ONYX® Portable HD

Portable Video Magnifier

User's Guide

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Introduction

The ONYX® Portable HD is a lightweight portable video magnifier that can easily be folded for quick and convenient travel. Once you arrive at your destination, simply unfold the unit, plug it in, turn it on, and experience high-quality HD video magnification for both close-up and long distance viewing.

The unit includes the following features:

- High-definition camera with auto-focus lens that displays high-quality images
- SuperSpeed USB video streaming using the USB 3.0 port (10x faster than a USB 2.0 port)
- HDMI port for monitor or HDTV connection
- 33 color modes to fit your viewing needs (six default and 27 configurable)
- Distance viewing and self-viewing camera positions
- Auto Focus – creates the clearest view without any need to make adjustments
- Freeze Frame to capture the current image on the screen

- SD Card slot – capture and save images to an installed SD Card
- Brightness controls
- Find function to easily target distant objects
- Adjustable reading lines and masks to emphasize an area displayed on the screen

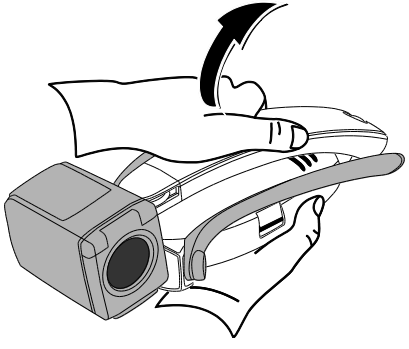
What's in the Box?

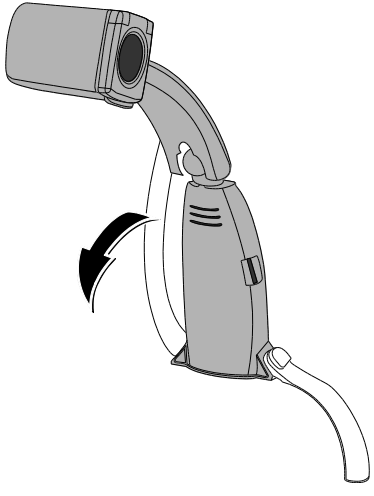
- ONYX Portable HD magnifying camera with wired remote control
- Monitor cable (1 m HDMI to DVI)
- Two USB 2.0 cables (1 m and 2 m) for power
- USB 3.0 cable (1 m) for high-speed video between the unit and computer
- Universal USB wall charger
- User documentation
- GEM® software CD for use with a computer
- Carrying case

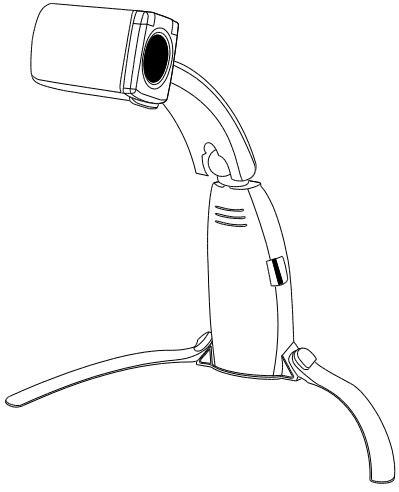
Opening the Unit

1. Hold the body of the unit in one hand, and with your other hand, lift the camera arm up until it locks in the first position.

2. Rotate one support leg down and then rotate the other support leg.





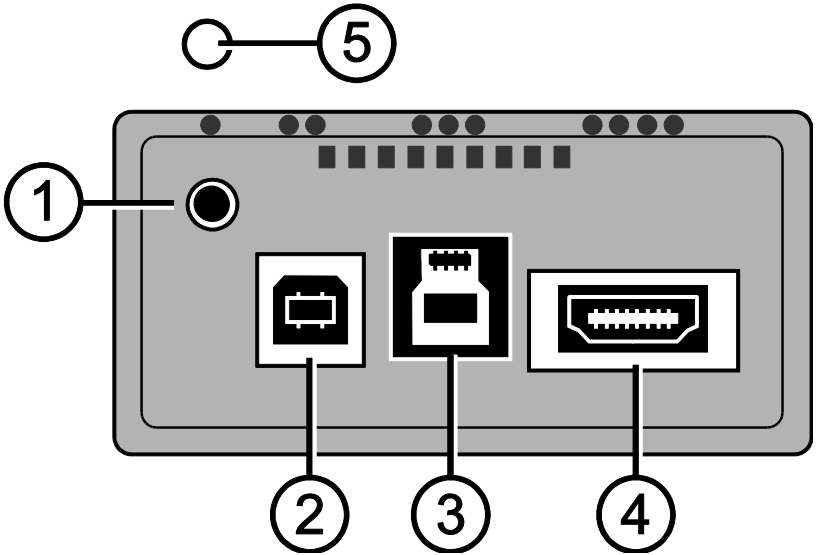


3. Place the unit on a sturdy flat surface.
4. For information about camera positions, see pages 16-18.

Connector Panel

The connector panel on the back of the unit has four connectors for the remote control, power, and video. Above the connector panel is the power status LED.

Use the following illustration and descriptions to learn more about the connector panel.



① **Remote Control Jack**. Connect the remote control to the unit. It is located in the upper left corner and is identified with a single raised dot above the jack.

② **USB 2.0 Power Port – Type B**. Attach one of the two supplied USB 2.0 cables (1 m or 2 m) for power. It is the left port and is identified by two raised dots.

③ **USB 3.0 Video Port – Type B**. Attach the supplied USB 3.0 cable (1 m) for a video connection between the unit and a computer. It is the center port and is identified by three raised dots. Blue is the standard color for USB 3.0 connectors and ports.

④ **HDMI Video Port**. Attach the supplied HDMI to DVI cable (1 m), or an HDMI to HDMI cable (customer supplied) for HDMI video output to a monitor or HDTV. It is the right port and is identified by four raised dots.

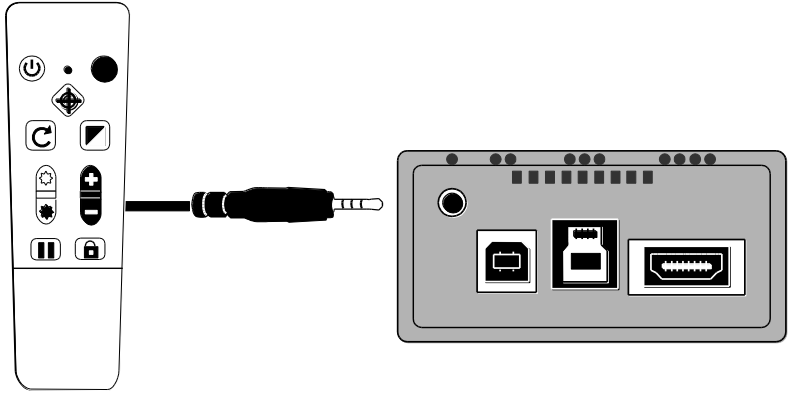
⑤ **Power Status LED**. Indicates if the unit is on or off. Also indicates if the unit has enough power to operate. It is located above the remote control jack.

Connecting the Remote Control

The unit has a wired remote control. When the unit is folded, the remote control attaches and is conveniently stored against the unit's body.

To connect the remote control, plug it into the jack on the back of the unit as shown below.

The jack is located in the upper left corner of the connector panel and is identified by a single raised dot.



Connecting a Monitor or HDTV and Powering On the Unit

You can connect the unit directly to a monitor or HDTV to view video. To do this, use the following cables:

- USB 2.0 power cable (USB A to B - white inner connectors)
- USB wall charger
- HDMI to DVI video cable for monitor connection
- HDMI to HDMI video cable for HDTV connection (customer supplied)

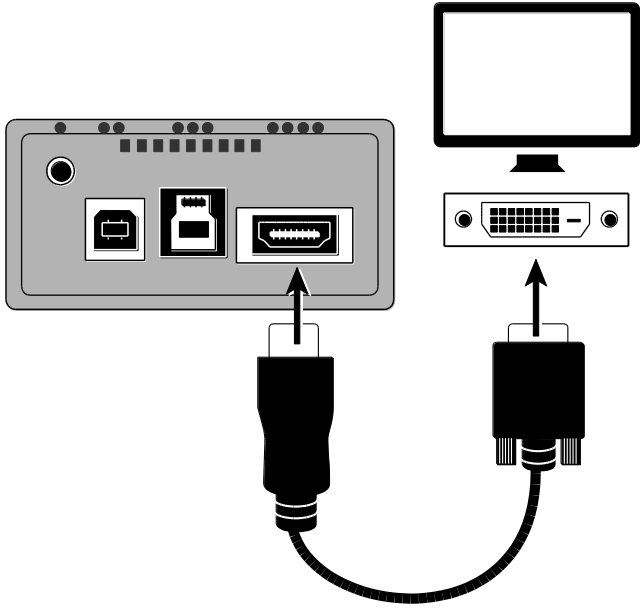
Monitor Connection – HDMI to DVI

The monitor cable has an HDMI connector and a DVI connector.

1. Plug the cable's HDMI connector into the HDMI port on the back of the unit. The port is identified by four raised dots.

2. Plug the cable's DVI connector into the DVI port on your monitor.

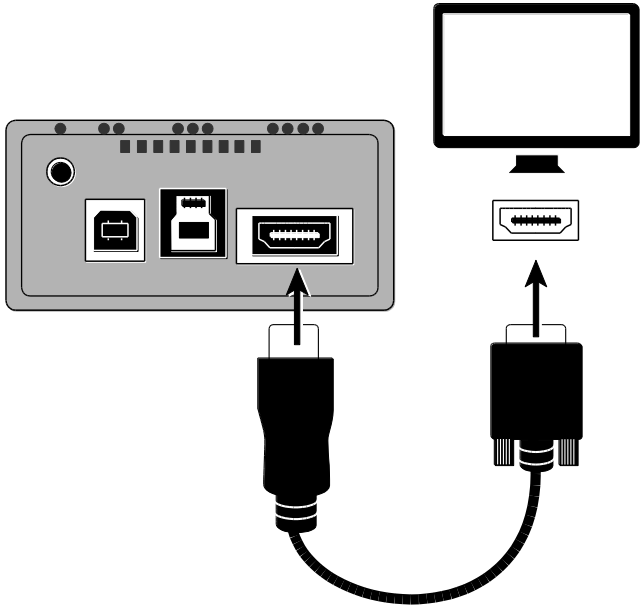
3. Make sure to power on your monitor.



HDTV Connection – HDMI to HDMI

When connecting the unit to an HDTV, you must supply an HDMI to HDMI cable. In addition, you must choose the correct input source using your HDTV's setup menu.

1. Plug an HDMI connector into the HDMI port on the back of the unit. The port is identified by four raised dots.
2. Plug the other HDMI connector into the HDMI port on the HDTV.
3. Make sure to power on your HDTV.
4. Change the HDTV's input source to select the unit. Refer to your HDTV user documentation for this information.



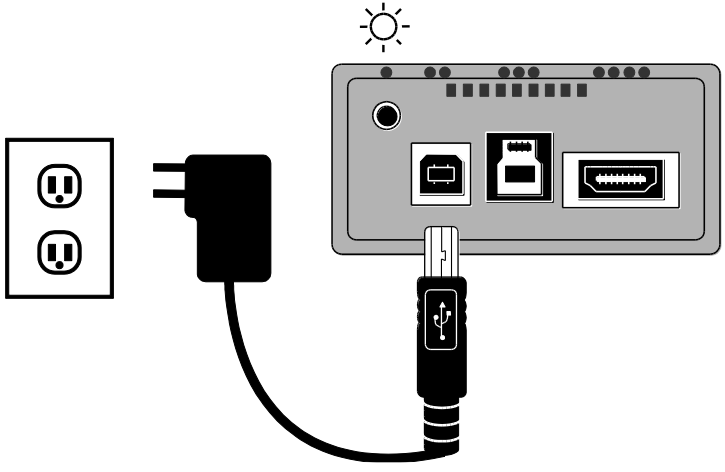
Power Connection

For power, use the 1 m or 2 m USB 2.0 cable.

1. Plug one end of the USB 2.0 cable into the USB wall charger and then the charger into a wall outlet.

2. Plug the other end of the USB 2.0 cable into the USB 2.0 port on the back of the unit. The port is identified by two raised dots and is located next to the remote control jack.

   The Power LED on the rear of the unit displays as **yellow**, which indicates that the unit is off. If it is not yellow, refer to *Power LED Description* on page 15 for more information.



Note: Use only the USB wall charger provided with the unit. Other chargers may not provide sufficient power.

3. Press the green **POWER** button on the remote control to power the unit on.

   The Power LED on the rear of the unit displays as **green** indicating that the unit is on. If the LED is not green, refer to *Power LED Description* on page 15 for more information.

   After a moment, the camera's view appears on the monitor screen.

Connecting a Computer and Powering On the Unit

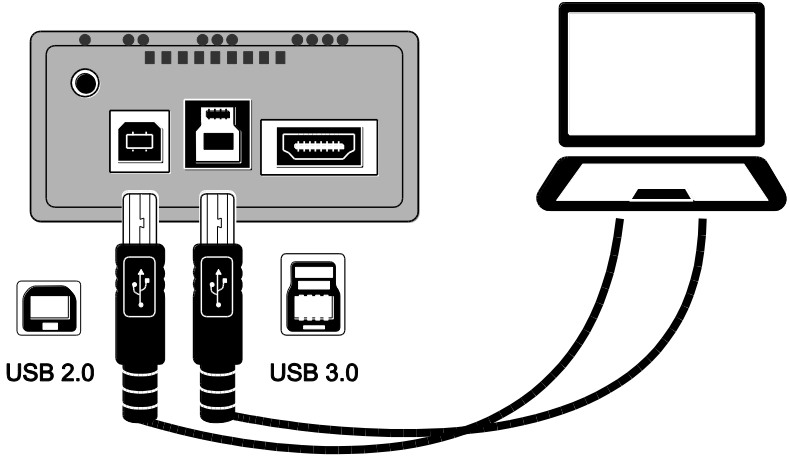
You can operate the unit using a computer and GEM image management software. GEM allows you to view, capture, and save magnified images. It also lets you perform tasks such as zoom, focus, and freeze. For more information about GEM, refer to its help file.

You can connect the unit directly to a computer for both power and video. To do this, use the following cables:

- USB 2.0 power cable (USB A to B - white inner connectors)
- USB 3.0 video cable (USB A to B - blue inner connectors)

Note: For best video performance, always use the USB 3.0 cable and port on the unit, and a computer with a USB 3.0 port. Blue is the standard color for USB 3.0 connectors and ports.

Always use the USB 2.0 cable and ports for power.



1. Plug the USB 3.0 cable (blue inner connectors) into the USB 3.0 video port (blue inner connector) on the back of the unit. The port is identified by three raised dots.

2. Plug the other end of the cable into a USB 3.0 port on the computer.

   A USB 3.0 port on a computer is blue. It may also be identified with “SS” or “3.0.”

Note: If your computer does not support USB 3.0, then plug the cable into any available USB 2.0 port on the computer. The unit will operate correctly; however, it will have slower video performance.

3. For power, plug one end of the USB 2.0 cable (1 m or 2 m) into the USB 2.0 port on the back of the unit. The port is identified by two raised dots.

4. Plug the other end of the cable into a USB port on the computer.

   The Power LED on the rear of the unit displays as yellow, which indicates that the unit is off. If it is not yellow, refer to *Power LED Description* on page 15 for more information.

5. Press the green **POWER** button on the remote control to power the unit on.

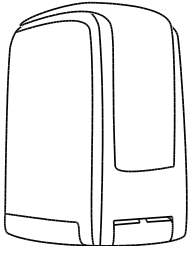
   The Power LED on the rear of the unit displays as green indicating that the unit is on. If the LED is not green, refer to *Power LED Description* on page 15 for more information.

6. Make sure to power on your computer.

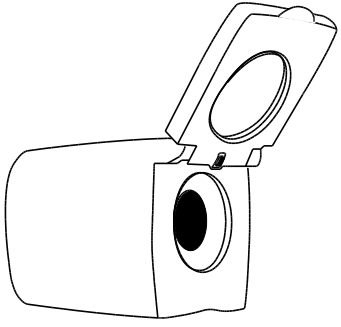
Power LED Description

Green	**Unit is on**. If no video displays, verify that (1) the USB 3.0 video cable is plugged into the unit's USB 3.0 port, or (2) that a video cable from the monitor or HDTV is connected to the unit's HDMI port. For an HDTV connection, make sure to change the HDTV's input source.
Yellow	**Unit is off and in Standby mode**. If the unit does not power on, verify that the USB 2.0 power cable is plugged into the USB 2.0 power port and not the USB 3.0 video port.
Red	**Unit does not have enough power to operate**. This indicates insufficient power from the USB 2.0 source, for example, if the unit is connected to a USB hub, keyboard, extension cable, or adapter. When getting power from a wall outlet, make sure you are using the USB wall charger supplied with the unit.
No LED	**Unit is off**. If the unit is connected to a power source but does not turn on, verify that (1) the USB 2.0 power cable is connected, (2) the computer is turned on, or (3) the USB wall charger is not connected to a power outlet on a light switch.

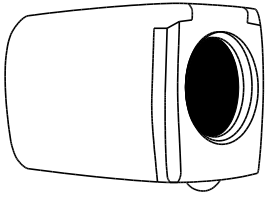
Positioning the Camera



For reading items placed under the camera, keep the close-up lens closed and the camera pointing down.



For distance viewing, keep the close-up lens open.



Keep the close-up lens closed and the camera pointing forward for:

- Looking at nearby objects
- Self-viewing (camera rotated and pointing at yourself)

Saving Camera Settings

Any changes that you make to camera settings (color mode, magnification, shading, and so on) are saved for that camera position: distance, reading, or self-viewing. This allows you to have a unique configuration for each camera position.

For example, for reading, you can use yellow on black as your color mode to provide a strong contrast between foreground text and a solid background. When you rotate the camera for self-viewing, you can have a different configuration that automatically switches to true full color with less magnification.

To permanently save camera settings after creating your preferences:

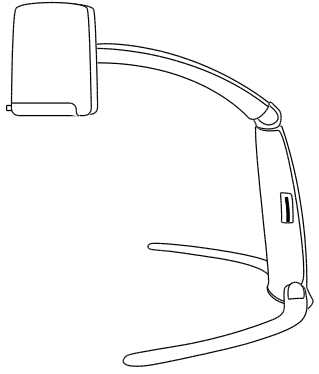
- Press the green **POWER** button (upper right corner of the remote control) to turn off the unit. Your most recent changes are saved for each camera position.

Note: If you remove the USB cables from the unit instead of powering off, your most recent changes are not saved.

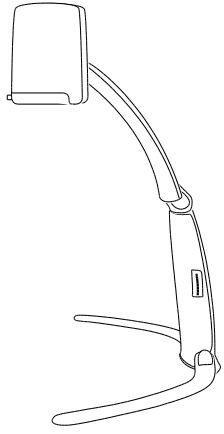
Note: To restore the unit to its factory default settings, see page 41.

Camera Arm Positions

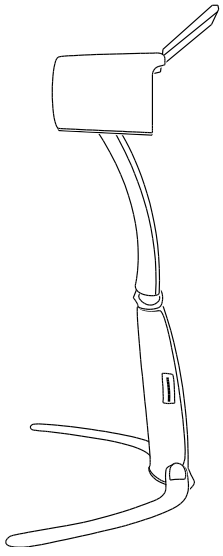
The camera arm can be placed into three different positions.



Reading. Use to view documents that are placed on a surface directly below the camera



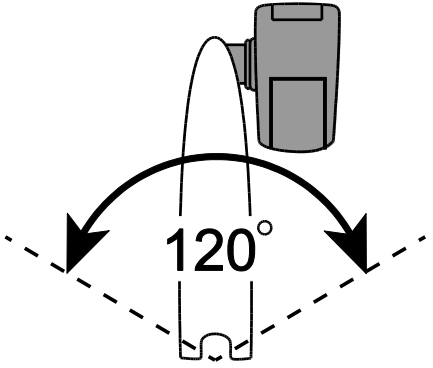
Intermediate. Use to view taller objects that are placed on a surface directly below the camera. For example, it can be used to view the shipping label on a package. This position can also be used for distance viewing or self-viewing.



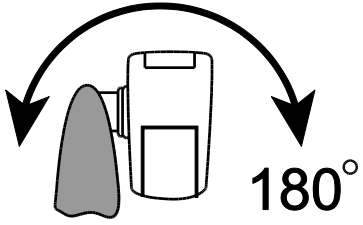
Distance. Use for distance viewing. This is ideal when it is necessary to view over objects that may obstruct the camera's view. For example, when in a classroom or lecture hall environment, it positions the camera over the heads of other students.

Always keep the close-up lens open for this position.

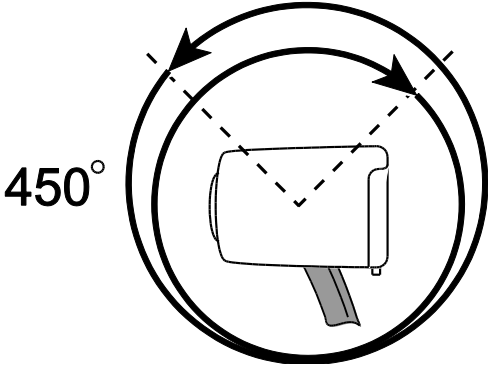
Swinging, Panning, and Rotating the Camera



Camera arm swings 120° left and right



Camera pans 180°



Camera rotates 450°

Closing the Unit

Before closing the unit, do the following:

- Press the green **POWER** button on the remote control to turn off the unit.
- Unplug the remote control, power, and video cables from the back of the unit.

Note: When the unit is collapsed for travel, you can attach the remote control securely against the unit's body for compact storage. There are two ways to secure the remote control. Use the method that you prefer.

(a) You can attach the remote control now before collapsing the unit, or

(b) You can wait until the unit is collapsed and then attach it against the unit's body as described below in step 5.

To close the unit, do the following:

1. Lift and hold the unit by its body.
2. Fold the camera arm down toward the unit's body.

3. Reposition your grip on the unit and with your other hand, rotate one leg up toward the unit's body, and then rotate the other leg.

4. Move the camera so that it is perpendicular to the camera arm.

5. If you like, you may secure the remote control against the unit's body for compact storage.

   To do this, slightly lift the camera arm, and slide the remote control between the arm and body.

6. Place the unit and cables into the carrying case for safe storage and travel.

The following explains how to quickly change magnification, screen colors, and image brightness. Before you begin, you should unfold the unit and connect cables and power as described earlier in *Setting Up the Unit* beginning on page 3.

1. Place the object you want to magnify onto the surface directly below the camera so that it displays on the monitor's screen.

   Make sure the camera is pointing down, and the close-up lens is closed. Make any position adjustments necessary to both the camera and the object.

2. Press or on the remote control to zoom in or out and change the size of the image displayed on the screen. The magnification value briefly displays on the screen when you release the button.

3. To adjust contrasts and color, press to cycle though the six default color modes: True Full Color; High Contrast Full Color; Black on White (high-contrast positive); White on Black (high-contrast negative), Yellow on Blue, and Yellow on Black.

4. If necessary, you can adjust screen brightness by pressing or .

This section describes how to change magnification and screen brightness, locate objects, change color modes, and more using the remote control. For more information about the remote control and its buttons, refer to *Remote Control Functions* on page 42.

Before you begin, make sure the unit is turned on. If necessary, press the green **POWER** button on the remote control to turn on the camera.

Changing Magnification

- Press the black **PLUS** button (center right of the remote control) to zoom in and enlarge the object that appears on the screen

- Press the black **MINUS** button (center right of the remote control) to zoom away from the object on the screen

  The magnification value briefly displays when you release the button. Due to tolerances in object height and camera location, this indicator is approximate.

Adjusting Screen Brightness

- To make the image lighter, press the top yellow **BRIGHTNESS** button (center left of the remote control).

- To make the image darker, press the bottom yellow **BRIGHTNESS** button (center left of the remote control).

Changing Color Modes

A color mode is a pre-defined color combination. You can use color modes to reduce glare and provide contrast. The unit has six default color modes:

- True Full Color (cannot be disabled)
- High Contrast Full Color
- Black on White (high-contrast positive)
- White on Black (high-contrast negative)
- Yellow on Blue
- Yellow on Black

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 38. To add more color modes, refer to *Adding and Removing Color Modes* on page 39.

There are two ways to move through the list of color modes:

- Press the blue **COLOR MODE** button , located in the upper right of the remote control, to cycle through and select different color modes.
- Press the black **UP ARROW** or **DOWN ARROW** buttons to move to the previous or next color mode. You can only do this when reading lines, shades, and masks are off.

Flipping an Image

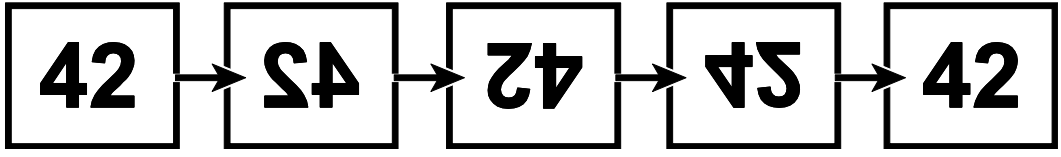
You can change the screen orientation so that the camera image is flipped and mirrored both horizontally and vertically.

This function is useful when the object you are viewing is upside down. For example, if you receive a heavy package, it may be easier to flip the image around instead of turning over the package.

To flip an image, do the following:

- Press the light blue **FLIP** button (upper left of the remote control) to cycle through the four different picture orientations.

  The camera will remember this setting the next time you rotate it back to this position.



Freezing an Image

1. Press the red **FREEZE FRAME** button to freeze the current image that appears on the screen. The Freeze Frame button icon ⏸ displays on the screen.

   Freeze Frame is useful when viewing distant static images such as text on a blackboard.

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

Locking the Focus

Focus lock keeps the camera focused on the item you are viewing instead of trying to automatically focus on your hand, or any other item that passes in front of the camera. This is useful when working or writing directly under the camera.

1. Move the camera to the reading position (pointing down with the close-up lens closed).

   Next, place your document or other item under the camera, and adjust magnification using the black **PLUS** or **MINUS** buttons.

2. Press the orange **FOCUS LOCK** button (lower right side of the remote control) to turn on Focus Lock.

   The Focus Lock icon displays on the screen. The camera's focus setting will not change, meaning that an object moved closer to or farther away from the camera lens will be out of focus.

3. Press the orange **FOCUS LOCK** button again. The Focus Lock icon disappears, Auto Focus is restored, and the camera returns to normal operation.

Aiming the Camera at Distant Objects

If you are currently focused on an object, but you want to move the camera to another object, use the **FIND** button to help you aim the camera, locate the center of the new object using the crosshairs displayed on the screen, and return to your initial magnification level.

1. Press and hold the red **FIND** button (upper center section of the remote control).

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

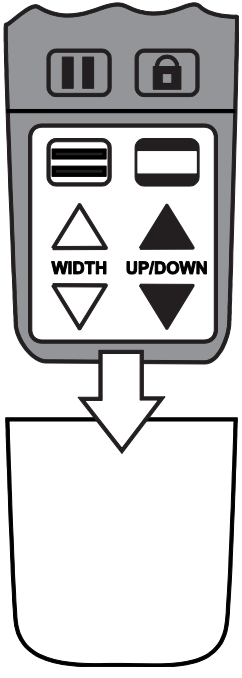
2. While still holding the button, move the camera or the object until the crosshairs shown on the screen align with the area that you want to view.

3. Release the red **FIND** button .

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

Shading, masks, and reading lines are features you can use to help you read text on the screen.

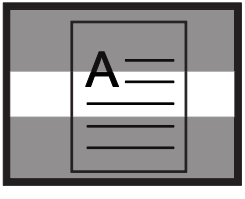
The **MASK** and **READING LINES** buttons are located under the button cover. To access these buttons, slide the button cover down and off.



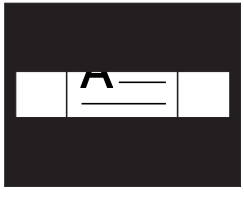
Shading and Masking

Shades and masks block parts of the screen to show only a horizontal or vertical slice of the screen. This makes it easier to focus on a specific area of the screen while also reducing glare from bright backgrounds. Shades display as two translucent bars. Masks display as two solid bars on the screen.

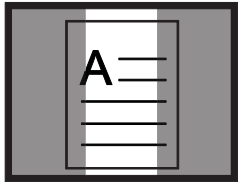
To display shades or masks, press the black and white **MASK** button to cycle through the following options. (The button is located on the lower right side of the remote control.)



Horizontal Shades

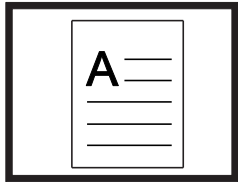


Horizontal Masks



Vertical Shades

Vertical Masks



None

To move shades or masks, use the white and black arrow buttons as described below.

Press …	To …
White **UP ARROW** button	Decrease the distance between shades or masks. This is true for both horizontal and vertical layout.
White **DOWN ARROW** button	Increase the distance between shades or masks. This is true for both horizontal and vertical layout.
Black **UP ARROW** button	Move horizontal shades or masks up the screen. Move vertical shades or masks to the left.
Black **DOWN ARROW** button	Move horizontal shades or masks down the screen. Move vertical shades or masks to the right.

Reading Lines

Reading lines are horizontal or vertical lines that display on the screen to help you maintain your place while viewing an image or reading text.

Note: When connected to a computer, reading lines are controlled using the GEM image management software's hot keys. Refer to the GEM help file for more information.

To display reading lines, do the following:

1. Press the white and black **READING LINES** button (lower left side of the remote control) to display two horizontal lines.
2. Press it again to display two vertical lines.
3. Press it a third time to display none.

To move reading lines, use the white and black arrow buttons as described below.

Press …	To …
 White **UP ARROW** button	Move the bottom horizontal reading line up the screen. Move the right vertical reading line to the left.
 White **DOWN ARROW** button	Move the bottom horizontal reading line down the screen. Move the right vertical reading line to the right.
 Black **UP ARROW** button	Move both horizontal reading lines up the screen. Move both vertical reading lines to the left.
 Black **DOWN ARROW** button	Move both horizontal reading lines down the screen. Move both vertical reading lines to the right.

Saving an Image to an SD Card

Note: Images can only be saved when an SD Card is in the SD Card slot. If the image cannot be saved, displays on the screen. When viewing the camera from the front, the SD Card slot is located on the right side of the unit's body.

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 until the Save icon appears on the screen.

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 720 pixels (when operating the unit with the remote control and not the GEM software).

   Images are named and numbered in the order saved, for example, IMG_0001.bmp, IMG_0002.bmp, and so on. The naming convention follows an alphanumeric, 8-character format with BMP extension.

Reviewing or Deleting Images Saved on an SD Card

Note: To enter Review mode from live view or freeze frame, press for six seconds. displays if an SD Card is not in the SD Card slot. Verify that the SD Card is inserted in the card slot.

Reviewing Images

After entering Review mode, the latest saved image displays on the screen.

To view other images saved on an SD Card, do the following:

1. Remove the button cover from the remote control. The cover is located below the **FREEZE FRAME** and **FOCUS LOCK** buttons on the front of the remote control.
2. Press or to scroll through the saved images.
3. The Save Image check box is selected for each image.
4. When you are finished reviewing images, you can (1) exit Review mode and return to live view by pressing for six seconds, or (2) delete images as described in the next section.

Deleting Images

To delete the current image while in Review mode, do the following:

1. Press and hold the black **ADVANCED** button ●, and then press ⊕ 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 ● and ⊕ again to toggle and select the check box **before** exiting Review mode.

2. To delete another image, press △ or ▽ move to the next image, and then repeat step 1.

3. Press ⏸ for six seconds to exit and return to live view.

Color Modes

There are six factory default* color modes and 27 additional color modes that can be activated.

* True Full Color (cannot be disabled)	* High-Contrast Full Color	Grayscale
* Black on White (high-contrast positive)	* White on Black (high-contrast negative)	* Yellow on Blue
Blue on Yellow	* Yellow on Black	Black on Yellow
Violet on Black	Black on Violet	White on Blue
Blue on White	Green on Black	Black on Green
Red on White	White on Red	White on Green
Green on White	Black on Blue	Blue on Black
Black on Red	Red on Black	Violet on White
White on Violet	Black on Orange	Orange on Black
Green on Yellow	Yellow on Green	Amber on White
White on Amber	Amber on Black	Black on Amber

Adding and Removing Color Modes

The unit has six default color modes. You can also activate and choose from a variety of 27 other color modes for a total of 33.

To add or remove color modes, do the following:

1. Press and hold the black **ADVANCED** button ● first and then the green **POWER** button ⏻ for approximately six seconds to enter the Configuration menu.

   The Enable check mark ✓ displays on the screen indicating that the current color mode is active.

2. To disable the current color mode, press the light blue **FLIP** button . An ✗ displays and indicates that the color mode is disabled.

Note: True Full Color mode is always available and cannot be disabled.

3. To scroll to the next color mode, press the blue **COLOR MODE** button .
   - ✓ indicates that the color mode is enabled
   - ✗ indicates that the color mode is disabled

Note: To scroll faster through the list, you can also press the black **UP ARROW** ▲ or **DOWN ARROW** ▼ buttons to move to the previous or next color mode. (The **UP/DOWN** buttons only work if shading, masking, and reading lines are off.)

4. To enable or disable another color mode, press the light blue **FLIP** button .
5. Repeat steps 3 and 4 to continue adding or removing color modes.
6. When you are finished, press and hold the black **ADVANCED** ● button first and then the green **POWER** ⏻ button for approximately six seconds to save your changes and exit Configuration mode.

Restoring Factory Default Settings

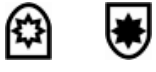
To restore the unit to its default settings, do the following:

1. Press and hold the black **ADVANCED** button first and then the green **POWER** button for approximately six seconds to enter the Configuration menu.

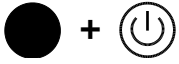
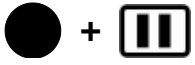
2. Press and hold the red **FIND** button for approximately three seconds.

3. Press and hold the black **ADVANCED** button first and then the green **POWER** button for approximately six seconds to exit Configuration mode.

Remote Control Functions

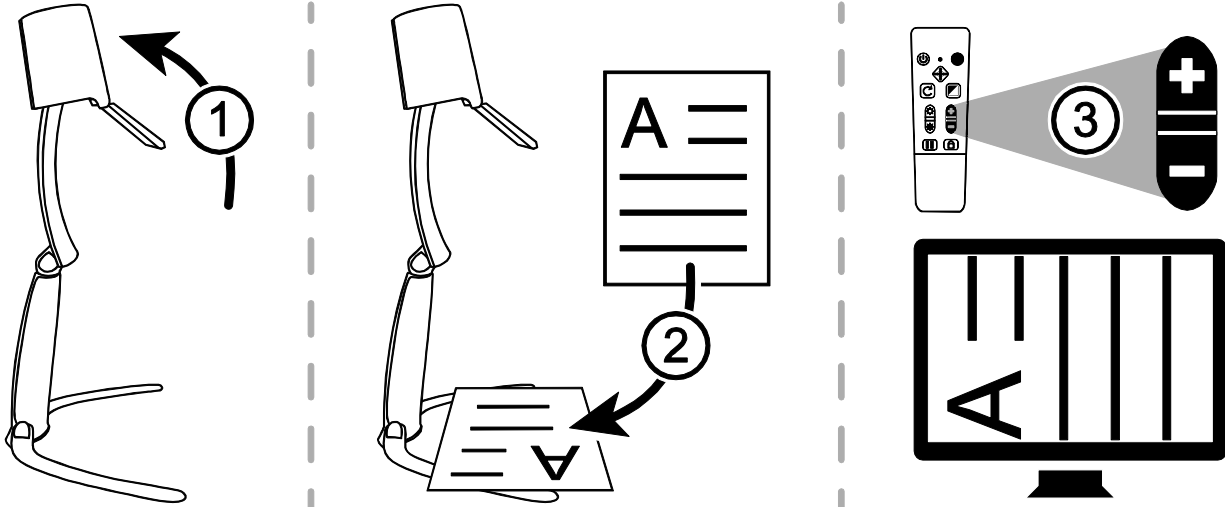
Button	Description
	Power (Green): Turns unit on and off
	Advanced (Black) Use in combination with other buttons to perform advanced tasks. Always **press and hold** this button first, and then press another button to perform the task.
	Find (Red) Displays crosshairs and zooms out to help aim the camera
	Flip (Light Blue) Cycles through four different picture orientations
	Color Mode (Blue) Cycles through different color modes
	**Brightness (Yellow)** Increases and decreases screen brightness

Button	Description
	Zoom (Black) Changes magnification when Auto Focus is on (see page 24)
	Freeze Frame (Red) (1) Freezes the current image displayed on the screen. Press again to return to live view (see page 27). (2) Hold for approximately six seconds to enter or exit Review mode (see page 36).
	Focus Lock (Orange) Turns Auto Focus on and off (see page 28)
	Reading Lines (White and Black) Displays two horizontal or vertical reading lines
	Mask (Black and White) Displays shades or masks to cover parts of the screen
	Width (White) Increases and decreases space between shades, masks, and reading lines

Button	Description
	Up and Down (Black) Moves shades, masks, and reading lines on the screen
	**Advanced + Power** Hold for approximately six seconds to enter or exit Configuration mode
	**Advanced + Freeze Frame** Saves the current image to an SD Card. Images can only be saved when an SD Card is in the SD Card slot.
	Advanced + Find Deletes the current image when in Review mode

OpenBook is Freedom Scientific's OCR (optical character recognition) scanning and reading software. You can use OpenBook, along with the ONYX Portable HD and the GEM software that came with the unit, to capture, scan, and read documents.

Placing a Document under the Camera



1. Place the unit into the Distance position (1).

2. Rotate the camera so that it is pointing down, and open the camera lens (1).

3. Place a document under the camera so that its text is perpendicular to the unit (2). For example, if the document's layout is portrait, turn it so that it is landscape. Adjust the camera as necessary.

4. Use the remote control to zoom in or out so that only the document appears on the screen (3). Make sure the desktop or other objects beyond the edge of the page do not appear on the screen.

Capture, Scan, and Read

Note: OpenBook must be installed on the same computer that is running GEM.

1. Start GEM.

2. Press **F12+DASH** while viewing the document in GEM.
   This hot key captures and sends an image to OpenBook.

3. OpenBook starts (if it is not currently running), displays the recognized text in a new document, and automatically begins reading aloud.

Problem	Solution
The monitor or HDTV screen is blank.	Press on the remote control to power on the unit. Make sure the USB 2.0 power cable is connected to the unit's USB 2.0 port (white inner connector and two raised dots). Make sure the USB 2.0 power cable is connected to a computer's USB port, or to the USB wall charger and then a power outlet. Make sure the monitor or HDTV is powered on. Make sure the correct input source is selected for the HDTV. Reduce the magnification level using . Try adjusting brightness using or . Press to switch to a different color mode.

Problem	Solution
The unit does not power on.	Ensure that the remote control is working. The red LED in the top center of the remote control flashes when a button is pressed. If this does not happen, verify that the remote control is plugged in to the unit. Make sure that the USB 2.0 cable (white inner connector) is connected to the USB 2.0 port (white inner connector with two raised dots) on the back of the unit. When connected to a power outlet, ensure that the power outlet has power and is not malfunctioning. If the outlet is connected to a wall switch, make sure the switch is on. When connected to a computer, ensure that the computer is powered on.
The Power LED is yellow, but the unit does not power on.	Verify that the USB 2.0 power cable (white inner connector) is connected to the USB 2.0 power port and not the USB 3.0 video port (blue inner connector) on the back of the unit.

Problem	Solution
The Power LED is red.	Do not connect the unit into a USB hub, keyboard, extension cable, or adapter. For adequate power, always plug the unit directly into a computer's USB port, or use the supplied USB wall charger. Ensure that the USB 2.0 power cable (white inner connector) is connected to the unit's USB 2.0 port and not the USB 3.0 port (blue inner connector) on the back of the unit.
The Power LED is green, but there is no video.	When connected to a monitor or HDTV, ensure that you are using the USB 2.0 power cable (white inner connectors) and not the USB 3.0 video cable (blue inner connectors). Ensure that the USB 2.0 power cable (white inner connectors) is not connected to the USB 3.0 video port (blue inner connectors).

Problem	Solution
The image on the screen is too bright, or too dark.	Press to reduce brightness. Press to increase brightness. Press to switch to a different color mode.
The document being read is out of focus.	Make sure the close-up lens is closed while the camera is pointing down. See *Positioning the Camera* on page 16 for more information. When the camera arm is in the intermediate position, and the camera is pointing down, the item on the desktop may be less than 2.5 in. / 6.4 cm in height. Move the camera arm to the reading position.

Problem	Solution
The image on the screen is blurry or unfocused.	Make sure the close-up lens is in the correct position: closed for reading view, and open for distance view. If the camera arm is in the reading position, and the camera is pointing down in reading view, the object may be 2.5 in. / 6.4 cm or more in height. Move the camera arm to the intermediate position. Ensure that Focus Lock is off. Press to turn on auto focus. Make sure the lens is clean. Check that the object that you are trying to view is centered on the screen. The camera might be trying to focus on something else.
The image is upside down.	Press to invert the image.

Problem	Solution
When moving the camera to a new position, the previous position's settings are lost.	This is normal operation since camera settings are saved based on the camera position. For example, if you have reading lines turned on for distant viewing, and then change the camera to reading or self-viewing, the reading lines will not appear unless you set them for that camera position.
Nothing happens while pressing buttons on the remote control.	Verify that the red LED on the remote control flashes when you press a button. If not, make sure the remote control is plugged in to the back of the unit.
The unit's settings are different after powering on the unit.	The last settings used are not kept if you power off the unit by unplugging the USB 2.0 power cable. It is recommended that you power off the unit using the remote control.

Service and Support

You can contact Freedom Scientific Technical Support to receive technical assistance. Before contacting Technical Support, it is recommended that you refer to *Troubleshooting* on page 47 to try to resolve your problem quickly.

To contact **Technical Support** by Web, visit **www.FreedomScientific.com**, choose Support, and complete the form to submit questions.

To contact by e-mail, send questions to **Support@FreedomScientific.com**.

To contact by telephone, U.S. customers can call **(727) 803-8600**, Monday through Friday, 8:30 AM to 7:00 PM (Eastern Time).

When you call, please have your questions ready and be prepared to provide the following information:

- Product name
- Product serial number
- What you were doing when the problem occurred
- How you tried to solve the problem

Warranty Information and Product Registration

The ONYX Portable HD and its accessories come with a two-year warranty against manufacturing defects.

Note: These devices have no user-serviceable components. Any unauthorized attempt to service or replace internal components will void the product warranty.

Please call Freedom Scientific Technical Support at (727) 803-8600 for assistance in troubleshooting any problems. If necessary, the technical support specialist will issue a Return Materials Authorization (RMA) number that must be referenced on the outside of the package containing your returned unit. The unit or its accessories will then be exchanged or repaired as needed.

Visit **www.FreedomScientific.com/Forms/ProductRegistration** to register your product and validate your warranty.

Federal Communications Commission (FCC) Compliance Statement

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 an outlet on a circuit different from that to which the receiver is connected
- Consult the dealer or an experienced radio or television technician for help

CAUTION: Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

Industry Canada (IC) Compliance Statement

- CAN ICES-3(B)/NMB-3(B)

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.
- Do not attempt to modify the remote control. Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.
- 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 camera lens or close-up lens, use the supplied lens cleaning cloth and gently wipe. Do not apply excessive pressure. 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.