

# MILESEEY®



## BNV20 HANDHELD BINOCULAR NIGHT VISION DEVICE

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## Product description

Thank you for using Mileseey handheld infrared night vision device, please read the user guide carefully before use.

Mileseey BNV20 series is a handheld infrared binocular night vision device.

The appearance design of BNV20 is simple and elegant, and the appearance is solid and textured. Built-in color high-definition 3 inch IPS wide screen, wide display range, fine picture quality.

BNV20 has three modes to choose from: game mode, professional mode, and pure mode to meet the needs of different enthusiasts.

BNV20 is a night vision device for observing objects in dark or low light. The low light observation distance is infinite, and it can reach 200 meters in dark environment.

BNV20 can be used normally both day and night, with functions such as photographing, video recording, and playback. The optical magnification is 5 times and the electronic magnification is up to 8 times.

The BNV20 series is the best auxiliary tool for human vision extension, it is a precision photoelectric instrument for observing targets at night. Can work in very low light.

BNV20 is equipped with infrared illuminator, suitable for use in pure dark environment.

The auxiliary lighting apparatus can be turned on when the environment is dark, the brightness of the auxiliary lighting apparatus can be adjusted appropriately according to the

distance of the observed object. The night vision device uses a low-illuminance sensor. The auxiliary lighting apparatus don't have to turn on when the environment has a certain light source (such as street lights, moonlight). Adjust the focus of the objective lens and the brightness of the screen to make the observation clear.

## Safety instructions



In order to ensure the safety of product use, please follow the instructions strictly. Otherwise, the warranty will not be carried out if the product is damaged.



Please use a damp cloth or weak soap and liquid to clean the structure shell. Do not use abrasives, isopropyl alcohol or solvents to clean the instrument shell, lens and windows.



Please do not use this instrument in flammable, explosive, steamy, humid or corrosive environments.



Please do not continue to use it after being damaged, dropped or corrected, so as not to cause wrong test results.

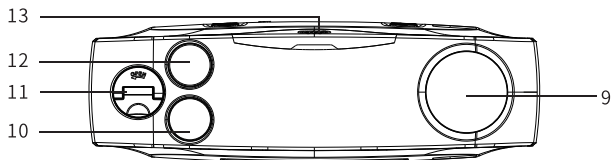
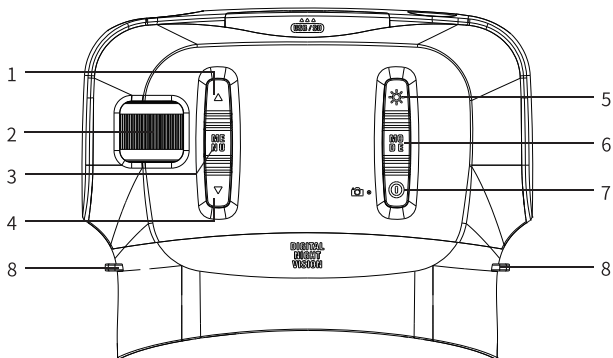


Charging will cause device internal temperature rise, it will affect the accuracy of temperature measurement. It is not recommended to perform temperature measurement when charging.



Due to the product power consumption is relatively large, it will cause the device internal temperature rise, in order to ensure the product accuracy, it is recommended to start the measurement after 10 minutes of preheating when the product is turned off for a long time.

## Appearance



**1.Up' button**

Can be used to scroll up options, view pictures, image zoom.

**2.Objective lens focusing handwheel****3.Setting button**

Long press to enter setting menu.

**4.Down' button**

Can be used to scroll down for options, view pictures, image zoom.

**5.Infrared compensate light button**

Short press to open, switch 1 / 2 / 3 / off.

**6.Function button**

Long press to shift model.

**7.Turn on/off button**

Long press to turn off, short press to enter.

**8.Lanyard hole****9.Objective lens****10.Near-beam infrared light****11.Battery chamber****12.Far-beam infrared light****13.USB/SD Card port**

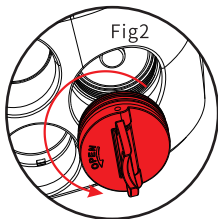
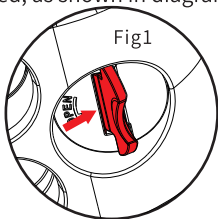
## Install the battery

The night vision device uses 2000mAh/3.7V lithium battery, which can be replaced and charged directly. Please use the original USB cable for charging when the battery is low. Please remove the battery from the machine if it is not used for a long time.

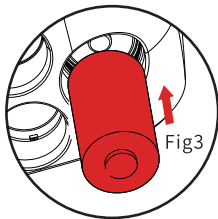
**! Important: Please remove the battery from the machine if it is not used for a long time.**

**! Note: Please turn off the device when disassembling the battery.**

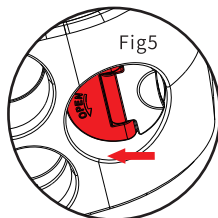
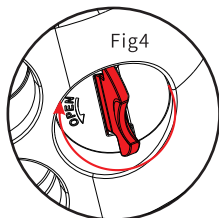
1. Pull up the rotating handle on the battery cover, as shown in diagram 1; rotate handle counterclockwise until the battery cover is opened, as shown in diagram 2.



2. Put a 3.7V lithium battery into the battery chamber according to the positive and negative directions, as shown in diagram 3.



3. After the battery is assembled, screw the battery cover clockwise, as shown in diagram 4, and then lower the rotating handle, as shown in diagram 5.



## Turn on/off

Long press turn on/off button  to turn on.

According to factory default setting, the instrument will shut down automatically if there is no operation within 3 minutes.

### Note:



**1. The auto shut down time can be set in the setting menu.**

**It will not shut down automatically during recording and playback.**

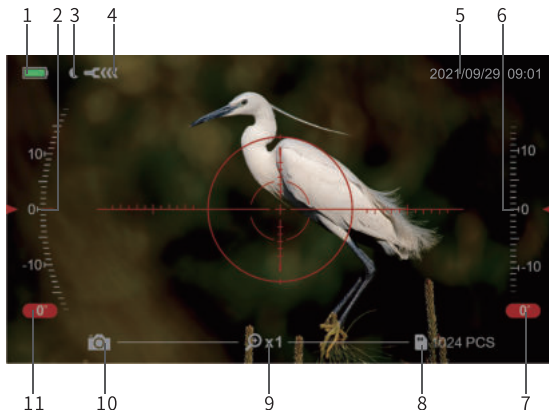
**2. The device will enter into the observation (photograph) state after turning on, normal observation and photographing operations can be carried out.**

## Object observation

Under the observation (photograph) state, aim the objective lens at the object to be observed, look at the display screen from the eyepiece.

1. Adjust the objective lens focusing handwheel to make the observed scene the clearest.
2. The machine will fine-tune the brightness of the display automatically according to the average brightness of the object in the center of the screen.
3. Press  , electronic zoom can be realized, and the range of image electronic magnification is 0-8 times
4. Turn off the auxiliary infrared light (avoid overexposure of the image and save battery power at the same time) when the ambient light is relatively bright.
5. In order to make the observation clear, please turn on the auxiliary infrared light and adjust the brightness of the light when the ambient light is very dark and the scenery is unclear. Turn on the auxiliary infrared light, the device will switch to black and white mode for observation automatically (photographing, video recording).

## Icons instruction



1. Battery level display
2. Left and right scroll angle
3. Night mode
4. Infrared light
5. Present date and time
6. Up and down pitch angle
7. Up and down pitch angle display
8. Storage display
9. Electronic magnification
10. Function display (photograph/video/album)
11. Left and right scroll angle display

## Infrared compensation light adjustment





Under the photographing or video recording function, press the  key to enter the night mode (diagram 1), the night mode icon is displayed in the upper left corner of the screen, press  again to enter the infrared compensation light mode (diagram 2), The red fill light level 1 icon appears in the upper left corner of the screen, press  to adjust the intensity of the infrared light (level 1-3). After the infrared light is adjusted to level 3, press the  key again to turn off the infrared compensation light.



Fig 1: Night mode



Fig 2: 1st gear infrared fill light






Fig 3: 2-speed infrared fill light

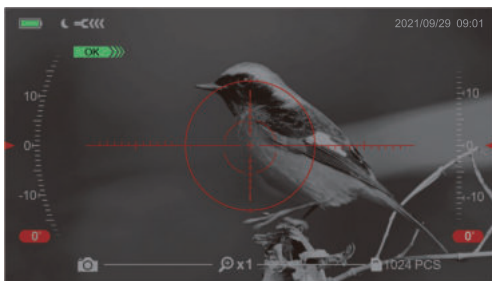


Fig 4: 3-speed infrared fill light

**Note: please turn off the auxiliary infrared light when there is no necessary use the infrared light to save power.(There is no objects should be blocked in front of the light when the infrared auxiliary light is turned on to avoid overexposure of the image at close range.)**




## Photograph

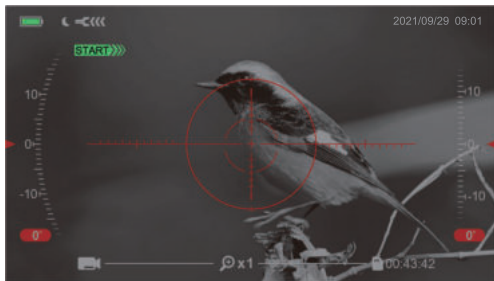
Turn on the device, the system automatically enters into camera mode , the scenery can be observed and photographed. Aim at the target and short press , the upper left corner of the screen displays  the photo is taken successfully and automatically saved to the SD card.



**Note:** The maximum number of photos that can be taken on the screen is 1024. The actual number of photos that can be taken will vary slightly depending on the memory size.

## Video


Press and hold down **MODE** (right one) to switch to recording mode , short press **OK** to start recording, the upper left corner of the screen display **START** , and the time in the lower right corner of the screen starts counting. Short press **OK** again to stop recording, the upper left corner of the screen display **STOP** , the video file was successfully recorded and automatically saved to the SD card. After stopping recording, the time displayed in the lower right corner is the remaining available recording time.

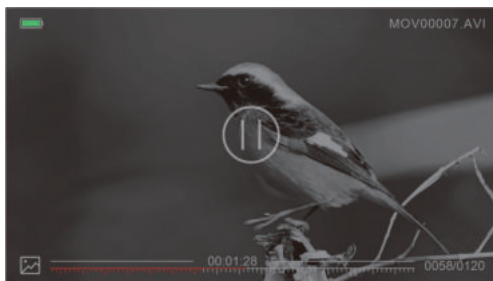


**Note:** During the recording process, please do not turn off the machine suddenly, otherwise it may cause video data errors or fail to save.

**Solution:** Connect to a computer, format the memory or delete damaged files.

## Album

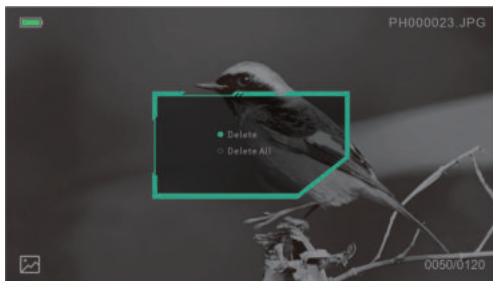
Press and hold down **MO** (right one) key to switch to the album . Short press **▲▼** to browse pictures/video files; Select a video file, short press **▶** to play the current video file, short press **⏸** again to pause playback.



## Delete

Select the photo/video that needs to be deleted, Press and hold down **ME** **NU** (Left one), the delete selection box will pop up, press **▲** **▼** to switch back and forth to delete or delete all, press **○** to delete.

Press and hold down **ME** **NU** (Left one) to exit the delete selection box.




**Note: In the playback state, the screen brightness and auxiliary lighting adjustment functions cannot be used.**

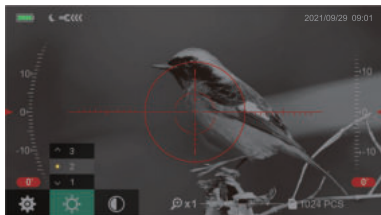
## Setting menu

### Setting menu operation instructions

1. Press and hold down **MENU** (Left one) to enter the setting menu;
2. Press **▲▼** to switch menu options, press **○** to enter the setting interface, and press **▲▼** to set the value;
3. press **○** to complete the setting;
4. Press and hold down **MENU** (Left one) to exit the setting menu.

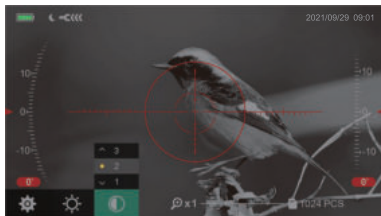
### Screen brightness

Press and hold down **MENU** (Left one) to enter the setting menu, press **▲▼** to select screen brightness , press **○** to confirm, press **▲▼** to adjust the brightness from 0 to 9, press **○** to confirm.



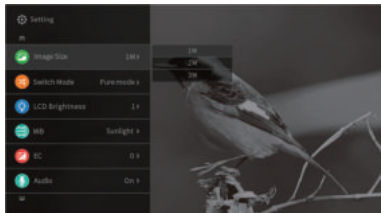
## Contrast

Press and hold down **ME** (Left one) to enter the setting menu, press **▲▼** to select contrast **☾**, press **○** to confirm, press **▲▼** to adjust the brightness from 0 to 9, press **○** to confirm.



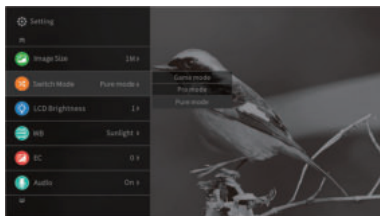
## Image Size

Press and hold down **ME** (Left one) to enter the setting menu **⚙️**, press **○** to confirm, select the Image Size **📷**, press **○** to enter the setting, press **▲▼** to switch options(1-3M), press **○** to confirm the setting.



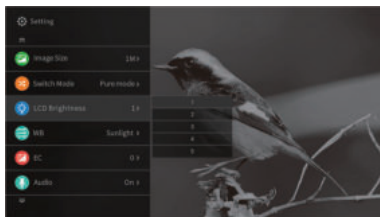
## Mode switch

Enter the setting menu, select Mode switch, press **0** to enter the setting, press **▲▼** to switch options, press **0** to confirm the setting.



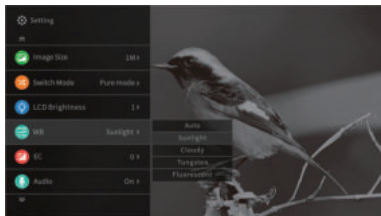
## LCD brightness

Enter the setting menu, select LCD brightness, press **0** to enter the setting, press **▲▼** to switch options, press **0** to confirm the setting.



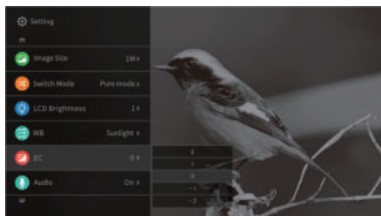
## White balance(WB)

Select white balance(WB), press **[O]** to enter the setting, press **[▲]**  
**[▼]** to switch options, press **[O]** to confirm the setting.







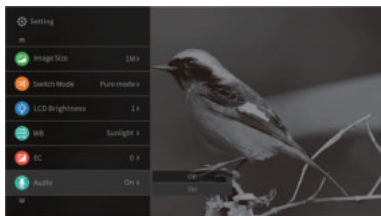
## Exposure compensation(EC)

Select Exposure compensation(EC), press **[O]** to enter the setting, press **[▲]**  
**[▼]** to switch options, press **[O]** to confirm the setting.



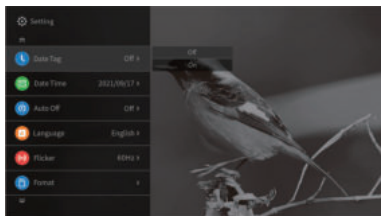
## Audio recording

Select the Audio, press  to enter the setting, press   to switch options, press  to confirm the setting.



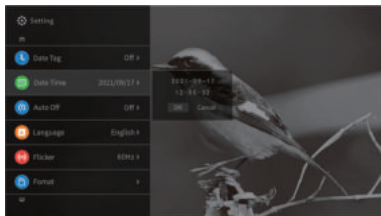
## Date Tag

Select the Date Tag, press  to enter the setting, press   to switch options, press  to confirm the setting.



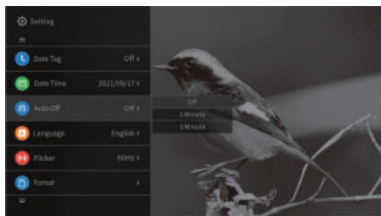
## Time setting

Select the time setting, press **[O]** to enter the setting, press **[▲][▼]** to switch options, press **[O]** to confirm the setting.



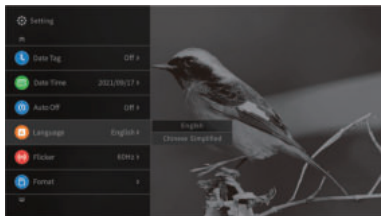
## Automatic power off

Select Auto off, press **[O]** to enter the setting, press **[▲][▼]** to switch options, press **[O]** to confirm the setting.



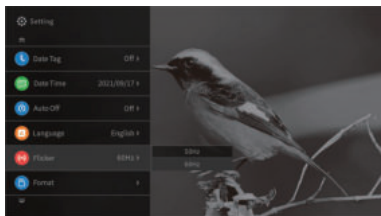
## Language

Select the language, press **[O]** to enter the setting, press **[▲][▼]** to switch options, press **[O]** to confirm the setting.







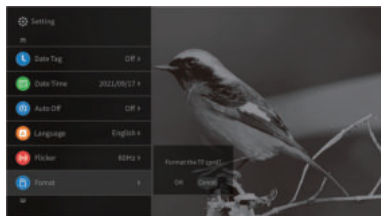
## Flicker

Select the Flicker, press **[O]** to enter the setting, press **[▲][▼]** to switch options, press **[O]** to confirm the setting.







## Format

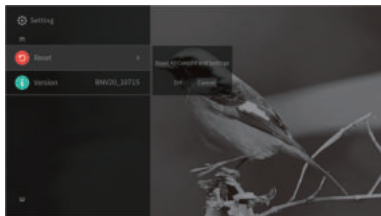
Select Format, press  to enter the setting, press   to switch options, press  to confirm the setting.



**Note:** Please use the format setting with caution, once the format is confirmed, all information in the SD will be lost.

## Reset system



Select the Reset, press  to enter the setting, press   to switch options, press  to confirm the setting.



**Note:** Please use the reset system settings with caution. Once confirmed the factory settings are restored, all information in the instrument will be lost.

## Connect to the computer

This product is equipped with a USB2.0 interface. (Insert one end into the device USB interface, and connect the other end to the computer device).

After the USB cable is connected to the computer, press and hold the power button , after turning on the device, press and hold the button , a function screen appears: memory/PC camera/video mode. Select "Storage", the device is used as a mobile storage device, the computer will read the contents of the TF card. Download "PC camera software" (such as potplayer) from the Internet and install on your computer.

Restart the device, select "PC Camera" to enter the video mode, open the PC camera software installed in the computer, and perform real-time camera/photograph and other operations.

If select "video mode" to observe the object when connecting to computer, the battery will be charged through the USB interface.

## Specification

Category	Item	Parameter value
Optical performance	Optical Magnification	5X
	Objective size	35 mm
	Field of view	7°x5.25°
	Low light observation distance	2m~∞
	No light Total black observation distance	~200m
	Sensor	Low illumination HD 1/3 CMOS
Electronic performance	Pixel	130W
	Pictures	1280*720
	Video	720P
	Display Screen	3 inches, IPS color screen
		640*360
	Digital Magnification	8X
power supply	Operating Voltage	3.7V DC
	Replaceable battery	2000mA lithium battery can be charged repeatedly
other	Size	192x150x61mm
	Weight	820g

## Copyright statement

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