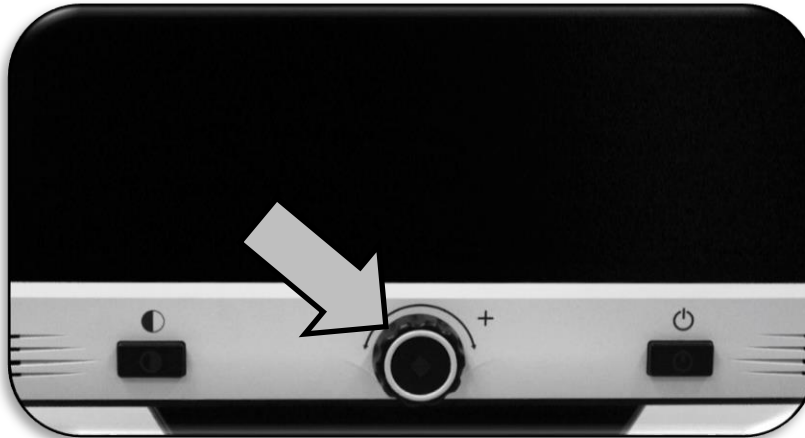
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# Merlin Modes Overview

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## Merlin Modes

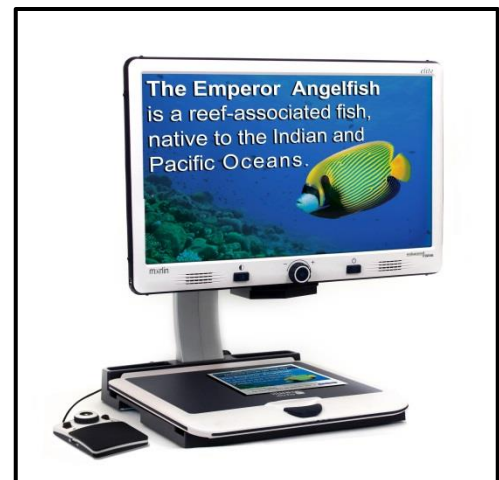
Merlin Elite Pro has two main “Modes” of operation that can be switched/toggled by pressing the CCTV/OCR Front Panel Center Button which is shown below.



*Figure 6 CCTV/OCR Toggle*

## CCTV Mode

The CCTV Mode is the default mode that will display immediately after you power the device on. This is a high quality live image that is designed for Real-Time 1080p High Definition viewing.



## OCR Mode

The OCR Mode is designed to assist you in reading documents automatically by scanning documents for OCR (Optical Character Recognition) and then reading these documents back with our Premium TTS Engine (Text to Speech).





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## Using Merlin Elite Pro in CCTV Mode

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Merlin Elite Pro camera is attached to a specifically designed camera stand, lighting system, adjustable monitor and movable X/Y table. This provides a high quality image with flexibility in your viewing options for comfort. When the Device is in CCTV mode it is operated by simply moving the X/Y Table with your viewing target underneath. The image will then be viewable on the LCD Monitor.



*Figure 7 LCD Range of Motion*

Merlin Elite Pro LCD is mounted on to a bracket that allows the user to tilt the screen to adjust for the best viewing position. Choose an angle or position that is most comfortable for viewing.

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## CCTV Desktop Mode

This mode is well adjusted for reading, writing and enjoying crafts or other hobbies. Merlin Elite Pro can slide targets freely, up, down, left or right, along the specially designed X/Y Table mechanism. Adjust the magnification level via the zoom wheel to a size that suits your reading preference and smoothly glide your material left or right.



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## Adjusting 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 located on the Control Console, or Front Panel, until you reach the desired magnification. Turning the wheel clockwise will increase magnification, and turning the wheel counter-clockwise will decrease magnification.

The Zoom Level will appear in the upper left corner of your monitor when you are increasing or decreasing magnification (in desktop mode only). An indicator will play when the user is at the maximum magnification or minimum magnification. The upper magnification limit can be extended with the “Extended Zoom” setting located under Product Settings Menu.

**NOTE: The extent of the magnification is dependent upon the distance of the Camera to the object.**



*Figure 8 Zoom Wheels on Front Panel & Control Console*

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## Changing the Viewing Mode

Merlin Elite Pro was designed to provide optimum viewing for people with certain visual conditions by offering a range of choices in both text and background colors. Press the [Mode] button located on the Front Panel, or the [Mode Up/Down] on the Control Console, to cycle between Full Color, Black and White, Enhanced Positive, Enhanced Negative, and up to 5 of your favorite color select modes. The 5 favorite color select modes can be modified to any of the 28 color select options by changing your preferred color modes as mentioned on page 41.

## Adjusting Viewing Modes

You can choose a viewing mode by pressing the [Mode] button on the Front Panel, or [Mode Up/Down] on the Control Console. Each push will allow you to cycle through all of the selected viewing modes.

## Default Viewing Modes

### Full Color Image

This mode gives a true color representation of the image being magnified.

### Factory Default Enhanced-Positive Image

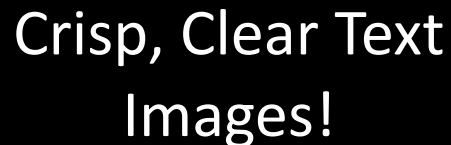
This mode provides a white background with black text. It increases the contrast to offer crisp text images for reading.



Crisp, Clear Text  
Images!

### Factory Default Enhanced-Negative Image

This mode provides a black background with white text. It increases the contrast to offer crisp text images for reading.



Crisp, Clear Text  
Images!

### Factory Default Color 1

In factory default this mode provides a black background with green text. This is one of the most commonly used color combinations. You may change this mode to any of the 28 available.

### Factory Default Color 2

In factory default this mode provides a black background with yellow text. You may change this mode to any of the 28 available.

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### Factory Default Color 3

In factory default this mode provides a black background with yellow text. You may change this mode to any of the 28 available.

### User Defined Color 4

In factory default this mode is Off. You may change this mode to any of the 28 available.

### User Defined Color 5

In factory default this mode is Off. You may change this mode to any of the 28 available.

### Factory Default Black-and-White Image

This mode gives a black and white representation of the image being magnified.

### Enabling Line & Window Markers (CCTV Mode ONLY)

1. Line & Window Markers can toggled on or off for use in the live CCTV mode.
2. When particular Line & Window Markers are enabled they will appear when cycling through your options as mentioned in the following section Cycling Between Line & Window Markers.
3. Press the “[Mode Up] and [Find/Enter]” on the Control Console, to enter the Menu. Then choose User Settings >> Display
4. You should see two options “Line Markers” and “Window Markers”  
Select the Option you would like to change with [Find/Enter].
5. Two Options should be visible under this Sub Menu  
Horizontal & Vertical
6. A Black Square indicates that the feature is enabled and will appear in the cycle rotation and a White Square indicates the feature is disabled and will not appear in the cycle rotation.
7. You can enable or disable all available Line and Window Markers depending on your preference.

### Cycling between Line & Window markers:

Rotating the [Marker Wheel] on the right hand side of the Control Console will allow you to toggle through the Marker Options which is dependent on your user settings.

If you do not see the Marker or Window Setting you would like, try enabling it in the user menu mentioned in more detail on page 41.



Figure 9 Marker Wheel

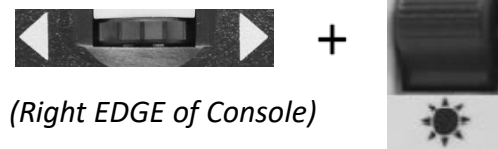
## Adjusting Line Markers and Windowing Positions

To adjust the position of the Marker (If markers are already enabled please skip steps 1 & 2):

1. Press the “[Mode Up] and [Find/Enter]” on the Control Console, to enter the Menu.
2. Enter into the Menu >> User Settings >> Display and ensure your desired “Markers Setting” are selected. Press the [Find/Enter] button on the Merlin Elite Pro Front Panel, or Control Console, to select your options.
3. Return to the live CCTV and use the scroll wheel on the right hand side of the console to select your desired marker.
4. Press the right hand console button and simultaneously use the brightness up and down to adjust the Line or Window Position. (Shortcut is listed below)

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

Press and hold the “[Marker Wheel] and press [Brightness Up/Down]”



(Right EDGE of Console)

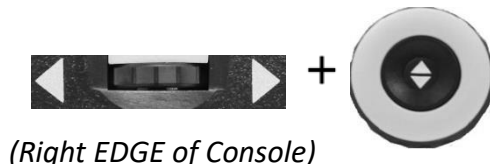
### To adjust the size between the Line Markers or size of the Windowing:

To adjust the size of the Marker (If markers are already enabled please skip steps 1 & 2):

1. Press the “[Mode Up] and [Find/Enter]” on the Control Console, to enter the Menu.
2. Enter into the Menu >> User Settings >> Display and ensure your desired “Markers Setting” are selected. Press the [Find/Enter] button on the Merlin Elite Pro Front Panel, or Control Console, to select you options.
3. Return to the live CCTV and use the scroll wheel on the right hand side of the console to select your desired marker.
4. Press the right hand console button while simultaneously turning the Zoom Wheel Clockwise or Counter-Clockwise to adjust the Line or Window size. (Shortcut is listed below)

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

Press and hold the “[Marker Wheel] and Scroll Zoom Wheel [Left or Right]”



(Right EDGE of Console)

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## Adjusting the Volume

1. On the Control Console you can turn the [Volume Wheel] (Left EDGE of Console) to increase or decrease the volume during OCR Readback.
2. Optionally it can be adjusted via the Audio Sub Menu in the system Menu.



*Figure 10 Volume Wheel*

## Adjusting the Brightness

1. Brightness can be adjusted in either CCTV mode or OCR Mode by pressing the Brightness Toggle Switch on the control Console.
2. Optionally it can also be adjusted via the Display Sub menu in the system Menu.



*Figure 11 Brightness Switch*

## HDMI/VGA Toggle

On the back of Merlin Elite Pro Monitor is an HDMI Dongle and VGA port which allows for a computer or tablet signal to be attached to the Merlin Elite Pro display (additional peripherals may be required). This port makes it possible to use the Merlin Elite Pro display as a computer monitor to save desk space.

1. To toggle from the camera image to the computer image ensure that the computer is connected to Merlin Elite Pro in the location indicated in Figure 12 HDMI & VGA Port or HDMI Dongle then press the “[Find/Enter] and [Pause/Play]” buttons on the Control Console.

2. There are 3 different video channels (CCTV, PC Input 1-VGA and PC Input 2-HDMI) so to toggle from the computer image back to the camera image, press the [Find/Enter] and [Pause/Play] button again on the Control Console until you see the desired display.

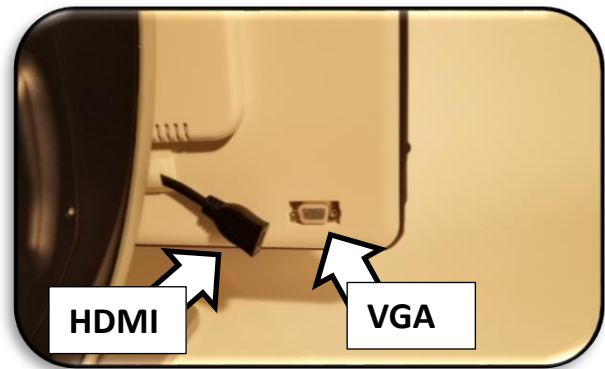


Figure 12 HDMI & VGA Port

3. When using Merlin Elite Pro Display as a computer monitor, the controls for the camera (e.g. Zoom, Mode, & Marker) will not work for the computer image.
4. Using the Merlin Elite Pro LCD as a computer monitor is similar to 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.

### Control Console Shortcut for HDMI/VGA Toggle

Press and hold the “[Pause/Play] and press [Find/Enter]”





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# Merlin Elite Pro Console Configuration

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## Control Console Introduction

The Control Console and the included Console Cover are required to use Merlin Elite Pro (shown on page 11). Familiarizing yourself with the Console will be helpful because how you configure the console will affect your user experience. Read on to learn more.

## Merlin Elite Pro Dynamic Controls

The Control Console for Merlin Elite Pro has an intelligent design that allows you to customize features on demand and switch between two control types which we have defined as “Basic” & “Advanced”. These two control methods are changed by taking the control console cover and either placing it onto the console or removing it. Merlin Elite Pro will detect the change and you will notice accessibility of certain buttons and features for your Merlin Elite Pro will also change when the Cover is ON OR the Cover is OFF. This enables you to quickly and easily switch between a Basic Control Scheme for ease of use and the Advanced Control Scheme which has a diverse range of features. You should also notice that the functions of certain keys will change depending on which scheme you are using. For beginning users we recommend initially starting with the Simplified Control Scheme and then as you become more comfortable graduate to using the Advanced Control & Advanced Features.

### Removing the Control Cover:

While you are in Basic Mode you can remove the Control Cover at any time, this enables the advanced features and controls.

### Placing the Control Cover:

If you are using Advanced Controls and want to return to Basic, place the Cover ON and it will return you to the Live Preview with the Basic control scheme.



*Figure 13 Console Cover*

## Basic Controls

One of the great features of Merlin Elite Pro is the ability to make the product simple to use. This is achieved by placing the console cover over Merlin Elite Pro (demonstrated in the “Basic Controls Enabled” figure shown to the right). The OCR button configuration changes to a more basic format that still provides you with all of the essential features that you will need to begin a document scan. If you are excited to begin reading right away, simply place the Control Cover on Merlin Elite Pro Console and press the button in the center of the Zoom Wheel to start and press it again to exit. A more complete summary of this configuration is shown on pages 12-13 of this user manual.

\*Some Configurable & Advanced options are not available while using the Basic control scheme.



## Advanced Controls

Merlin Elite Pro has a lot to offer when it comes to customization which is covered in the rest of this manual. If you have used the Basic Control Console Settings and are comfortable with it, you may start by trying out some of the advanced features that are available.

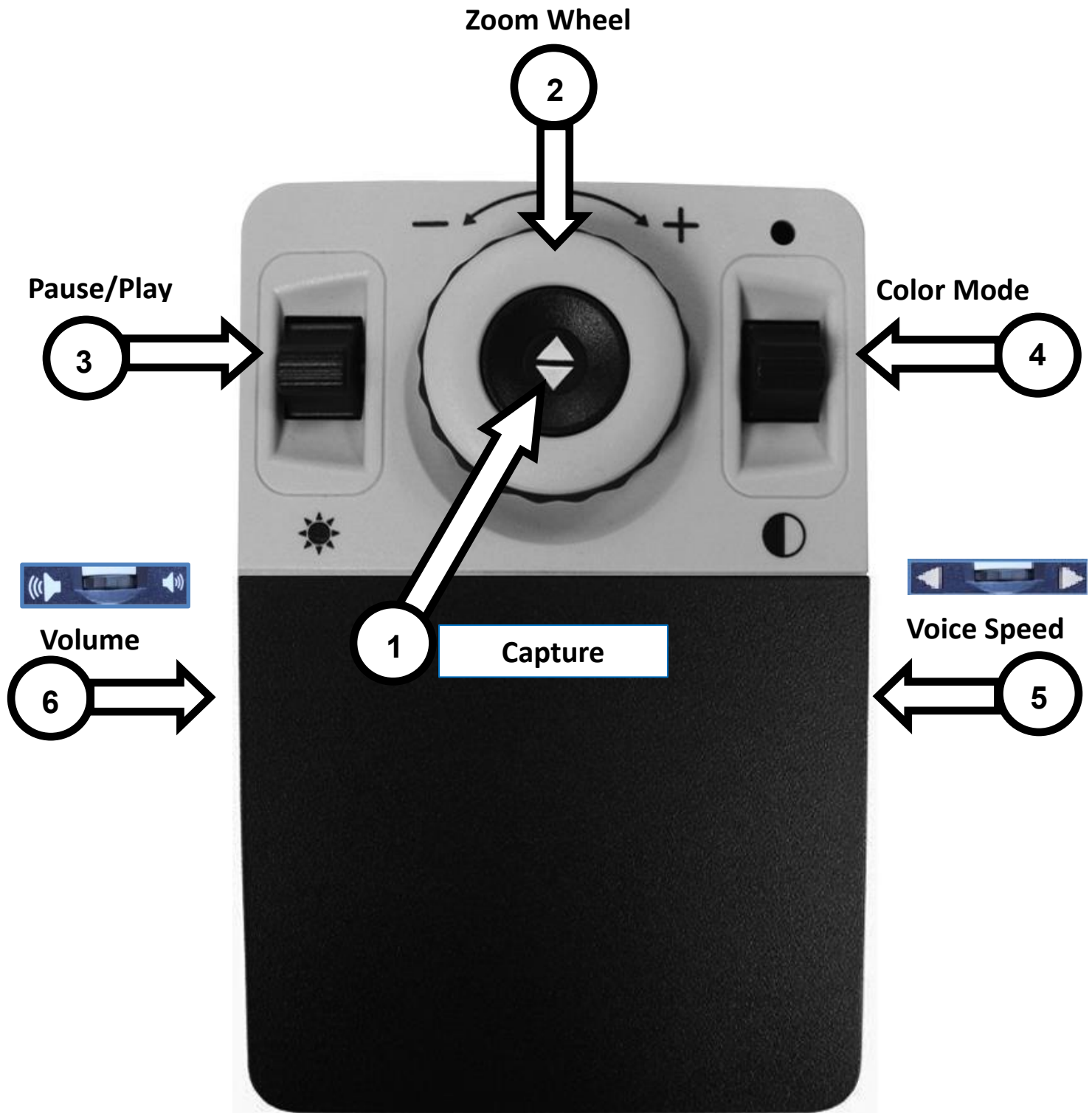
If you see a feature that you would like to use, remove the Control Console Cover (see the “Advanced Controls Enabled” This configuration is shown to the right). This enables features such as saving, zone identifiers, line navigation, and much more. For details on these features please refer to their respective pages and how they are used. For more information on the Advanced Console please see pages 14-15.



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# Merlin Elite Pro Basic OCR Control Console

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See the following

*Basic Console Controls in Detail*

Page for

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## BASIC OCR CONTROL CONSOLE BUTTONS DEFINED

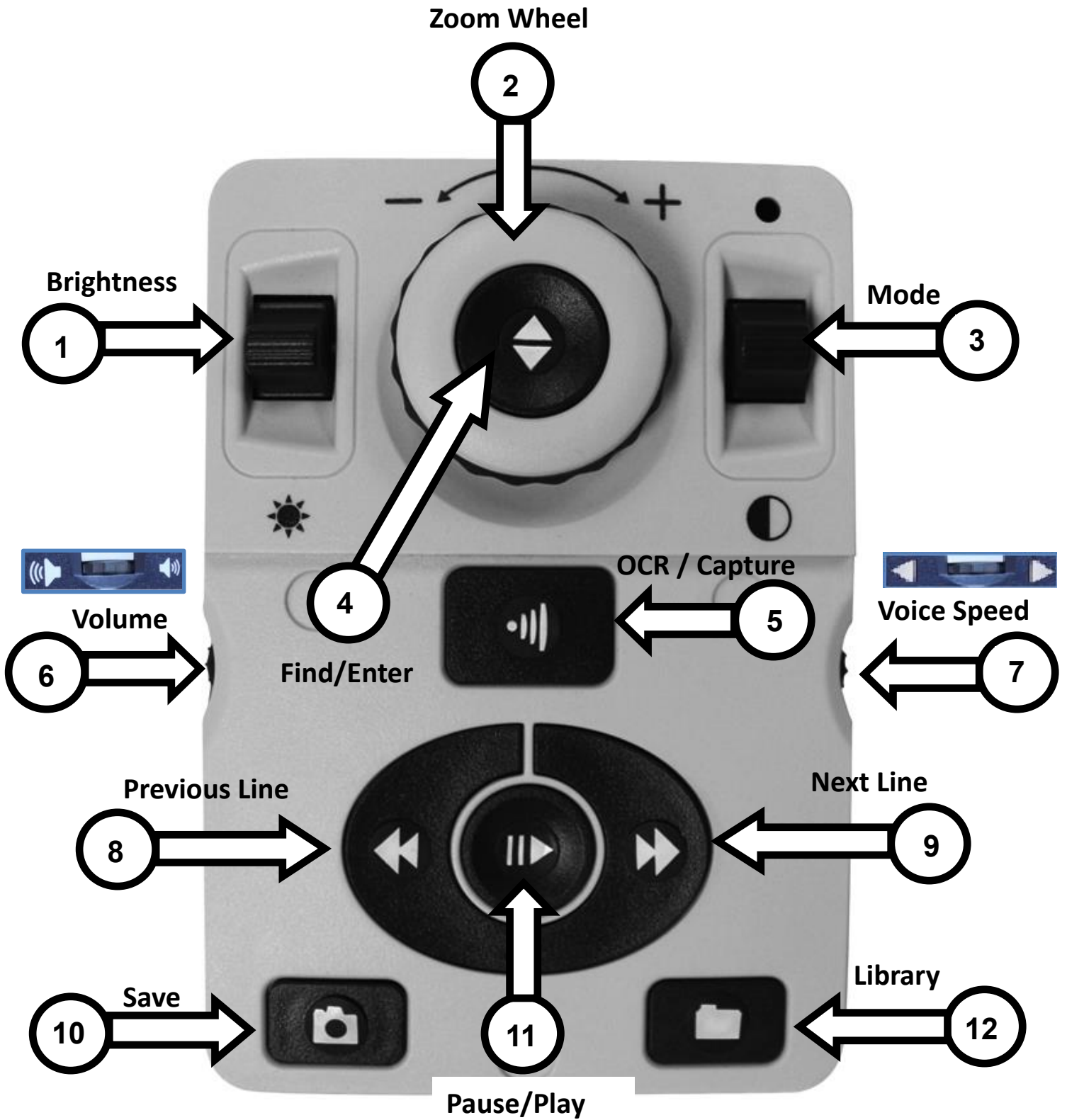
1. **Capture** – While in OCR mode press this button to capture an Image for Optical Character Recognition (OCR). Device will begin reading back to you. Press again to return to OCR mode.
2. **Zoom Wheel** – Turn clockwise/counter-clockwise to increase/decrease the zoom level.
3. **Pause/Play** – Press Up/Down to Pause and Resume OCR Reading after performing an OCR Capture.
4. **Color Mode** – Press Mode Up/Down to toggle through different color viewing modes.
5. **Voice Speed** – When in OCR mode, rotate to increase/decrease OCR Playback speed.
6. **Volume** – When in OCR Mode and reading, rotate to increase/decrease system volume.

**\*Merlin Elite Pro Lights can be turned on or off by pressing down the Voice Speed #5 and Volume #6 dials inwards at the same time.**

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# Merlin Elite Pro Advanced OCR Control Console

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*See the following Page for Advanced Console Controls in Detail*

- 
1. **Brightness** – When in OCR mode and viewing the guide frame, press Up/Down to increase/decrease brightness.
  2. **Zoom Wheel** – Turn clockwise/counter-clockwise to increase/decrease the zoom level (Zoom is Possible only while in OCR Readback)
  3. **Mode** – Press Mode Up/Down to toggle through different color viewing modes.
  4. **Find/Enter** – While in OCR Mode this is used to make a selection in various menus. This includes the Library and System Menu etc.
  5. **OCR/Capture** – Press to capture an image for OCR. Press again to exit out of OCR and back to the OCR Guide Frame.
  6. **Volume** – Use this control to adjust the volume during readback.
  7. **Voice Speed** – When in OCR mode, rotate the speed dial clockwise/counter-clockwise to increase/decrease OCR Playback speed.
  8. **Previous Line or Zone (In OCR Mode)** – Press to move to the previous line while reading or to move to the previous Zone while in Zone Overview.
  9. **Next Line or Zone (In OCR Mode)** – Press to move to the next line while reading or to move to the next Zone while in Zone Overview.
  10. **Save (In OCR Mode Only)** – ‘Press and hold’ for 2 seconds after performing an OCR Scan (Either while paused or during OCR Playback) to save the current OCR File. Perform the same operation while viewing the OCR Guide Frame to save the image as a picture.
  11. **Pause/Play** – Toggle operation: Used to pause, or resume play, during OCR Playback.
  12. **Library** – Press and Hold Library for approximately 3 seconds to enter and exit the Library. Rotate Zoom Wheel to Navigate. Press the Library Key briefly to return one level while the Find/Enter key to select your target.

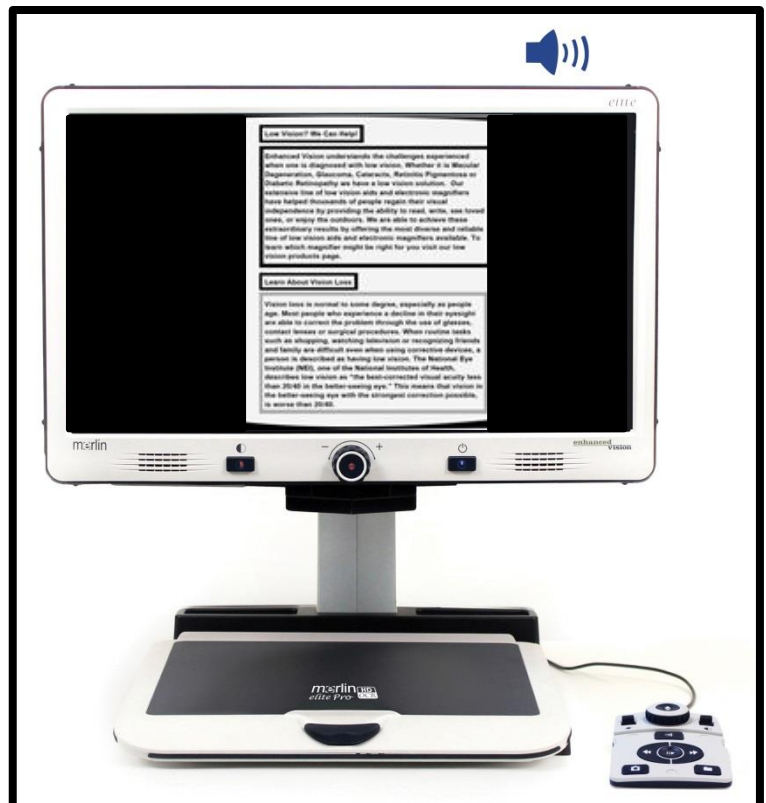


## Your first OCR Scan

Merlin Elite Pro provides you with *Figure 15 OCR Guide Frame* placement underneath the camera and read it aloud. OCR/Text-to-Speech is only available when the Merlin Elite Pro Control Console is plugged in. When you are ready to use your OCR for the first time follow the steps below:

1. Ensure that the device is in OCR Mode by pressing the Front Panel Center Knob Button.
2. Place the document under the Merlin Elite Pro camera and position the text within the indicated guide frame.  
*Please note- Merlin Elite Pro supports multiple orientations for documents when they are scanned as long as it is viewable under the Camera Chassis.*
3. Press the [Find/Enter] Button for Basic Mode or [Capture] button on the Advanced Mode Control Console.
  - You will hear a camera shutter sound which indicates the system has taken a snapshot of the document and will begin processing it for OCR.
4. After Merlin Elite Pro has completed the processing step it will begin to read the document aloud. You will be able to make various adjustments to your OCR Read-back features including Volume, Color Mode, Reading Speed and more.

*Please Note-If you are in Basic or Text Modes the readback operation begins automatically. If you are in an advanced control scheme and you have selected Full Page Picture mode it requires that you choose your "Zone" with our zone identifier feature and then Press Play. Zones are highlighted by using the Next or Previous buttons.*



5. To exit OCR/Text-to-speech Mode, Press the [Find/Enter] Button for Basic Mode or [Capture] button on the Advanced Mode Control Console.
6. This will return you to OCR camera mode and you are now ready to scan another document.
7. Now that you have completed your first scan you may want to change some of your settings.



## OCR Readback & Text-to-Speech (TTS) Modes

**Full Page Picture Mode-** This mode is typified by showing the actual photo of your target OCR Scan. A word highlight will display on each word while reading back to you. Magnification occurs on this document similar to the CCTV Display.

### Basic Picture-Mode (Basic mode only)

When the console is set to basic mode the page will be displayed as it appears in the guide frame during OCR Readback. The word highlight will be displayed at the current reading position and all of the Basic OCR Navigation features will be available. Pressing the [Find/Enter] Key will immediately exit from this mode and return you to the OCR Guide Frame.

### Advanced Zone-Mode (Advanced mode only)

The Zone Mode will display the picture as it appeared in the Guide frame with the addition of the Zone Identifier Graphics you have selected (Boxes are enabled by Default). This divides the target material into different “Zones” or blocks of text that you can highlight and navigate to using the Advance Console keys.

OCR readback will not engage automatically in this mode since you are given the option of choosing where you start reading. When you have highlighted the desired area simply press the Play button. Pressing [Capture] at any time will return you to the OCR Guide Frame.

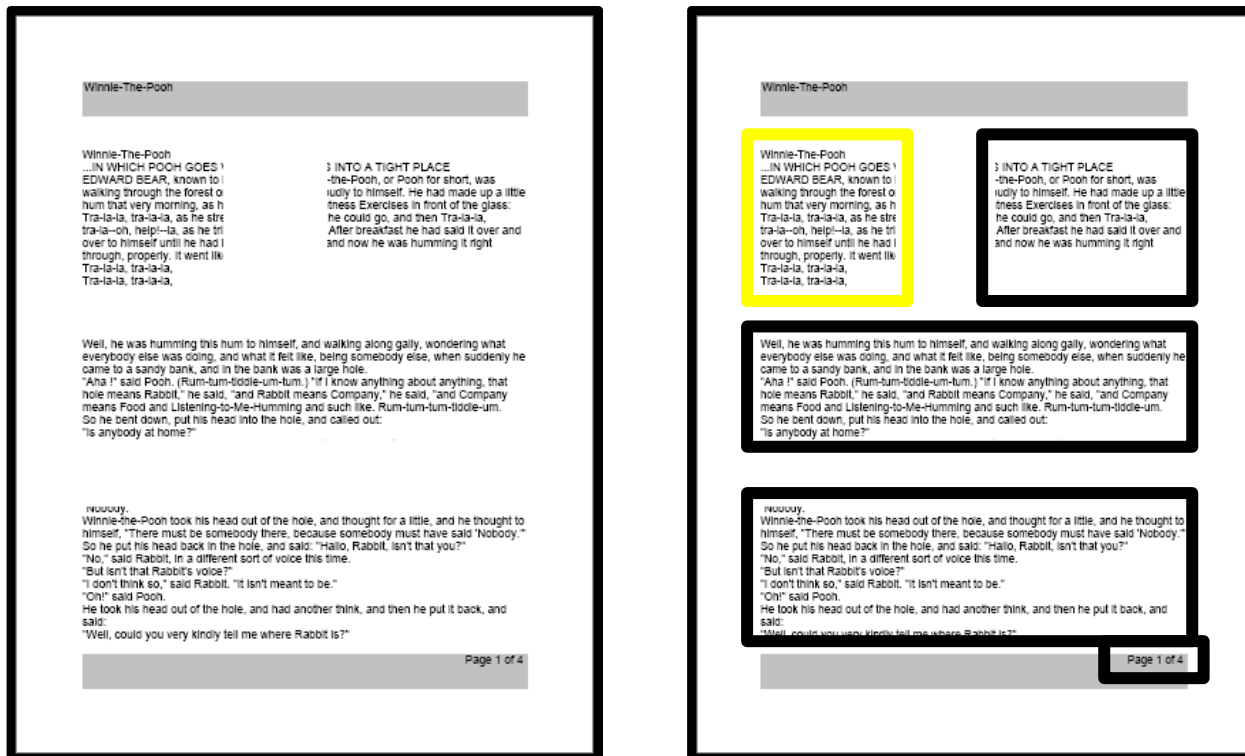


Figure 16 Full Page Picture Mode and Zone Identifiers

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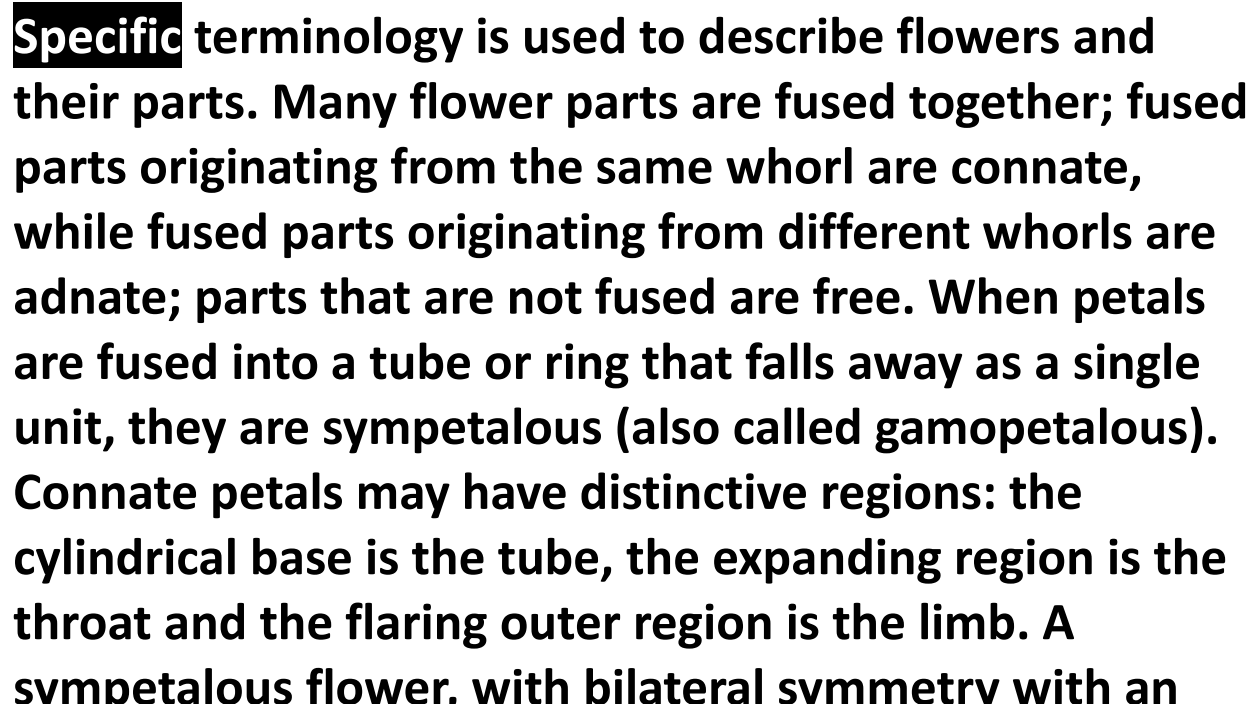
**Full Page Text Mode-** This mode is typified by strictly displaying the target text. This viewing mode gives a clear and crisp version Full Page View of digital text displayed in a word wrapped column like format. Magnification changes will dynamically adjust your material to ensure that it will always extend the entire width of the screen.

**Basic Full Page Text-Mode (Basic mode only)**

When the console is set to basic mode the page will be displayed in Full Page Text mode during OCR Readback. The word highlight will be displayed at the current reading position and all of the Basic OCR Navigation features will be available. Pressing the [Find/Enter] Key will immediately exit from this mode and return you to the OCR Preview Guide Frame.

**Advanced Full Page Text-Mode (Advanced mode only)**

This is a full feature mode that includes saving, quick navigation, etc. For navigation purposes the full page text mode it is organized into separate lines which can be navigated one at a time or via a single button press of the Next/Previous Line keys or optionally these can be held down to quickly navigate line by line. The word highlight is displayed 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 bilateral symmetry with an

*Figure 17 Full Page Text Mode*

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**Single Line Text Mode-** This mode is typified by strictly displaying the target text. This viewing mode gives a clear and crisp version Single Line View of digital text displayed in a word highlight that remains in the center of the screen. This Single Line format emphasizes making the text as large as possible and easiest to read while on screen.

**Basic Single Line Text Mode (Basic mode only)-**

When the console is set to basic mode the page will be displayed in Single Line Text mode during OCR Readback. The word highlight will be displayed at the current reading position and all of the Basic OCR Navigation features will be available. Pressing the [Find/Enter] Key will immediately exit from this mode and return you to the OCR Preview Guide Frame.

**Advanced Single Line Text Mode (Advanced mode only)-**

For navigation purposes the Single Line text mode is organized into lines that fill the entire screen which can be navigated one word at a time. The word highlight is displayed based on your selected color mode.



**Specific terminology is used to**

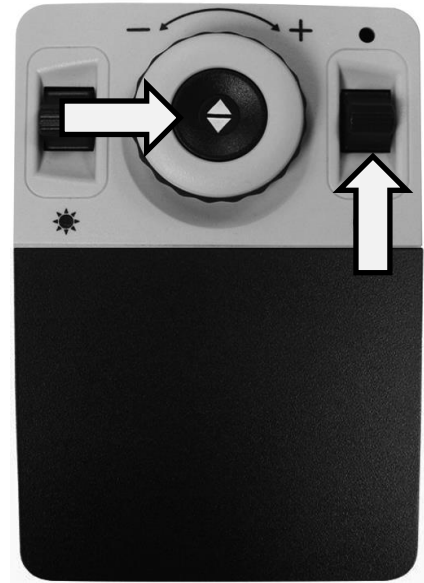
*Figure 18 Single Line Text Mode*

**Table Mode-** This is a special mode designed to facilitate accurate readings of table formatted documents such as bank statements, receipts, etc. It will disregard formatting options and read the document in a strictly left to right and top to bottom reading order. **To engage this option simply press and hold the “Capture” button for greater than 5 seconds.** Table mode is activated for a single OCR scan and will appear in the Full Page Text Mode mode only. After the scan is complete and you exit it will return to the previous mode.

# Merlin Elite Pro System Menu Overview

## System Menu:

Once Merlin Pro has been set up and turned on, you have the option to personalize your Merlin Pro settings to your own personal preferences. While in CCTV Mode press [Mode Up] and [Find/Enter] to access your Merlin Pro system menu. Then turn the [Zoom Wheel] in single increments to scroll through your available options. Merlin Pro will announce each potential item as you turn the Zoom Wheel. Use the [Find/Enter] button on the Control Console to make a selection. (Please note that Library will be un-selectable/greyed out in simple mode). The list of available choices is provided below.



1. Introduction
2. Games
3. Settings
4. Factory Settings
5. Library
6. Help
7. Exit



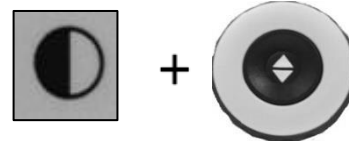
## Introduction Video

An introduction video has been included with your Merlin Pro that will give you a brief overview of all the features in an easy to view format. This allows you to brush up on all of the great features and functions available with your Merlin Pro with the instructions built-in! 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/Enter] Key. Also note that the introduction video can be replaced if you choose, please contact EV for more info.



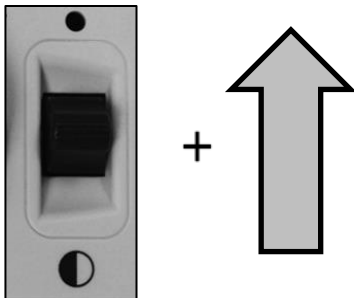
### Exit from Introduction Video and Return to Menu

Press and hold the “[Mode] Up and press [Find/Enter]” to exit.



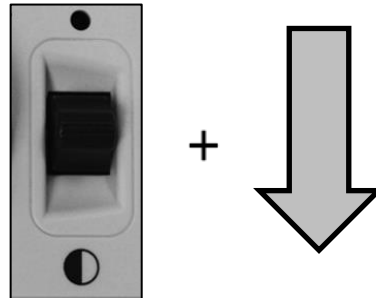
### Pausing the Video

Use [Mode] Up to Pause Video Playback



### Resuming the Video

Use [Mode] Down to Resume Video Playback



## Games

The Games sub-menu contains all the various games you can play. You will be presented with the “Games Carousel” which can be navigated by using the [Zoom Wheel] on your Control Console. A choice is confirmed by using the [Find/Enter] Key. All of the games require a normal USB Mouse to be connected to the rear port of your Merlin Pro in order to play. You can add a second port by using the included 2 port USB Hub shown on page 8 Item #10 of your Users Manual. *You will be prompted to connect a computer mouse prior to starting any game if you have not done so.*

List of games:

- 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 ever expanding sequence.



## Settings

The Settings Menu contains all of the configurable options to fine tune your user experience which is divided into 12 Sub-Menu options. Use [Find/Enter] Key & [Zoom Wheel] to navigate and select while in these menus.

1. Audio
2. Display
3. Time & Date
4. OCR Text Recognition
5. Set System to 50/60hz
6. Extended Zoom Levels
7. Working Distance
8. Languages
9. Auto-Language
10. White Balance
11. Screen Saver
12. Focus Locked



### Adjusting Audio Settings

The Audio Submenu 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 chime sounds. The Audio menu has 4 options which are shown below:

- 1) All Audio (ON/OFF) –The user can enable or disable all audible sounds and voices quickly. When this is toggled on all the default voices and sounds will be available and when it is toggled off all sounds will be turned off and Audio Submenu options will be greyed out.

EXIT	
All Audio	<input type="checkbox"/>
Volume	09
Sounds	
Voice	

- 2) Volume (1-10) – sets the default volume level for all Audio (1 to 10). User will use volume wheel on the console to increase or decrease the volume to a suitable option. Audio feedback will be in the form Volume 1, Volume 2, etc. Pressing the center of the Volume wheel will reset to default volume.

- 3) Sounds – This Sub-Menu has 3 items where you can turn on or off the following:
- All Sounds (ON/OFF) – This Enables or Disables Button Clicks and Chime Sounds.
  - Button Clicks (ON/OFF) – This Enables or Disables the Button Click Sound exclusively.
  - Chime Sounds (ON/OFF) – This Enables or Disables the Chime Sound exclusively.



- 4) Voice – user has the option to turn all voice off, speed and other configurable options.
- All Voices (ON/OFF) – Enables or disables all of the voice prompts on the system.
  - Menu Voice (ON/OFF) – Enables or disables all of the voice prompts in the system menus.

- Message Voice (ON/OFF) – Enables or disables voice prompts for all of the On-Screen messages that display.

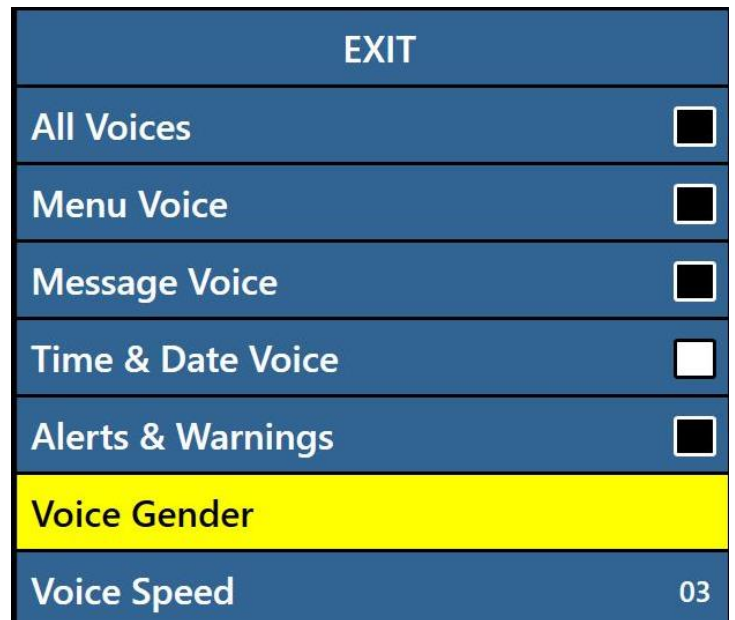
- Time & Date Voice (ON/OFF) – With this option you can opt to have the system announce the current date and time when you enter into the menu.

- Alerts and Warnings include system TTS messages that warn user of certain system conditions such as “No files Found” or “Document Saved”. It also

includes OCR messages such as , “Please align your document inside the frame”.

- Voice Gender (Male/Female) – Allows user to select the gender of the annunciations voice if it is available in the selected language. If available you can toggle this choice, otherwise only one selection will be displayed.

- Voice Speed (Speed Level) – Allows user to select from various voice speeds. Pressing the center of the Speed wheel will reset to default value during OCR Readback Mode





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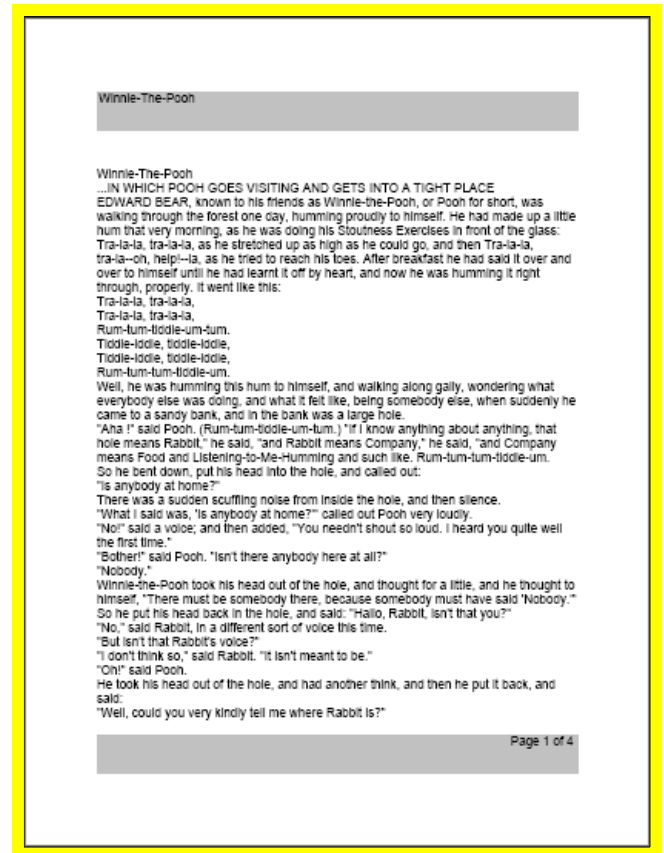
## Display Features

The User can select their preferred display and visual settings using this menu. Display Settings control all graphical user interfaces, icons and visuals that can be viewed on Merlin Pro and consists of the following options:

- 1) Screen Messages (ON/OFF) – these are all system and software notifications, warnings and alert messages that are displayed to inform the user of various conditions such as when lights are turned on “Lights ON” or when saving a file, “Saving...”, Export Complete, Factory Settings Restored etc. The user can turn all such display messages ON or OFF.
- 2) Brightness (1-10) – user can select the preferred Brightness level for the LCD display and User Interface.
- 3) Icons & Visuals – Allows user to Enable or Disable the display of icons such as lights ON/OFF icons or panning icons when in Preview/live or Freeze mode.
- 4) Line & Window Markers – Enables or disables Vertical or Horizontal Window Markers. These can be used to better focus on segments of text while you are in CCTV Mode.
- 5) Preferred Color Modes – This option allows you to select the preferred color modes that are cycled through utilizing the [Mode] key on both the control console and device Front Panel. The device comes pre-loaded with several color defaults but these can be changed according to your preference.

## OCR Text Recognition Settings

- 1) Guide Frame – This is the color of the boundary while in OCR Mode. It is used to help you position your text before an OCR Scan.
- 2) Zone Identifier – The scanned text in your document is broken up into blocks called “Zones” this determines if you want these zones identified with Rectangular boxes or Numbers.
- 3) Zone Boundary Color – This determines the color of the Zone Identifier features mentioned above.
- 4) Reading Highlight – This is the color of the box around the word currently being read in OCR readback Mode.
- 5) OCR Tune – This determines the processing sound that occurs after an OCR Scan. You have 3 options to choose from.
- 6) OCR Attributes – This tab allows you to optimize your OCR Processing. You are given two choices between Faster Processing Times or Higher OCR Accuracy depending on your preference.
  - a. “High Performance” uses a processing method designed to provide a Good OCR Result relatively quickly. If your target document is using Normal Fonts and is not very complex this method will suit your needs.
  - b. “High Precision” is designed to achieve more accurate results but will do so more slowly when compared with High Performance Mode. If you are concerned with overall accuracy of your OCR Scan results or have a complex document with smaller fonts it is recommended that you use High Precision.
- 7) OCR Modes-
  - a. Full Page Picture Mode- This mode displays the actual picture of your OCR scan and organizes them into “Zones”. This is the classic Merlin Pro Setting.
  - b. Full Page Text Mode- This mode displays a digital text version of your OCR Scan with pictures taken out. It fully covers the screen in a column format.
  - c. Single Line Text Mode- This mode displays a digital text version of your Ocr Scan with the pictures taken out. It covers a single line on the screen and features the largest text magnification level.



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## 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 to 50 or 60.

## Extended Zoom Levels

The user has the option to select extended magnification levels which adds the 77.0x magnification range. This becomes the new Maximum Magnification level on the device.

## Working Distance

The working distance feature is designed to elevate the optimal focal distance to allow several additional inches of height on a target material. This feature is particularly useful when viewing an object that is very close to the camera such as your hands when performing arts and crafts a pill bottle, etc or if you are viewing a larger book such as an encyclopedia or product box that is not flat against the X/Y Table.

## Languages & Setting the Primary Language (English-US by default)

This menu sets the primary language for *Merlin Elite Pro*. All the text and prompts will be displayed in the selected language. To change your Language Preference, follow these steps.

1. While in the User Settings Sub-Menu Press “[Mode Up] and [Find/Enter]” located on Merlin Pro Control Console to enter the Menu.
2. Turn the [Zoom Wheel] clockwise until “Languages” is highlighted.
3. Press the [Find/Enter] button to select the “Languages” sub menu. To select an option, turn the [Zoom Wheel] to highlight the desired language. Press the [Find/Enter] button to select that option. A black box next to that option indicates that the option is ON.

## Auto Language

The Auto Language Detection feature will allow you to select options from a list for the purpose of allowing multiple languages to be automatically detected and read without having to reset the language frequently in the menu when utilizing our OCR Feature.

This feature works by identifying portions of a particular text in a document and then recognizing them with the appropriate language specific characters. Once processing is complete Text-To-Speech begins in the desired language from those that are enabled in the Auto-Language list.

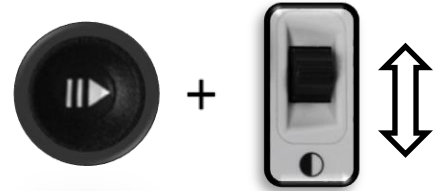
*\*The Auto-Language feature is recommended for those who read multi-lingual materials or swap between a variety of languages frequently. If you only tend to read in a single language it is recommended that you leave this feature disabled.*

## Quick Language Swap

When the user is on the OCR Preview Screen you can use the language Quick Swap feature to quickly change between two languages (Group 1 -> Swaps between English-American and German, Group 2-> Swaps Between English-UK and Chinese-Cantonese) or cycle through the entire language list 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 recognition feature.

### Language Quick Swap Next/Previous Language:

Press the “[Pause/Play] and then press “[Color Mode Up/Down]” to cycle Up and Down through the Language List



### Language Quick Swap Language Defaults:

Press and hold the “[Pause/Play] and then press and hold “[Color Mode Up/Down]” for 5 seconds to Swap

- [Group 1] English-American [Color Mode Up]
- [Group 1] German [Color Mode Down]
- [Group 2] English-UK [Color Mode Up]
- [Group 2] Chinese-Cantonese [Color Mode Down]



## White Balance

This option configures the image temperature and affects the viewing characteristics of the CCTV Image. There are 4 options:

- Auto – Automatically adjusted 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.

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## Screen Saver

You can adjust the overall time it takes for the screensaver 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 doesn't detect any motion under the camera.

- Set Screen Saver Time - This option configures how long the device must remain idle until it enters into Screensaver Mode. The Options are 5, 10, 20 & 30 minutes.
- Off – This enables or disables the screensaver feature.

## Focus Lock

Merlin Pro is equipped with a Focus Lock feature. You may lock the focus at a specific distance for optimal viewing at a fixed location. This feature is turned on and off via the product settings menu or optionally by pressing the Next and Previous keys simultaneously. Please note that once you turn on the Focus Lock the focal distance will remain locked so if you reposition some material in the FOV it may not be in optimal focus automatically. Also note that one Auto Focus operation is performed after zooming even when Focus Lock is engaged.

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

Simultaneously press the [Next] and [Previous] navigation keys on the control console to engage and disengage Focus Lock/Auto Focus



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## Factory Settings Menu

This menu is used to check the status and revision numbers of your device or to make it “Factory Fresh” in regards to the original configuration at the time it left the Enhanced Vision Factory.

## Product Information

This submenu contains important system information such as the Software Version, Language Group, Product Number etc.

## Reset Factory Settings

Selecting this option returns your system to the “Factory” default conditions and resets any custom settings or changes you have made as a user.

*\*Please note that this will not delete any of your saved images, pages or books.*



## Library Menu

The Library function stores all of your saved pictures, pages and books. To enter into the library you may do so via the system menu, CCTV mode or OCR mode by pressing the “Library” button on the advanced control Console. Items are saved into the library as either a Picture or a Document.

- Picture – To save something as a picture simply press and hold the “Save” button while you are in OCR mode.
- Page – To save an Item as a Page simply press and hold the save key while device is in OCR Readback Mode. When prompted if you would like to save as a page or book simply choose Page.
- Book – To save an Item as a book simply press and hold the save key while in OCR Readback Mode and when asked if you would like to append more pages choose the Green Checkmark indicating “Yes”. When you are done simply choose the Red X indicating “No”.



EXIT
View Pictures
View Documents
Import Files
Export Files
Export all Pictures
Export all Documents
Delete All Pictures
Delete All Documents

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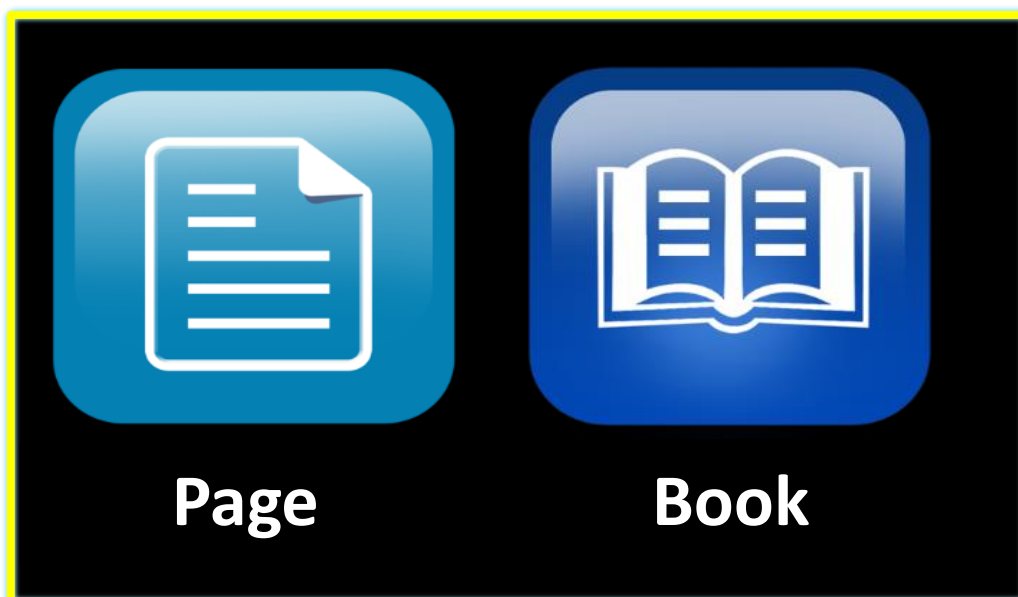
## Library Sub-Menus

When you navigate to the Library Menu you will be provided with Sub Menus for Pictures and Documents. Selecting “Pictures” takes you to the Display List whereas selecting “Documents” will take you to the Pages and Books Sub Menu.



## Documents Sub-Menus

The Documents tab is subdivided further into both Page (Single Page Documents) and Book (Multi-Page Documents).





# Library Features in depth

## Navigating Merlin Elite Pro Display List

Once you enter your library you will enter the “Display List” which will show you a preview of your Book, Page or Picture. Use the Zoom Wheel to cycle through all of your saved documents. You should also notice previews for the next and previous lines will change as you navigate between the different options. Press [Find/Enter] to make a selection and proceed to OCR Readback for Books and Documents or Picture Viewing Mode for Pictures.

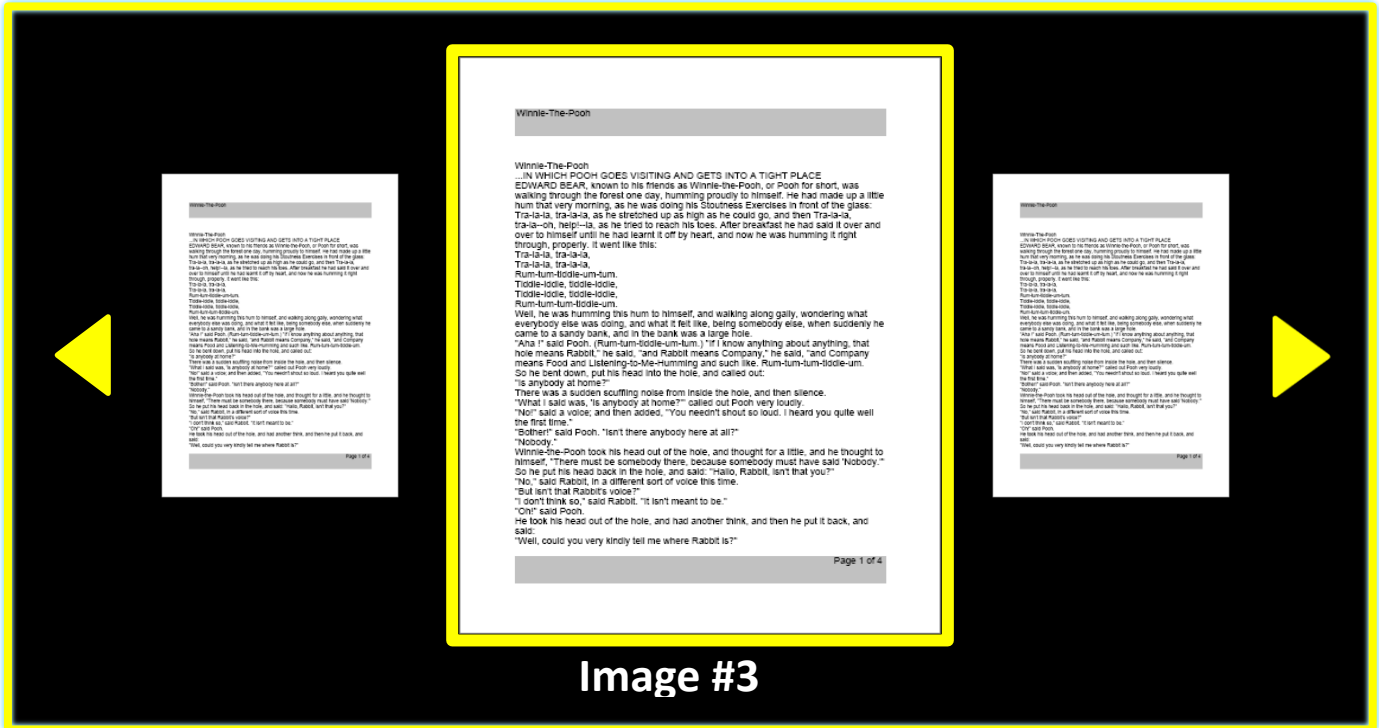


Figure 19 Library Display List

## Deleting a Single Item from the Display List

While in the Library Display List or while viewing any type of saved image simply press the right hand side console wheel in briefly. A garbage pail icon will display indicating that the image has been deleted.

### Control Console Shortcut to Delete an Image:

Press Right Hand side [Marker Wheel] While in the Library menu anywhere to delete an image.



(Right EDGE of Console)

## Navigating A Book (Next and Previous Pages)

In order to navigate all the pages in a book you will need to utilize the following shortcut to simulate turning the page. This is done by Pressing and Holding the [Pause/Play] button and then pressing the [Next] button to go forward one page or [Previous] button to return one page.

### Next and Previous Page Shortcut

Press and hold the “[Pause/Play] and press [Next] or [Previous]”



Or



## Picture Viewing Mode

All of the same Color mode & Magnification options are available in picture viewing mode with the addition of Panning which allows you to adjust the Field of View (FOV) for your saved Picture Image. This is accomplished by using the side scroll wheels on your control console. Please review the sample below. The Left-Side Scroll Wheel controls the movement Left and Right of the FOV. The Right-Side Scroll Wheel controls the movement Up and Down of the FOV.

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



*(Left EDGE of Console)*



*(Right EDGE of Console)*



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## Saving/Downloading Files to USB Drive

Merlin Pro has the option to export your files and documents to a USB Flash drive. To use this feature it is mandatory that you connect the 2 port USB Hub (Page 8 Item 10) and a USB Flash Drive to the available empty USB port in the back of your Merlin Pro. There are three different ways to export files that are listed below along with the instructions for each method.

- **Export Files – Exports one file at a time as selected by the user.**
  1. Enter into the System Menu >> Library >> Export Files.
  2. You will be presented with the Library Menus and Display List .
  3. Press and Hold the [Save] button for at least 2 seconds.
  4. Upon Activation the Save Icon will appear indicate that the image has been saved.
- **Export All Pictures – This option automatically exports all of your saved images**
  1. Enter into the System Menu >> Library >> Export All Pictures.
  2. Upon Activation the Save Icon will appear indicating that you are downloading the images.
  3. A completion chime will be heard and it will be safe to remove the drive.
- **Export All Documents – This option automatically exports all of your saved documents (Pages & Books)**
  1. Enter into the System Menu >> Library >> Export All Documents.
  2. Upon Activation the Save Icon will appear indicating that you are exporting the images.
  3. A completion chime will be heard and it will be safe to remove the drive.



*Figure 20 Saving Icon*

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## Exporting Files from the Library in a desired format

You can transfer your saved Merlin Elite Pro files off of your device into a variety of formats which include .txt, .rtf, .jpg, .pdf and .doc. To use this feature it is mandatory that you connect the 2 port USB Hub (Page 8 Item 10) and a USB Flash Drive to the available empty USB port in the back of your Merlin Pro. While the drive is connected simply access the Export Files menu shown below and select the formats you would like to transfer in. Then simply select “Export”.

EXIT	EXIT
View Pictures	.TXT <input checked="" 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	

## Deleting Images

Merlin Elite Pro has the option to delete your files and documents from the internal storage system

There are three different ways to delete files that are listed below along with the instructions for each method.

- **Delete Single File – Delete one file at a time as selected by the user.**
  1. At any point while viewing a single image in the Library the user may delete an image.
  2. Press the Right hand side scroll wheel button in.
  3. Upon Activation the Delete Icon will appear indicate that the image has been deleted.
- **Delete All Pictures – This option deletes all of your saved images**
  1. Enter into the System Menu >> Library >> Delete All Pictures.
  2. Upon Activation the Delete Icon will appear indicating that you are deleting all the images.
  3. A completion chime will be heard and it will be safe to remove the drive.

- 
- **Delete All Documents – This option automatically deletes all of your saved documents (Pages & Books)**
    1. Enter into the System Menu >> Library >> Delete All Documents.
    2. Upon Activation the Delete Icon will appear indicating that you are deleting the images.
    3. A completion chime will be heard indicating that all documents have been deleted.



*Figure 21 Delete Icon*

### **Importing Files from a USB Drive**

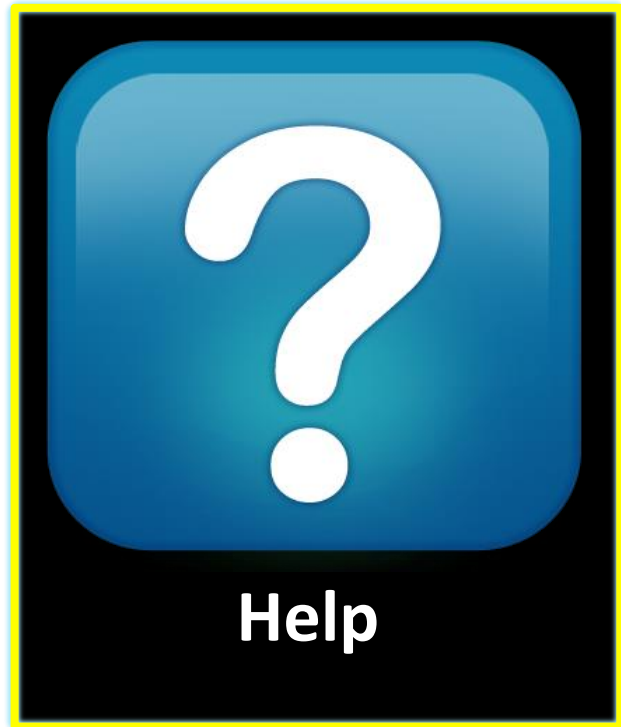
Merlin Pro has the option to import your files and documents from a USB Flash drive to be read, viewed or stored on your device. It is mandatory that you connect a USB Flash Drive and the included USB Hub (Page 8 Item #10) to the available empty USB port in the back of your Merlin Pro. Please copy the files you would like to import from your Computer prior to insertion. Supported file formats are as follows: .TXT, .RTF, .JPG, .PDF, .DOC.

### **Import Files – Imports one file at a time as selected by the user in chosen formats.**

1. Enter into the System Menu >> Library >> Import Files.
2. Select the file formats you would like to appear in the Display list.
3. Cycle through the Carousel Menu and all available files will appear. They will have a unique graphic icon which shows the file format at a glance.
4. Press the [Find/Enter] key to view a picture or begin OCR readback of a text file.
5. Press and Hold the [Save] button for at least 2 seconds to save the file to your DaVinci Internal memory.
  - a. Please note that Single Page documents are stored in the Pages Section of the library, Multi-Page documents will be stored in the Books Section of the Library and Photos will be stored in the Picture Gallery.
6. Upon Activation the Save Icon will appear indicate that the image has been saved.

## Help Menu

The Help Menu Contains a list of all of the available shortcuts and key presses to access your Merlin Elite Pro features. This is a Quick Start Reference with both Simple and Advanced references mapped in sufficient detail for you to be able to pick up using the device right away. The shortcut to exit from this menu once selected is included below. Optionally you can always press the “OCR Toggle” button on the front Panel to exit immediately. Use the [Find/Enter] Key on the control console to confirm entering this option.



### Exiting from the Help Menu

Press and hold the “[Mode] Up and press [Find/Enter]” On Control Console

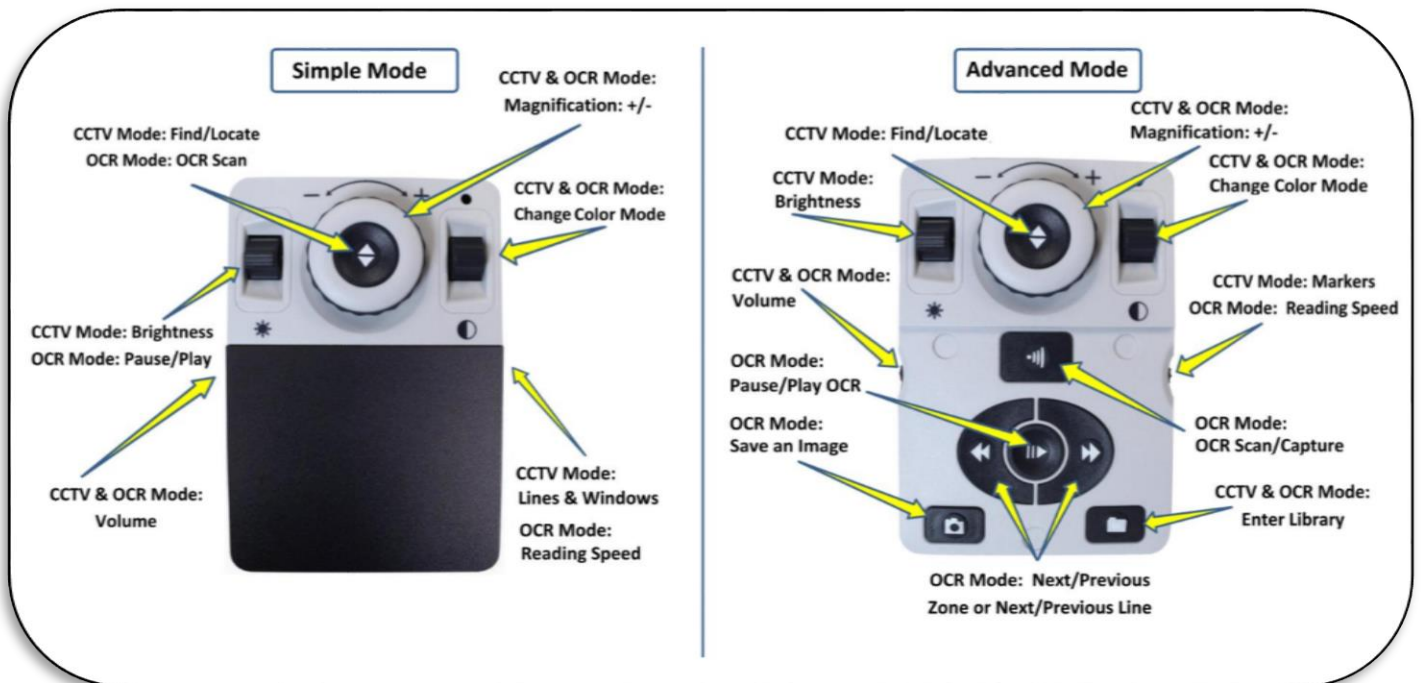
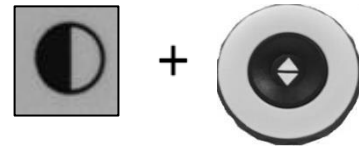


Figure 22 Help Menu

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# Merlin Elite Pro Power States

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**Please do not disconnect your Merlin Elite Pro from power until the Shutdown Sequence has completed. A message will display during shutdown which lasts about 10 seconds.**

## 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. You should follow the instructions below to place your device into Standby.

1. Locate the Power Button (Located on the Front Panel of Merlin Elite Pro).
2. Press this button once for less than 5 seconds.
3. The LCD Display should dim and the Front Panel LCD indicator lights should blink several times before turning off.
4. To resume simply press the Power button again.
5. **IMPORTANT NOTICE: Avoid disconnecting Merlin Elite Pro from power during standby or shutdown sequence. To maximize the life of your product please follow this procedure.**
6. **Please note that returning from Standby takes approximately 15-20 seconds until device is back on and ready to use.**

## 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 do a full shutdown you should follow the instructions below.

1. Locate the Power Button (Located on the Front Panel of Merlin Elite Pro).
2. Press this button and hold for 5 seconds to begin the Shutdown Sequence
3. A message screen will display indicating you are entering into the shutdown sequence please wait until all of the Status LED's are no longer illuminated and the message has been removed from the screen before removing your Merlin Elite Pro from a power source.
4. **IMPORTANT NOTICE: Avoid disconnecting Merlin Elite Pro from power during this shut down sequence. To maximize the life of your product please follow this procedure.**

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## Tips & Tricks

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### Improving OCR Accuracy

- To improve the accuracy of your Merlin Elite Pro ensure that whenever you begin a document capture the lighting in the room is evenly distributed over your target document. (Avoid Hotspots)
- Flatten out books (especially if it has a large spine) or other materials with an observable curvature.
- For optimal OCR Readback please position your material within the guide frame in its entirety. You can rotate your target material in any orientation to ensure that it fits completely within these boundaries.
- Turning ON or Off the LED can sometimes improve your accuracy on some materials this is done by pressing the volume and marker wheels in like buttons simultaneously.
- Try changing from High Performance to High Precision mode in the OCR Attributes menu in the User Settings Menu. The High Precision mode is tuned to make the fewest errors during OCR Processing and you should notice a big improvement on problematic documents.
- For small OCR Targets such as a business card or letter try placing a clean white sheet of Paper in the background to eliminate any distracting patterns that may exist in the background.

### Multiple Orientations

- Did you know that your Merlin Elite Pro supports all available viewing angles (Portrait and Landscape)? If your target document is too large or unusually shaped you can reposition it at another angle this enables you to get the perfect fit within the guide frame.

### System Restart

- In the event that your system exhibits any odd behavior you can quickly reset and power cycle the device by pressing the [Find/Enter] Key and Power Button simultaneously. This should immediately power down the system.

### User Menus

- Merlin Elite Pro is a feature rich system that comes with a lot of configurable options. You can customize your User Interface, System Sounds or System Display items to suit your preference. Once you are familiar with the system try changing or configuring these options to develop the perfect user experience customized to fit you!



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# Troubleshooting

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## **Merlin Elite Pro will not power on**

- Make sure the power supply from Merlin Elite Pro is securely connected to a working outlet. Push the Power button on Merlin Elite Pro's Front Panel. A blue light near the Power button, and blue Control Console LED, should illuminate indicating the power is turned on.
- Make sure the two parts of the power supply cord are securely connected.
- Ensure the power supply cord is completely plugged into the DC 19V IN jack on the back of the viewing stand base.
- Check the power strip/surge protectors ON/OFF switch and circuit breaker if *Merlin Elite Pro* is plugged into one.

## **The images seem to be out of focus and/or my OCR result is poor.**

- 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.
- Alternate Merlin Elite Pro LED Camera Lamp ON or Off. Making sure there is even ambient lighting which will assist in creating a better image.

## **Merlin Elite Pro is taking a long time to process the document for Text-to-speech.**

- Cycle the Power On & Off by pressing the Power button.
- If the device is not responding to these button presses you can Press and Hold the power button for more than 5 seconds to force a shutdown. Do not physically remove from power during this period of time.

## **Replacement LED lamps**

Your *Merlin Elite Pro* comes equipped with a LED lamp designed to provide years of trouble-free service. However, in the unlikely event that the LEDs need replacement, contact your place of purchase or Enhanced Vision at (800)440-9476 for instructions or assistance on replacing the LEDs.

## **Firmware Update**

To keep your *Merlin Elite Pro* up to date visit our software support page at:

<http://www.enhancedvision.com/support/software.html>

If you have any questions or require technical assistance with your product, please call (800) 440-9476, Monday – Friday, from 8 a.m. to 5 p.m. PST.

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# Merlin Elite Pro Specifications

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## Product Measurements

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

## Camera

- High Definition Sony 1080p Full HD Camera

## Product Weight:

- 40.1lbs (18.2 Kg)

## Magnification Range

- Normal Range: 2.4X to 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

## Warranty: 3 Years

\*Product specifications subject to change without notice.

## OCR Storage Capacity

- The file size of an OCR scan varies based on text density. 1000 full page scans at minimum can be stored on Merlin Elite Pro.

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# WARRANTY STATEMENT & CONTACT INFORMATION

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## Warranty Statement

### Enhanced Vision *Merlin Elite Pro* Warranty Policy

Enhanced Vision products are designed to give you the highest quality image, convenient features, ease of use and reliable service. **Merlin Elite Pro has been inspected and tested prior to shipping.** Enhanced Vision warrants Merlin Elite Pro against defects in material and workmanship under normal use for **three years** from the date of original purchase. Enhanced Vision, at its option, will at no charge either repair the product or replace it during the warranty period. There are no other expressed or implied warranties accompanying this product.

This warranty does not cover: a) Defects or damage from misuse, use in other than normal and customary manner, accident or neglect; b) Defects or damage from improper operation, maintenance, installation, adjustment, alterations or modification; c) Defects or damage from spills of food or liquid; d) All plastic surfaces and all other externally exposed parts that are scratched or damaged due to normal use; e) Damage due to operation of Merlin Elite Pro with equipment not supplied by Enhanced Vision.

- You must provide proof of purchase, bearing the date of purchase, in order to receive warranty service.
- Anyone using this product does so knowingly assuming certain risks, due to the need to utilize vision enhancement devices.
- A 2-year extended warranty option is available within 12 months from the date of purchase. Please contact Enhanced Vision for detailed information.

## Service Process

In the event that technical support or repair service is needed, please contact your local Enhanced Vision representative or the Enhanced Vision warranty service center.

If warranty service is required, please contact Enhanced Vision at (800)440-9476 Monday through Friday, between 8 a.m. and 5 p.m. Pacific Standard Time (PST) 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.**

# OTHER ENHANCED VISION PRODUCTS

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## DaVinci Pro



DaVinci Pro is a high performance desktop video magnifier (CCTV), featuring Full HD, text-to-speech (OCR) and a 3-in-1 camera. With HD you will experience high definition color and contrast giving you a beautiful, crystal clear picture and vibrant colors. Experience the joy of reading with our new text-to-speech feature. DaVinci Pro will read any printed text aloud with the push of a button.

Magnification: 24" LCD: 2X (min.) - to 80X (max.)



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## Smart Reader HD



Smart Reader HD is a lightweight, portable reader/scanner with large built-in user-friendly tactile control buttons. Position your document and press a button, in seconds Smart Reader begins reading aloud. Connect Smart Reader to a TV or monitor and enlarge your captured image to follow along as it reads. Perfect for work, home, school, vacation and on the go.



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## Pebble HD



Pebble HD boasts a new HD camera providing a crisp, clear, colorful, high definition picture. A new ergonomic lightweight compact design makes it the perfect companion whether at home or on the go. Carry Pebble HD in your purse, pocket, or clip it on your belt with the included carrying case.

Magnification: 1.25X – 13.5X



# OTHER ENHANCED VISION PRODUCTS

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## Jordy

Jordy is a battery-operated, full-color portable system that can be worn like a pair of glasses to see near, far and everything in between. Jordy becomes a fully functioning HD desktop video magnifier when placed on its optional 24" monitor docking stand.



## Merlin Ultra HD

Merlin ultra's Full HD camera technology produces an even truer, more natural image. Easily read books and magazines, read and write letters, manage your financial records, view color photos, do crossword puzzles, and even pursue a favorite hobby.

Magnification:

20" LCD: 1.9x (min) to 51.2x (max)

22" LCD: 2.1x (min) to 55.9x (max)

24" LCD: 2.3x (min) to 61.2x (max)



## Acrobat HD-mini ultra



Acrobat HD-mini ultra is a portable battery operated full HD CCTV. Full HD gives you a beautiful crystal clear picture and vibrant display. A generous 13.3" display offers a large field of view, allowing you to see more on the screen.

Magnification: 1.3X to 65X



# OTHER ENHANCED VISION PRODUCTS

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## Transformer HD



Transformer HD with Built-in Wi-Fi is a high performance portable video magnifier (CCTV), featuring a Sony® Full HD 1080p 3-in-1 camera for reading, writing, and viewing magnified images at any distance. Wi-Fi capability, and optional Full Page Text-to-Speech (OCR) makes it a perfect solution for school, work or home



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## Acrobat HD ultra LCD



Acrobat HD ultra LCD is a complete system featuring a 3-in-1 Sony HD camera with a 20", 22", 24", or 27" high resolution HD LCD producing maximum picture detail for clear, vivid color display. The adjustable arm, tilting screen, and rotating capability allows the camera to be positioned at any angle for optimal viewing. A built-in handle allows for easy transport.

Magnification: 1.4x to 71x adjustable magnification (varies with LCD size)



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## Amigo HD



Amigo HD is a truly portable desktop magnifier. Optimal viewing is achieved with a tilting 7 inch viewing screen. Amigo HD provides 1.4x to 14x digital magnification and the lightest weight in its class. Amigo HD has an integrated battery and can be taken anywhere.

Magnification: 1.4x – 14x  
(With extended zoom up to 25x)





# **enhanced vision**

Merlin Elite Pro is a high definition desktop CCTV – featuring Full Page text to speech (OCR). *Merlin Elite Pro* will read any printed text aloud with just the push of a button. Listen or Read along. For more information, Please visit [www.enhancedvision.com](http://www.enhancedvision.com).

**[www.enhancedvision.com](http://www.enhancedvision.com)**  
**(800) 440-9476 (US Office, toll free)**  
**(714) 465-3400 (US Office)**  
**+44 (0) 115 9442317 (UK Office)**  
**Fax + 49 (0) 6078 96982733 (DE Office)**  
**Tel. + 49 (0) 6078 9698270 (DE Office)**

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Product specifications subject to change without prior notice.