

# **RUBY<sup>®</sup> 7 HD**

## **Handheld Video Magnifier**

### **User's Guide**

Freedom Scientific, Inc.

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

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RUBY™ 7 HD is a lightweight, handheld video magnifier that can magnify an object from two to 24 times its size. It has a 5-megapixel, auto-focus camera that provides sharp HD quality images that are easily viewed on its full color, 7-inch LCD screen. RUBY 7 HD supports five default color modes, and 16 additional contrasting color modes that can easily be enabled.

Other features include:

- PivotCam™ – a 5-megapixel, auto-focus camera that easily rotates through a wide range of viewing modes: reading, hobby, distance, self-view, and spotting
- Panning button to easily pan horizontally or vertically across a still or saved magnified image
- Unit can be used to view items up to 15-feet away
- Large and easy-to-use buttons
- Full size HDMI port that allows connection to HDTVs and HD monitors
- Save and store up to 105 images that can easily be copied to a computer through a simple USB connection


- Micro-USB port to transfer images between the unit and computer
- Multiple LED lights
- Reading line and masks to quickly locate and maintain your place while viewing an image or reading text on the LCD screen


### **What's in the Box?**




- RUBY 7 HD with PivotCam
- Power adapter
- Micro-USB cable for file transfer
- HDMI-HDMI cable for HDTV connection
- Microfiber lens cloth
- User documentation
- Carrying case



Below are steps to quickly set up and use RUBY 7 HD for the first time.

1. Make sure the unit is fully charged.
2. Power the unit on by pressing the green/yellow **Power** button  or by opening the reading stand.
3. Do one of the following:
  - Hold the unit similar to a tablet to view items both near and far. This is useful when you want to magnify and read objects such as labels or details on cans, packages, pill bottles, and more. You can also use this position for self-viewing.
  - Open the reading stand to place the unit on a flat document such as a newspaper or magazine, a bill or receipt, a letter, and so on.

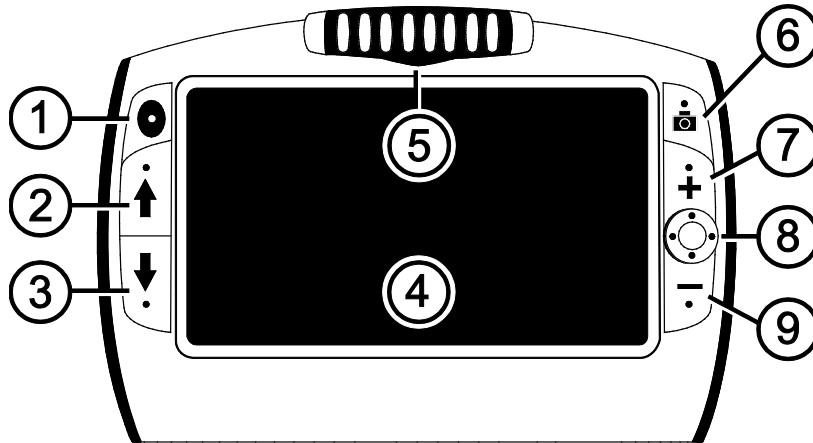
**Note:** When you close the reading stand, the unit automatically powers off. Press the green/yellow **Power** button  to power the unit on again.

4. Adjust the magnification using the yellow **Plus** or **Minus** buttons (**+** or **-**).
5. Select a color mode (**↑** or **↓**) for contrasting colors that best suit your vision needs.
6. Freeze the image  on the LCD screen so that you may take your time reading details in the image.
7. Pan horizontally or vertically  to see more of the magnified image.
8. Save the image or return to live view .

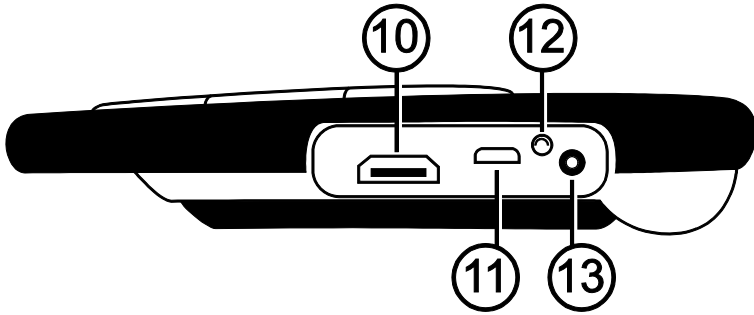
Once you become comfortable using RUBY 7 HD, try the following advanced features.

- Turn the LED reading lights on or off to adjust for glare and reflections when viewing photographs or glossy magazine pages.
- Use the reading line or reading masks to help you maintain your place while reading text.
- Save, view, and delete images stored on the unit.
- For additional storage, you can transfer images from the unit to your computer.

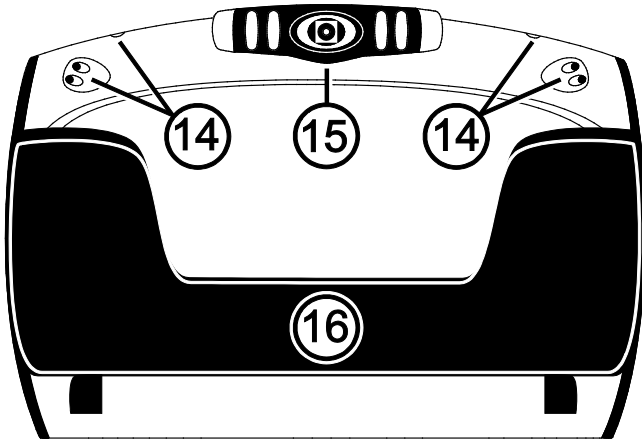
## Hardware Description



1. Power (Green/Yellow)
2. Color Mode Scroll Up (Blue)
3. Color Mode Scroll Down (Blue)
4. LCD Screen
5. PivotCam Camera
6. Freeze Frame (Red)
7. Magnification Increase (Yellow)
8. Panning (Black)
9. Magnification Decrease (Yellow)



- 10. HDMI connector
- 11. USB connector
- 12. Battery LED
- 13. Power connector



- 14. LED Lights
- 15. PivotCam Camera
- 16. Reading Stand

## Button Descriptions



**Power (Green/Yellow):** Press to power on the unit. Press it again to power off.

**Magnification (Yellow):** Press and HOLD for continuous zoom magnification with live images.



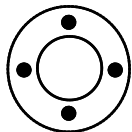
When viewing still images, press and release to incrementally increase or decrease magnification.



**Color Mode (Blue):** Press to cycle through five default color modes and 16 additional color modes. For a complete list, refer to *Color Modes* on page 23.



**Freeze Frame (Red):** Press to freeze the current image. Press it again to turn off Freeze Frame mode and return to live view.

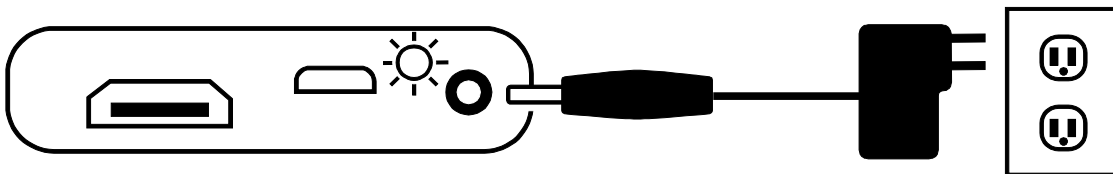


**Panning (Black):** Scroll vertically or horizontally across a magnified frozen or captured image.

## Charging the Unit / Battery LED Status

**Note:** You must use the supplied power adapter to charge the unit.

1. Plug one end of the power adapter into the unit and the other end into a wall outlet.
2. The battery indicator LED blinks green to show that the battery is charging.



3. The LED stops blinking and glows a steady green once the battery is charged. Unplug the power adapter from the unit. The battery indicator LED turns off.
4. You can now use the unit for approximately four hours of continuous use. When the battery is low, the battery indicator LED flashes red. Connect the power adapter and plug it in to recharge the battery.

## Battery LED Descriptions

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

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

**Red – Flashing:** Battery low

**Red – Solid:** Error – unplug power adapter, wait a few seconds, and plug in again

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

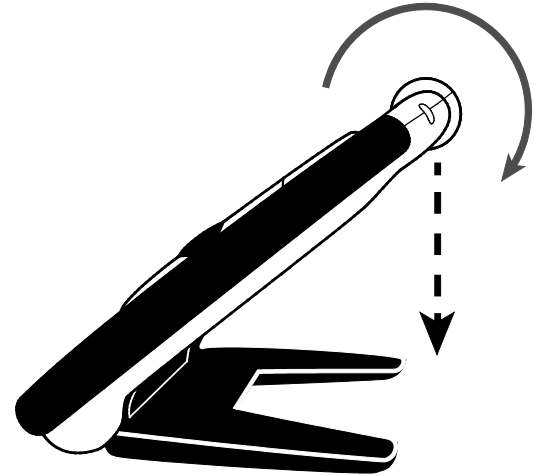
## Camera Positions


The unit can be used in five different positions: reading, distance, hobby, self-view, and spotting.

### Reading Position

The unit has an integrated reading stand. When you open it:

- The unit automatically powers on
- The camera rotates and points down into the spotting position
- You can place the unit directly on a document and read printed text or images in magazines, catalogs, menus, photographs, and other printed material

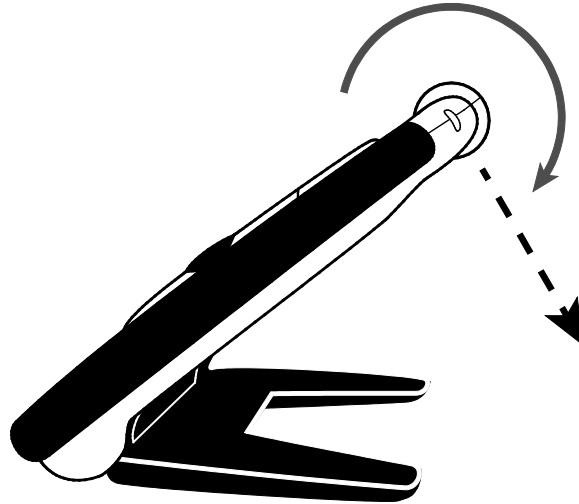


**Note:** When you close the reading stand, the unit automatically powers off, and the camera rotates to the spotting position. To power the unit on, press the green/yellow **Power** button .



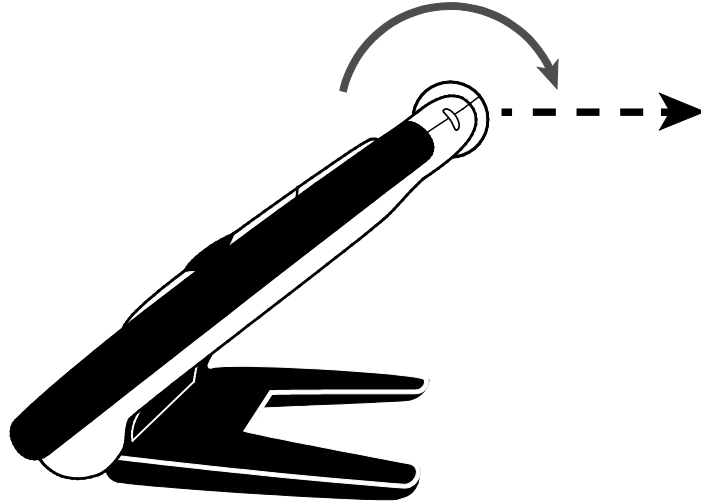
## Hobby Position

When used in the hobby position, you rotate the camera so that it is pointing slightly down and at an angle. This position allows you to hold objects at a comfortable distance in front of the camera.



## Distance Position

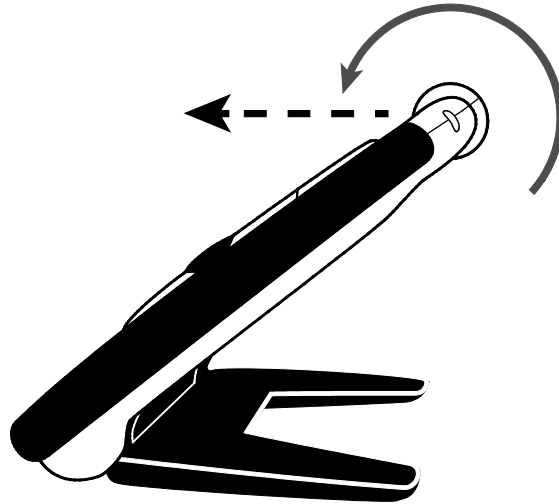
In distance position, you rotate the camera so that it is parallel to the open reading stand. The reading stand offers a hands-free stable platform to view items that are out of reach.



## Self-view Position

When in self-view, the camera is rotated around so that it is facing you. You can now see yourself on the unit's screen or on an attached HDTV or monitor.

You can use self-view with the reading stand open so that the unit is resting on a flat surface, or you can hold the unit with the reading stand closed.

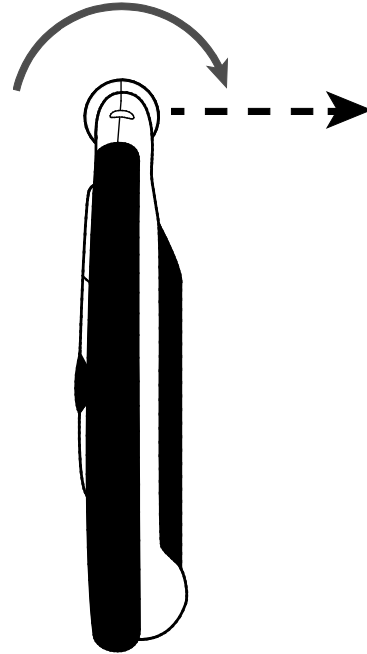


## Spotting Position

With the reading stand closed:

- The camera automatically rotates to the spotting position
- You can hold the magnifier close to an object, or point it at objects that are out of reach
- Press the magnification buttons to zoom in or out, and then freeze the image on the screen
- If you like, you can then zoom in further, and pan the image across the screen.

This is ideal for viewing clothing labels, prescription labels, price tags, receipts, business cards, and more.



## Changing Magnification

### Live Images

When viewing a live image, you can use continuous zoom magnification.

- Press and HOLD the yellow **Plus** button **+** to zoom in
- Press and HOLD the yellow **Minus** button **-** to zoom out

### Frozen or Saved Images

When viewing a frozen or saved image, you can increase magnification in two incremental steps.


- Press the yellow **Plus** button **+** to increase magnification
- Press the yellow **Minus** button **-** to decrease magnification again



For steps to freeze an image, refer to *Freezing an Image* on page 16.

To access saved images, refer to *Saving and Deleting an Image* on page 26.

## Freezing an Image




Freezing an image on the LCD screen can be useful for reading labels on items on a store shelf. By holding the unit close to the item and freezing the image, you can then bring the unit close enough for you to read.

1. Press the red **Freeze Frame** button  to freeze the image.

If you like, press the yellow **Plus** button  to increase magnification, or the yellow **Minus** button  to decrease magnification.




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

## Saving a Frozen Image

1. Press the red **Freeze Frame** button  to freeze the image.
2. Press and HOLD the red **Freeze Frame** button  for **three seconds**. The Save Image check box  appears once the file is saved.
3. Press and HOLD the red **Freeze Frame** button  for **six seconds** to return to live view. For more information, refer to *Saving and Deleting an Image* on page 26.

## Panning Still Images

The panning feature allows you to magnify a still image (frozen or saved) to view greater detail, and then scroll horizontally or vertically across the screen to see more of the image.

1. Freeze an image or open a saved image.
2. Press the yellow **Plus** button  to increase magnification to a level that is comfortable for you.
3. Do any of the following using the black **Pan** button .
  - Press and HOLD up or down to scroll vertically across the screen
  - Press and HOLD right or left to scroll horizontally across the screen
  - Double-click up or down to jump to the topmost or bottommost edge of the image
  - Double-click right or left to jump to the rightmost or leftmost edge of the image
4. Press the red **Freeze Frame** button  to return to live view.





## Changing Color Modes

A color mode is a pre-defined color combination (for example, yellow text on a black background) that you can select when reading items with RUBY 7 HD.

The unit has five default color modes: Full Color; Yellow on Black; Yellow on Blue; White on Black (high-contrast negative); Black on White (high-contrast positive); and 16 additional color modes.

For a complete list, refer to *Color Modes* on page 23.

To change color modes, do the following:

- Press the blue **Up** or **Down** arrow buttons ( or ) to change the current color combination on the LCD screen.
- The blue **Up** arrow button  cycles in one direction through the color combination list while the blue **Down** arrow button  cycles in the other direction.





## Switching Between the Last Used Color Mode and Full Color

RUBY 7 HD provides the convenience of quickly switching between the last color mode used and full color, or vice versa.





This shortcut is useful when looking at a live image (for example, while holding and reading a document) and using a color mode that provides the best contrast for you. If you need to move the unit to a different part of the document, it may be easier to switch to full color, move to the new location, and then return to your color mode selection and continue reading.

To do this,

- Press and HOLD the green/yellow **Power** button , and then press the blue **Down** arrow button . The screen changes from one mode to the other.
- To switch back, repeat the same button sequence again

## Turning LED Lights Off

When you power on RUBY 7 HD, the LED lights also turn on. To avoid glare when viewing reflective surfaces, you can turn off the LED lights.


1. Press and HOLD the green/yellow **Power** button , and then press the red **Freeze Frame** button . The LED lights turn off.
2. To turn the lights on again, press and HOLD the green/yellow **Power** button , and then press the red **Freeze Frame** button .

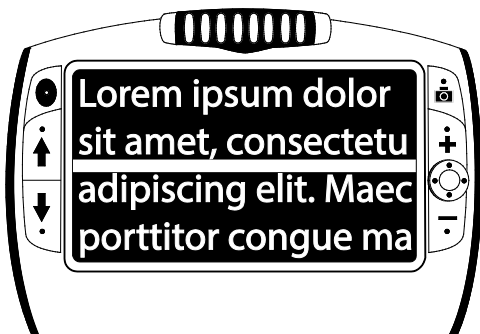
## Using Reading Line or Reading Masks


The reading line is a horizontal line that displays on the screen. Reading masks block part of the screen to show a horizontal slice of the screen. Use these items to help you locate and maintain your place while viewing an image.

**Note:** When using the button sequence as described in this procedure, the unit cycles through displaying the reading line, the reading masks, and then no reading line or masks.


## Displaying Reading Line

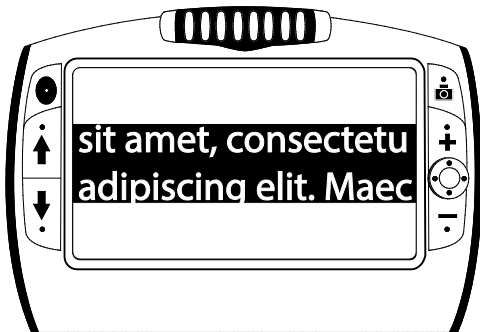
1. Press and HOLD the green/yellow **Power** button  and then press both yellow buttons (**+** and **-**). The reading line displays on the screen.





2. Press and HOLD the green/yellow **Power** button  and then press the yellow **Plus** button **+** or the yellow **Minus** button **-** to move the reading line up or down on the screen.
3. When you are finished using the reading line, continue to the next section to cycle to reading masks.

## Displaying Reading Masks

1. Press and HOLD the green/yellow **Power** button  and then press both yellow buttons (**+** and **-**) again to remove the reading line and display the reading masks on the screen as shown in the next figure.



2. Press and HOLD the green/yellow **Power** button  and then press the yellow **Plus** button **+** or the yellow **Minus** button **-** to increase or decrease the distance between the masks.
3. To remove reading masks from the screen, press and HOLD the green/yellow **Power** button  and then press and HOLD both yellow buttons (**+** and **-**).

## Color Modes

There are five factory default\* color modes and 16 additional color modes that can be activated.

\* True Full Color  
(cannot be disabled)

\* Yellow on Black

\* Yellow on Blue

\* White on Black  
(high-contrast negative)

\* Black on White  
(high-contrast positive)

Grayscale

Black on Yellow

Green on Black

Black on Green

White on Blue

Black on Blue

Blue on Black

Blue on Yellow

Red on Black

Black on Red

Amber on Black

Black on Amber

Violet on Black

Black on Violet



Red on White

Black on Light Blue



## Adding and Removing Color Modes

RUBY 7 HD has five default color modes. You can also activate and choose from a variety of 16 other color modes. Once a color mode is available, you can easily switch to it using the blue arrow buttons (↑ or ↓).



To add or remove other color modes, do the following:

1. Press and HOLD the green/yellow **Power** button  and then press the blue **Up** arrow button  to enter Color Selection mode.



The Enable check box  displays indicating that the current color mode is active.

2. To disable the current color mode, press the blue **Down** arrow  while STILL holding the green/yellow **Power** button . This button sequence clears the check box.

**Note:** By disabling a color mode, it is no longer available as you cycle through the color modes using the blue **Up** or **Down** buttons during normal operation.


3. To scroll to the next color mode, press the blue **Up** arrow  while STILL holding the green/yellow **Power** button .

  - If the check box is selected (  ), the color mode is enabled.
  - If the check box is cleared (  ), the color mode is disabled.

4. To enable or disable a color mode, press the blue **Down** arrow  while STILL holding the green/yellow **Power** button  to select or clear its check box.
5. Repeat steps 3 and 4 to continue adding or removing color modes.
6. When you are finished loading color modes, release all buttons. Any color mode changes made will be saved, and the unit will return to normal operating mode.

## Restoring Default Color Modes

If you have added or removed color modes that display on the screen, you can always restore the unit to its five default color modes.

- Press and HOLD the green/yellow **Power** button  and the blue **Up** arrow button  simultaneously for **15 seconds**.

## Storage Mode



Storage mode can save up to 105 images (approximately 115 MB). When you first store an image, it is saved with the current magnification and color settings just as displayed on the screen. When viewing a saved image, you can change the magnification level.

## Saving and Deleting an Image


After freezing an image on the screen, you can save it by doing the following.

1. Press and HOLD the red **Freeze Frame** button  for **three seconds** to enter Storage mode.
2. The Save Image check box  is automatically selected and displays for **three seconds**. This indicates that the image will be saved after exiting Storage mode and returning to live view.

To delete an image while in Storage mode, do the following:

1. Press and HOLD both yellow buttons ( and ) to clear the check box . When you exit Storage mode, the image is deleted.




2. Press and HOLD the red **Freeze Frame** button  for **three seconds** to exit and return to live view.






## Viewing Saved Images

You can easily scroll through your saved images using the blue arrow buttons ( and .

1. Press and HOLD the red **Freeze Frame** button  for approximately **six seconds** to enter Review mode.
  - To scroll forward through the saved images, press the blue **Up** arrow .
  - To scroll backward through the saved images, press the blue **Down** arrow .
2. Press and HOLD the red **Freeze Frame** button  for approximately **three seconds** to exit and return to live view.

## Saving an Image When Memory is Full



The unit can store up to 105 images. If you try to save another image when the unit's memory is full, the Memory Full icon  displays on the screen. To add another image, you must first remove one or more saved images from memory.

1. Press the blue **Up** arrow  or the blue **Down** arrow  to move to an image that you want to delete.
2. Press both yellow buttons ( and ) to clear the check box .
3. Press and HOLD the red **Freeze Frame** button  for **three seconds** to exit Storage mode. The new image is saved, and all unchecked images are deleted.



**Note:** To free space on the unit, you can also move images to a computer. For more, refer to *Transferring Images* on page 29.

## Storage Mode Icons



**Save:** Press the two yellow buttons ( and ) at the same time to select the check box. The image is saved when you exit Storage mode.



**Delete:** Press the two yellow buttons ( and ) at the same time to clear the check box. The image is deleted when you exit Storage mode.



**Memory Full:** Indicates that the maximum number of images have been saved on the unit. You must mark one or more images for deletion  before you can save the current image.

## Transferring Images

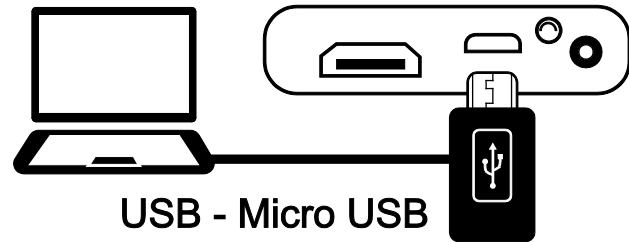
Images stored on RUBY 7 HD can be transferred to your computer using the supplied USB cable. Any image moved from RUBY 7 HD to your computer can easily be moved back to the unit.

1. Connect the supplied micro USB cable directly to the unit and the computer.
2. When connected,

- The USB symbol and battery icon briefly display on the LCD screen



- The battery icon indicates the current battery status.
- RUBY 7 HD displays as an external device in Windows Explorer or Finder (Mac)

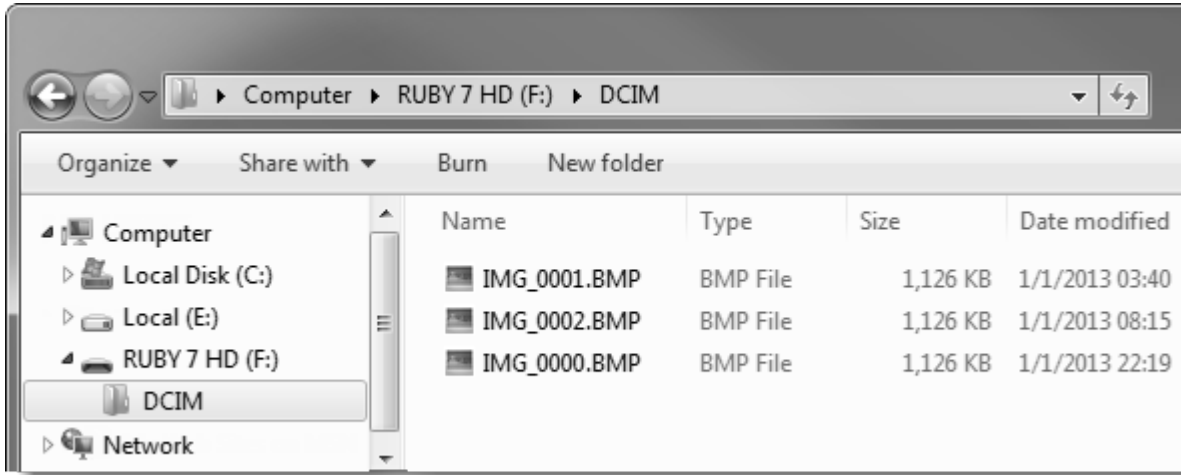


**Note:** The unit does not charge and no images display on the screen while it is connected to a USB port.

3. To transfer images, do one of the following:

### From the RUBY 7 HD to a computer

- Open RUBY 7 HD's DCIM folder, and select and move one or more images to a folder on your computer
- Images are named and are numbered in the order saved, for example, IMG\_0001.bmp, IMG\_0002.bmp, and so on as shown in the next figure



## From a computer back to the RUBY 7 HD

**Note:** Only images saved by RUBY 7 HD can be copied back to the unit.

- Locate the image on your computer using Windows Explorer or Finder (Mac)
  - Select the image and move it to RUBY 7 HD's DCIM folder
4. When you are finished transferring files, make sure that you safely eject (remove) the unit from your computer.

**Note:** To safely disconnect the unit and protect your data, always follow your operating system's procedures for removing a USB device.

5. Press the green/yellow **Power** button  to restart the unit.




## Displaying a Slide Show

You can create a slide show that loops continuously using the images saved on the unit. 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.


To rearrange the order that images display, you can transfer them to your computer, rename the files in the order that you like, and then transfer them back to the unit. (The file names should not be longer than eight characters followed by the BMP file extension.) To move files between the unit and computer, refer to *Transferring Images* on page 29.

**Note:** When in Slide Show mode, the 30-minute power-off timer is disabled.

To start the slide show, do the following:

1. Press and HOLD the red **Freeze Frame** button  for approximately **six seconds** to enter Review mode.
2. Press and HOLD the green/yellow **Power** button , and then press the blue **Up** arrow .

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

3. Press and HOLD the red **Freeze Frame** button  for approximately **three seconds** to exit Slide Show mode and return to live view.

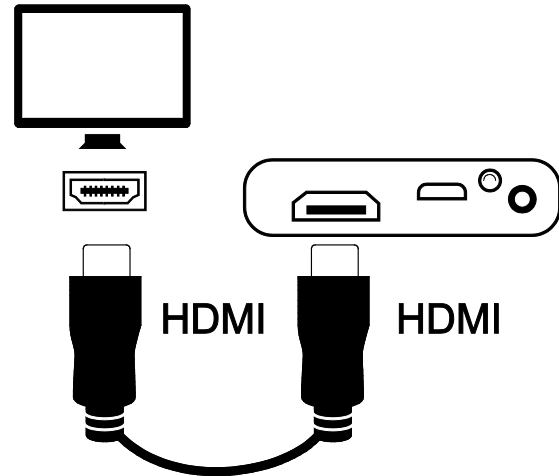
## Connecting the Unit to an HDTV or Monitor

To view video on a larger screen, you can connect the unit to an HDTV or monitor.

### HDTV Connection – HDMI to HDMI

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

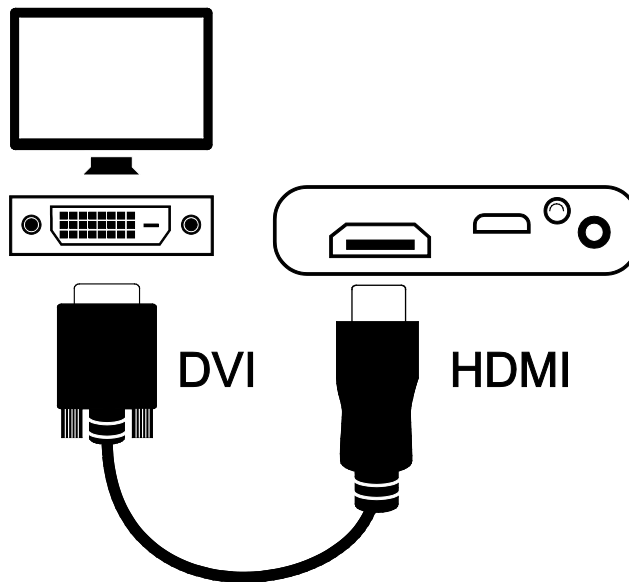
1. Plug the cable's HDMI connector into the HDMI port on the side of the unit.
2. Plug the other HDMI connector into the HDMI port on the HDTV.
3. Make sure to power on your HDTV.
4. Change the HDTV's input source to select the unit. Refer to your HDTV user documentation for this information.



## Monitor Connection – HDMI to DVI

When connecting the unit to a monitor, you must supply an HDMI to DVI cable.

1. Plug the cable's HDMI connector into the HDMI port on the side of the unit.
2. Plug the cable's DVI connector into the DVI port on your monitor.
3. Make sure to power on your monitor.





### **The unit does not power on.**

- Press the green/yellow Power button. If the unit does not power on, charge the battery.

### **The screen is blank.**

- If the unit is sitting on a flat surface (a desk or document), the screen is blank (black). Lift the unit off the surface, or open the reading stand.
- Power the unit off and then on again.
- Verify that the item you want to magnify is positioned correctly under the camera window.
- Press the yellow Magnification buttons to step through the magnification levels.
- Press the blue Color Mode buttons to step through the color modes.
- When the reading stand is closed, the unit automatically powers off.
- When the unit is connected to a computer via USB, the screen is blank.

**The battery indicator LED is flashing red.**

- Charge the battery.

**The battery LED is solid red while the power adapter is connected to the unit.**

- The unit is charging.

**A battery error has occurred.**

- Unplug the power adapter from the unit and plug it in again.

If the problem continues, disconnect the power adapter and call Freedom Scientific Technical Support as mentioned in *Service and Support* on page 41.

**The battery indicator LED does not flash green, even though the power adapter is connected and plugged into a wall socket.**

- Ensure that the small end of the power adapter is firmly plugged into the unit's power port.
- Ensure that the outlet has power and is not malfunctioning. If the outlet is connected to a wall switch, make sure the switch is on.

### **The battery is not charging.**

- Use the supplied power adapter to charge the unit.
- Make sure the small end of the power adapter is firmly plugged into the unit's power port.
- Ensure that the outlet has power and is not malfunctioning. If the outlet is connected to a wall switch, make sure the switch is on.

### **There are smudges or blemishes on the screen.**

- Clean the LCD screen using the supplied microfiber cloth.

### **Text is too small or too large to read.**

- Press the yellow **Plus** or **Minus** buttons to increase or decrease magnification. For live images, press and HOLD a **magnification** button for continuous zoom magnification. For frozen or saved images, press a **magnification** button to zoom in or out one step at a time.

### **The edges of the image are distorted on the screen.**

- When in the reading position, make sure the camera is pointing directly down on the item below the camera.
- Make sure the reading stand is flat against the item you are reading.

**The camera does not auto focus after you move it to a different position.**

- Place your hand in front of the camera for approximately three seconds, and then move your hand away from the camera.

**LED lights produce glare against a reflective surface.**

- Press and HOLD the green/yellow **Power** button, and then press the red **Freeze Frame** button to turn off the LED lights.

**The unit powers off after reading for 30 minutes.**

- This is expected behavior. The unit powers off after 30 minutes if no buttons are pressed. This extends battery life.

**The unit powers off when I close the reading stand.**

- This is expected behavior. It extends battery life. To continue using the unit, press the green/yellow **Power** button.

## Technical Specifications

- **LCD widescreen:** 7 inches (178 mm); tilts approximately 40 degrees with built-in reading stand open
- **Body size:**
  - 8.3 inches high (210.8 mm)
  - 5.8 inches wide (147.3 mm)
  - 1.0 inches deep (25.4mm)
- **Weight:** 18 oz. (510 grams)
- **Color modes:** Five factory default color modes: Full Color; Yellow on Black; Yellow on Blue; White on Black (high-contrast negative); Black on White (high-contrast positive); and 16 additional color modes
- **Magnification range:** 2x to 24x zoom
- **Maximum saved images:** Up to 105 bitmap images; approximately 115 MB total disk space
- **Camera:** 5 MP HD auto-focus camera module; rotates to support five camera positions: reading, hobby, distance, self-view, and spotting

- **Image resolution:** 800 x 480 pixels
- **Color:** 24-bit
- **Battery:** Li-ion battery; approximately four hours of continuous use; charges in approximately three hours

**Note:** Only use the supplied power adapter to charge the unit's battery.

## 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 35 to try to resolve your problem quickly.

**Note:** This device has no user-serviceable components. Any unauthorized attempt to service or replace internal components will void the product warranty.

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 provide the following information:

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

For additional support information, visit **www.FreedomScientific.com**, choose **Support** and then **Technical Support**.

## **Federal Communications Commission (FCC) Notice**

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

## **Industry Canada Notice**

- 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:

- Do not stare at the operating illumination LED as it may be harmful to the eyes
- Do not attempt to repair the unit or open its case. This product contains no user serviceable parts. Any unauthorized attempt to service or replace internal components will void the product warranty.
- Do not remove the battery. It is not user serviceable.
- Keep the unit away from wet areas, rain, and other sources of liquids. Do not submerge the unit.
- Always operate the unit in a place where the temperature is between 10° and 35° C (50° and 95° F).
- Storage temperature limits are between -20° and 50° C (-4° and 122° F).
- Do not store in places subject to temperature extremes such as a parked car.
- Do not force any connector into the unit's power port. The power connector fits easily into the port.

## Cleaning the LCD Screen

- Power off and unplug the unit before cleaning the LCD screen.
- Always use a clean microfiber cloth.
- Very gently wipe the cloth across the screen. Do not press hard on the cloth or screen.
- If you use a cleaning liquid, use an appropriate LCD cleaning liquid. You can also use distilled water, isopropyl alcohol, or vinegar mixed with water at a concentration of no more than 10 percent vinegar. Note that tap or mineral water may cause spotting on the screen. Do not leave any liquid on the screen. Repeat this procedure for hard to remove smudges.
- **Do not** spray any cleaning solutions directly on the LCD screen.
- **Do not** use a cleanser that contains acetone, ethyl alcohol, ethyl acid, ammonia, or methyl chloride.
- **Do not** use a paper towel to clean the LCD screen.

## Cleaning the RUBY 7 HD Body

- Make sure the unit is unplugged. Use a lightly dampened, soft, clean cloth with water or mild detergent. Do not use alcohol, solvents, abrasives, or aerosol sprays.

## Warranty and Registration

Congratulations on your purchase of the RUBY 7 HD Handheld Video Magnifier.

The unit and its accessories come with a 2-year warranty against manufacturing defects.

**Note:** These devices have no user-serviceable components. Any unauthorized attempt to service or replace internal components by opening the case 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. Your unit or its accessory will then be exchanged or repaired as needed.

## Product Registration

Visit [www.FreedomScientific.com/Forms/ProductRegistration](http://www.FreedomScientific.com/Forms/ProductRegistration) to register your product and validate your warranty.

