

PATRIOT

Vision Industries, LLC



**PATRIOT 5FHD
Handheld/Stand Smart
Magnifier**

Ver 1.0

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Welcome

Product Features

Congratulations on your purchase of the Patriot 5FHD, a digital HANDHELD/STAND SMART MAGNIFIER. Its revolutionary design will assist you in achieving greater independence.

The Patriot 5FHD Smart Magnifier represents the highest performance/best value due to its unique special distance capability combined with near functionality. It is smart because unlike ordinary standard magnifiers it can enhance the contrast for viewing AND magnify more powerfully onto its oblong shaped and generous sized screen !

- 5.0" large anti-glare screen, high definition.
- Dual SONY image sensors for far and near clear, true color.
- Dual auto focus design, full depth of field coverage from 2" to distance at infinity.
- Custom-made high quality optics, wide angle and extended depth of field, allows for more text and comfort.
- 1080P30 (far lens) , 720P60 (near lens) design, no lag, no smear, no blur, a fluent FHD/HD view.
- Professional image processing DSP to restore colors and details.
- Supports take photos and playback function, HD storage and playback of scenery and text.
- 2X-32X variable magnification, 2X smart zoom improves effective pixels and definition.
- Control buttons are big, high contrast, tactile and marked.

-
- With foldable bracket design, the screen is at an angle of 40 degrees to the user, comfortable reading, smooth handwriting.
 - Rotatable handle design for better handling.
 - Handle may be detached and transferred to left side for further customization.
 - 26 color modes, customizable.
 - Picture freeze capability for added benefit.
 - Image zoom panning function. Image zoom can be moved up and down (above 4X).
 - Supports reading line function if desired.
 - Voice prompts announcement capable.
 - Voice memo is available for archived picture content by voice.
 - Vibration feature function or silent operation.
 - Large icon user interface, clear and concise.
 - Backlight adjustable, adjustable LED light settings. May be disabled for reading reflective surfaces such as mobile phone, tablet, glossy and laminated materials.
 - SD/TF card storage card can expand storage capacity.
 - Memory function can automatically save the user's settings preferences.
 - AV jack for optional connecting to external HD monitor/TV

- Flashlight can supply temporary lighting.
- Lens is centered for intuitive positioning.
- Large capacity re-chargeable battery, up to 4 hours run time.
- Intelligent power-saving design.

Two year warranty covers defective parts and labor, should unit malfunction simply call us for support.

Packaging and What's Included

Inside Box:

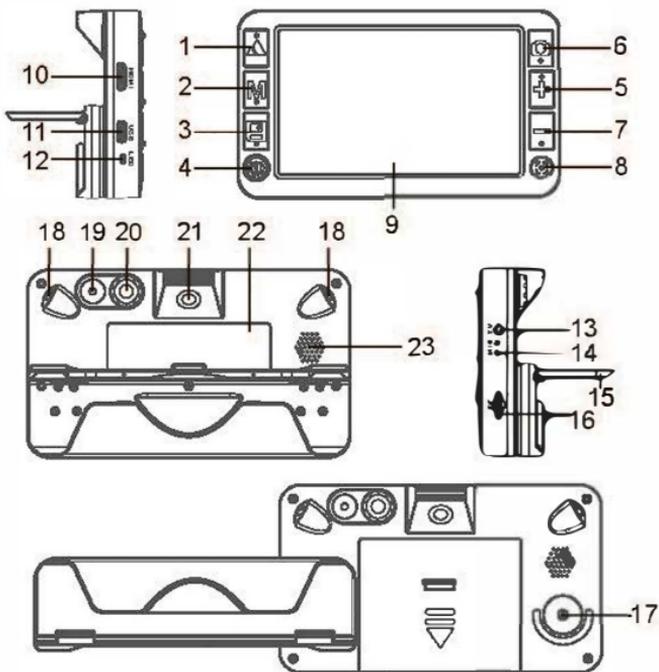
Patriot 5 FHD Digital Magnifier
Power Adapter 100-200V 5V-1A
User Manual
Protective Case, Cleaning Cloth
Battery 3.7V
USB charging cable
Video output cable

Specifications

- Screen size: 5.0 inch high resolution color display
- Zoom range: 2X to 32X variable magnification
- Color modes: 26 user adjustable
- Mode custom configurable
- Near AND Distance capable
- Auto focus (Working range for near is 2" to 6")
- White LED lighting adjustable
- Screen brightness adjustable
- Preferences memory

-
- Image freeze
 - Image pan
 - Reading line marker
 - Storage and playback photos and voice memos
 - Storage capacity slot: up to 32G SD card maximum
 - Flashlight function
 - TV output: Support AV and HDMI 1080i 60
 - Voice control: Not supported (for future use)
 - Voice prompts
 - Voice memo capability, up to 30 seconds
 - Vibration mode capable
 - Handle and bracket are foldable
 - Handle customization for left handed users
 - Battery capacity: 2500mAH high-capacity re-chargeable lithium battery, up to 4 hours run time
 - Device dimension: 5.71" Length X 3.31" Width X 1.1" Depth
 - Device weight: 0.5 Lbs. (Battery excluded)

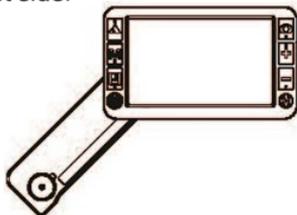
Product illustration



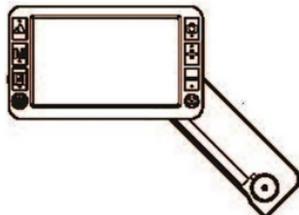
- | | | |
|----------------------|--|--------------------------|
| 1. Far/near button ▲ | 10. HDMI-C interface | 18. Near focus White LED |
| 2. Mode button M | 11. TYPE-C USB interface | 19. Far focus White LED |
| 3. Save button E | 12. LED Indicator light (power/charging) | 20. Far focus lens |
| 4. Power on button ⏻ | 13. AV interface | 21. Near focus lens |
| 5. Zoom in button + | 14. MIC | 22. Battery cover |
| 6. Freeze button ⏸ | 15. Handle rotating shaft | 23. Speaker |
| 7. Zoom out button - | | |
| 8. Focus button 🔍 | 12. Handle bracket | |
| 9. LCD | 13. SD/TF card slot | |
| | 14. Handle rotating shaft | |

1. Customization for Left Handed User (if preferred)

Although handle comes pre-installed for right hand and left hand users due to auto rotating screen sensing. Left handed users may desire to further customize by relocating handle to left side.

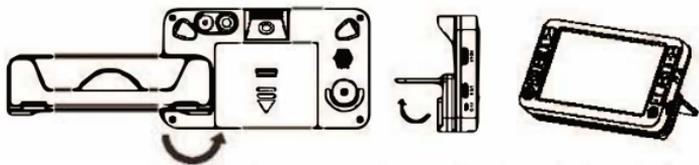


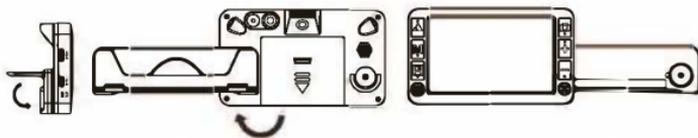
Left hand (optional relocated preference pictured above)



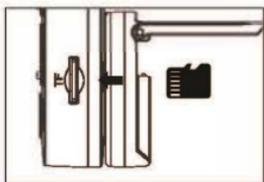
Right hand (default)

1. Handle may be removed and switched to left vs. right
2. Take out the rotating shaft and the rotating shaft cover, and exchange the two positions. (screwdriver required)
3. Open the handle, remove the handle limit pin and install it on the other side.
4. Close the handle and tighten the screw.
5. Insert the handle to the rotating shaft and tighten the screws.

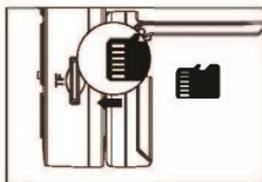




2. Install SD card NOT INCLUDED



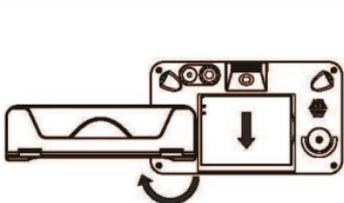
Install micro-SD/TF into card slot



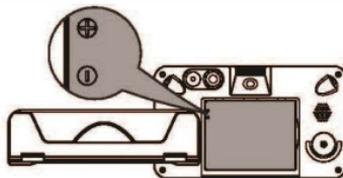
micro-SD/TF gold pointers pointing up

1. Micro-SD/TF card gold pointers pointing up, insert card into slot
2. Push the card in, there will be a buzzing sound when it is in place.

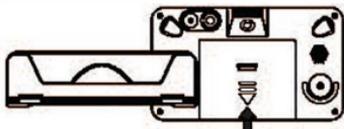
3. Install battery



Rotate the handle extending it out and then open the battery cover



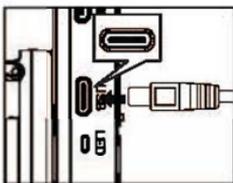
Install battery



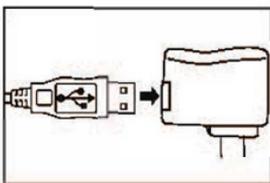
Close the battery cover

1. Invert video magnifier, rotate the handle and remove battery cover.
2. Press the battery cover box and push the battery cover out down.
3. Install the battery according to the positive and negative tips.
4. Cover the battery box, push up and slide into place when hearing the "click" sound.

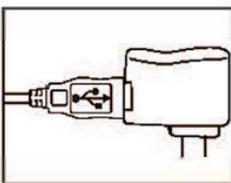
4. Battery charging



Connecting to
video magnifier



Connecting to adapter



Connecting to
AC power

1. Connecting video magnifier to adapter by USB cable.
2. Connecting adapter to AC power.
3. Charging light(red light) is on when charging.
4. Charging light(red light) will be off when complete charge.
5. Upon unpacking please charge the battery to full capacity.
6. When low battery is displayed, please charge the battery.

Attention: In the charging process, please keep the charger and the video magnifier away from heat sources, keep in a well ventilated dry area for safety.

5. Power on / off



Long press bottom left power on button to switch on



Long repress bottom left power on button to switch off

1. Long press bottom left power on button  , the video magnifier will turn on, and the green indicator lights up
2. Aim the lens focus at the reading target.
3. Optimal reading effect can be attained through adjusting magnifying power, zoom plus or minus, changing color contrast modes.
4. Long repress power on button  and the video magnifier will power off.

Attention: For best results, remove the protective film from the LCD screen before using.

6. Controls described

Color mode switch: Press Mode button **M** to switch color mode

Zoom in and out: Press Zoom in button **+** to enlarge image and press Zoom out button **-** to shrink image

Freeze and unfreeze image: Press freeze button  to freeze

image and repress freeze button  to unfreeze image. Far and near lens switch: Press Far/Near button  to switch far and near lens;

Photo storage and playback: Press save button  to take and save photos, and long press save button  to playback.

System parameter setting: Long press mode button **M** to enter setting menu and long press freeze button  to enter information menu.

Auto focus setting: Long press focus button  to switch auto focus or manual focus, short press focus button  to enter single time focus.

Time and date view: Press focus button  to enter time and date interface. (Without auto focus version)

For more details, please refer to the chapter on function introduction and menu setting.

Functions Introduction

1.Color mode switch

Switch the LCD screen image enhancement mode by Mode button **M** to meet different needs.

26 kinds of image enhancement modes:

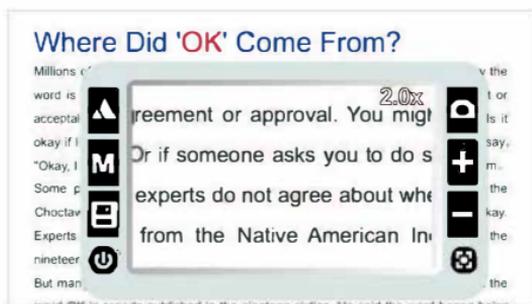
- | | | |
|--------------------------|--------------------|--------------------|
| 1)Color mode | 8)White on blue | 15)Orange on white |
| 2)Color enhancement mode | 9)Yellow on black | 16)White on orange |
| 3)Negative mode | 10)Black on yellow | 17)Red on black |
| 4)Monochrome mode | 11)Yellow on blue | 18)Black on red |
| 5)Black on white | 12)Blue on yellow | 19)Orange on black |
| 6)White on black | 13)Green on white | 20)Black on orange |
| 7)Blue on white | 14)White on green | 21)Yellow on green |

- 22)Green on yellow 24)White on red 26)White on yellow
23)Red on white 25)Yellow on white

The desired color mode can be customized by menu setting -> color mode, details see Color mode setting section.

2.Zoom rate adjustment

2X magnifying



16X magnifying

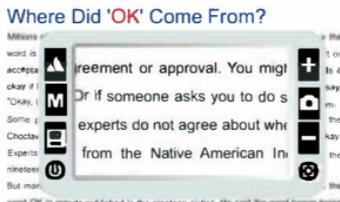


32X magnifying



Zoom in **+** or zoom out **-** can adjust zoom rate to achieve the best magnifying effect. Zoom in or zoom out variably between 2X to 32X.

3.Switching between near and far view



Near lens



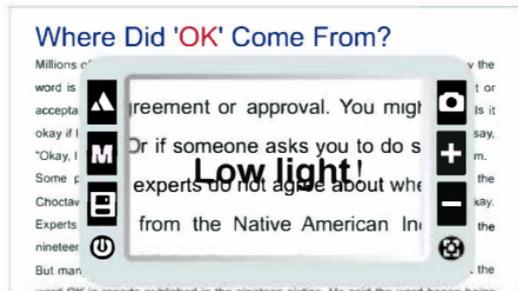
Far lens

Switch near or far lens by Far/near button **▲** , far and near scenes will then be clear and in focus when using proper mode.

Near lens applicable scene: Newspapers, books, drugs, signatures, mobile phones, tablets, banknotes, antiques and so on.

Far lens applicable scene: Blackboard, bus stop sign, road signs, guiding signs, menus behind counter, etc.

Low light



When the camera light is too dark, there will be a low light tips, as shown above.

4.Auto focus function (selectable)



Auto real-time focus



Single time focus



Manual focus

Can achieve full depth of field coverage from 2 inches to infinity distance by auto focus function. We suggest you leave on auto-focus always

Long press focus button  to switch auto focus mode and manual focus mode.

Auto real-time focus: Under auto focus mode, the system will start real-time focus automatically according to the scene change to ensure clear picture.

Single time focus: Under auto focus mode, short press focus button  to force single time focus.

Manual focus: Under manual focus, short press focus button , MF icon flashing, manual focus by zoom in button  and zoom out button 

5. Image freezing and unfreezing

Freeze image
after viewfinder



Watching image
after freezing

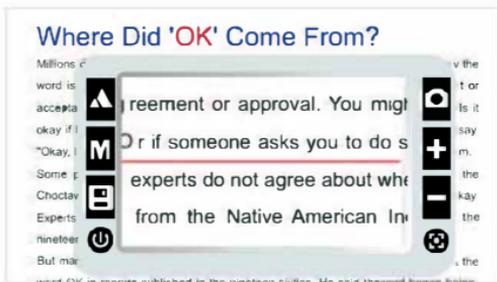


Freeze button  can freeze image and can observe the image at close distance, repress Freeze button  to unfreeze image and return to live real-time view.

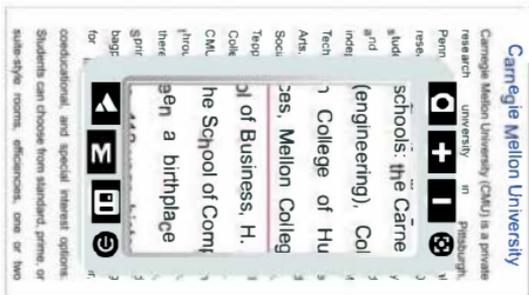
6. Reading line

Reading line can help text positioning to help users read quickly and continuously.

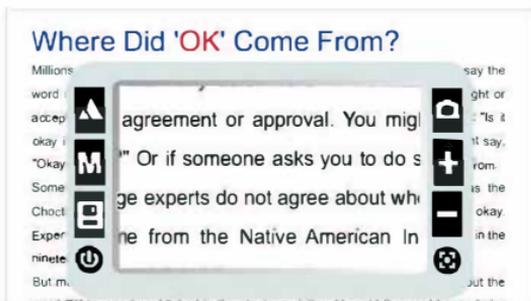
Horizontal reading line



Vertical reading line



Turn off the reading line

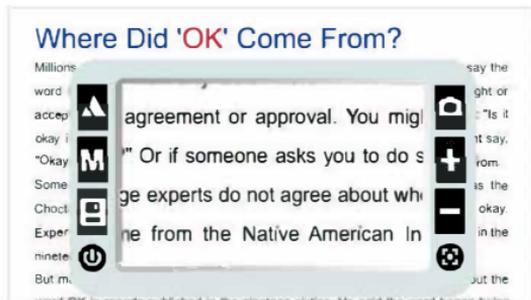


Long press Far/Near button ▲ to switch horizontal reading line, vertical reading line and remove the reading line.

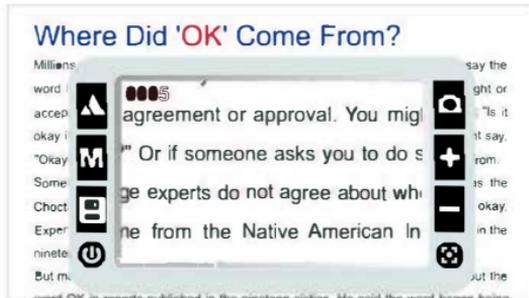
Moving reading line: When the reading line is flashing, the reading line may be positioned by pressing zoom in button + and zoom out buttons -

7.Storage and playback

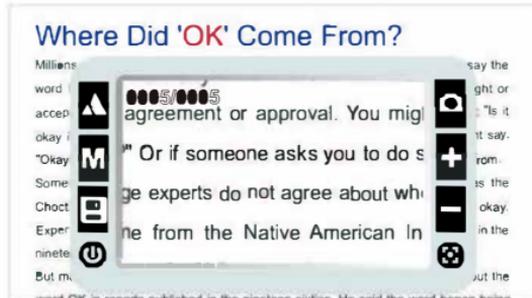
Viewfinder



Capture



Playback



Press save button  to save the current photo, easy to follow local playback or computer playback.
Long press save button  to enter the playback interface and replay saved photos to view.

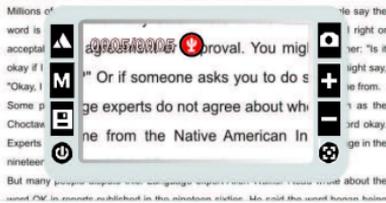
Under playback mode, the buttons are defined as follows:

Pressing button	Short press operation	Long press operation
Far/near button ▲	Previous picture	Image up(After zoom in)
Mode button M	Color mode switch	Exit playback/ Image left shift(After zoom in)
Save button □	Next Photo	Image down(After zoom in)
Zoom in button +	Image zoom in	Image zoom in
Freeze button □	Voice memo/playback	Image right (After zoom in)
Zoomout button -	Image zoom out	Image zoom out

Step 8. Attention: The built-in memory can store about 50 files. To further your storage capability you can insert your choice of memory card, up to 32 gig, into the TF slot.

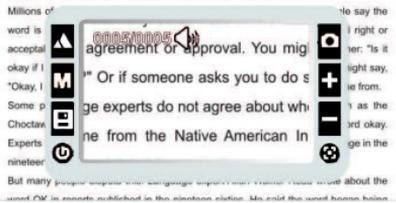
9. Voice memo

Where Did 'OK' Come From?



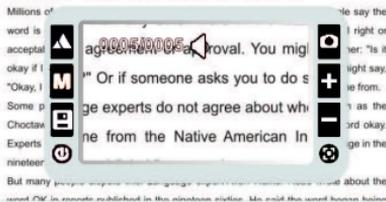
Record voice memo

Where Did 'OK' Come From?



Play voice memo

Where Did 'OK' Come From?



Stop voice memo

Under playback mode

Press freeze button  , make voice memo on the current photo, that is noting content of the photo by voice memo. When open the photo next time, voice will play content automatically.

During recording voice memo, press freeze button  to stop recording (Voice memo lasts for 30s at most).

During playing voice memo, press freeze button  to stop playing.

Attention: When there is a voice memo, delete it in the playback menu and record a new voice memo.

10. Flashlight

Flashlight Feature can assist users by invoking as follows:

Activating flashlight: When unit is powered OFF, press and hold the freeze button  first and while doing so long press the power button  , flashlight is on. If you press freeze button  it will switch between light intensity, slow flash, flash, gradient and OFF.

Brightness adjustment: Zoom in button  or zoom out button  can brighten or dim flashlight brightness (except for the gradient mode).

Turn off flashlight: Long repress power button  , and flashlight will be off.

11. Memory function

As a convenience, the user preferences that are made will be saved as default.

12. Power saving

Unit auto activates hibernation sleep mode with no activity after 1 minute.

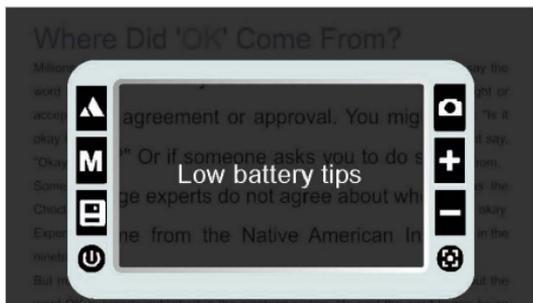
Unit can enter hibernate mode with the screen showing the battery power, date and time in big print with no activity for one minute.

Automatically sleep



Under sleep status, you can press any key to wake up unit. If not woken, and no activity for 2 minutes after sleep/hibernating, unit will shut down automatically to save power.

13.Low battery notification/tip



Low battery notification/tips function: Screen will display the low power icon at low battery, and the power light flashes.

When low battery notifies/tips, please charge the battery in time.

14. Handwriting

This video magnifier supports handwriting function. Open the bracket, keep the magnifier upright.

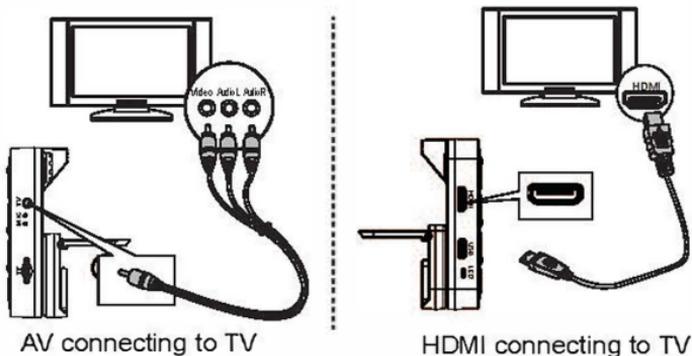
Reading with bracket



Writing under bracket



15. Connecting to TV



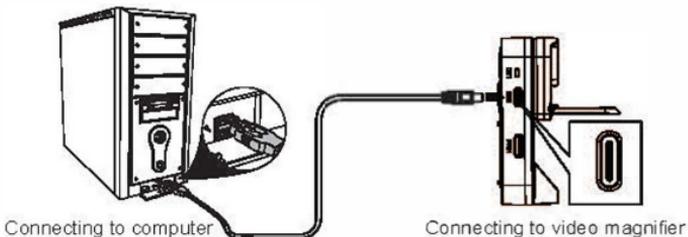
Connect magnifier to TV by AV video cable to get a bigger, clearer display.

Connect magnifier to TV by HDMI cable to get clearer and more fluent display compared to AV video cable.

When the magnifier enters the video output mode, the LCD screen will turn off automatically.

16. Connecting to computer

After connecting to computer by USB cable, the computer can recognize magnifier's the mass storage to playback the saved pictures and voice memo files on the computer.



Menu Introduction

Under menu open mode, the buttons are defined as follows:

Pressing button	Operation
Far/near button ▲	Previous menu
Mode button M	Exit menu
Save button 	Next menu
Zoom in button +	Previous option
Freeze button 	Option setting
Zoom out button -	Next option

1. Setting menu

Under preview mode, long press mode button **M** to enter the setting menu for magnifier parameter setting.

● LCD brightness adjustment



Brightness 1



Brightness 3



Brightness 5

As shown above, zoom in button **+** and zoom out button **-** can adjust between 1 ~ 5 levels.

● White LED brightness adjustment



Turn off
white LED



Brightness 1



Brightness 3



Brightness 5

As shown above, zoom in button **+** and zoom out button **-** can adjust between 1 ~ 5 levels.

Attention: 0 level to turn off white LED, mainly for reading mobile phones, panel and texts on other self-luminous instruments.

Under near lens mode, menu controls near lens White LED, under far lens mode, menu controls far lens White LED.

● Beep volume adjustment



Turn off beep



Volume1



Volume3



Volume5

As shown above, zoom in button **+** and zoom out button **-** can adjust between 1 ~ 5 levels.

Attention: 0 level is beep off.

● Vibration prompt may be turned on/off



Vibration prompt on



Vibration prompt off

As shown above, zoom in button **+** and zoom out button **-** can adjust between vibration prompt on and off.

Date and Time Settings :



Year setting



Month setting



Date setting



Hour setting



Minute setting



Second setting

As shown above, zoom in button **+** and zoom out button **-** can adjust value. Press freeze button  to move setting option.

● Color mode setting



Color mode



Open black on white mode



Turn off black on white mode

As shown on the previous page, zoom in button **+** and zoom out button **-** can switch. Press freeze button **⏸** to turn on or turn off mode.

Only the selected mode will be used in the mode switch. the unselected mode will be skipped in the mode switch.

Note : Color mode cannot be turned off.

2.Playback menu

Under playback mode, long press mode button **M** to enter playback menu and manage files.



Delete **current**
voice memo menu



Confirm delete
current voice memo



Deleting **current**
voice memo

As shown above, in the playback mode (long press disk button then long press the mode button), zoom in button **+** and zoom out button **-** can select confirmed option, and then press freeze button **⏸** to delete current voice memo.



Delete **all** voice
memos menu



Confirm delete
all voice memos



Deleting **all**
voice memos

As shown above, in the playback menu mode (long press disk button then long press the mode button), zoom in button **+** and zoom out button **-** can select confirmed option, and then press freeze button **⏸** to delete all voice memos.



Delete
current photo



Confirm delete
current photo



Deleting
current photo

As shown above, in the playback menu mode (long press disk button then long press the mode button), zoom in button **+** and zoom out button **-** can select confirmed option, and then press freeze button **⏸** to delete current photo.



Delete **all** photos



Confirm delete
all photos



Deleting **all** photos

As shown above, in the playback menu mode (long press disk button then long press the mode button), zoom in button **+** and zoom out button **-** can select confirmed option, and then press freeze button **⏸** to delete all photos.



Format menu



Confirm format



Formatting

As shown above, in the playback mode, zoom in button **+** and zoom out button **-** can select confirmed option, and then press freeze button **⏸** to format disk.

Special reminder: Once deleting the file, the file cannot be restored. Please be careful.
Once formatting the disk, all files will be deleted and cannot be restored. Please be careful.

3.Information menu

Long press freeze button  to enter information menu to check system information.

●Battery power display



Low power,
to be off.



Low power



Half power



Full power

As shown above, battery power will be displayed as a percentage.

●File information display



File information

As shown above, the file information menu displays the total number of pictures and voice memos.

●Disk information display



Built-in memory information



Micro-SD/TF card information

As shown above, the disk information menu displays the current disk free space and the total space.

● Version information display



Version information

As shown above, the version information menu displays the product model, firmware version number, and firmware compilation time.

Computer configuration requirements

This digital video magnifier requires the PC to meet the following requirements:

- Windows® 10 or later operating system
- Intel® Pentium 4, 2.8 GHz CPU or above
- At least 1 GB RAM or greater
- Standard USB 2.0 or greater
- 512MB or above video card

Precautions

In order to keep your digital video magnifier works in the best condition, please read the following notes carefully:

- Please do not expose it directly to high temperatures or sunlight
- Please keep it away from moisture, rain, liquids and chemicals
- Please do not use it near to electronic equipments, and medical equipments, which are not under insufficient shielded

- Please ensure that using it at temperatures between 50 degrees F and 104 degrees F
- Please ensure that it is stored at temperatures between -4 degrees F and 149 degrees F
- Do not try to repair or open the unit to avoid damaging and voiding warranty
- Please use the matching power supply and battery only

Note: We recommend using a soft cloth to clean unit and avoid solvents and harsh chemical cleansers.

Note: Unit is designed to be used on battery and we suggest avoid using device while charging battery as its optimal to charge device after depleted battery. If you require extended usage then you may contact us for purchasing an additional battery that can be charged and set aside for critical extended use.

Trouble Shooting

Problem	Solutions
Black screen	Long press power button to power on. Battery without power, charging it. Make sure the lens focus on the reading materials.
Can not power on	Battery without power, charging it.
No sound	Make sure if the volume at 1 to 5 in the menu setting.
Video magnifier focus failed, image is blurred	Make sure if the environment is dark. Try to press focus button to focus one time. Make sure if enter to manually focus mode.
Image is too dark or too bright	Make sure the lens focus on the reading. Make sure if choose right lens. (far/near lens)
Image is blurred or dirty	Wipe the LCD screen and lens goggles. Make sure if choose right lens. (far/near lens)
Reading text is too small	To adjust zoom rate by pressing the zoom in button.
Can not save or card error prompt	Please format or change SD/TF card.
Connected to the TV, but the TV is not shown	Make sure the TV is on. When use the AV cable, switch the TV input to AV input. When use HDMI cable, switch the TV input to HDMI input. Make sure the video cable is properly connected to the magnifier and TV.



For more information regarding this Patriot 5FHD Handheld/Stand Smart Magnifier or any of our other Patriot brand of innovative low vision products we invite you to visit us below at:

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