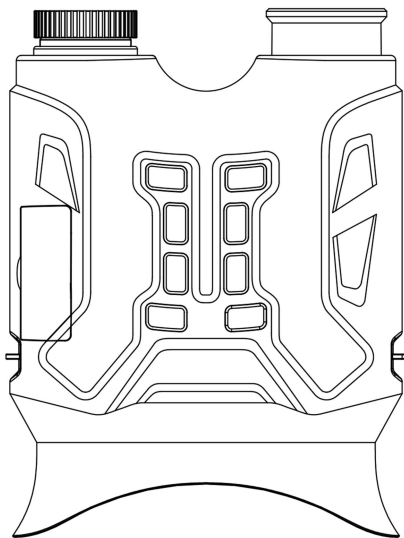


# **GardePro<sup>®</sup>**

## **N5 NIGHT VISION GOGGLES**



### **INSTRUCTION MANUAL**

Model# N560

Doc V1.0

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## 1. IN THE BOX

1 x Night Vision Goggles (referred to as goggles), 1 x Carry Bag, 1 x Neck Strap, 1 x Mini-USB Cable, 1 x User Manual, 1 x Cleaning Cloth

*Note: Memory card and AA batteries are not included (user supplied).*

## 2. IMPORTANT NOTES

### 2.1. System Requirements

Require **eight (8) 1.5V AA** Alkaline or Lithium batteries. We recommend the use of Energizer AA Lithium batteries in this goggles to obtain maximum battery life.

Do not mix old and new batteries. Do not mix battery type. Rechargeable NiMH AA batteries can be used, but the lower voltage (generally 1.2V) they produce has short lifetime, you may have to replace them frequently.

Remove batteries when the goggles is NOT in use.

Require a **standard-size** SD/SDHC memory card (maximum capacity 512GB, Class 10 or higher speed). We recommend using SanDisk 32GB SDHC Class 10 memory cards in the goggles to obtain the best cost-performance.

**Before first use, please format your SD card in this goggles by using "Format SD Card" in the menu settings.**

### 2.2. Cleaning Device

Before cleaning the device, disconnect it from the power supply (remove batteries)!

Only use a dry cloth to clean the surface of the device.

To avoid damaging the electronics, do not use any cleaning fluid, only clean the eyepieces and/or lenses only with a soft lint-free cloth (e.g. microfiber cloth).

To avoid scratching, please gently wipe the lenses with the cleaning cloth.

To prevent the device from dust and moisture, please keep it in a bag or box.

### **3. INTRODUCTION**

#### ***3.1. About the Goggles***

The N5 is a new generation of digital infrared night vision goggles, it is equipped with a Sony Starvis sensor, and advanced super-large aperture optical lens, featuring all-new night vision technology and algorithm, so that it can deliver color night vision in low light up to 1000ft/305m and deliver black and white night vision in total darkness with infrared illumination system.

#### ***3.2. Main features***

- Equipped with a Sony Starvis sensor, with exclusive imaging optimization algorithm, produces color night vision in low light
- Equipped with a f/1.5 aperture, 50mm focal length optical lens and powerful infrared system, delivers night vision up to 1000ft/305m
- Built-in 2.4" color display with 640x480 resolution, plus 6 x digital amplification for better night vision experience
- 1080p HD video clips and still images
- Easy-to-use menu system

- Info strip on each image: Date, Time, Temperature & Moon Phase
- Operating temperature: -4~140°F (-20~60°C)
- Water resistance for outdoor purpose
- Operates on a standard-size SD card (maximum 512GB) (*not included*), 8 AA batteries (*not included*)

#### 4. PARTS AND CONTROLS

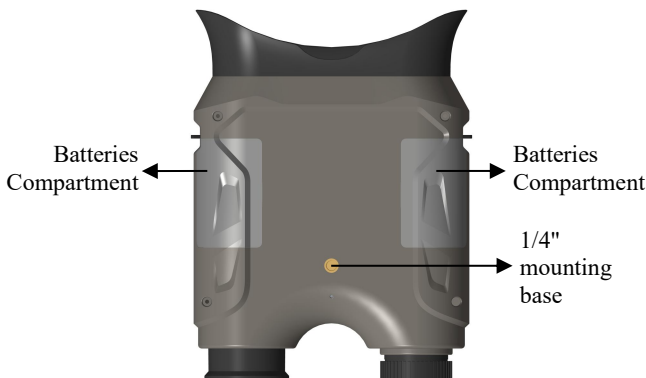
The goggles is equipped with an advanced optical lens and its focus wheel, a high-power infrared LED, 8 operation buttons (*Figure 1*), a view window in front view (*Figure 2*), 2 groups of 4 AA batteries compartments on left and right side, 1/4" mounting base (*Figure 3*).



*Figure 1 – Top view*



*Figure 2- Front View*



*Figure 3 – Back View*

## **5. INSTALLING THE BATTERIES AND SD CARD**

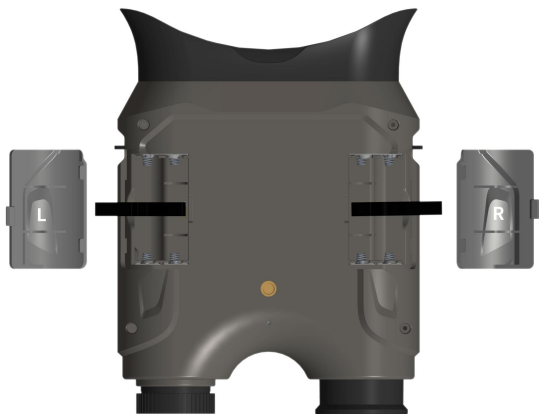
Before you begin learning how to use your goggles, you will first need to install a set of batteries and insert an SD card. Although that may only take you a minute, there are some important notes about both batteries and SD cards you should be aware of, so please take the time to **read the following directions and cautions:**

## 5.1. Loading Batteries

After opening the cover of the left and right battery compartments on the back, you will see that the goggles has 8 battery slots totally (*Figure 4*). A full eight batteries must be installed for the goggles to operate.

Be sure to insert each battery with correct polarity (negative or "flat" end against the long spring of each battery slot).

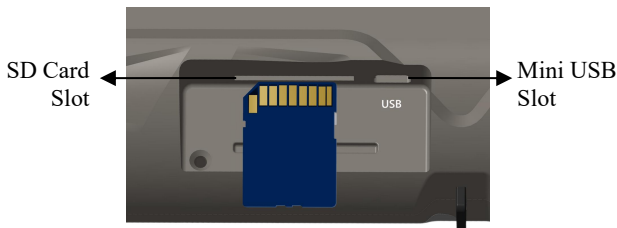
**TIP:** Each battery compartment has a small black rope, put the rope on the bottom, and then install the battery. The purpose is when you want to remove the battery, gently pull out the rope, which helps you quickly remove battery at the bottom. Please note the **L** and **R** markings on the battery compartment cover to help you install the cover correctly.



*Figure 4: Loading the Batteries*

## 5.2. Inserting the SD card

Insert the SD card (with the goggles powered off), before beginning to operate the goggles. Don't insert or remove the SD card when the goggles is powered (*Figure 5*).



*Figure 5: Inserting the SD Card*

The following describes how to insert and remove the SD card:

- Gently open the silicone cover for SD card slot (refer to *Figure 1* find the cover).
- Insert the SD card into the card slot with its gold finger side upwards (refer to the right diagram).
- A "click" sound indicates that the card is installed successfully. If the wrong side of the card is facing up, you will not be able to insert it without force, there is only one correct way to insert cards. If the SD card is not installed correctly, the device will not display an SD card icon on the screen when powered. **Formatting the SD card** by using the "Format SD Card" menu option before first use is recommended, especially when a card has been used in other devices
- To take out the SD card, use your nails or other small tools to gently push in the card (do not try to pull it out without








pushing in first). The card is released from the slot and ready to be removed when you hear the click. Be sure the goggles is powered off before inserting or removing SD cards or batteries.



## 6. USING THE GOGGLES

Once you've prepared your goggles by properly installing batteries and an SD card, we highly recommend that you first spend some additional time indoors with this manual and your goggles until you know a bit more about what those operation buttons do (Figure 6).



*Figure 6: Operation Buttons*

Buttons	Description
<b>POWER</b> 	Turn on or turn off the device (press and hold the <b>POWER</b> for 3 seconds).
<b>Color/Mono Night Vision</b> 	Switch the goggles in Color or Mono night vision mode. A good practice is that using Color mode in low light to get the optimal color night vision, only using Mono mode in total darkness. In Mono mode, the goggles will turn infrared system on, you can adjust infrared illumination power level in FN settings.
<b>FN</b>	Function button. Press the <b>FN</b> to quickly switch within common settings (referred to as FN settings). At the bottom of the screen, there is a bar for common settings, the bar is referred to as FN bar, composed of several icons as follows.
	<div data-bbox="308 838 360 889"></div> Zoom In/Out: <b>1x</b> , 1.5x, 2x, 3x, 4x, 6x
	<div data-bbox="308 955 360 1006"><b>IR</b></div> Infrared level: 0 (means OFF), <b>1</b> , 2, 3 <i>Note: need to press the  button to bring up the icon.</i>
	<div data-bbox="308 1071 360 1122"></div> Screen brightness: 0, 1, 2, 3, 4 The larger the value, the brighter the screen. When the ambient light is low, lowering the screen brightness will protect your eyes. When the ambient light is bright, increasing the screen brightness makes the screen more readable.

	<b>EV</b>	Exposure value: -1, -2, 0, 1, 2 Manage exposure of images. If the image looks dark, increase the exposure value to brighten it. If the image looks bright, lower the exposure value to darken it.
	<b>ISO</b>	ISO value, means your goggles sensitivity to light (display only, cannot be adjusted)
<b>REPLAY</b>	Enter or exit replay mode. You can playback the stored photos or videos.	
<b>MENU</b>	Enter or exit menu settings, back to previous menu.	
<b>UP</b> 	Multi-function button: (1) Press it to zoom in, increase infrared level, screen brightness or EV level when you are programming in FN settings, (2) press it to navigate while playback or programming settings.	
<b>DOWN</b> 	Multi-function button: (1) Press it to zoom out, decrease infrared level, screen brightness or EV level when you are programming in FN settings, (2) press it to navigate while playback or programming settings.	
<b>OK</b>	Multi-function button: (1) Trigger a shot, or (2) hold down it for 2 seconds to start video recording, or (3) confirm and save settings.	

## 6.1. Turning on the Device

Press and hold the **POWER** for 3 seconds to turn on or turn off the device.



*Figure 7: Using the Device*


Watch the eyepiece (display screen) and gently spin the focus wheel to focus until you get clear image on the screen (*Figure 7*).

## **6.2. Live preview**

There are two modes, color night vision mode (referred to as Color mode) and Mono night vision mode (referred to as Mono mode (also called black and white mode)).

The goggles defaults to Color mode, it is suitable for observation during the day or in low light without turning on the IR LED.

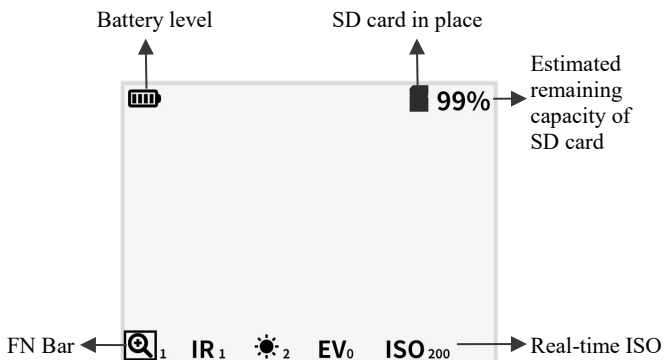


In total darkness, press  (the **Color/Mono Night Vision** key) to turn on infrared LED, you will observe the black and white night vision.

**Note:** *You can adjust the screen brightness for the best viewing experience while watching the eyepiece (display screen).*

### 6.3. Taking pictures

Turn on the device. The default is photo mode. (*Figure 8*).



*Figure 8: Photo Mode*

Press the **FN** to switch different functions to set, and then press the **UP/DOWN** to adjust the corresponding level. Adjust the focus by turning the focus wheel. Press the **OK** to take a photo. **ZOOMING**: Press the **UP** to zoom in or press the **DOWN** to zoom out (when the function (**FN**) marker is in the ZOOM function).

### 6.4. Recording videos

Turn on the device, the default is photo mode, press and hold the **OK** for 2 seconds to start video recording (*Figure 9*), then Press **OK** again to stop recording and automatically enter photo mode.

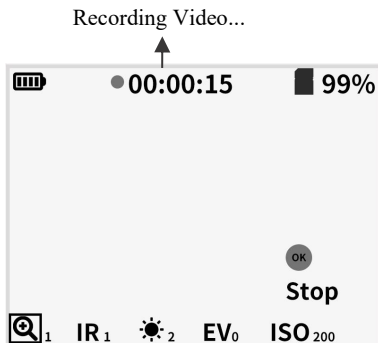


Figure 9: Video Mode

**NOTE:** The device will stop recording automatically once reaching up to the capacity of the memory card.

## 6.5. Playback

Turn on the device, press the **REPLAY** to enter playback mode of stored photos or videos. (Figure 10).

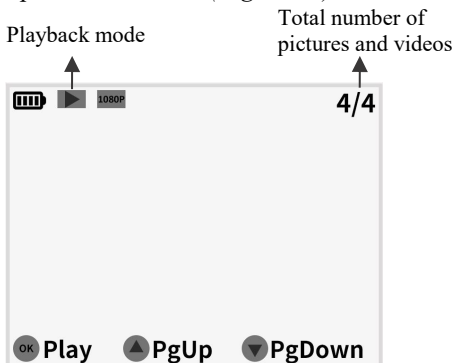


Figure 10: Playback Mode

Press the **UP/ DOWN** to navigate photos or videos.

Playback	Operation Guide
For video	Press the <b>OK</b> to start replaying, press the <b>OK</b> again to pause, press the <b>REPLAY</b> or <b>MENU</b> to exit this replay.
For photo	Press the <b>REPLAY</b> to exit this replay.

***Note:** While playback, you can press **MENU** to choose to delete the current photo or video, or delete all photos and videos in memory card.*

## 7. ADVANCED SETTINGS

The goggles comes with preset manufacturer settings. You can change the settings to meet your requirements. Once the device screen is on, press **MENU** key to enter/exit the menu. Press the **UP/DOWN** key to move the marker, press the **FN** key to change the setting, and press the **OK** key to confirm the change. Always remember to press the **OK** key to save the change, otherwise you will lose your new setting.

Parameter	Settings ( <b>Bold</b> = default)	Description
<b>Photo Quality</b>	<b>FHD</b>	HD still image.
<b>Video Quality</b>	<b>1080P</b>	HD 1080P.
<b>Video Sound</b>	<b>On</b> Off	Selecting <b>On</b> will record video with sound.

<b>Video Format</b>	<b>MP4</b> MOV	MP4 is the mainstream format in the video industry, more compatible with any player. Select MOV in case some legacy digital camera software must be working with videos in MOV format.
<b>Date / Time</b>	M/D/Y hh:mm	M – Month, D – Day, Y – Year hh – Hour, mm – Minute <i>Note: Use "FN" key to switch settings, use "UP/DOWN" to set current date and time. Date input format may change. Please refer to “<b>Date Format</b>” parameter settings accordingly.</i>
<b>Date Format</b>	D/M/Y M/D/Y Y/M/D	Select date format which will be shown on the screen and each capture.
<b>Time Format</b>	<b>12h</b> 24h	Select time format which will be shown on the screen and each capture. 12h - AM/PM
<b>Screen Timeout</b>	1min, 2min, 3min, 4min, <b>5min</b> , 10min, 30min, Never	If there is no operation ( <i>key pressing</i> ), selecting the time-out time for the device to automatically shut down.



<b>Anti-flickering</b>	<b>50HZ 60HZ</b>	Selecting the frequency to 50Hz reduces the flickering only when you find flickering in live view or videos, the flickering is usually caused from artificial light sources (such as fluorescent or LED light).
<b>Device Name</b>	<b>On Off</b>	Select <b>On</b> to assign a 4-character long in the form of Capital A-Z, 0-9 to name the device.
<b>Info Strip</b>	<b>On Off</b>	Select <b>On</b> to show date, time, temperature, moon phase on each capture.
<b>Password</b>	<b>On Off</b>	Set up a 4-digit password to protect your goggles from unauthorized users. If the code is lost, you can contact customer support to reset the password.
<b>Format SD Card</b>	<b>Yes No</b>	All files will be deleted after formatting the SD card. We highly recommend you to format the SD card if it has been used previously in other devices. <b><i>Caution: make sure wanted files on the SD card have been backed up first!</i></b>
<b>Factory Reset</b>	<b>Yes No</b>	Selecting <b>Yes</b> will return all your previous settings back to the manufacturer default.
<b>Version</b>	<b>Defined</b>	Display the version of the goggles.

## 8. REVIEW PHOTOS OR VIDEOS

After you have setup, operated your goggles, you may like to review the images or videos captured. The goggles stores photos and videos in the folder \DCIM\100MEDIA in the SD card. Photos are saved with file names like DSCF0001.JPG and videos like DSCF0001.MP4. The video files can be played back on most popular media players, such as Windows Media Player, QuickTime, VLC etc.

There are different ways this can be done.

You can directly review the photos or videos on the goggles screen in the playback mode.

Or the goggles is powered on, you can use the provided USB cable to review or download the files to a computer.

Or, remove the SD card and put it to an SD card "reader" (*user supplied. The reader must have a stand-size SD card slot*), plug in a computer, and browse the files on the computer without downloading.

## 9. TECHNICAL SPECIFICATIONS

Element	Description
<b>Picture Resolution</b>	1920 x 1080
<b>Video Resolution</b>	1920 x 1080P@30fps
<b>Optical Lens</b>	Aperture: f/1.5, focus length = 50mm Lens Angle: FOV = 10°
<b>Display Screen</b>	Physical screen 2.4" TFT, Visual screen: 2.42" x 1.45" (87 x 37mm)
<b>Digital Zoom</b>	1x, 1.5x, 2x, 3x, 4x, 6x
<b>Viewing Distance</b>	328ft ~ 1000ft (100m ~ 305m)
<b>IR LED</b>	3W, 850nm
<b>Info Strip</b>	On /Off
<b>Password</b>	4-Digit Code
<b>Device Name</b>	4-Character (A-Z, 0-9)
<b>Power Supply</b>	8x1.5V AA Batteries (Not included)
<b>Interface</b>	Mini-USB, Standard-size SD card holder
<b>Mounting</b>	Tripod Base (1/4-20)
<b>Operating Temperature</b>	-4~140°F / -20~60°C
<b>Operation Humidity</b>	5% ~ 95%
<b>Dimension</b>	8.11 x 6.02 x 2.36 inches
<b>Weight</b>	540g

## 10. TROUBLESHOOTING

If your night vision goggles does not seem to be functioning properly or if you are having photo/video quality issues, please run simple and quick check:

**Q: SD card can't be recognized?**

**A:** Format the SD card in menu settings in the goggles or replace the SD card since the SD card is a storage media and sometimes it might be unstable.

**Q: Device can't turn on?**

**A:** If the device fails to turn on, please check if eight batteries are properly installed and have power.

Replace batteries if night vision seems not working as expected.

**Q: Poor Image?**

**A:** Please manually focus by slowing turning the Focus Wheel and make sure it is focused.

Using FN settings, Zoom in/out, adjust the screen brightness to the optimal visual experience.

If in the daytime, please make sure you are using Color night vision mode; If in totally darkness, press the **Color/Mono Night Vision** key to turn on the IR LED, and slowing turning the Focus Wheel and make sure it is focused, navigate the FN marker to IR icon, press the **UP/DOWN** to adjust the IR illumination level.

If your unit is still having trouble, please contact us with your order number. Please be assured we will make the things right for you.