

# *e*Mag 120/150 HD

**Portable Video Magnifier  
User's Guide**

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Congratulations on purchasing the eMag 120/150 HD. We hope you enjoy using this high-quality device.

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## Safety and Maintenance

To keep the unit in good condition and to ensure safe usage, observe the following guidelines:

- Read the instructions in this user's guide before attempting to use the unit.
- Do not attempt to repair the unit or open its case. This product contains no user serviceable parts.
- Keep the unit away from wet areas, rain, and other sources of liquids or high humidity. Do not submerge the unit.
- Always operate the unit in a place where the temperature is between 10° and 40° C (50° and 104° F).
- Always store the unit in a place where the temperature is between -20° and 65° C (-4° and 149° F).
- Always use the unit on a stable, level, hard surface such as a desk or table.
- When cleaning the screen, camera lens, or self-view lens, unplug the power cord and apply a small amount of non-abrasive cleanser, such as the following, to a soft, lint-free cloth and gently wipe:
  - Water
  - Isopropyl alcohol
  - Petroleum benzene
  - Vinegar mixed with water at a concentration of no more than 10 percent vinegar, for example, 1.5 tablespoons of vinegar per cup of water (100 ml per liter)

**CAUTION:**

Do not apply excessive pressure to the screen, camera, or self-view lens. Do not spray cleanser directly on these items. Also, do not use any cleanser that contains the following agents: acetone, ethyl alcohol, ethyl acid, ammonia, or methyl chloride.

When cleaning the rest of the unit, make sure the unit is unplugged. Use a lightly dampened, soft, clean cloth with water or mild detergent.

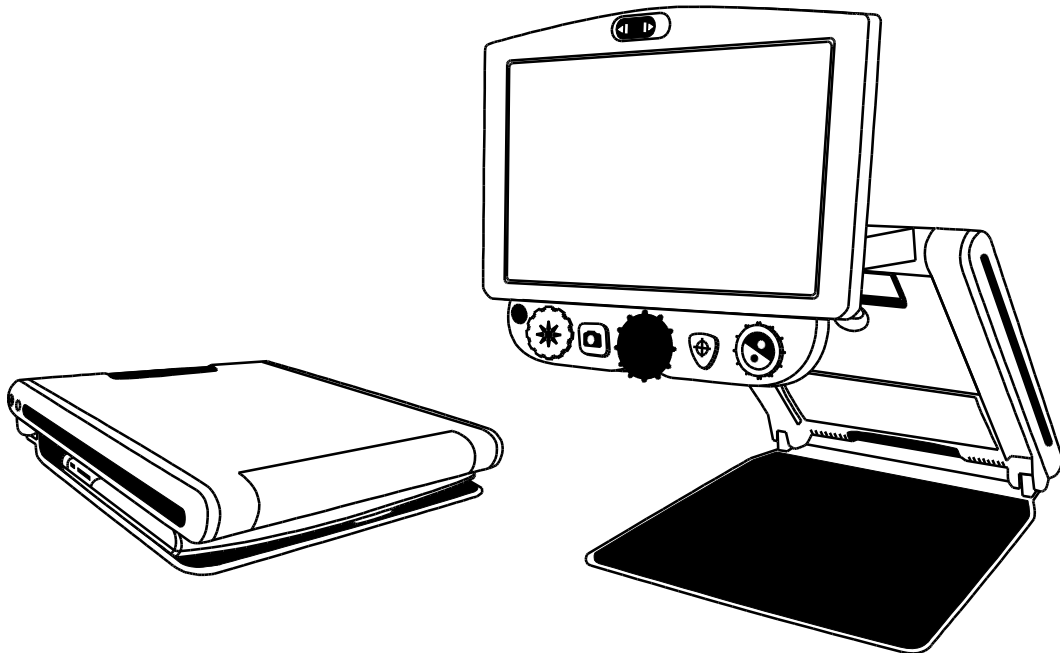
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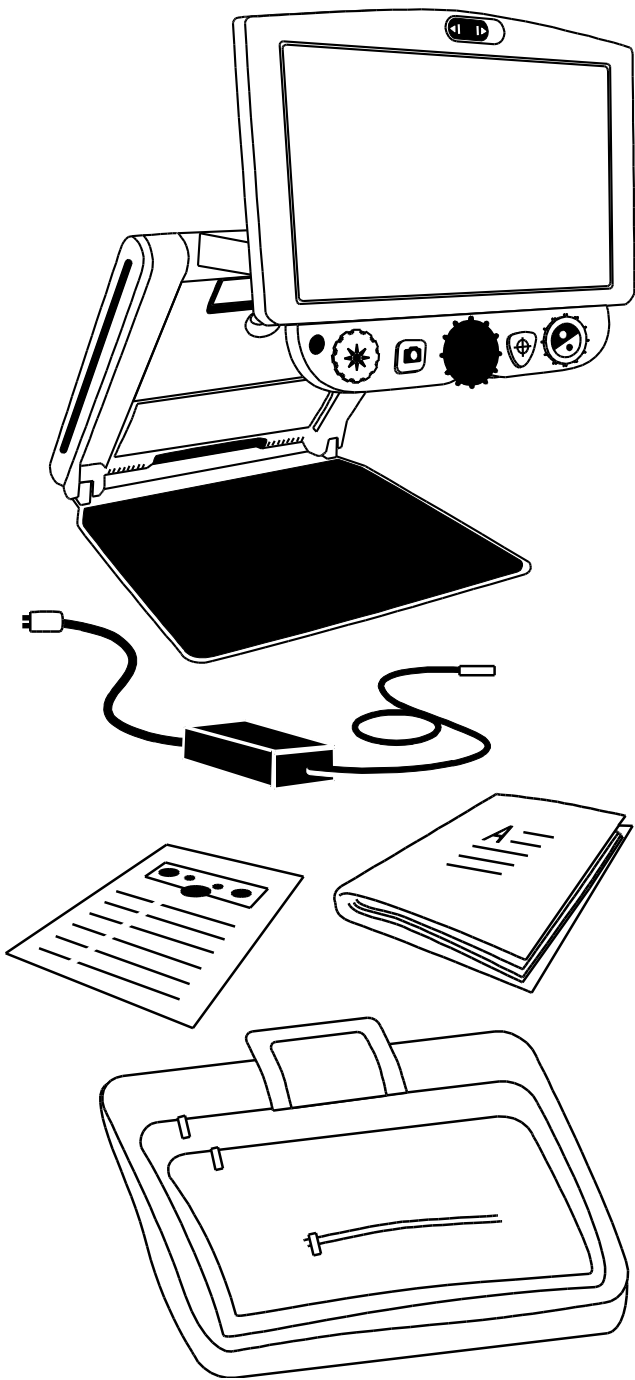
## Welcome to eMag 120/150 HD

The eMag 120/150 HD is a lightweight portable video magnifier. Its collapsible design makes it easy for travel.



The unit includes the following features:

- High-definition camera with auto-focus lens that displays high-quality images
- Magnification from 1.7x to 24x (12-inch model), and 2.1x to 30x (15-inch model)
- Six default color modes; 27 configurable color modes
- Freeze Frame to capture the current image on screen
- Find function to briefly zoom out and easily locate the center of the object displayed on the screen
- Adjustable Reference Lines and Masks to emphasize an area displayed on the screen
- SD Card slot – capture and save images to an installed SD Card
- Self-view camera – magnification from 1x to 2.5x




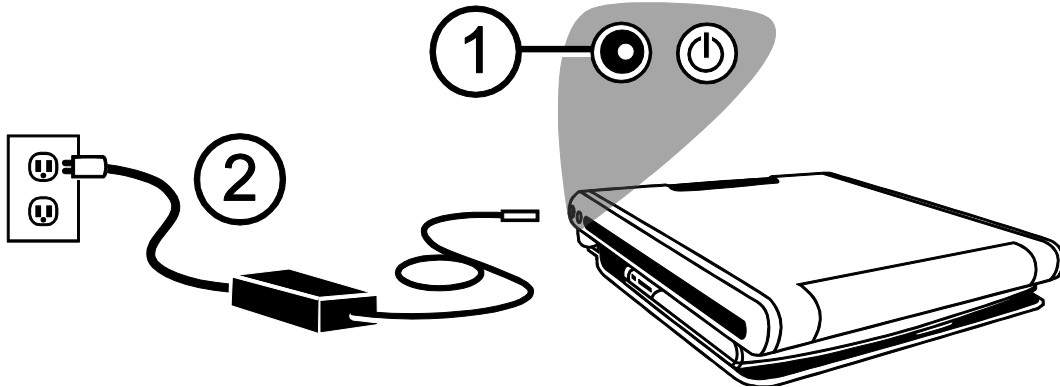
## What's in the Box

- eMag 120/150 HD portable video magnifier with 12-inch or 15-inch flat-panel monitor
- Power adapter and cord
- User documentation
- Carrying case
- Li-ion battery (optional)

### Powering the Unit

To power the unit or charge the battery, do the following:

1. Plug the power adapter cord into the unit's power jack (1). The jack is located on the left side of the unit next to the POWER button .
2. Plug the power cord (2) into a wall outlet.



An optional Li-ion battery is available for the unit. It provides approximately 4 hours of use and takes approximately 3.5 hours to fully charge.

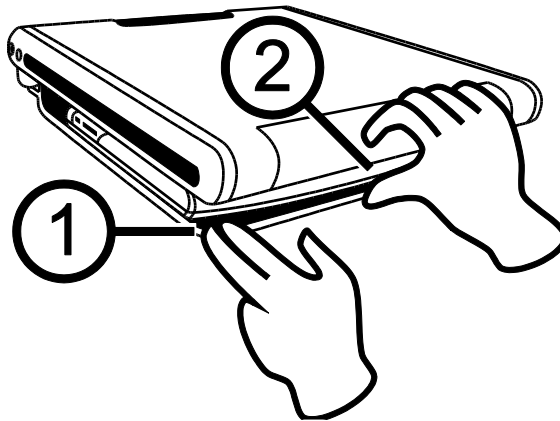
Refer to *Battery Status* on page 8 for information about battery operation.

To insert or remove a battery, see *Changing the Battery* on page 29.

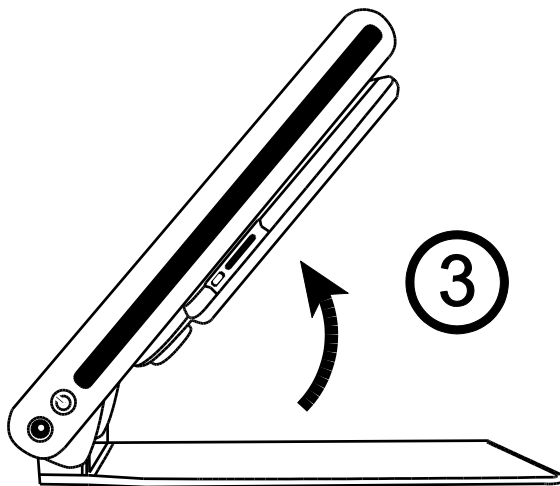
## Opening the Unit

**Note:** To apply power to the unit, make sure it is plugged into an AC outlet or that an optional battery is installed and charged. You can still use the unit while it is charging.

1. Place the unit on a sturdy, stable work surface.
2. Place two fingers on the left or right front corner of the unit's baseplate (1). With your other hand, grip the front edge of the unit's body (2).

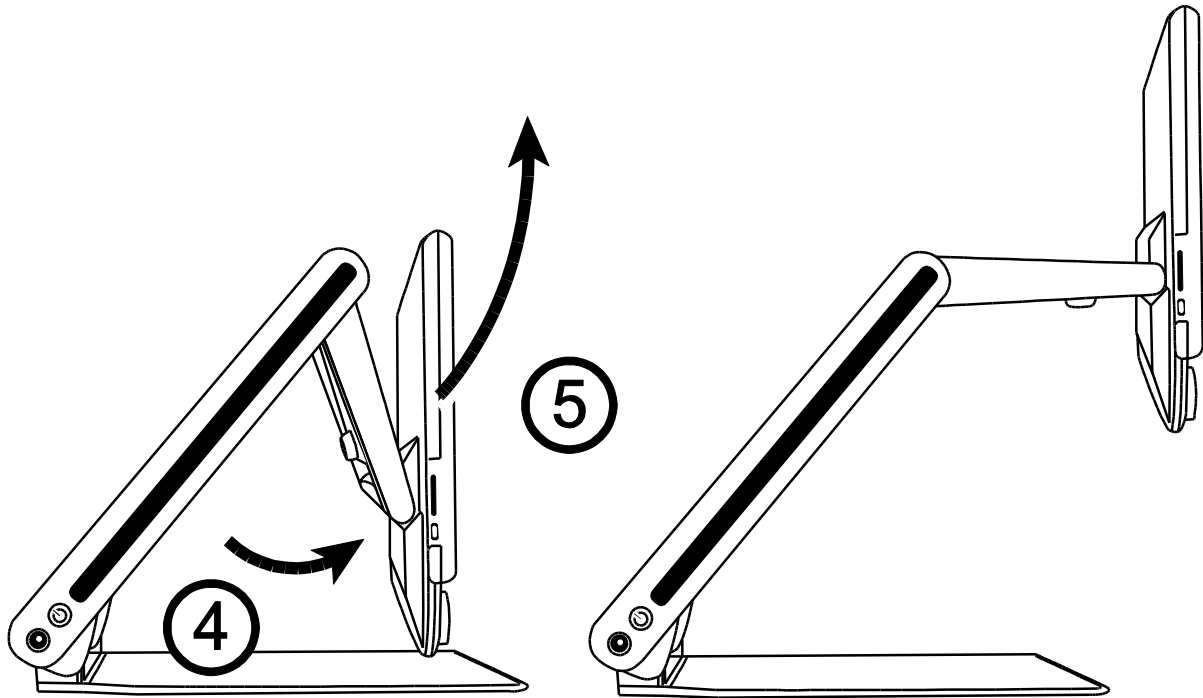


3. Raise the body until it locks in place (3).

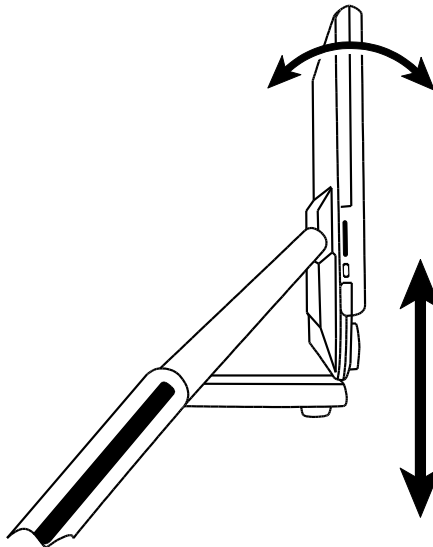




- Place both hands along the left and right sides of the monitor, and pull it toward you (4 and 5). The unit automatically powers on as you move the monitor from its closed position.



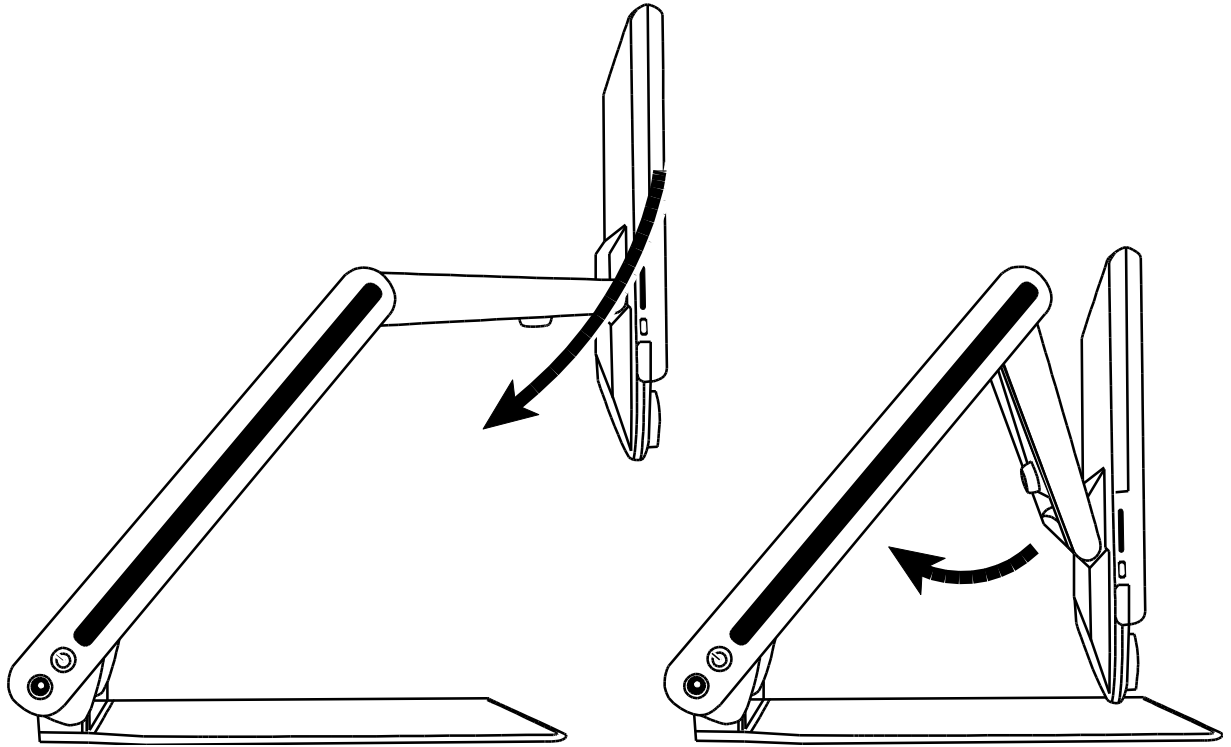
- Finally, raise, lower, or tilt the monitor to a position that is comfortable for you. After a few moments, the screen turns on.



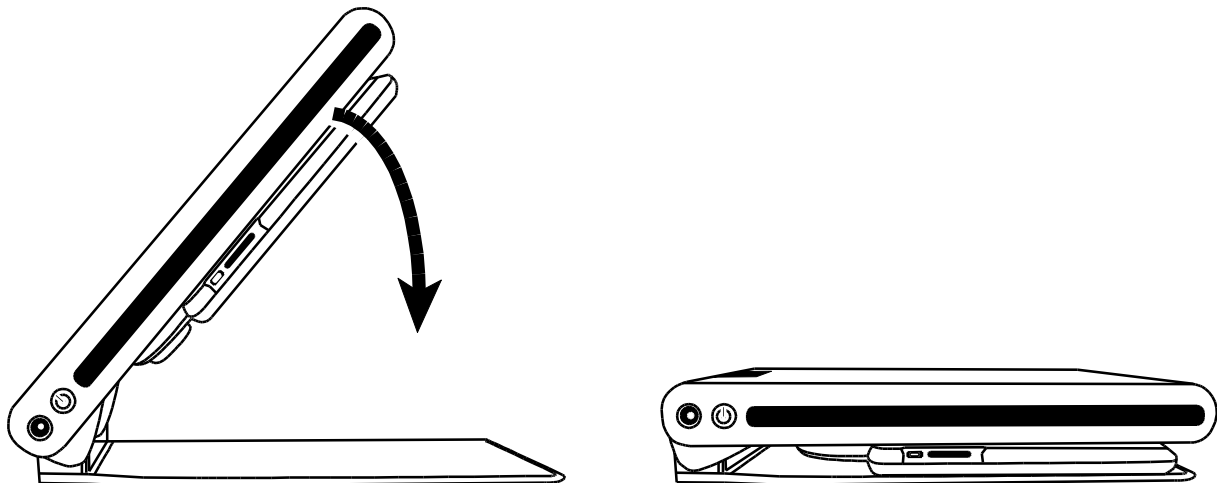
**Note:** If a battery is installed, and the unit does not power on, plug the unit into an AC outlet, or press the POWER button. The power connector and POWER button are located on the left side of the unit.

## Closing the Unit

1. To close the unit, use both hands to lower and rotate the monitor until it is against the unit's body.




2. Place both hands on the left and right sides of the body, and lower it until the unit is closed. The unit automatically powers off.





## Manually Powering the Unit On and Off

The unit automatically powers on when you open it and move the monitor from its closed position. The unit powers off when you collapse and close it.


To manually power the unit on and off, do the following:

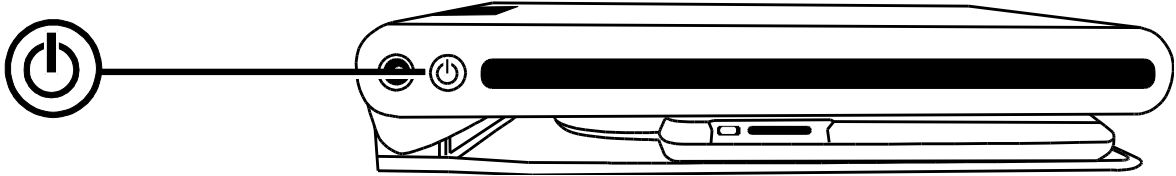
1. Press the POWER button . It is located next to the power jack on the left side of unit.

If the unit is off, the reading light turns on, and the camera's current view displays on the screen.

2. If an image does not display on the screen, try the following:
  - Press the POWER button  on the side of the unit
  - Make sure the power cord is connected to the unit
  - Make sure the power cord is plugged into a power outlet
  - If a battery is installed, verify that it is charged. A flashing red LED indicates low battery. See *Battery Status* on page 8 for more information.
  - Ensure that the wall outlet has power and is not malfunctioning. If the outlet is connected to a wall switch, make sure the switch is on.
  - For more solutions, refer to *Troubleshooting* on page 33
3. To turn the unit off, press the POWER button  again.

## Battery Status

The POWER button  is a multi-color LED (green/red) that indicates battery status when an optional battery is installed in the unit. The button is located next to the power jack on the left side of the unit.



**Green – Solid:** Battery charged – power adapter connected.

**Green – Flashing:** Battery charging – power adapter connected.

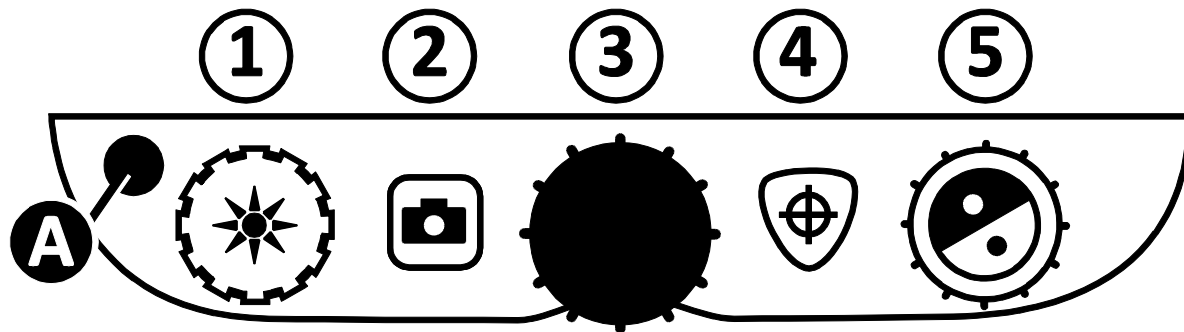
**Red – Flashing:** Battery low – less than 10 percent remaining.

**Red – Solid:** Error – if a power adapter is connected, unplug power adapter, wait a few seconds, and plug in again. If this condition persists, change the battery or contact Technical Support.

**No LED:** Battery charge ok, power adapter not connected; or unit is off.


## Control Panel Functions

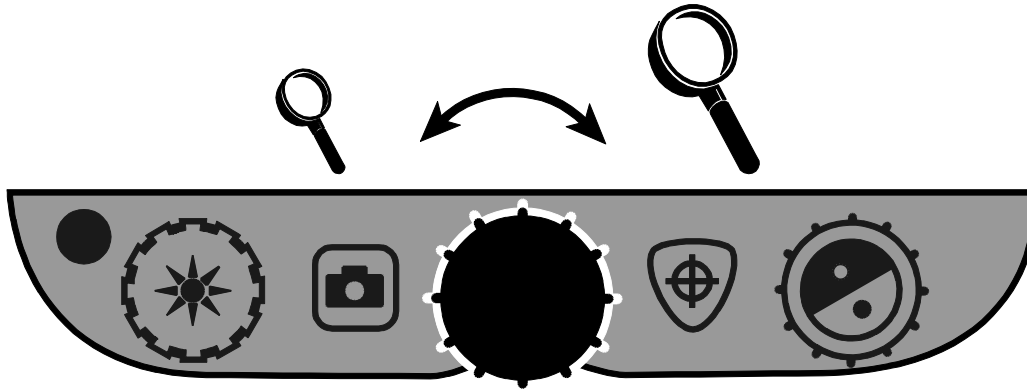
### Control Panel – Basic Functions





(1) BRIGHTNESS (Yellow dial)	Turn clockwise to increase screen brightness. Turn counterclockwise to decrease screen brightness.
(2) FREEZE FRAME (Red button)	Press to freeze the image that is displayed on the screen. Press again to return to live view. Press and hold for approximately six seconds to enter or exit Review mode. See <i>Reviewing or Deleting Images Saved on an SD Card</i> on page 16 for more information.
(3) MAGNIFICATION (Black dial)	Turn to zoom in and increase magnification or zoom out and decrease magnification
(4) FIND (Orange button)	Press and hold to zoom out and display crosshairs on the screen to help you reposition the object under the camera. Release to return to the previous magnification level.
(5) COLOR MODE (Blue dial)	Turn to cycle through color modes. See <i>Color Modes</i> on page 21 for more information.
(A) ADVANCED (Black button)	Use in combination with other controls to access and perform advanced features. See <i>Advanced Operation</i> on page 14 for more information.

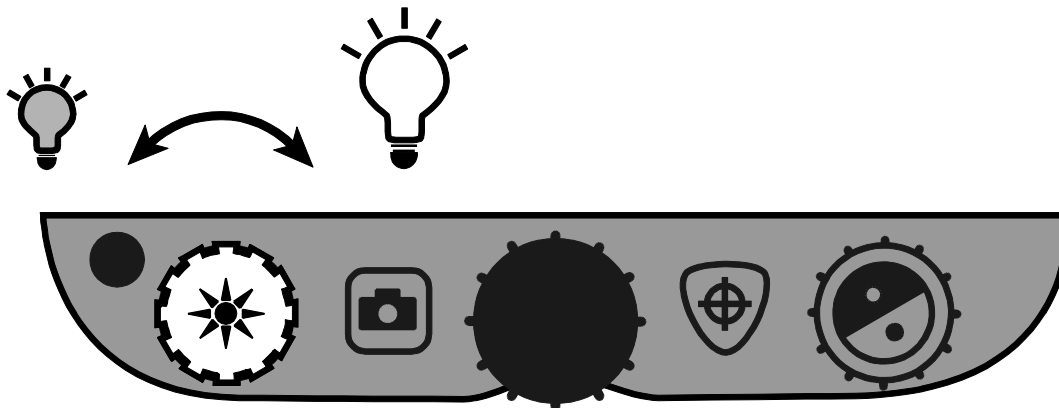
## Changing Magnification

Turn the center black **MAGNIFICATION** dial  clockwise to zoom-in and enlarge, or counterclockwise to zoom away from the object that is displayed on the screen.




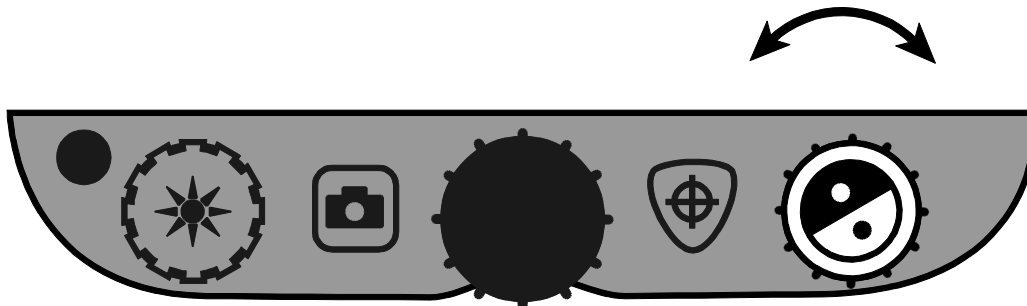
## Adjusting Screen and Image Brightness

- To make the image lighter, turn the yellow **BRIGHTNESS** dial  clockwise.
- To make the image darker, turn the yellow **BRIGHTNESS** dial  counterclockwise.



## Changing Screen Colors

To change screen colors, turn the blue **COLOR MODE** dial .



A color mode is a pre-defined color combination (for example, yellow text on a black background). You can use color modes to reduce glare and provide contrast to make it easier to read text on the screen. There are six default color modes:

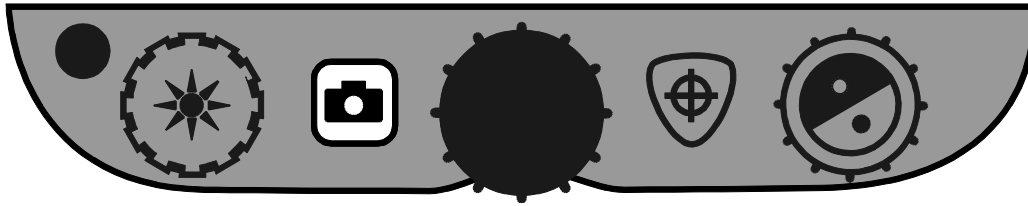
- True Full Color – always available, cannot be deleted
- Black on White (high-contrast positive) – always available, cannot be deleted
- White on Black (high-contrast negative) – always available, cannot be deleted
- Yellow on Blue
- Yellow on Black
- High-contrast full color (Color-Boost-Contrast)

You can also activate up to 27 additional color modes for a total of 33. For a complete list, refer to *Color Modes* on page 21. To add more color modes, refer to *Adding and Removing Color Modes* on page 19.

## Freezing an Image

To freeze the image displayed on the screen, do the following:


1. Press the red **FREEZE FRAME** button . The Freeze Frame icon  displays on the screen.

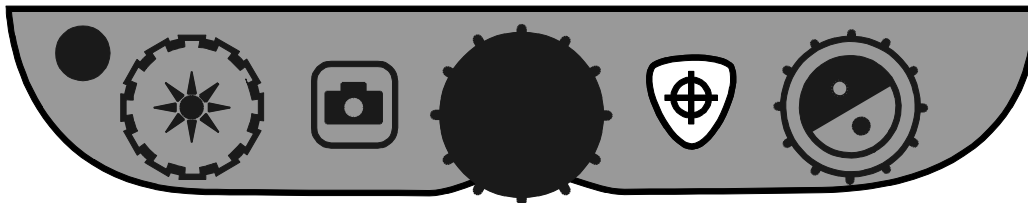


2. Press the button again to turn off Freeze Frame and return to live view.


## Using the Find Feature

The Find feature is useful when moving and repositioning a document or item under the camera. Crosshairs display on the screen to assist with positioning.

1. Press and **hold** the orange **FIND** button .



Crosshairs display on the screen (indicating the center of the image on the screen), and the camera zooms out.

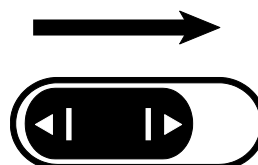
2. While still holding the button, move the item until the crosshairs shown on the screen align with the new area that you want to view.
3. Release the orange **FIND** button .

The camera zooms in to its previous magnification level and the crosshairs turn off.

## Self-view Camera

The self-view camera is located at the top center of the monitor. Use it to see yourself on the screen.

1. To select the self-view camera, move the camera cover to the right.

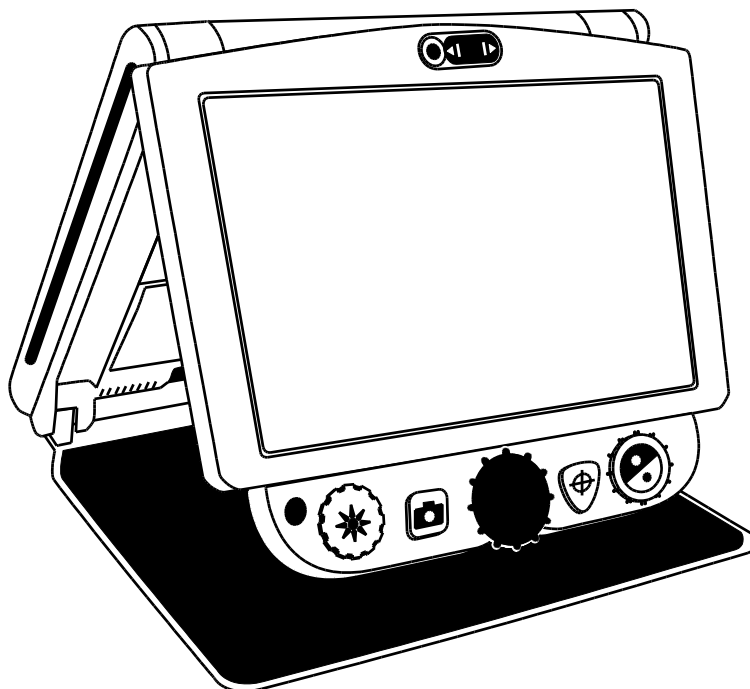


The unit switches to its self-view camera, and displays the self-view icon on the screen.



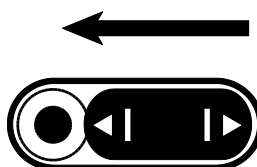
2. While sitting in front of the unit, position the display at an angle that is comfortable for you.

If necessary, hold the left and right sides of the display, and then gently tilt it forward or backward to adjust the angle, or lift it up or down to adjust the height.



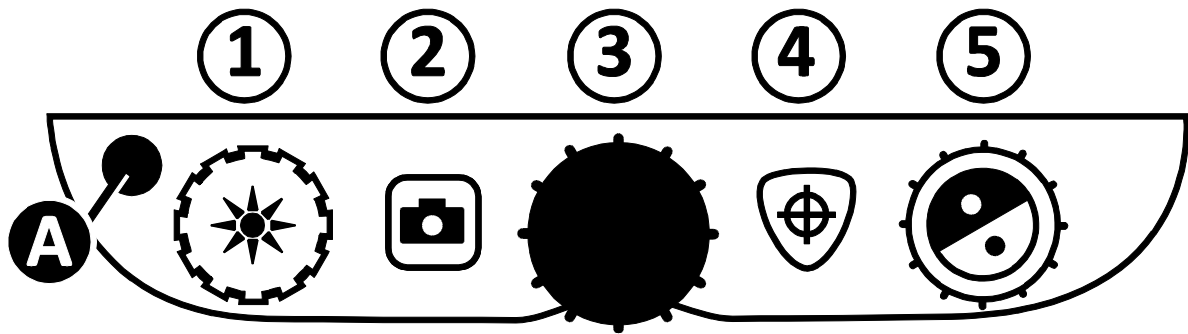
While in Self-view mode,

- You can turn the black **MAGNIFICATION** dial to zoom in and out
  - You can freeze or save the image displayed on the screen. For more information, see *Freezing an Image* on page 12, or *Saving an Image* on page 15.
  - You can change screen brightness as described on page 10
3. To disable the self-view camera, move the camera cover to the left.



The screen now displays the main camera's view.

## Control Panel – Advanced Features



### IMPORTANT:

The black **ADVANCED** button (**A**) is used with other control panel buttons and dials to access and perform more features and operations.

Always **press and hold** the **ADVANCED** button (**A**) first, and then press or turn the other buttons or dials to perform the advanced task.

For example, to dim or brighten the LED reading light, first **press and hold** the **ADVANCED** button (**A**), and then turn the yellow **BRIGHTNESS** dial (1).

<b>(A + 1)</b> BRIGHTNESS (Yellow dial)	Turn to adjust the LED reading light brightness.
<b>(A + 2)</b> FREEZE FRAME (Red button)	Press and <b>hold</b> to save the current image to an SD Card. Release when the Save icon appears on the screen. Images can only be saved when an SD Card is in the SD Card slot.
<b>(A + 3)</b> MAGNIFICATION (Black dial)	Turn to cycle through and display horizontal lines, horizontal masks, vertical lines, vertical masks, and no lines or masks on the screen.
<b>(A + 4)</b> FIND (Orange button)	Press and <b>hold</b> for approximately 10 seconds to enter or exit Configuration mode.
<b>(A + 5)</b> COLOR MODE (Blue dial)	Turn to adjust the spacing between the lines or masks.



## Adjusting LED Brightness

To adjust the LED reading light brightness, do the following:

1. Press and **hold** the black **ADVANCED** button.
2. Do one of the following:
  - Turn the yellow **BRIGHTNESS** dial  clockwise to increase brightness.
  - Turn the yellow **BRIGHTNESS** dial  counterclockwise to decrease brightness.
3. Release the black **ADVANCED** button when finished.

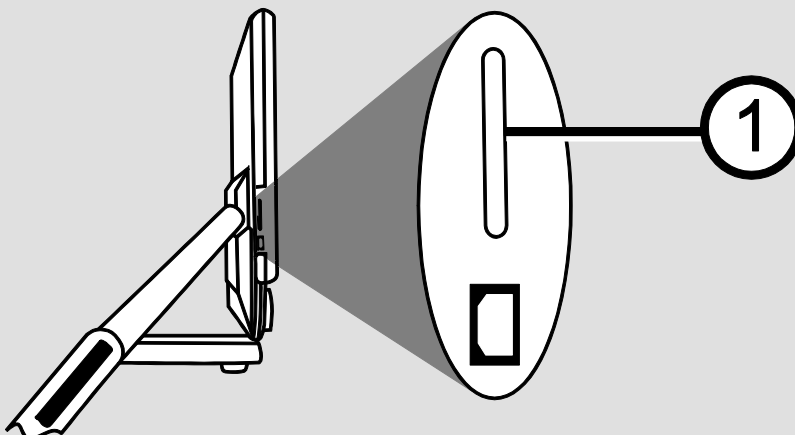
## Saving an Image

To save the live or still image that is displayed on the screen, do the following:

1. Press and **hold** the black **ADVANCED** button, and then the red **FREEZE FRAME** button  until the Save icon  displays.
2. The unit returns to live view, and the image is now saved to the SD Card.  
Images are saved in 24-bit BMP format with a resolution of 1280 x 800 pixels.

Images are named and numbered in the order saved, for example, IMG\_0001.bmp, IMG\_0002.bmp, and so on.

**Note:** Images can only be saved when an SD Card is in the SD Card slot (1). If the image cannot be saved, **X** displays on the screen.




## Reviewing or Deleting Images Saved on an SD Card


**Note:** To enter Review mode from live view or freeze frame, press the red **FREEZE FRAME** button for six seconds.

**X** displays if an SD Card is not in the SD Card slot. Verify that the SD Card is inserted in the card slot.

After entering Review mode, the latest saved image displays on the screen. To review other images saved on an SD Card, do the following.



1. Turn the blue **COLOR MODE** dial  to move forward or back through the saved images.
2. The Save Image check box  is selected for each image.

To delete the current image while in Review mode,

1. Press and **hold** the black **ADVANCED** button and then press the orange **FIND** button  to clear the check box .

The image is deleted when you exit Review mode.

**Note:** If you change your mind and decide to save the image, press the **ADVANCED** and **FIND** buttons again to toggle and select the check box **before** exiting Review mode.


2. To delete another image, turn the blue **COLOR MODE** dial  to move forward and back through the saved images, and then repeat step 1 above.
3. Press and **hold** the red **FREEZE FRAME** button  for six seconds to exit and return to live view.

## Displaying a Slide Show

You can create a slide show that loops continuously using the images saved on the SD Card. Each image displays for approximately five seconds. The order that images display is based on their file names, for example, IMG\_0001.bmp, IMG\_0002.bmp, and so on. For best results, all images on the SD Card should have a resolution of 1280 x 800 pixels.

To rearrange the order that images display, you can insert the SD Card into your computer, rename the files (alphanumeric characters) in the order that you like, and then reinsert the SD Card into the unit. (The file names should not be longer than eight characters followed by the BMP file extension.)


### Before You Begin


You must be in Review mode before you start a slide show. To enter Review mode, press and **hold** the red **FREEZE FRAME** button  for approximately six seconds.


To start the slide show, do the following:

1. Press and **hold** the black **ADVANCED** button and the red **FREEZE FRAME** button .

The first image stored on the unit, based on its file name, displays on the unit's screen for approximately five seconds followed by the second image, the third, and so on.

2. To stop the slide show and return to Review mode, press the black **ADVANCED** button and the red **FREEZE FRAME** button .

To restart the slide show, press the black **ADVANCED** button and the **FREEZE FRAME** button  again.


3. To stop the slide show and return to live view, press and **hold** the red **FREEZE FRAME** button  for six seconds.

## Reading Lines and Reading Masks

Reading lines display as two horizontal or vertical lines on the screen. Reading masks block part of the screen to show only a horizontal or vertical slice of the screen. Use these items to help you maintain your place while reading text. You can also adjust the distance between the lines or the masks that display on the screen.

### Turning On Lines or Masks

To select reading lines or mask, do the following:

1. Press and **hold** the black **ADVANCED** button.
2. Turn the black **MAGNIFICATION** dial  to cycle through and select one of the following options: horizontal lines, vertical lines, horizontal masks, vertical masks, or none.



Horizontal  
Lines



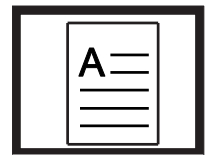
Vertical  
Lines



Horizontal  
Masks





Vertical  
Masks




None

### Adjusting Distance Between Lines or Masks

To adjust the distance between lines or masks, do the following:






1. With lines or masks displayed on the screen, press and **hold** the black **ADVANCED** button.
2. Do one of the following:
  - Turn the blue **COLOR MODE** dial  clockwise to increase the distance between lines or masks
  - Turn the blue **COLOR MODE** dial  counterclockwise to decrease the distance between lines or masks
3. When finished, release the black **ADVANCED** button.

## Adding and Removing Color Modes


The unit has six default color modes that are available as you turn the blue **COLOR MODE** dial . You can have up to 12 color modes enabled at one time.

Using the Configuration menu, there are an additional 27 different color combinations that you can choose from. For a list of color modes, see *Color Modes* on page 21.

To add or remove color modes, do the following:

1. Press and **hold** the black **ADVANCED** button and the orange **FIND** button  for approximately 10 seconds to enter the Configuration menu.
2. Turn the blue **COLOR MODE** dial  to view the different color combinations.
  -  indicates that the color mode is enabled
  -  indicates that the color mode is disabled
3. Press the red **FREEZE FRAME** button  to toggle between enabling and disabling the current color mode displayed on the screen.

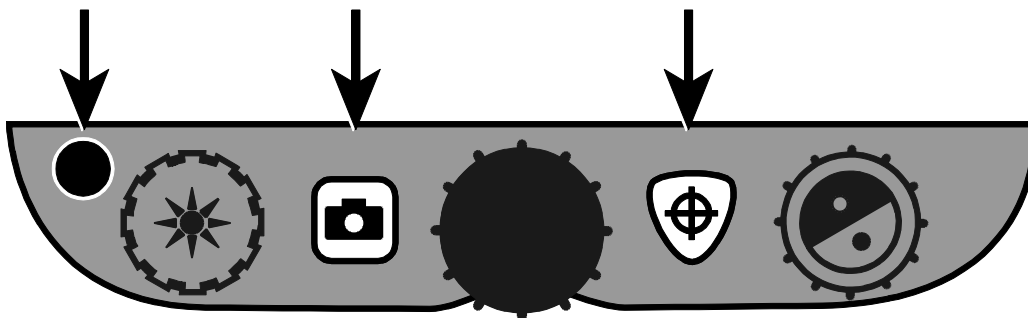
**Note:** The first three color modes, True Full Color, White on Black, and Black on White, are always available and cannot be disabled.

4. Repeat steps 2 and 3 to continue adding or removing color modes.  
You can have a maximum of 12, or a minimum of three available color modes.
5. When you are finished, press and **hold** the black **ADVANCED** button and orange **FIND** buttons  again for approximately 10 seconds to save changes and exit Configuration mode.

## Restoring Factory Settings

Press and **hold** the following buttons for approximately 10 seconds to reset the unit to its default settings.

- Black **ADVANCED** button
- Red **FREEZE FRAME** button
- Orange **FIND** button





## Appendix A - Color Modes

There are six factory default color modes and 27 additional color modes that you can activate and use. Select the color modes that best suit your visual needs, for example, yellow text against a black background.

- |   |                    |                     |
|---|--------------------|---------------------|
| 1. Full Color <sup>1</sup>                                    | 12. White on Blue  | 23. Red on Black    |
| 2. Black on White <sup>1</sup><br>(high-contrast<br>positive) | 13. Blue on White  | 24. Violet on White |
| 3. White on Black <sup>1</sup><br>(high-contrast<br>negative) | 14. Green on Black | 25. White on Violet |
| 4. Yellow on Blue <sup>2</sup>                                | 15. Black on Green | 26. Orange on Black |
| 5. Yellow on Black <sup>2</sup>                               | 16. Red on White   | 27. Black on Orange |
| 6. High-contrast full<br>colors (Color-Boost-<br>Contrast)    | 17. White on Red   | 28. Green on Yellow |
| 7. Grayscale  | 18. White on Green | 29. Yellow on Green |
| 8. Blue on Yellow   | 19. Green on White | 30. Amber on White  |
| 9. Black on Yellow  | 20. Black on Blue  | 31. White on Amber  |
| 10. Violet on Black   | 21. Blue on Black  | 32. Black on Amber  |
| 11. Black on Violet   | 22. Black on Red   | 33. Amber on Black  |

---


<sup>1</sup> Default color modes for positions 1 through 3; cannot be changed or deleted



<sup>2</sup> Default color modes for positions 4 through 6; can be changed or deleted  
A maximum of 12 positions can be active.

## Appendix B - Changing and Saving Default Settings


You can change the unit's factory settings using the Configuration menu as described in this section.

**Note:** When configuring color modes, it is best to have both a page of text and a color photo to place under the camera to select settings best suited for you.



1. Press and **hold** the black **ADVANCED** button and the orange **FIND** button  for approximately 10 seconds to open the Configuration menu. Release the buttons when the firmware version number displays.

The color mode setting displays on the screen: the color mode icon ( or ) , a check mark or X to indicate if the color mode is enabled or disabled, and the position number.




Color modes for positions 1 through 3 cannot be changed or deleted. For a list of available colors, refer to *Color Modes* on page 21.

2. Turn the blue **COLOR MODE** dial  to scroll through positions 4 through 12.

To select and enable () a position:







- Press the red **FREEZE FRAME** button .
- The color combination currently displayed on the screen is assigned to that position number.
- If you press the button again, the position is cleared () and disabled.

To select a position (4 through 12) and a color mode:

- Turn the yellow **BRIGHTNESS** dial  to view the 33 color modes.
- When you find a color mode that you want to use, press the red **FREEZE FRAME** button  to select () the color combination and enable the current position.



Repeat this step as necessary to configure other positions.

3. Press the black **ADVANCED** button to move to subsequent options. Below are descriptions for these options.

Icon	Description	Default Setting
	Freeze Frame	✓
	Find	✓
	Magnification Tables <sup>1</sup>	1
	Magnification Display Number <sup>1</sup>	"88"
	Time <sup>2</sup>	00:00 (HH:MM in 24-hour format)
	Date <sup>2</sup>	01.01.14 (MM.DD.YY)

<sup>1</sup> See *Adjusting Magnification Settings* on page 24 for more information.

<sup>2</sup> Time and Date settings are only saved while a battery is installed and charged. For more information, see *Changing the Battery* on page 29.

4. When an item that you want to change displays, press the red **FREEZE FRAME** button  to cycle through the different settings available for that option.
5. When finished, press and **hold** the black **ADVANCED** button and the orange **FIND** button  again for at least 10 seconds to save and exit the Configuration menu.

**Note:** To restore factory default settings, refer to page 20 for more information.

## Appendix C - Adjusting Magnification Settings

**Note:** The following is an advanced feature and is accessed while in Configuration mode.

There are three magnification tables from which you can choose the best magnification configuration for your vision needs.

- **Table 1** is ideal if you are comfortable with lower magnification. It provides finer adjustments between positions 1 through 5.

(Turn the black **MAGNIFICATION** dial  to step through positions 1 through 16.)


- **Table 2** is the default magnification table and is ideal for most users.
- **Table 3** provides finer adjustments for high-end magnification available between positions 6 through 10. This table is good if you need greater magnification.

**Note:** Tables 1 and 3 have a higher top-end magnification range. This results in some loss of resolution when using Full Color mode.


To read comfortably above 24x, choose a contrasting color mode, for example, white text on a black background.

Experiment with the different magnification tables and use the one that is best for you. You can always revert to table 2 at any time if you are not comfortable with the magnification available in tables 1 and 3. The following describes how to select and edit your viewing preferences.


### Selecting a Magnification Table

1. Press and **hold** the black **ADVANCED** button and the orange **FIND** button  for approximately 10 seconds to open the Configuration menu.
2. Continue to press the black **ADVANCED** button until the video magnification icon displays on the screen.

**AAA**


3. Press the red **FREEZE FRAME** button  to select one of the three magnification tables. For an overview of magnification tables, refer to the table descriptions mentioned earlier.


4. Do one of the following:

- To save the change and exit Configuration mode, press and **hold** the black **ADVANCED** button and then the orange **FIND** button  for approximately 10 seconds until the on-screen display at the bottom of the screen turns off.
- To customize how magnification values display on the screen, perform the steps in the next section.

### Changing the Magnification Display Number

After selecting a magnification table, you can choose whether or not the current magnification value displays on the screen as you turn the black

**MAGNIFICATION** dial . To set your preference, do the following:

1. Press the black **ADVANCED** button until the magnifying glass icon displays on the screen.
2. Press the red **FREEZE FRAME** button  to select how magnification values display. This is represented by the magnifying glass icon.




Select to display the magnification in use relative to the 16 positions of the black **MAGNIFICATION** dial, for example, 1, 2, 3.



Select if you do not want any magnification value to display as you turn the black **MAGNIFICATION** dial.












Select to display the actual magnification value, for example, 5.2, 6.4, 7.9, and so on.




3. To save changes and exit Configuration mode, press and hold the black **ADVANCED** button and the orange **FIND** button  for approximately 10 seconds until the on-screen display at the bottom of the screen closes.

To discard all changes made while Configuration mode is open, do not touch any control panel buttons or dials for approximately 30 seconds. This closes Configuration mode without saving changes.

## Appendix D - Configuration Menu Settings

Setting	Description
<p data-bbox="233 304 440 340">Color Select</p> <div style="display: flex; justify-content: space-around; align-items: center;">   </div>	<p data-bbox="644 304 1372 470">Adds more color positions so that additional color combinations are available when you turn the blue <b>COLOR MODE</b> dial during normal operation.</p> <p data-bbox="644 492 1311 613">By default, positions 1 through 6 are available. Positions 7 through 12 can be added using this setting.</p> <p data-bbox="644 636 925 680"><b>Hollow icon - </b></p> <p data-bbox="644 703 1347 784">Positions 1 through 3 are always available and cannot be changed.</p> <p data-bbox="644 806 1347 972">Position 1 is always full color. Position 2 is black on white (high-contrast positive). Position 3 is white on black (high-contrast negative).</p> <p data-bbox="644 994 893 1039"><b>Solid icon - </b></p> <p data-bbox="644 1061 1385 1272">Displays for positions 4 through 12. These positions can be added to or removed from normal operation. In addition, you can select one of 30 different color combinations for each position.</p> <p data-bbox="644 1294 1366 1415">By default, position 4 is yellow on blue, and position 5 is yellow on black. Both positions can be changed using this setting.</p> <p data-bbox="644 1438 1270 1482"><b>Adding and removing Color Modes</b></p> <p data-bbox="644 1505 1414 1671">To add a position, select () it by pressing the red <b>FREEZE FRAME</b> button. To remove a position, clear () it by pressing the red <b>FREEZE FRAME</b> button.</p>
<p data-bbox="233 1715 469 1751">Freeze Frame</p> 	<p data-bbox="644 1715 1337 1814">Disables or enables freeze frame functionality. It is enabled () by default.</p> <p data-bbox="644 1836 1318 2002">If you disable () it, Freeze Frame is no longer available when you press the red <b>FREEZE FRAME</b> button during normal operation.</p>

Setting	Description
<p>Find +</p>	<p>During normal operation, Find displays a set of crosshairs on the screen and zooms out so that you can see more of the item displayed on the screen.</p> <p>This setting is enabled (✓) by default. If you disable (✗) it, Find is no longer available when you press the orange <b>FIND</b> button during normal operation.</p>
<p>Magnification Levels AAA</p> <div style="border: 2px solid black; padding: 5px; margin-top: 10px;"> <p><b>Note:</b> Tables 1 and 3 have a higher top-end magnification range.</p> <p>This results in some loss of resolution when using Full Color mode.</p> <p>To read comfortably above 24x, choose a contrasting color mode, for example, white text on a black background.</p> </div>	<p>The unit can display 16 levels of magnification when you turn the black <b>MAGNIFICATION</b> dial (positions 1 to 16).</p> <p>Three separate magnification tables are available for use. Each table offers slightly different values so that you can choose the best magnification power for you.</p> <p>Table 1 is best if you are comfortable with lower magnification. It provides finer adjustments between positions 1 to 5.</p> <p>Table 2 is the default magnification table and is ideal for most users</p> <p>Table 3 provides finer adjustments in the middle magnification range available between positions 6 to 10. This table is good if you need greater magnification.</p> <p>Press the red <b>FREEZE FRAME</b> button to select table 1, 2, or 3.</p>

Setting	Description
<p data-bbox="233 232 504 315">Magnification Display Number</p> 	<p data-bbox="644 232 1378 398">Sets the type of magnification value that displays on the screen as you turn the black <b>MAGNIFICATION</b> dial. Press the red <b>FREEZE FRAME</b> button to select a value.</p> <p data-bbox="644 439 1334 562">Select the icon with “88” to display the magnification in use relative to the 16 dial positions, for example, 1, 2, 3, and so on.</p> <p data-bbox="644 633 1353 799">Select the icon with the clear magnifying glass if you do not want to see a magnification value display as you turn the dial.</p> <p data-bbox="644 835 1372 958">Select the icon with “X” to display the actual magnification value, for example, 5.2, 6.4, 7.9, and so on.</p>
<p data-bbox="357 1032 440 1066">Time</p> 	<p data-bbox="644 1032 1404 1198">Sets the time in 24-hour format (HH:MM). Image file names are based on the unit’s time and date. The time setting is persistent as long as a battery is installed and charged.</p>
<p data-bbox="357 1252 440 1285">Date</p> 	<p data-bbox="644 1252 1398 1417">Sets the date (MM.DD.YY). Image file names are based on the unit’s time and date. The date setting is persistent as long as a battery is installed and charged.</p>



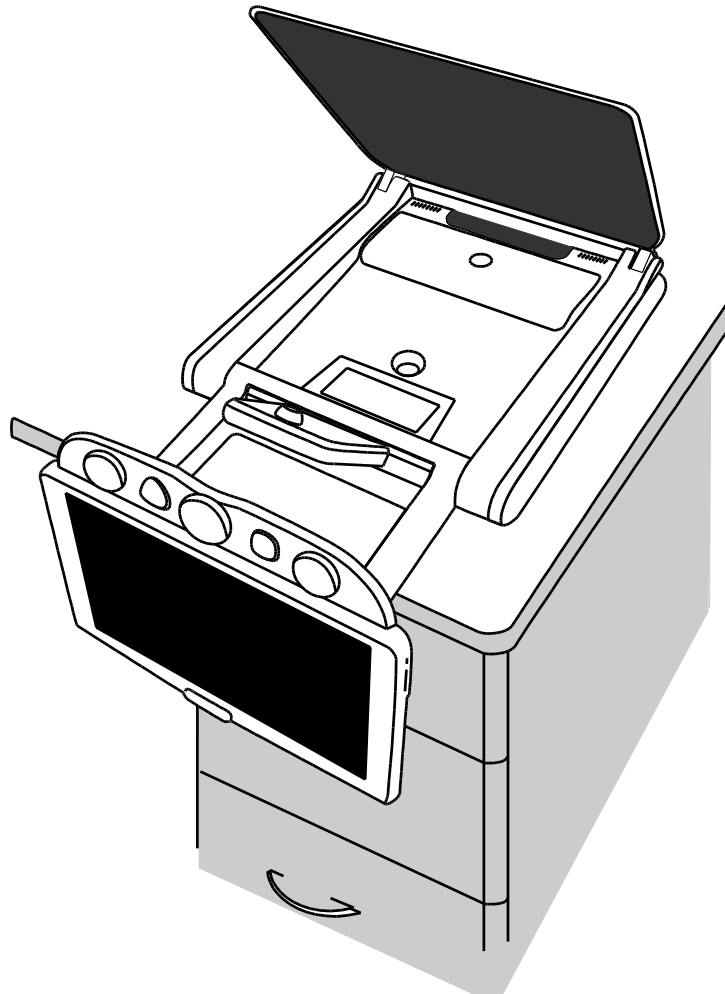
## Appendix E - Changing the Battery

A Li-ion battery is an optional feature. Please contact the dealer who sold you the device if you later wish to purchase a battery.

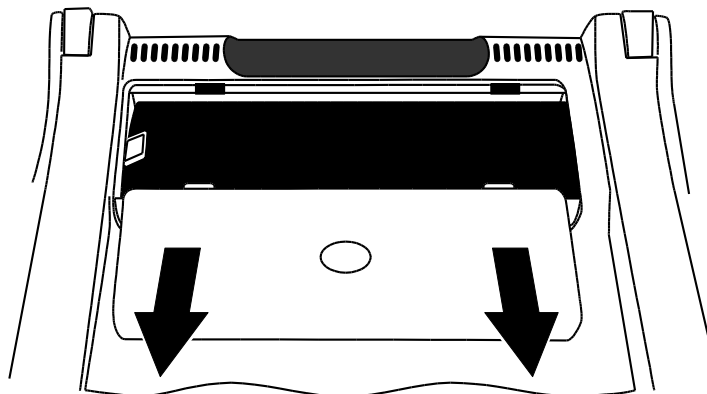
To remove a battery and replace it with a charged battery, do the following:

### Removing the Battery

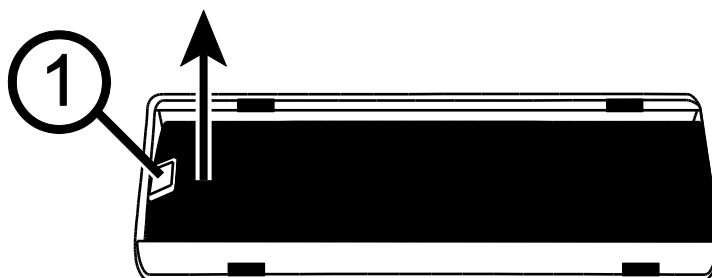
1. Power off and unplug the unit.
2. Open the unit as described earlier in *Setting Up the Unit* on page 3.
3. Carefully lay the unit on its back with the monitor hanging over the edge of a table, desk, or other sturdy surface.



4. Use both thumbs to press down on the outside edges of the battery compartment door, and then slide it toward you.  
This releases the battery door and exposes the battery.

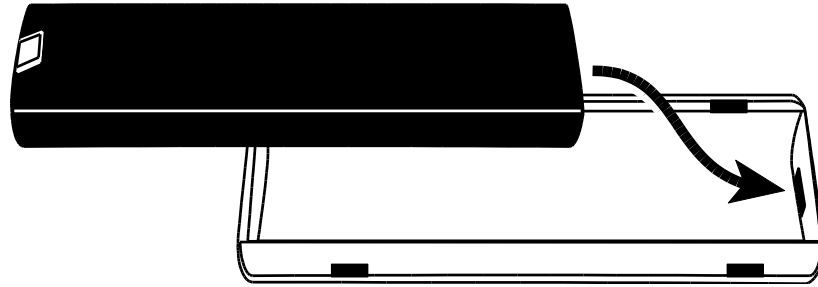


5. Use the plastic tab (1) located on the left side of the battery to lift and remove the battery.

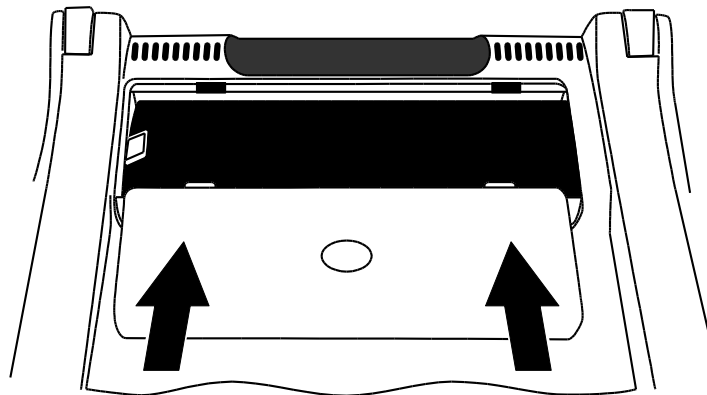


## Replacing the Battery

1. Place the battery into the compartment. Make sure that the battery's contacts align with the compartment's contacts.




2. Align the battery door's locking tabs with the compartment's slots, and slide the door until it locks. Make sure that the battery's plastic tab remains inside the compartment.




3. Place the unit right-side up on the table, and then power on the unit. The battery status icon displays on the screen.

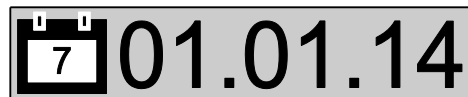
## Setting Date and Time






After replacing the battery, you must reset the unit's date and time so that saved images have an accurate timestamp.

1. Press and **hold** the black **ADVANCED** button and the orange **FIND** button  for approximately 10 seconds to enter Configuration mode. Release the buttons when the version number displays.
2. Press and release the black **ADVANCED** button until the clock option displays on the screen. The format is HH:MM (24-hour).



- Turn the yellow **BRIGHTNESS** dial  to adjust the hour.
  - Press the red **FREEZE FRAME** button  to move to minutes, and then turn the yellow **BRIGHTNESS** dial  to set minutes
3. Press the black **ADVANCED** button to display the date option. The format is MM.DD.YY.



- Turn the yellow **BRIGHTNESS** dial  to adjust the month
  - Press the red **FREEZE FRAME** button  to move to day, and then turn the yellow **BRIGHTNESS** dial  to set the day
  - Press the red **FREEZE FRAME** button  again, and turn the yellow **BRIGHTNESS** dial to set the year. The year format is the last two digits of the current year.
4. When finished, press and **hold** the black **ADVANCED** button and the orange **FIND** button  for at least 10 seconds to save and exit the Configuration menu.

## Appendix F - Troubleshooting

Problem	Solution
The screen is blank.	<p>Press the unit's power button.</p> <p>Make sure the power cable is correctly connected to the unit and a power outlet.</p> <p>Reduce magnification.</p> <p>Try adjusting brightness.</p> <p>Switch to a different color mode.</p>
The unit does not power on.	<p>Press the unit's power button.</p> <p>When using the power cord, ensure that the power outlets have power and are not malfunctioning. If the outlets are connected to a wall switch, make sure that the switch is on.</p>
The image on the screen is not changing.	<p>Exit Review mode and return to live view by pressing the red Freeze Frame button.</p>
The unit is not responding.	<p>Press and <b>hold</b> the unit's Power button for at least 12 seconds to reboot the unit.</p>
The image on the screen is too bright, or there is a glare from the screen that makes it difficult to see.	<p>Reduce brightness.</p> <p>Switch to a different color mode.</p>
The image on the screen is too dark.	<p>Increase brightness.</p> <p>Switch to a different color mode.</p>
There are smudges or blemishes on the screen.	<p>Clean the screen using a damp, soft, lint-free cloth.</p>
Self-view camera does not display an image.	<p>Make sure the camera cover is open.</p>

## Appendix G - Service and Support

If you require technical support with your eMag 120/150 HD, please contact the dealer who sold you the visual aid. It is recommended you first refer to “Troubleshooting” (on page 33).

**Note:** The eMag 120/150 HD contains no user serviceable components. Any unauthorised attempt to service or replace internal components will render the warranty null and void.

### Battery safety instructions

We place our batteries on the market in line with legal requirements. Please read the points below for the safe removal and disposal of our batteries:

- Our product contains a rechargeable battery.
- To prevent harmful effects to the environment and health, used batteries must be disposed of properly at recycling centres or returned to the point of sale. Returning batteries is required by law and free of charge for you.
- Batteries should only be returned in a fully discharged state. The poles of lithium-ion batteries must be insulated with adhesive tape.
- Valuable raw materials such as zinc, iron, nickel and so on can be recovered by recycling used batteries.
- The “crossed out wheeled bin” symbol indicates that disposal of used batteries along with normal refuse is illegal. The additional specification of the chemical symbols for lead (Pb), cadmium (Cd) and mercury (Hg) indicates that these materials are contained in the batteries in legally permissible quantities.

