acrobat® HD ultra

acrobat HD ultra

User Manual

The Acrobat HD Ultra video magnifier is designed to enlarge and enhance images to improve the lives of people who have low vision. The extent to which the Acrobat HD Ultra can improve the ability to see images and text depends on a person's individual condition and level of visual impairment. The Acrobat HD Ultra is not designed to restore vision, correct eye conditions or halt degenerative vision loss. An eye-care professional can best determine the suitability of the Acrobat HD Ultra for a patient's specific condition. For more information, visit www.EnhancedVision.com.

Contact Numbers

U.S. Office	Toll-free	800 440 9476
	Telephone	+001 714 465 3400
	Fax	+001 714 374 1821
UK Office	Telephone	+44 (0) 115 9442317
	Fax	+44 (0) 115 9440720
DE Office	Telephone	+49 (0) 6078 9698270
	Fax	+49 (0) 6078 96982733

Technical Support

U.S. Office	Toll-free	800 440 9476 ext. 2
	Telephone	+001 714 465 3400 ext. 2
	E-mail	EVSupport@EnhancedVision.com

Part # MAN-0012-00 X4
February 2020

Table of Contents

Congratulations

Congratulations on your purchase of the Acrobat HD Ultra. Enhanced Vision products are designed to give you the highest quality and convenience available.

The Acrobat HD Ultra product can enable people with low vision to read, write, and see objects at a distance. The unique design of this product provides the ultimate in flexibility and offers a large range of magnification with multiple viewing options that make reading easier than ever. The Acrobat HD Ultra is a fully integrated solution, offering the advantage of a built-in LCD screen.

Prior to using this system, carefully read the instructions in this manual. A thorough understanding of the functionality will allow you to fully benefit from the flexibility and great features of this device.

If you have any questions, please contact the eye-care professional or the supplier from whom you have acquired the unit.

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 on the **Downloads** tab.

Acrobat HD Ultra Components

1. Arm   **2.** Camera

4. Close-up lens

3. LCD screen
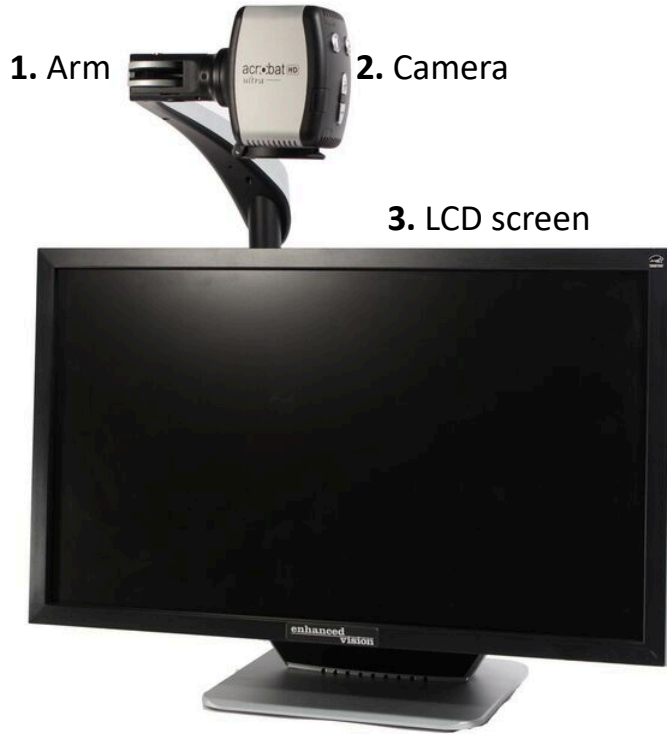
5. Remote control

6. Carrying handle

7. Lens cloth

Optional Accessories
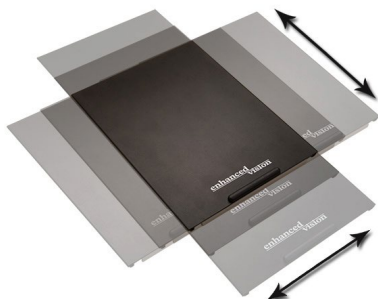
8. Mini X-Y table   **9.** HDMI or DVI toggle box   **10.** Rolling case

Acrobat HD Ultra Package Contents

All required components for operation are included in your Acrobat HD Ultra package. The optional accessories are not included in the package but can be purchased separately from your Enhanced Vision dealer.

Components

Acrobat HD Ultra is comprised of the following items and features:

1. **Arm:** Rotating arm that holds the camera.

2. **Camera:** Rotates 340 degrees to capture and enlarge the image.

3. **LCD screen:** Displays high quality image on 20", 22", 24" or 27" screen.

4. **Close-up lens:** Used for up close high magnification.

5. **Remote control (batteries included):** Allows the user to control the Acrobat HD Ultra functions from a distance.

6. **Carrying handle:** Used for lifting the Acrobat HD Ultra.

7. **Lens cloth:** Permits cleaning of the LCD display.

Optional Accessories (Not Included)

8. **Mini X-Y table:** The mini X-Y table is available to place underneath your Acrobat camera and make reading easier. A larger [X-Y table](#) is also available (see page 10).

9. **HDMI or DVI toggle box:** Allows the display of the Acrobat HD Ultra to be shared along with a standard HDMI/DVI output of a computer and permits switching between either source.

10. **Rolling case:** Provides protection for the Acrobat HD Ultra and makes transportation easier.

Setting Up Acrobat HD Ultra

1. During unpacking and transporting, only lift the Acrobat HD Ultra by the built-in carrying handle.

   Warning: Do not attempt to lift or carry the unit by the monitor or base.

2. Place the Acrobat HD Ultra on a flat, level surface such as a table or desk.

3. Connect the attached power cord to an available wall outlet. To offer additional protection during an electrical storm, a surge protector is recommended.

4. Go to the back of the Acrobat HD Ultra and find the master power switch on the right side. Flip the switch from the 0 position to the l position. In a few seconds, the LCD screen and Acrobat HD Ultra camera automatically turn on. The image that appears on the LCD will reflect whatever the camera is pointing at.

   Note: You can turn off the power by flipping the power switch to the 0 position, or you can put the unit in standby mode by pressing the green Power button on the remote control.

Adjusting the Height of the Monitor

The monitor is mounted to a bracket that has three positions to accommodate slightly different heights. A lever that locks the monitor in place is placed on the back, right side of the monitor by the connector cables.

Lever in locked position

Lever in unlocked position

To adjust the monitor, you must remove it from the bracket and reposition it. The monitor is heavy, so enlist someone to help if needed. Due to its size, the 27-inch monitor is limited in its height adjustment.

To adjust the monitor, follow these steps:

1. Grasp the monitor firmly with both hands and pull up and out to remove it from the bracket.

2. Line up the bracket holes with the protruding monitor base pins.

   Tip: Look down on the monitor and hook the top of the bracket holes into the protruding top pins first.

Acrobat HD Ultra User Manual

3. Bring the bottom of the monitor up to the lower pins, making sure that the protruding base pins are in the bracket holes, and then press down.

4. Once the monitor is secure, reposition the lever by pulling the locking lever to the right.

Adjusting the Viewing Angle

The camera on the Acrobat HD Ultra is attached to a specially designed arm, which allows the camera to slide left or right, or to pivot in multiple directions.

The Acrobat HD Ultra camera rotates 340 degrees for unsurpassed flexibility. Do not force the camera beyond its 340-degree angular range as this may damage the unit.

The Acrobat HD Ultra may be used to see objects in the distance, to view oneself, and to read/write. To change the viewing mode, turn the position of the camera by rotating it on the arm.

Distance Viewing Mode

The camera can rotate forward to capture people, objects, and scenery. When changing to this viewing angle, **Distance Viewing** is displayed in the upper-left corner of the screen.

Distance mode enables up to 25X magnification for objects three feet away. To achieve the maximum magnification benefit for distance, open the close-up lens and position your target three or more feet away from the Acrobat.

Self-Viewing Mode

The camera can be rotated backwards to provide you with the equivalent of a mirror. In this position, you can use the Acrobat HD Ultra to help you put on make-up, shave, or perform other personal hygiene. When you change to this viewing angle, **Self Viewing** is displayed in the upper-left corner of the screen.

7.5-22 inches recommended

For optimum clarity, use the close-up lens and position yourself between 7.5 inches and 22 inches away from the camera.

Reading and Writing Mode

The camera can be adjusted downward for reading, writing, and enjoying crafts or hobbies. When the camera is rotated downward, **Reading-Mode** is displayed in the upper-left corner of the screen.

The Acrobat HD Ultra can slide freely, left or right, along the specially designed bracket mechanism.

For optimal viewing clarity, place objects 12 inches to 19 inches away from the camera and close the close-up lens.

12-19 inches recommended

Two Tables Available as Optional Reading Accessories

The X-Y table is available to make your reading experience more comfortable. Simply place your reading materials on the XY table and glide the table from side to side and front to back. It is transportable and locks into place.

The mini X-Y table easily fits in the front pocket of your Acrobat LCD rolling case.

Adjusting Magnification

The Acrobat HD Ultra offers a large range of magnification capabilities.

Normal Magnification

Refer to the following table for normal minimum and maximum magnification settings, where FOV is the horizontal field of view. Extended zoom is described in the next section.

Zoom	FOV mm	FOV in	27" LCD	24" LCD	22" LCD	20" LCD
Min	7.9 mm	0.31 in	1.69X	1.5X	1.37X	1.25X
Max	348 mm	13.7 in	70.9X	63X	57.8X	52.5X

To adjust the magnification, press and hold the Plus (+) or Minus (-) buttons located on the remote or camera until you reach your desired magnification.
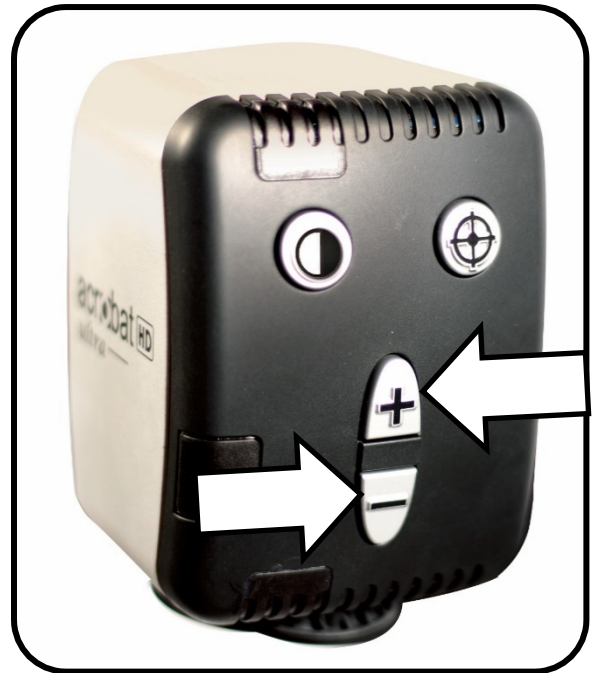
Extended Zoom

To take full advantage of the camera's capabilities, you can use the extended zoom feature of Acrobat. Refer to the following table for minimum and maximum magnification settings, where FOV is field of view.

Zoom	FOV mm	FOV in	27" LCD	24" LCD	22" LCD	20" LCD
Min	2 mm	0.08 in	1.19X	1.05X	0.97X	0.88X
Max	493 mm	19.4 in	258.8X	230X	210.8X	191.7X

To use extended zoom on your camera, follow these steps:

1. On the remote, press and hold the Mode button for five seconds.

2. Press the Plus (+) or Minus (-) button to navigate to Extended Zoom.

3. Press the Mode button.

4. Press the Minus (-) button to turn on extended zoom, or press the Plus (+) button to turn it off. By default, extended zoom is off.

5. To keep the zoom setting, press the Mode button.

6. To leave zoom settings, press the Plus (+) or Minus (-) button until **Exit** is displayed, then press the Mode button.

Current Camera Zoom State

A message displayed in the upper-left corner of your monitor gives you the current camera zoom state, as described in the following table.

Message on Monitor	Description
Zoom In	Displays when you are increasing magnification.
Max Zoom	Displays at the maximum magnification.
Zoom Out	Displays when you are decreasing magnification.
Min Zoom	Displays at the minimum magnification.

Note: *The extent of the magnification is dependent upon the distance from the camera to the object.*

Changing the Viewing Mode

The Acrobat HD Ultra provides optimum viewing for people with certain visual conditions by offering a range of choices in both text and background colors. Use the Mode key to toggle between full color viewing, black and white, enhanced positive, enhanced negative, and your five favorite color select modes.

Crisp, Clear Text Images!

Crisp, Clear Text Images!
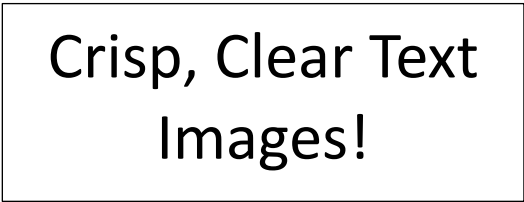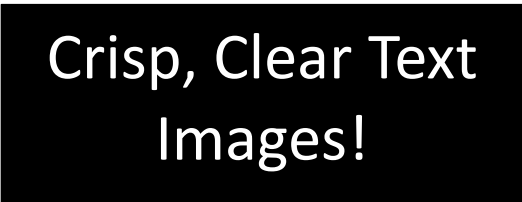
The five favorite color select modes can be modified to any of the 28 color select options by following the instructions in "Changing Favorite Color Modes" on page 15.

You can choose a viewing mode by pressing the Mode button on the remote or camera. Each push will allow you to cycle through all seven viewing modes.
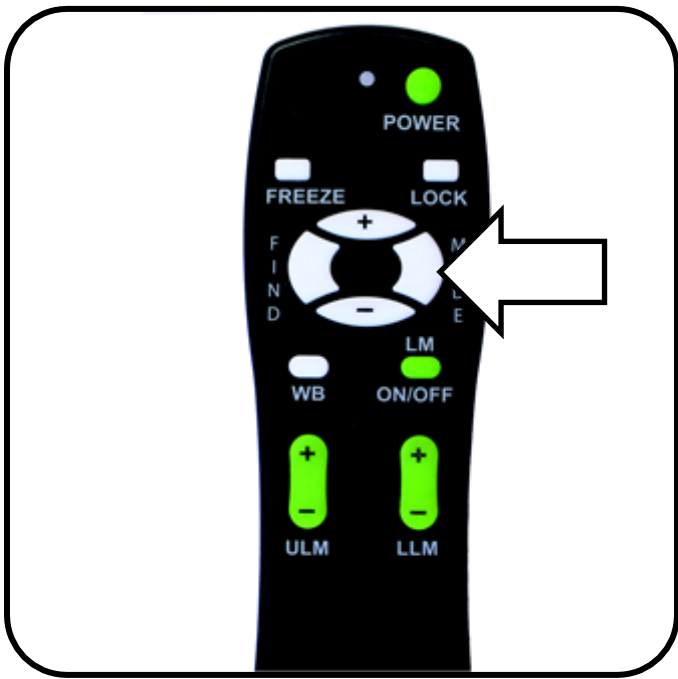
Each mode described in the following table gives a different color combination. The descriptions in the table reflect the factory default settings. You can change or turn on the Color Select options using the steps in in "Changing Favorite Color Modes" on page 15.

Viewing Mode	Description
Full Color	Gives a true color representation of the image being magnified.
Black-and-White Image	Gives a black and white representation of the image being magnified.
Enhanced-Positive Image	Provides a white background with black text. It increases the contrast to offer crisp text images for reading.
Enhanced-Negative Image	Provides a black background with white text. It increases the contrast to offer crisp text images for reading.
Color Select 1	Provides a blue background with yellow text, which is one of the most common color combinations.
Color Select 2	Provides a black background with green text.
Color Select 3	Provides a black background with yellow text.
Color Select 4	Turned off.
Color Select 5	Turned off.

Changing Favorite Color Modes

The Acrobat HD Ultra provides 28 selectable Color modes, and allows you to select up to five favorites for use. To change your favorite Color modes, follow these steps:

1. Press and hold the Mode button for at least five seconds to display the **Entering Setup** menu.

2. Press the Plus (+) button to scroll to **6. Color Select**.

3. Press the Mode button.

4. Press the Plus (+) or Minus (-) button to choose the Color mode to set (1, 2, 3, 4, or 5).

5. Press the Mode button.

6. To turn on one of the five Color Select modes, press the Plus (+) button. To turn it off, press the Minus (-) button.

7. Press the Mode button.

8. Press the Plus (+) or Minus (-) buttons to preview the 28 available Color modes.

9. Press the Mode button to select and save a color combination.

Using the previous steps, you can choose from the 28 color combinations in the following table to program the five Color Select modes.

Color Mode	Background	Text	Notes
1	Black	Green	
2	Black	Yellow	Default factory setting for Color Select 3
3	Black	Red	
4	Black	Blue	
5	Black	Purple	
6	Black	Orange	
7	White	Green	

Color Mode	Background	Text	Notes
8	White	Red	
9	White	Purple	
10	White	Blue	
11	White	Orange	
12	Yellow	Red	
13	Green	Yellow	
14	Yellow	Blue	
15	Green	Black	
16	Yellow	Black	Default factory setting for Color Select 2
17	Red	Black	
18	Blue	Black	
19	Purple	Black	
20	Orange	Black	
21	Green	White	
22	Red	White	
23	Purple	White	
24	Blue	White	
25	Orange	White	
26	Red	Yellow	
27	Yellow	Green	
28	Blue	Yellow	Default factory setting for Color Select 1

Adjusting Brightness in Color Mode

To adjust the brightness of the screen in Color mode, follow these steps:

1. Press and hold the Mode button for at least five seconds until the **Entering Setup** menu is displayed.

2. Press the Plus (+) or Minus (-) button to display **4. Brightness Color**.

3. Press the Mode button.

4. Press the Plus (+) or Minus (-) button to increase or decrease screen brightness.

5. Press the Mode button to set and save the screen brightness.

Adjusting Brightness in Color Select Mode

To adjust the brightness of the screen in Color Select mode, follow these steps:

1. Press and hold the Mode button for at least five seconds until the **Entering Setup** menu is displayed.

2. Press the Plus (+) or Minus (-) button to display **5. Brightness C. Sel**.

3. Press the Mode button.

4. Press the Plus (+) or Minus (-) button to increase or decrease screen brightness.

5. Press the Mode button to set and save the Color Select screen brightness.
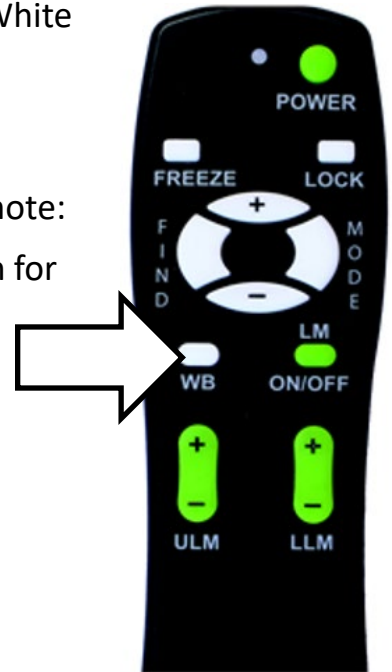
Adjusting the White Balance

The color white is often affected by the lighting in a room. To compensate for the current lighting and improve the clarity of the display, you can adjust the White Balance using either the remote or the camera.

Using Your Remote to Adjust White Balance

Follow these steps to change the tone of the lighting using the remote:

1. On your remote, press and hold the WB (White Balance) button for two seconds to activate the key.

2. Repeat step 1 to scroll through four settings:

   - **Auto** automatically adjusts to the lighting in the room.

   - **Warm** casts a yellow, brown, olive, or reddish tinge.

   - **Normal** casts a balanced tone.

   - **Cool** casts a blue or greenish tinge.

Using Your Camera to Adjust White Balance

Follow these steps to change the tone of the lighting using the camera:

1. On the camera, press and hold the Mode button for five seconds until the **Entering Setup** menu is displayed.

2. Press the Plus (+) button to scroll to **2. White Balance**.

3. Press the Mode button to initiate the White Balance feature.

4. Press the Plus (+) or Minus (-) button to scroll through the four settings.

   - **Auto** automatically adjusts to the lighting in the room.

   - **Warm** casts a yellow, brown, olive, or reddish tinge.

   - **Normal** casts a balanced tone.

   - **Cool** casts a blue or greenish tinge.

5. Press the Mode button to exit this feature.

Turning On/Off the LED Light

An LED light is built into the camera arm. This light can be toggled on and off by simultaneously pressing the Mode and Find buttons.

The LED light will turn on automatically after a restart or after waking up from standby, regardless of its previous state.

Press together
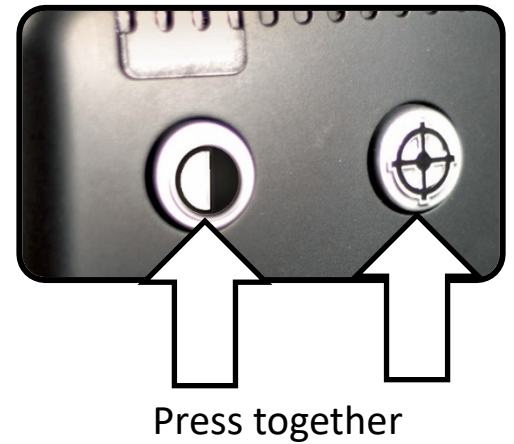
Using Line Markers and Window Masking

Line markers are used to frame an image between two horizontal or vertical lines. These lines may be used as a reading guide for long passages of text, to help keep your place as you move from one side of the page to the other, or to make writing easier.

In addition, you have both horizontal and vertical window masking, where the portion of the window between the line markers is displayed and the portion outside of the line markers is masked in black.

Note: *Using the camera, you can only set horizontal line markers. However, you can use the remote to set any line marker or window mask.*

Using the Remote to Set Line Markers and Window Masks

To set line markers or window masks using the remote, follow these steps:

1. Press and hold the LM On/Off button for at least one second to toggle between vertical and horizontal line markers and window masking.

2. Move the upper marker or mask by pressing the ULM Plus/Minus (+/-) button.

3. Move the lower marker or mask by pressing the LLM Plus/Minus (+/-) button.

4. To remove the line marker or mask, press and hold the LM On/Off button for at least one second.
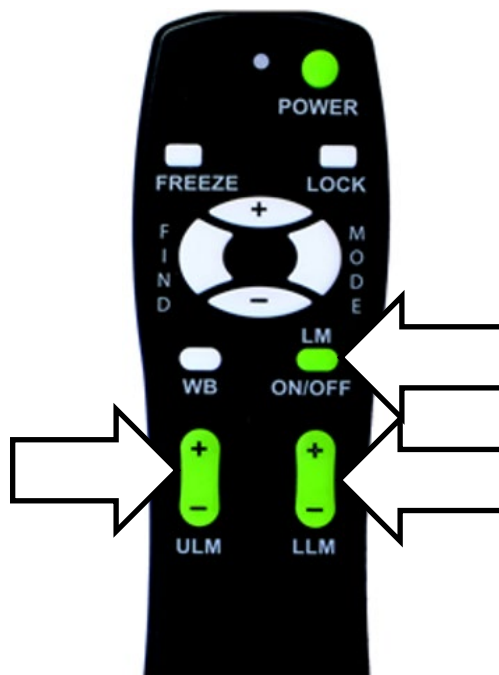
Using the Camera to Set Horizontal Line Markers

To add or remove horizontal line markers using the camera, follow these steps:

Note: *Only horizontal line markers can be set with the camera, not window masks or vertical line markers.*

1. Press and hold the Mode button for at least five seconds until the **Entering Setup** menu displays **1. Line Markers**.

2. Press the Mode button. The menu displays **1. Line Markers Off**.

3. Press the Minus (-) button to activate **Line Markers On**.

4. Press the Mode button to adjust the upper line marker. The menu displays **1. Upper Line Adjust**.

5. Press the Plus/Minus (+/-) buttons to raise or lower the upper line marker.

6. Press the Mode button to adjust the lower line marker. The menu displays **2. Lower Line Mark**.

7. Press the Plus/Minus (+/-) buttons to raise or lower the lower line marker.

8. Press the Mode button to finish and exit the **Line Markers** menu.

Note: *To remove horizontal line markers, repeat steps 1-2.*

Using Left-Handed Mode

To switch from right-handed to left-handed mode, follow these steps:

1. Press and hold the Mode button for at least five seconds until the **Entering Setup** menu is displayed.

2. Using the Plus (+) button, scroll to **3. Left Handed Mode**.

3. Press the Mode button. **1. Left Handed Off** is displayed.

4. Press the Plus (+) button to activate **2. Left Handed On**.

    Note: *To turn off left-handed mode, press the Minus (-) button.*

5. Press the Mode button to save and exit.

Using the Object Locator

The Object Locator feature helps you quickly identify where you are currently positioned when magnified on a page and easily locate a specific part of an object you want to view more closely. Follow these steps:

1. Press and hold the Find button on the remote or camera. Acrobat automatically zooms out to the widest field of view, and a target appears in the center of the monitor.

2. Move your work or reading material until you have placed the desired item within the target area.

3. Release the Find button, and the item you placed in the targeted area is magnified.
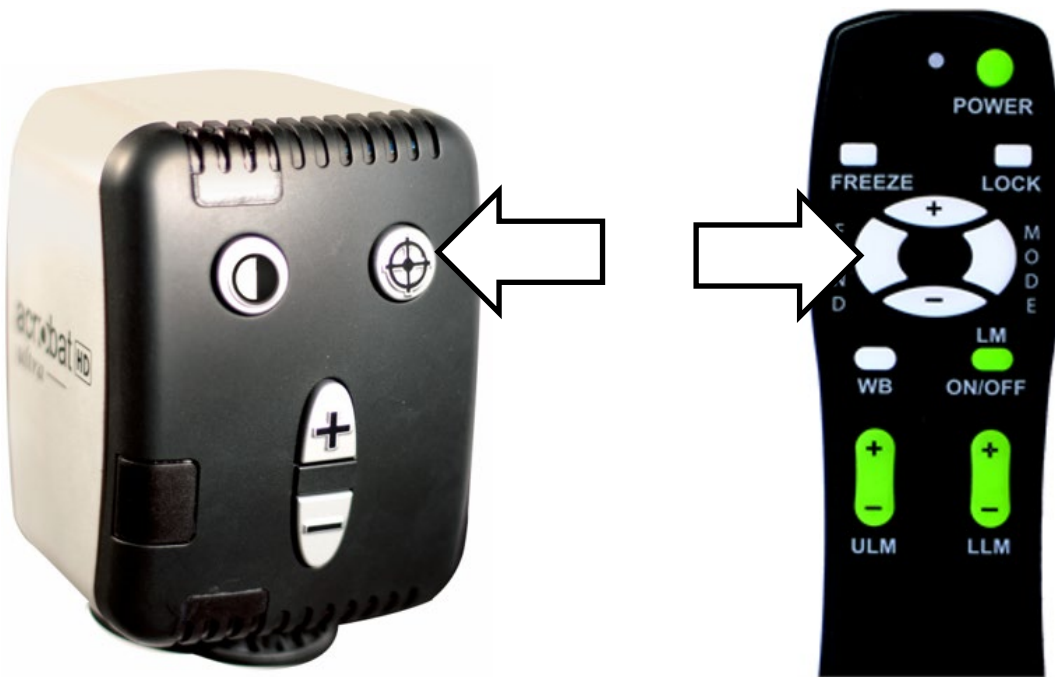
Using Intelligent Focus Lock

When the Acrobat HD Ultra is turned on, it is automatically set on auto focus. This is the most convenient setting for everyday activities, such as reading from a single page to a book, reading a prescription bottle, or working with arts and crafts.

Focus Lock allows you to maintain focus on a specific object, so that object remains in focus after changing the magnification or moving items into the field of view. For example, the focus would remain on the text you are writing rather than shifting to your hand when it comes into the camera's field of view.

Using the Remote to Apply Focus Lock

To apply the focus lock feature using the remote, follow these steps:

1. Place your notepaper, stationery, checkbook, or other writing material on the table.

2. Press the Lock button on the remote.

3. In the upper-left corner of the monitor, **Focus Lock** is displayed.

4. To return to auto-focus, press the Lock button on the remote.
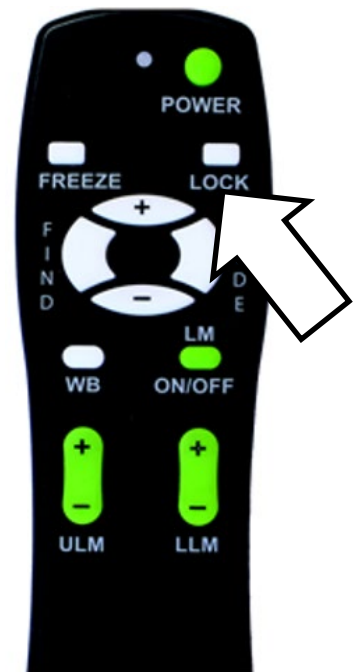
Using the Camera to Apply Focus Lock

To apply the focus lock feature using the camera, follow these steps:

1. Place your notepaper, stationery, checkbook, or other writing material on the table.

2. Simultaneously press the Find and Mode buttons for at least three seconds. **Focus Lock** is displayed in the upper left corner of the monitor.

3. To return to auto-focus, simultaneously press and hold the Find and Mode buttons for at least three seconds.

Note: *The LED light can be toggled on and off by simultaneously pressing the Mode and Find buttons.*

Setting a Sleep Timer

The sleep timer puts the device in power saving mode when left idle for a specified length of time. For example, setting the timer to 15 minutes means that the device enters sleep mode after it is not used for 15 minutes. You can instantly resume from sleep mode by pressing any button on the device or repositioning the camera.

To set the sleep timer, follow these steps.

1. Press and hold the Mode button for at least five seconds until the **Entering Setup** menu is displayed.

2. Using the Plus (+) button, scroll to **7. Sleep Timer**.

3. Press the Mode button. The menu displays **Off** by default.

4. Press the Plus (+) button to cycle through all the available modes and choose the desired sleep time (**Off**, **15**, **30**, **45**, **60**).

5. To set the time, press the Mode button.

6. To leave the sleep timer section, press the Plus (+) or Minus (-) button until **Exit** is displayed, then press the Mode button.

Using the Freeze Function

Freeze temporarily takes a still image to allow you to view it at length. For example, you could freeze a picture of a blackboard and use it to finish taking notes.

Note: *The image is not saved but remains on the screen until you change the viewing angle or press any button (except the Mode button).*

With the remote, follow these steps to take a still image:

1. Press and hold the Freeze button for at least two seconds. The picture or video freezes and **Freeze** is displayed in the upper-left corner of the screen.

2. Optionally, press the Mode button to change the Color mode while the image remains still.

3. To release the Freeze function, press any key or change the viewing angle.
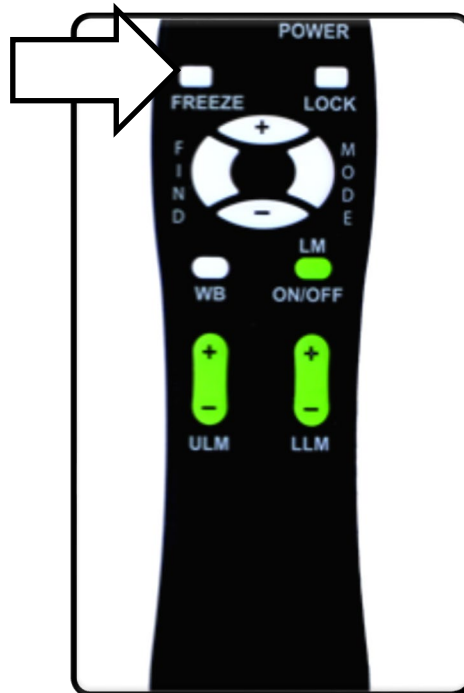
Features Menu

The four options on the **Features** menu are described in this section.

Changing the Remote Control Codes

When more than one Acrobat HD Ultra unit is used in the same location, interference may occur between remote controls. To prevent this problem, you can pair a camera and a remote control so they use the same codes. These settings should not be changed under normal circumstances. This information is provided for technical reference purposes only. See your Enhanced Vision representative or call our toll-free technical support if you need to modify these settings.

By default, a single remote control (and its corresponding remote-control code) is factory programmed and used for all Acrobat camera functions. A single code is acceptable for most single-use applications, However, when two or more Acrobats are used in close proximity (such as a lab setting), exclusive remote control over each unit may be desired.

You can modify the sending/receiving codes for exclusive use, assigning up to 15 unique codes. Both the transmitting remote control and receiving camera head must be set to matching ID codes. Refer to the following chart for remote control (transmit) codes.

Use this code …	Then press and hold these button combinations for three seconds …
28	MODE and FIND (default/factory reset)
15	MODE and LLM Minus (-)
24	MODE and ULM Minus (-)
25	MODE and LLM Plus (+)
27	MODE and ULM Plus (+)
07	Plus (+) and FIND
11	Plus (+) and LLM Minus (-)
14	Plus (+) and ULM Minus (-)
23	Plus (+) and LLM Plus (+)
31	Plus (+) and ULM Plus (+)

Use this code …	Then press and hold these button combinations for three seconds …
08	Minus (-) and FIND
09	Minus (-) and LLM Minus (-)
10	Minus (-) and ULM Minus (-)
12	Minus (-) and LLM Plus (+)
13	Minus (-) and ULM Plus (+)

Changing the Language

You can set the language to English, French, German, Italian, Spanish, or Japanese. Updating the language setting will change the language of all the verbiage shown on the screen, such as menus, options, and messages.

Changing the 50/60Hz Anti-Flicker Setting

You can change the frequency configuration to enable light flicker compensation for 50/60Hz AC.

Changing the Acrobat LCD-ARM Setting

This setting should not be changed under normal circumstances. It is provided as reference information only. See your Enhanced Vision representative or call our toll-free technical support if you need to modify these settings.

Troubleshooting

How do I clean the Acrobat HD Ultra?

At least once per week, clean the Acrobat HD Ultra with a soft dry cloth or an electrostatic dusting cloth. Do **not** use liquid cleaners on any of the plastic surfaces.

The remote is not functioning properly. What should I do?

First, ensure you have fresh batteries installed in the remote control. Next, reset the remote back to factory settings—press and hold the Mode and Find buttons on the remote control for at least three seconds, or until the LED indicator begins to flash. Resume normal operation.

Can I use the Acrobat HD Ultra with a computer?

Yes, the LCD of the Acrobat can used along with a computer. Although the Acrobat will not magnify computer images, the built-in LCD can be used either with the Acrobat camera or with a computer equipped with an HDMI/DVI connection. An optional HDMI/DVI toggle box provides this capability. See your Enhanced Vision dealer for more information.

FCC Compliance Notice

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.

- Increase the separation between the equipment and receiver.

- Connect the equipment into a wall outlet on a circuit different from that to which the receiver is connected.

- Consult the dealer or an experienced radio/TV technician for help

Unauthorized changes or modification to this system can void the user's 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 the responsibility of the user to use the shielded interface cables supplied with the equipment.

Important Safety Precautions

For your safety and to obtain the most benefit and life from the Acrobat HD Ultra, please read these safety precautions very carefully.

The Acrobat HD Ultra is designed to enlarge and enhance images 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.

The Acrobat HD Ultra 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 the Acrobat HD Ultra for a patient's individual condition. Please follow these safety precautions:

- Use the Acrobat HD Ultra on a stable, level surface such as a solid desk or table, according to its intended design specifications.

- Avoid placing the Acrobat HD Ultra on an unstable table, cart or stand. It may fall causing serious damage to the unit or bodily injury to the user.

- Use the Acrobat HD Ultra indoors only—it should NOT be exposed to extreme or rapid changes in temperature or humidity. Do not place the Acrobat HD Ultra near a radiator, heater or areas exposed to long hours of direct sunlight.

- 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.

Moving the Acrobat HD Ultra to Another Location

Use caution if you are repositioning the Acrobat HD Ultra a short distance across a desk or table. Make sure you do not pull on any power cords or connector cables.

Susceptibility to Interference

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

Caring for the Acrobat HD Ultra

Follow these instructions to take proper care of your new equipment:

- Always turn the power OFF on the Acrobat HD Ultra when the system is not in use.

- Always turn the power OFF before cleaning the Acrobat HD Ultra.

- Clean the Acrobat HD Ultra with a soft dry cloth or an electrostatic dusting cloth. DO NOT use liquid cleaners on its plastic surfaces.

- Clean the close-up lens as needed with the lens cloth provided within the Acrobat HD Ultra's packaging.
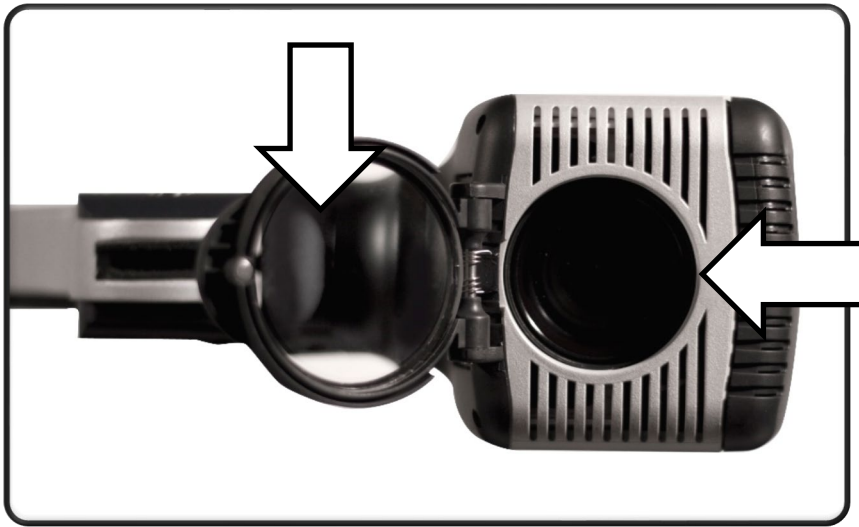
- Follow all warnings, cautions, and instructions marked on the product.

- The attached power cord is a disconnect device for electrical equipment. The wall 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 wall outlet. If necessary, contact an electrician to replace your wall outlet with a grounding-type wall outlet.

- Do not use the Acrobat HD Ultra in, near, or around water. The Acrobat HD Ultra is not designed to offer protection against contact with liquids of any kind.

- Do not use the Acrobat HD Ultra near flammable liquids.

- At least once per week, clean the Acrobat HD Ultra 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.

- This product contains moving parts. Use caution when moving the adjustable slide arm or when transporting the Acrobat HD Ultra to avoid possible injury to hands and fingers. Lift the device using the built-in carrying handle.

Acrobat HD Ultra Specifications

Product dimensions

20" LCD: 21"H x 19"W x 8"D (53cm x 48cm x 20cm)

22" LCD: 21"H x 20"W x 8"D (53cm x 51cm x 20cm)

24" LCD: 21"H x 22"W x 8"D (53cm x 56cm x 20cm)

27" LCD: 21"H x 25"W x 8"D (53cm x 63.5cm x 20cm)

Product weight

20" LCD: 20.60 lbs / 9.34 kg

22" LCD: 20.45 lbs / 9.28 kg

24" LCD: 21.20 lbs / 9.62 kg

27" LCD: 24.40 lbs / 11.07 kg

Display

TFT Active Matrix LCD average lifetime: 25,000 hours

Monitor (*common to 20", 22", 24" & 27" models)

***All monitor specifications subject to change without prior notice**

Resolution: 1600 x 900 (20" model)

Resolution: 1920 x 1080 (22", 24" and 27" models)

Response rate: 5 milliseconds (20", 22" and 24" monitors)

Response rate: 3 milliseconds (27" monitor)

Normal magnification range

20" LCD: 1.25X (minimum) to 52.5X (maximum)

22" LCD: 1.37X (minimum) to 57.8X (maximum)

24" LCD: 1.5X (minimum) to 63X (maximum)

27" LCD: 1.69X (minimum) 70.9X (maximum)

Field of View (near mode): 0.31 (min); 13.7 inches (max)

Working Distance (near mode): 17 inches

Extended zoom magnification range

20" LCD: 0.88X (minimum) to 191.7X (maximum)

22" LCD: 0.97X (minimum) to 210.8X (maximum)

24" LCD: 1.05X (minimum) to 230.0X (maximum)

27" LCD: 1.19X (minimum) to 258.8X (maximum)

Field of View (near mode): 0.08 (min); 19.4 inches (max)

Working Distance (near mode): 17 inches

Video output resolution on LCD

SMPTE 292M – HD 1080P 60/50Hz

Viewing modes

Color

Black and White

High Contrast Positive/Negative

Digital Color Select (five modes)

Power supply

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

Frequency: 60/50 Hz

Power usage: 27W (nominal)

Equipment classification (IEC 601-1)

Type of protection: Class 1

Degree of protection: Type B

Mode of operation: Continuous

Operating temperature range: 10-40°C / 50-104°F

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

Warranty

Two years

Warranty Statement

Enhanced Vision Acrobat Video Magnifier Warranty Policy

Enhanced Vision products are designed to give you the highest quality image, convenient features, ease of use and reliable service. **The Acrobat HD Ultra has been inspected and tested prior to shipping.** Enhanced Vision warrants the Acrobat HD Ultra against defects in material and workmanship under normal use for **two 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 the Acrobat HD Ultra 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 two-year extended warranty option is available within 12 months from the date of purchase. Contact Enhanced Vision for detailed information.

Service Process

If [technical support](#) repair service is needed, contact your local Enhanced Vision representative or the Enhanced Vision warranty service center.

If warranty service is required, contact Enhanced Vision at 800-440-9476 extension 2 (international +001 714-465-3400 extension 2) Monday through Friday, from 7 a.m. to 5 p.m. Pacific Standard Time (UTC-8) 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.

<u>Important:</u> **Completely fill out and send in the enclosed warranty registration card.**

OTHER ENHANCED VISION PRODUCTS

DaVinci Pro

DaVinci Pro is a high-performance desktop video magnifier (CCTV), featuring a Sony full HD 3-in-1 camera and full-page text-to-speech (OCR). With full 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 full-page 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)

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

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.

OTHER ENHANCED VISION PRODUCTS

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
Extended zoom up to 25X

Merlin HD ultra

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) – 51.2X (max)
22" LCD: 2.1X (min) – 55.9X (max)
24" LCD: 2.3X (min) – 61.2X (max)

Merlin elite Pro
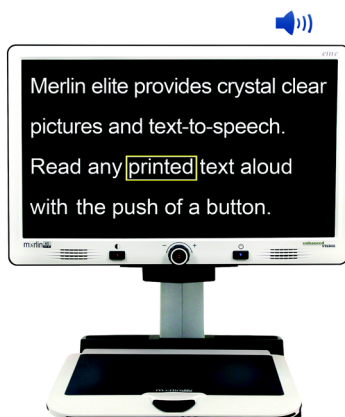
Merlin elite Pro is a high-performance desktop video magnifier (CCTV), featuring HD and full-page text-to-speech (OCR). High definition color and contrast provides a beautiful, crystal clear picture and vibrant colors. Merlin elite Pro's unique design allows for a wide field of view, displaying more text on the screen.

Magnification: 1.3X – 65X

enhanced vision

A VISPERO® BRAND

acrobat HD ultra

Flexibility for Any Task

MAN-0012-00 X4
February 2020