

CARSON®

NV-250

AURA™ PLUS

DIGITAL NIGHT VISION
MONOCULAR / CAMCORDER

INSTRUCTION MANUAL



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BEFORE USE

Please read this instruction manual carefully before using this device, and retain it for future reference.

Care and maintenance

- Avoid shock and dropping the device.
- Keep the device dry and protect it from water or moisture.
- Do not leave your device in a place with extreme high or low temperatures.
- Do not expose or store the device in dusty, dirty areas. This may cause damage to its moving parts.
- Do not use harsh chemicals, cleaning solvents or strong detergents to clean the device. Wipe it with a clean soft cloth.
- Blow away any dust and particles on the lenses and window. Clean these only with moistened soft lint-free cloth.

Warning

- Do not aim the device at the sun as this may damage the image sensor.
- Do not leave batteries installed during extended periods of disuse.
- Do not mix new and old batteries or different types of batteries.
- It is normal for this device to get warm when using for a prolonged period of time.
- Do not look directly at the sun or any bright light source using this device as it can cause permanent eye damage.

Introduction

- The Digital Night Vision Monocular and Camcorder allows you to view objects and capture still and video images in the dark. The high intensity beam of infrared enables visibility as far as 120m in complete darkness. It can be used in day and at night delivering black and white images. The adjustable frame rate and infrared intensity features plus the 2x digital zoom maximize visibility in all lighting situations.
- Familiarize yourself with the night vision monocular before using it. Read the manual and follow the steps and test it with a few shots in a dark room. After the image/video is captured, play it back and check whether it has been recorded properly.

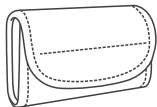
PRODUCT AT A GLANCE

Package contents

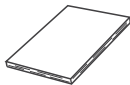
Digital Night Vison
Monocular and
Camcorder



Pouch



User Manual



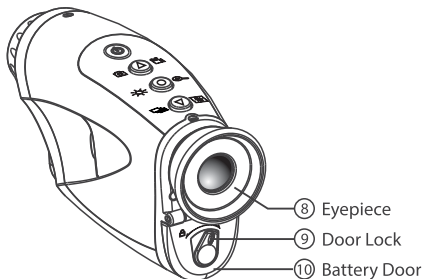
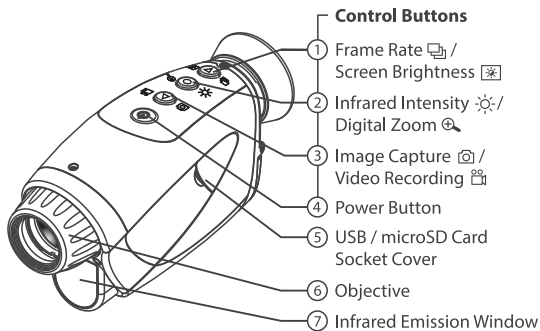
USB Cable



microSD card
w/Adapter



Product overview



Specifications

Objective	Focal length : $f=25.9$ Aperture : F 1.52 Field of view : 10°
Eyepiece	Dioptric compensation : $-4.0\sim+2.0D$
Infrared range	Approximately 120m
microSD card	16GB * included
Sensor	CMOS
Maximum video capturing resolution	640 x 480 pixels (VGA)
Magnification	2x~4x
Zoom	2x (Digital)
Battery	3 x AAA alkaline batteries
Weight	Approximately 5 ounces (without batteries)

* 1GB=1,000,000,000 bytes. Actual capacity may vary. Some capacity is used for memory maintenance and other functions and is not available for storage.

Status icon

Video recording

Recording indicator

Frame rate

 30 Frame rate 30 fps

 15 Frame rate 15 fps

 8 Frame rate 8 fps

Infrared intensity

 High

 Medium

 Low

 Off

Image capture

Digital zoom

X1 Digital zoom off

X2 2x digital zoom

Battery level

 Battery level-High

 Battery level-Medium

 Battery level-Low

 Replace battery



REC time

Time remaining

SD card status

 Card installed

 No card

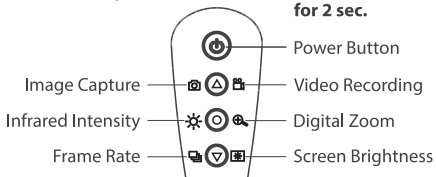
Remaining photos

Quick start guide




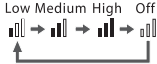






Control buttons

Press <↓>

Press and hold <↓>
for 2 sec.



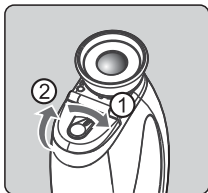
Function	Control Button	Description	Display
On/Off		Press and hold <⏻> for 2 seconds to turn power on or off. The device will enter sleep mode after 5 minutes of non-operation (except on video recording mode).	
Focusing		Adjust the eyepiece ① until the icons on the screen are clear, then adjust the objective ② until your target is clear.	
Image capture		Press <△> to capture image.	

Function	Control Button	Description	Display
Video recording		Press and hold <△> for 2 seconds to start recording. You will see [●] on the screen. Press <△> again to stop recording. The Night Vision Monocular will start a new file every 10 minutes.	
Infrared intensity		Press <◎> to adjust the IR intensity.	Low Medium High Off 
Digital zoom		Press and hold <◎> for 2 seconds to trigger 2x digital zoom. Press for 2 seconds to resume.	
Frame rate		Press <▽> to adjust frame rate.	30 → 15 → 8 
Screen brightness		Press and hold <▽> to switch between high or low brightness. Release to confirm.	

Before you start using the Night Vision Monocular and Camcorder, make sure the batteries and microSD card are installed properly.

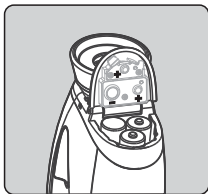
GETTING STARTED

Installing the batteries



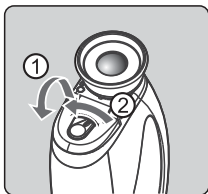
Open the battery door

Open the battery door by sliding the door lock in the direction as shown by the arrow.



Insert batteries

Insert 3 AAA alkaline batteries into the battery compartment in their correct polarity positions.

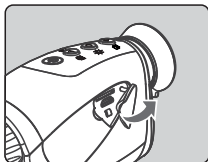


Close the battery door

Close the battery door and slide the door lock in the direction as shown by the arrow.

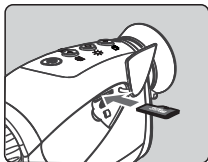
Warning: Do not mix old and new batteries, batteries with different brand names or different types within brands. Different attributes may cause the battery to leak fluid, overheat or explode. Do not expose to fire or excessive heat. Inspect all batteries for signs of corrosion or leakage. Use alkaline batteries only, rechargeable batteries not recommended. Insert all batteries in the direction indicated.

Installing the microSD card



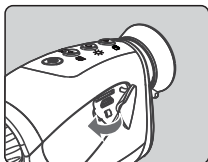
Open the cover

Flip open the USB and memory card cover.
Do not detach the cover.



Insert the card

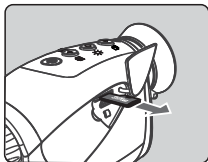
Place a microSD card in the memory card slot, with the metal contacts facing down, then push the card until it clicks in place.



Close the cover


Close the cover to its original position.

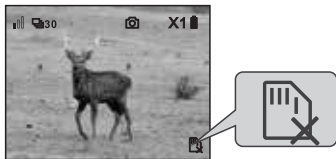
Removing the microSD card



Remove the card

Push the microSD card in gently. It will then release itself from the slot.

Without a microSD card in the device, the “no microSD card” icon [] will be displayed.

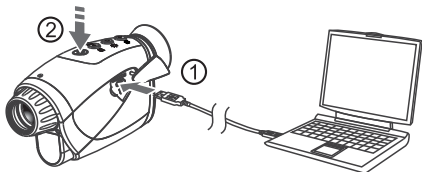


IMPORTANT: Before you can save photos to the SD Card, you must first go into the NV-250 settings menu and set the date and time. This puts a date/time stamp on the image, so they can be saved properly to the SD Card for later viewing on a computer or other SD compatible device.

Memory card and USB connection

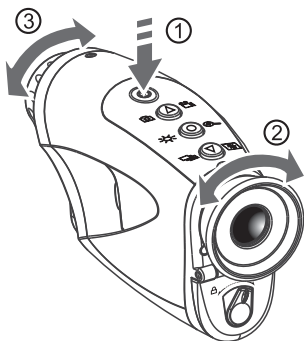
The saved images can be transferred to a computer by removing the memory card or via a USB cable.

Turn the device off and then connect the USB cable as shown below. When the device is turned on again, the computer will detect the microSD card automatically.




Do not remove the memory card while the device is transferring or accessing data. Doing so may cause loss of data, or damage to the memory card or the device. The manufacturer or distributor shall not be liable for any lost data or other indirect, incidental or consequential damages.

BASICS



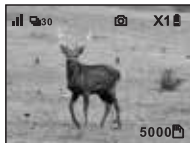
1. Turning on the power

Press and hold <  > for 2 seconds to turn on/turn off the Night Vision Monocular and Camcorder.



2. Focusing the eyepiece

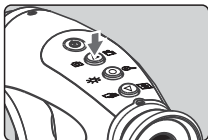
Rotate the eyepiece until the icons on the screen are sharp and clear.



3. Focusing the objective

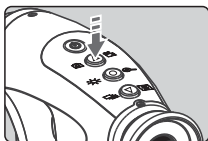
Rotate the objective until a sharp image is seen on the screen.




Capturing image

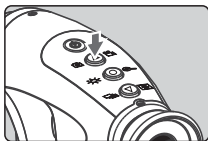


Press <  > to capture image. The image will be saved on the microSD card.

Recording video

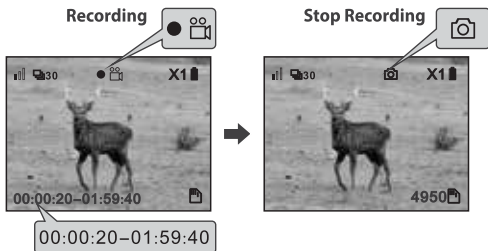


Press and hold <  > for 2 seconds to start video recording. The icon on the screen will change from [] to [], and the timer on the bottom left corner will start.

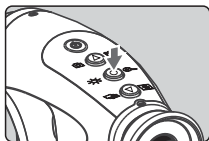


Press <  > to stop recording.

The device will save a new file every 10 minutes.



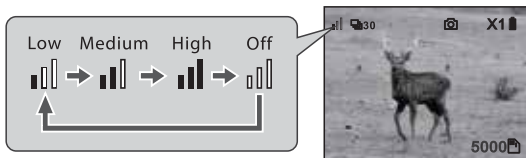
Adjusting the infrared intensity (IR intensity)



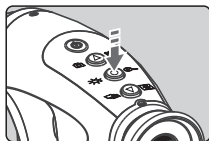
There are 4 IR modes available: low intensity, medium intensity, high intensity and IR off arranged in cyclic order.

Press <⊙> once to change mode and cycle through to the next mode.

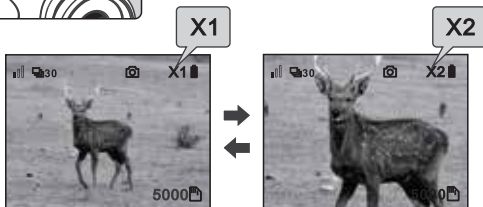
Tip: The further the object, the higher the IR intensity is required.



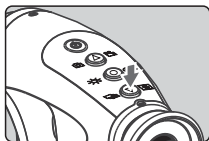
Digital zoom



Press and hold <⊙> for 2 seconds to trigger the 2x digital zoom. Press and hold <⊙> for 2 seconds to resume.



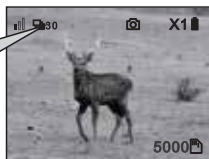
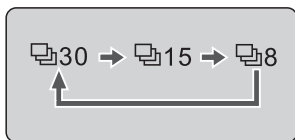
Frame rate (frames per second)



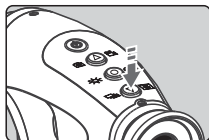
There are 3 frame-rate modes available: 30 fps, 15fps and 8 fps arranged in cyclic order.

Press <▽> once to change frame rate and cycle through to the next.

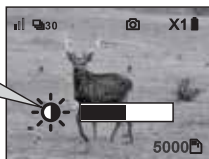
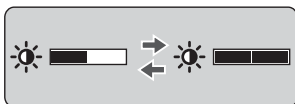
Tip: Use lower frame rate for darker condition/ further object.



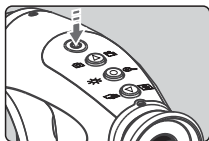
Screen brightness




Press and hold <▽> to toggle between dim and bright screen.




Turning off the power



Press and hold <  > for 2 seconds to turn off the Night Vision Monocular and Camcorder.

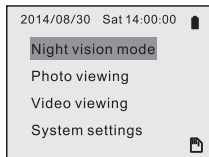
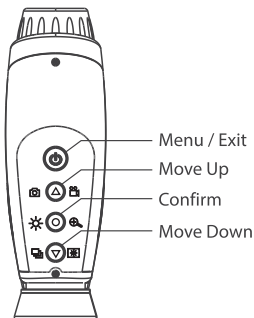
The device will enter sleep mode when left idle for 5 minutes, press any button to resume operation. The device will turn off automatically after 5 minutes in sleep mode.

Infrared intensity and battery consumption

There are 3 levels of infrared (IR) intensity and an IR off mode. The default setting is low intensity when turning on the device. Press <  > once to cycle through from low intensity, medium intensity, high intensity and IR off. It is suggested to start with the lowest level. A higher IR intensity is needed for viewing in darker environment or when viewing objects in further distance. More battery power is consumed for higher IR intensities. 3 brand new alkaline batteries can power continuous operation for approximately 60 minutes.

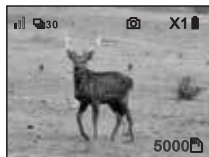
PLAYBACK AND SYSTEM SETTINGS

Scrolling through the menu



Select Item

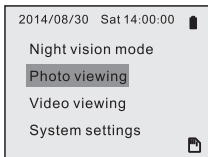
Press <⏻> to display menu screen. Select an item using the <▲> / <▼> buttons. Press <⌂> to confirm.



Return to Night vision mode

Press <⏻> to return to the Night Vision mode.

Playing back images



Enter Photo viewing

Use <▲ / ▼> to select the "Photo viewing" tab and press <⊙> to playback the first image.



Select image

Use <▲ / ▼> to select an image.

The icon on the bottom right corner shows the image number being viewed and the total number of images stored.

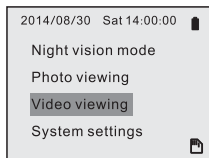
Press <⊙> to return the menu.



Deleting an image being viewed

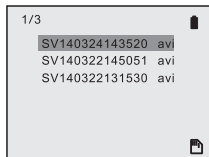
Press and hold <⊙> for 2 seconds. Press <⊙> to confirm.

Playing back video



Enter video viewing

Use <▲ / ▼> to select the "Video viewing" tab and press <○> to enter the video directory.

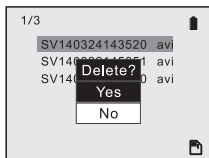


Select video viewing

Use <▲ / ▼> to select the video file, press <○> to view.

Press <○> to freeze a frame while viewing and press it again to resume.

Press <⏮> to go back.

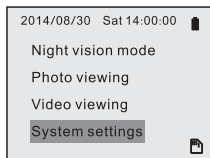


Deleting a video

At the video directory, select the video you want to delete, press and hold <○> for 2 seconds.

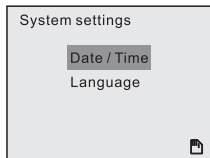
Press <○> to confirm deletion.

Setting date and time



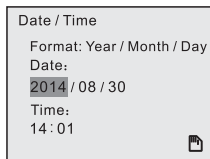
Enter System settings

Use <▲ / ▼> to select the "System settings" tab, then press <⊙>.



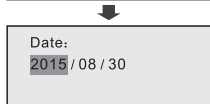
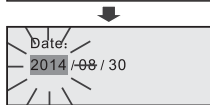
Enter Date/Time

Use <▲ / ▼> to select the "Date/Time" tab, then press <⊙>.

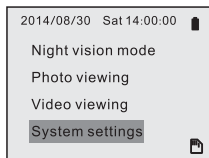


Set the date and time

Use <▲ / ▼> to select an item, press <⊙> to confirm selection. The item will start flashing. Use <▲ / ▼> to increase or decrease the number, press <⊙> to confirm.

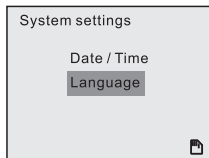


Selecting the display language



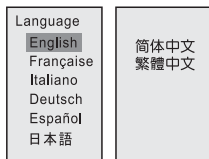
Enter System settings

Use <▲ / ▼> to select the "System settings" tab, then press <○>.



Enter Language

Use <▲ / ▼> to select the "Language" tab, then press <○>.



Select the interface language

English is set by default, use <▲ / ▼> to select the desired language, then press <○>.

Customer Service:

If you experience any difficulties, please contact us and we will be happy to help you.

In the U.S.A.

Phone: 1-631-963-5000

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Phone: +44 (0) 1938 557440

Email: eusupport@carson.com

For warranty information, visit www.carson.com/warranty