Bestguarder ®

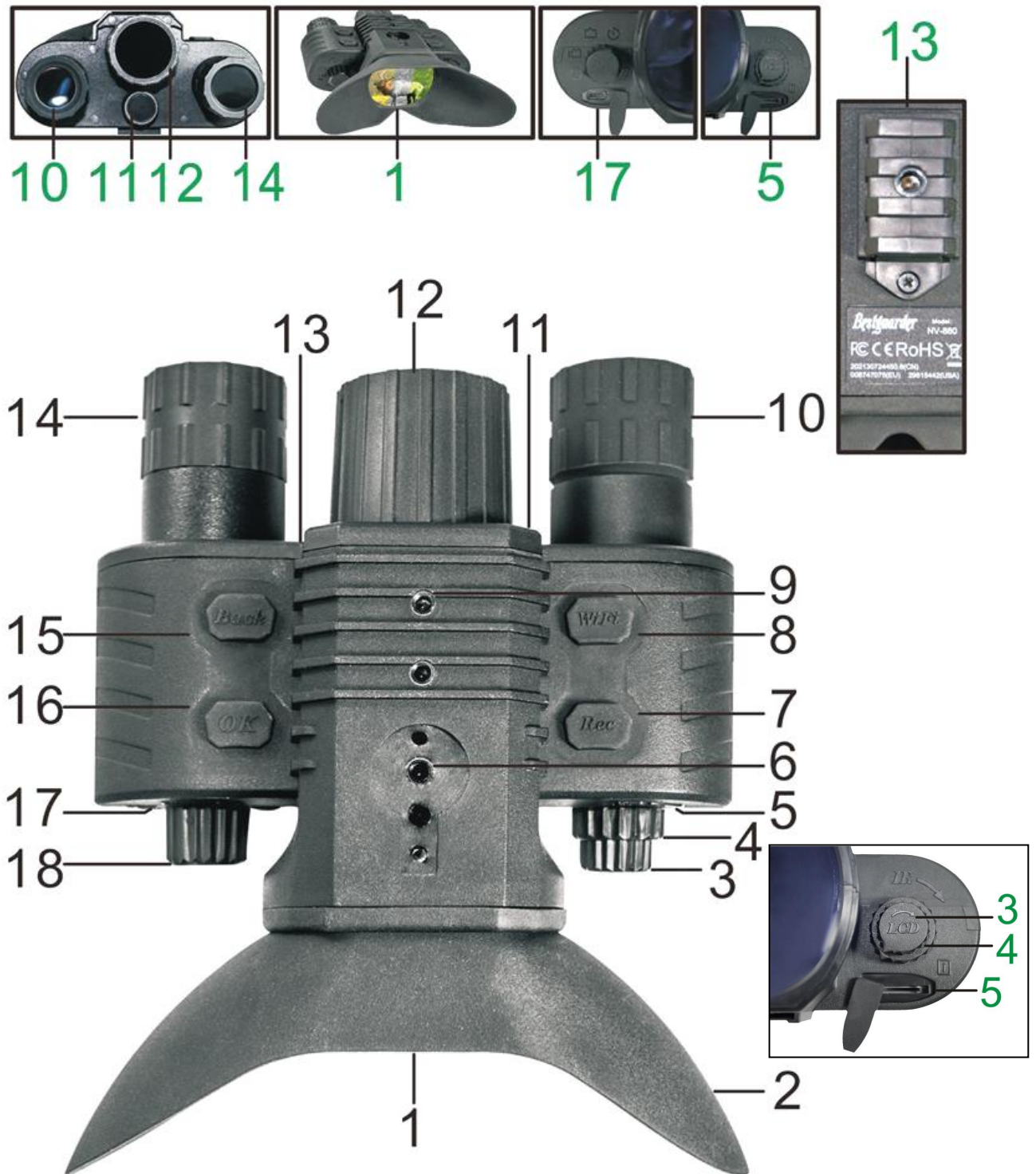# Digital Night Vision

Model: NV-880/VC-2000
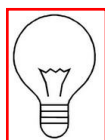
Patent: 202130724450.6(CN), 008747075(EU) US D965658 (USA)
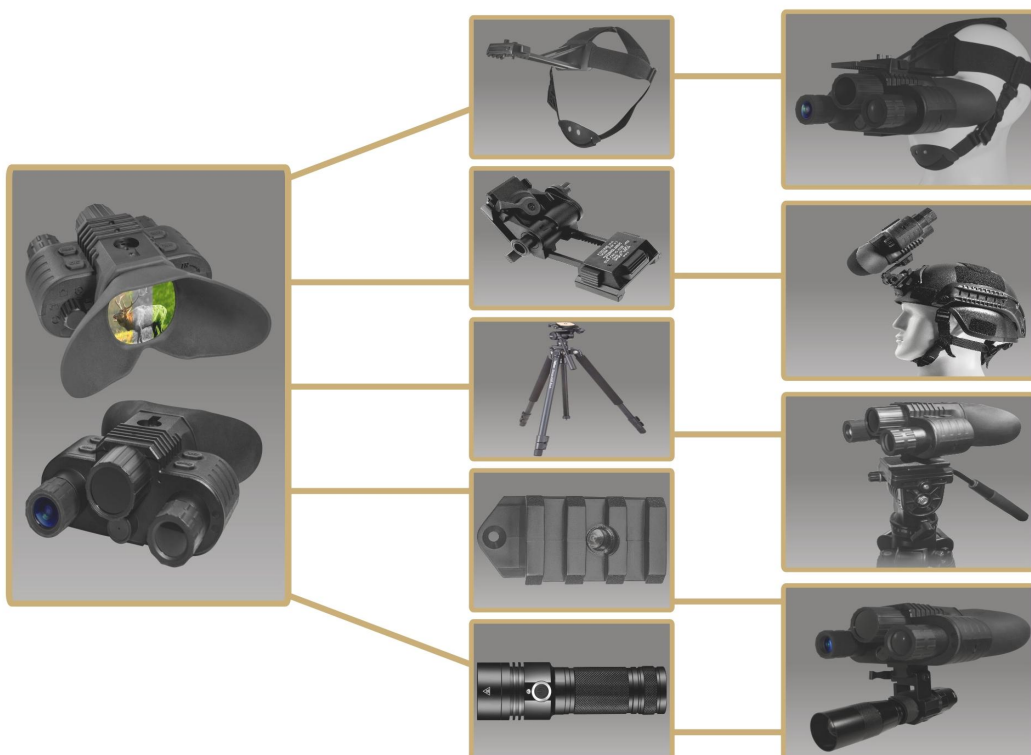
I Controls

1	Viewer		
2	Cover	11	Audio in
3	Screen brightness button	12	IR illuminator
4	IR illuminator adjust button	13	Mounting rail
5	Micro SD card slot	14	Battery cover（3.7V, 3000mAh 以上， 18650 x1）
6	Helmet interface	15	Back button/ Colorful, B&W, Green mode switch
7	REC button/Down button	16	OK button, Zoom 1-8X
8	WIFI button(long press)/Up button	17	Type –C interface
9	Simple bracket interface	18	On /Off , Video/Photo/time lapse /Playback/ Setting
10	Lens (rotate for focusing)		
Support Battery:18650, 3.7V, 3000mAh High quality (not include)			

II Usage

Device is potable NV camera with neck strap, also support helmet, tripod, external light mounted.   (Helmet, tripod, external light are not included)

Safety Notes

1, Multilayer coated optical glass lenses, pay attention to oil and dust, and use a soft wiping cloth to wipe from the middle to the periphery!
2, the machine cannot be immersed in water to avoid damage to the instrument circuit caused by immersion. No warranty is provided for water ingress.
3, When using, do not face the sun, and do not place it in a high temperature environment, such as a car or workshop exposed to high temperature.
4, Please insert Micro SD card at correct direction. Turn off the machine before inserting and removing the Micro SD card.

III Functions

Mode: Video/Photo/Timeplase/playback

1）**Button 18# :**

⏻　**a. Off**

🎥　**b. Video:** Press **REC** button to start and end a video.

📷　**c. Photo**：Press **REC** button to take a photo

⏱　**d. Time lapse:** countdown 10s to work

Set Photo/Video in Menu setting, interval 5s-24h. (default:1minute a video)
Note: The screen can be closed when Digital night vision is Time lapse mode to save power and extend battery working time)
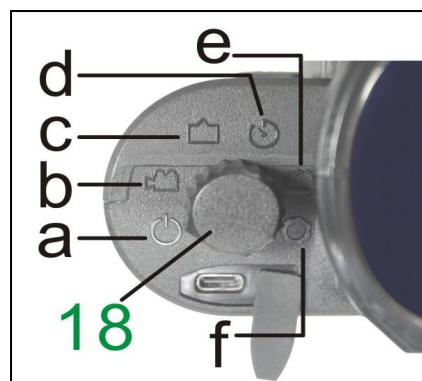
📂　**e. Playback:** Press **WIFI(Up) /REC (Down)** button

Press **Back** button in Delete mode

⚙　**f. MENU setting**

1.0-8.0X   Zoom Factor

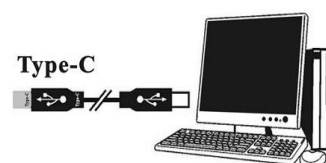The Digital Zoom magnification factor is displayed here. (1.0x – 8.0x)

IV MENU

Video Size:	⟶	FHD1080P
		HD720P
Photo Resolution:	⟶	16MP
		12MP
		8MP
		6MP
Date & Time Date Type	⟶	2022/7/1/ 00:00
		YY/MM/DD
WiFI Password:	⟶	CAM_******
		1234567890
Timelapse:	⟶	Interval 00:00:05
TimeLapse Mode:	⟶	PHOTO
		VIDEO
TimeLapse Work1:	⟶	Off / On
		Start00:00 End00:00
TimeLapse Work2:	⟶	Off / On
		Start00:00 End00:00
TimeLapse Work3:	⟶	Off / On
		Start00:00 End00:00
Date Stamp： GPS	⟶	Off / On
		Lng:000.0000N
		Lat:000.0000E

Language	→	English
		Français
		Español
		Italiano
		Pyccknn
		Deutsch
		日本語
		Polski
		Čeština
HUD Color:	→	Green / White / Red/ Yellow / Cyan / Magenta
NV Filter：	→	Green / B&W
Power Save	→	10 Min
		30 Min
		60 Min
		3 Hours
		5 Hours
		8 Hours
		12 Hours
		24 Hours
		Never
Micro SD Overwrite：	→	Off /On
USB Mode	→	MSDC
		PC CAM
Format:	→	Yes/No
Factory Reset:	→	Yes/No
System :	→	00.00.41

V Connecting device

Connection via USB cable

MSDC: Device could be used as a disk while connecting with USB cable

PCCAM: Device could be used as a WEB camera while connecting USB cable with computer

(The unit is able to install Driver used as a WEB camera while computer system is under Windows2000, And The unit is compatible with kinds of WEB camera software on line and usage is same as computer camera after installing driver successfully), **such as: SPCA1628_V1200_WHQL Setup.exe**

VI WIFI share

Download "Night vision" Android or IOS APP firstly in the application store of mobile device, and then install it into the mobile device. This app is a free application developed by our company
（**WIFI distance is Max 25m without any interference in the area**）
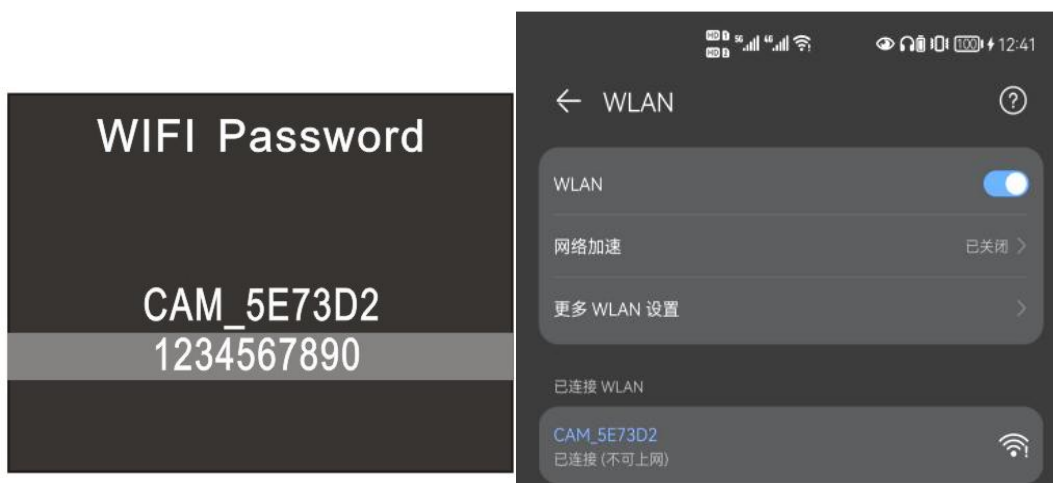
WIFI APP install and setting

1, Turn On WIFI of NV camera
Long press "WIFI" button to Turn on WIFI function, countdown 120s to connect.

2, Mobile device WIFI connection
Search the device name "CAM-5E…"(every NV has a different WIFI serial number) on Mobile device and connect, WIFI default password is 123456790.
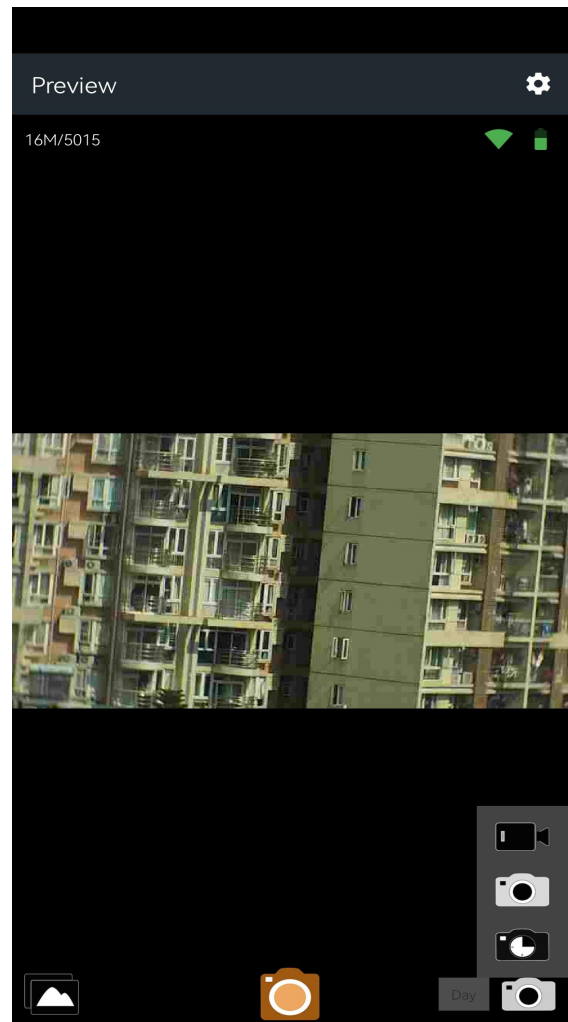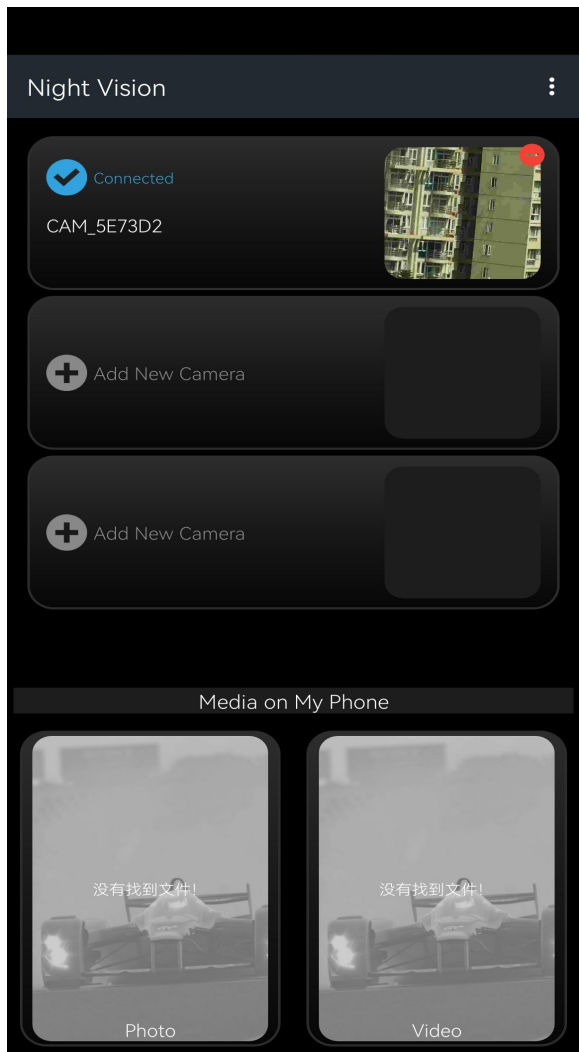"MENU" mode - "WIFI" password setting (0-1, A-Z)

3, NV Camera show connecting information on screen

4, Click "Night vision" APP, Click "ADD New Camera" to add a NV camera and enter Operation interface
Please refer to the following APP operation interface

Note: When WIFI is connected successfully, NV camera and the APP would be synchronised. Changes on APP will be same on NV camera, camera button are out of function.
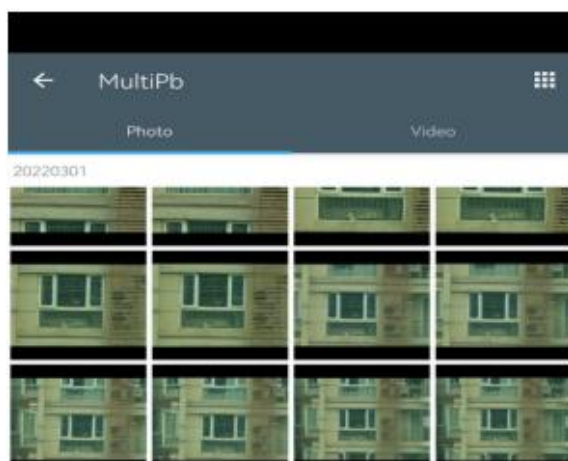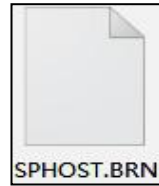

5：Playback：See

★ fast view "Photo/Video"

6, File name "Digital NV" in phone to save Video and photo which download from NV camera

VII Firmware upgrade

When upgrading the software, please ensure that there is enough power and no power loss.

1, Copy the software "SPHOST. BRN" to the root directory of the Micro memory card

2, Enter the software upgrade set in the menu
  No other operations will be done during the upgrade process. Wait until the software upgrade is completed, and then enter the menu "System" again to check the new software version number.

Appendix I: Technical Specification

Build In　1.5″　TFT , View Large LCD Screen UP TO 3″　display
Resolution of Screen:640*480
Magnification(optical): 3
Digital Zoom：　8
Lens diameter: 20mm
CMOS interpolate16mp
F for Objective lens：7.8*4.4,F=38mm
JPEG:5376×3024，4608×2592，3840×2160，3264×1832
Video:1920*1080，1280*720 @30FPS with sound
Infrared Illuminator: 850NM 1W Infrared LED
Observing Distance(Full Dark Environment): 490ft /150M
TF card: up to 64G(no included)

Time lapse Function:YES, Photo or Video
GPS ID stamp on the picture or video: YES
Adjustable eyepiece
Time stamp: Date and time, GPS on picture and video
Screen turn :on/off，WIFI function:YES
Language:　　　　　　　　　　　English,French,German,Italian,Japanese, Russian,Spanish,Czechen,Polish
Working Power Voltage:3.7V
Rechargeable Battery:　1 * 18650 (Not include)
Built-in 1 tripod mountable: YES
USB: Type C
Operating Temperature Range: -10 - +45°
Camera weight(without battery and package):　320g
Certification: CE, FCC-ID，ROHS

*Without battery, Micro SD card

Please Format the Micro-SD memory card before use. Files n the card from other device may affect the functionality of the cmera.

FCC 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/TV technician for help.

Shielded interface cable must be used with the equipment in order to comply with the limits for a digital device pursuant to Subpart B of Part 15 of FCC Rules.
Specifications and designs are subject to change without any notice or obligation on the part of the manufacturer.

FCC Radiation Exposure Statement:
The equipment complies with FCC Radiation exposure limits set forth foruncontrolled environment.This equipment should be installed and operated with minimum distance 5mm be tween the radia torand your body.

Disposal of Electric and Electronic Equipment
(Applicable in the EU and other European countries with separate collection systems)

This equipment contains electric and/or electronic parts and must therefore not be disposed of as normal household waste. Instead, it

should be disposed at the respective collection points for recycling provided by the communities. For you, this is free of charge.
If the equipment contains exchangeable (rechargeable) batteries, these too must be

removed before and, if necessary, in turn be disposed of according to the relevant regulations (see also the respective comments in this unit's instructions). Further information about the subject is available at your community administration, your local waste collection company, or in the store where you purchased this equipment.

Appendix II: Parts List

Part Name	Quantity
Digital Night vision	1pc
Instruction Manual	1pc
Protection bag	1pc
USB cable	1pc
Mount rail	1pc
Soft Helmet set	1pc
Lens cloth	1pc

Support Parts (not included, for reference only)

Appendix III: Warranty and Cautions

Warranty

Your device is covered by Warranty on parts and labor from the date of original purchase, and purchases must be made through an authorized dealer. Warranty period is complying with dealers' legal requirement. The warranty covers defects in workmanship and materials. The warranty does not apply to units, which have been damaged or abused intentionally or unintentionally. A purchase from individuals or unauthorized internet sites such as eBay voids the warranty.

Tampering with or altering the unit will void the warranty. Any unauthorized service will void warranty. A copy of your original sales receipt must be produced for any warranty service.

WARNING：
Reading User's manual before using it.
Changes or modification to this unit not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

Cautions：

Please install batteries according to shown polarity.

Please use good quality AA batteries and take out batteries when device will not be used for longer then a few weeks.

It is recommended to format the Micro SD-card by the camera when used at the first time.

Keep the device away from any heating and air conditioning vents or other heating devices, direct sunlight, and moisture.

Always store the unit in its carrying case in a dry well ventilated space in temperature above +15°C(60°F). Do not store near heating devices. Do not store in direct sunlight or high humidity conditions(higher than 70%)

NOTE: This camera is a precision electronic device. Do not attempt to service his camera yourself, as opening or removing covers may expose you to dangerous voltage points or other risks.

Appendix IV: Q & A

1, Can it be used for military and police purposes?
This digital night vision is for outdoor game, not suitable for military or police purposes.

2, Can I wear this Digital Night vision on my head?
This Digital Night vision is mainly used for handheld purposes, but you can use the to wear it on your head for a short time. If you wear it for too long, please purchase other helmet and accessories, such as figure below:

3, Why did the battery run out after one and a half hours?
Put high-quality 18650 rechargeable battery with full capacity and brand guarantee (3.7V, >3000mAh). Remember to charge before use.

Note that the positive and negative electrodes of the battery shall not be installed reversely. If the battery is not used for a long time, please take it out. put it into the shockproof bag, as shown in the figure below.

（positive　　　　　　）

If you need to stand by or shoot for a long time, you can connect an external mobile power supply.

4, I want to use Digital Night vision to shoot farther and clearer. Is there any way?
Yes, you can add a 940nM flashlight to the DIY at the bottom of the night vision device to enhance the light (as shown in the figure) , then the shooting distance will be longer and the image will be clearer.

5, How does the device get a little hot after 2 hours of continuous photography?
It is similar to a mobile phone. If it is used continuously, it will generate a little heat and have no impact on the performance of the machine

6, What's wrong with no response when you press the key?
There may be very few buttons that do not respond when you press them. It is highly likely that the force on the buttons is uneven when you press them. When you press them down, you can adjust them to the left or right appropriately.

7, Why it is a bit shaking when digital night vision with a random accessory which you provided?
The accessories provided are only suitable for wearing on the head for a short time. It is better to hold the night vision device with your hand when running!

8, How does the tripod connect digital night?
This is a tripod interface on mounting rail. See figure

9, Why screen is black, no display when digital night vision turn on?
Rotate LCD button right to turn on screen display.

10, Why the camera suddenly crashes or does not start:
A: When the battery is low, it is easy to automatically shut down quickly. After the shutdown, replace new battery.
B: Just like the computer, turn off digital night vision and restart it.
C: Digital night vision show low power, turn down brightness of the IR illumination. Remember to turn off IR during daytime use to save power.