Night Vision Device

User Manual

V6.3

Information

Product Information	
Name	Night Vision Device
Model	NVE-E53 (The 4th Version)
FCC ID	2A526NVE-E53
App Name	NVPlayPro(Apple App Store /Google Play Store)
WiFi Name	E53@XXXXXXXXXX
WiFi Password	12345678
Bullet Zeroing Password	87654321
App Information	www.wanney.com/Download
The Latest Firmware	www.wanney.com/Download
New Manual	www.wanney.com/Download
Your Suggestion	www.wanney.com/Contact-Us
The Q&A	www.wanney.com/Contact-Us
Company	Wanney Corporation
Website	www.wanney.com
ZEROING Step	0.16604 MOA

Declaration

Copyright 2020.

Original manufacture is abbreviated as Company.

Without the written permission of Company, no units or individual shall copy or translate part or all of the contents of the manual without authorization, and shall not disseminate for the purpose of profit-making in any way, including electronic, photocopy, recording, etc.

The product specifications and information mentioned in this manual are for reference only, and no further notice will be given if the content is updated. This manual is only used as guidance, and the statement is made without any form of guarantee.

Dear customers! We warmly remind you that you must abide by local laws and regulations when purchasing and using our products, and you are not allowed to use our products to violate the law under any circumstances. A few countries prohibit the use of night vision devices, high-power flashlight, lasers and other products. Please be sure to follow them.

Thanks for your attention to Company's night vision device (hereinafter as NVDevice). To ensure a better night vision experience, please read the instructions carefully and follow them before using the NVDevice.

Catalog

1. About NVDevice

1.1 Function

The NVDevice can be used for observing or hunting in dark environments. It is widely used in predator hunting, hog hunting, patrol and rescue.

1.2 Packing list

- Night Vision Device
- Adapter
- Clean Cloth
- Wrench

- User Manual
- USB Cable
- Certificate
- Packing Box

1.3 Product

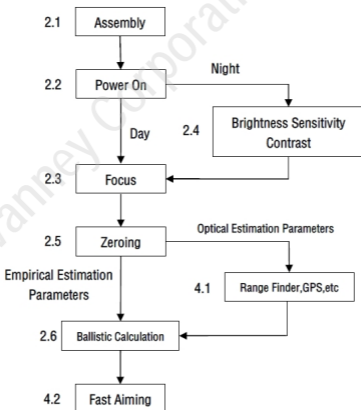Outline: Figure 1.1 and Figure 1.2 are the outline for NVDevice.

Figure 1.1

Figure 1.2

2 How to use

The flow chart is as follows.

2.1 Assembly

Mount the device solidly to the picatinny rail base, using recommended torque specs from the base manufacturer. Then remove the objects lens cover.

Loosen   Fastern

Mount Assemble

Figure 2.1

2.2 Power and adjusting

Focus Assemble

Near   Far

IR LED Adjust

Diopter Adjust

Figure 2.2

Note: The IR flashlight beam is able to be adjusted to a wide beam for close targets, or a narrow beam for far targets.

- **Power Switch.**

Power On: Press the power button in 2 seconds.
Power Off: Press the power button in 2 seconds, the "POWER OFF" countdown is displayed in the screen.
Forced shutdown: Press the power button in 12 seconds.

- **Diopter and Focus Adjusting**

Ensure the objective lens and IR lens clean.
Adjust the eye diopter until you can see screen information clearly.

2.3 Display Information and Keyboard

The display information corresponds to device functions. Functions can be opened or changed by keyboard.

- **Display Information**

When turned on, the screen is displayed as shown in Figure 2.3, and the information is listed in the table following Figure 2.3.

Figure 2.3

Information	Description	Information	Description
2018–08–08	Date	Wed	Week
10:34:28	The 12 hours time	AM	AM/PM
S:00%	Sensitivity	C:1	Contrast
B:1	Brightness	D:115	Image Parameters
Ballistic XX	Control Information	◎	Record Status
35℃	Temperature	▯	Battery Status
⚡	Recharge Symbol	38%	Battery
📶	WiFi Symbol	⚲	Positioning Symbol
▤	TF Card Symbol	REC 3:04	Record time/Infor
✛	Reticle	R:50	Target Range

● Keyboard

Figure 2.4

First: Turn on the device, adjust brightness, sensitivity and contrast by click ☀, ◣ and ◑.

Then decide whether to use other functions according to needs.

	Function Button			
	\multicolumn{2}{c}{Red Button (Long Press)}	\multicolumn{2}{c}{Black Button (Short Press)}	
1	⏻	Power	N/A	N/A
2	GPS	Positioning	WIFI	WiFi
3	Shift	Shift/ZEROING	✳	Laser
4	▬	Record	▣	Photo
5	▲	Reticle Up	◣	Sensitivity
6	◀	Reticle Left	▨	Digital Zoom
7	▶	Reticle Right	◑	Contrast
8	▼	Reticle Down	☀	Brightness
9	Unit	Unit Switching	OSD	Cursor/Menu

Buttons are multifunctional:

1. Black icon function:

Click button to access the function, on/off or level change.

2. Red icon function:

Power, press "⏻" in 2 seconds, turn on/off NV Device.

Long press "   " in 12 seconds, forced shutdown.

GPS, "▬" and "Unit", long press then enter functions.

3. To adjust reticle aiming position, long press "Shift" in 10 seconds, then "NOW ZEROING" is displayed on screen, press or click "▲", "◀", "▼", "▶", reticle can be controlled up / left / down / right. When no key is pressed within 8 seconds, the current status will be stored automatically.

6

4. Special Combination Function:

For more details about keyboard operation, refer to Appendix A.

Notice:

1) TF card: Do not power off or take out the TF card when recording is on, otherwise the TF Card or video files maybe damaged. When the TF card formatting is completed, the screen will display "Format success", or error information.

2) WiFi: Once WiFi is on, it cannot be turned off until the device is turned off.

3) Altitude: When turning on GPS, the real-time datum, ballistics is calculated automatically. There are two optional units: Meter and Yard. Long press "**Unit**", unit changes.

4) Temperature, "℃" for Centigrade, "℉" for Fahrenheit. Long press "**Unit**". Datum is involved in ballistic calculation automatically.

5) Ballistic settings refer to page 11.

2.4 Zeroing and Ballistic Calculation

ZEROING your device before using is necessary. At this time, you can decide whether to use ballistic calculation or not according to your needs. Ballistic calculation can also be done at a later time.

Notice: When the cursor is moved relative to the background, The cursor will adjust to target distance immediately after the ballistics calculation.

● Zeroing

Figure 2.5

Figure 2.6

Zeroing steps:

1) Setting "Cursor X" and "Cursor Y" to (0,0): long press "**Shift**" in 10 seconds, then "NOW ZEROING" is displayed on screen, press or click " ", " ", " ", " " to move cursor.

2) Set a target 50 meters (the Metric system) or 50 yards (the Imperial system) away. You can adjust the ZEROING RANGE by APP.

3) Shoot a round at the target.

4) Setting zero point "X" to bullet drop point: long press "**Shift**" in 10 seconds, until "NOW ZEROING" is displayed on screen, press " ", " ", " ", " " to move cursor.

The setting will be stored automatically after 8 seconds and zeroing is finished.

5) Shoot at target again to confirm the device zeroing is accurate, if not, repeat step 4 again.

Ballistic Calculation: Refer to the next section.

Range Estimation: Fast range assist refer to chapter 4.

Click "**OSD**" to enter ballistic menu, there are two types of unit menus available:

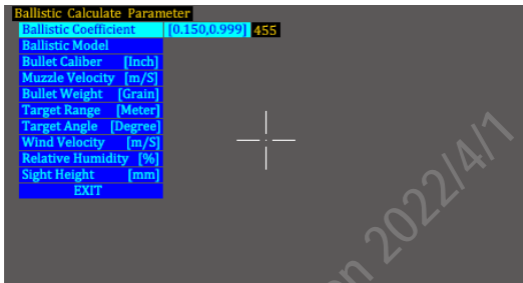Figure 2.7 The Metric Ballistic Menu

Figure 2.8 The Imperial Ballistic Menu

	British	British Range	Metric	Metric Range
Ballistic Coefficient		[0.020,0.999]		[0.020,0.999]
Ballistic Model		[G1,G8]		[G1,G8]
Bullet Caliber	Inch	[.150,.500]	Inch	[.200,.500]
Muzzle Velocity	ft/S	[0500,5000]	m/S	[0150,1500]
Bullet Weight	Grain	[020,800]	Grain	[015,800]
Target Range	yard	[10,999]	meter	[10,900]
Target Angle	degree	[Dn-90,Up+90]	degree	[Dn-90,Up+90]
Wind Velocity	mile/h	[L-35,R+35]	m/S	[L-15,R+15]
Relative Humidity	%	[000,100]	%	[000,100]
Altitude	yard		meter	
Temperature	℉		℃	
Sight Height	mm	[30,250]	mm	[30,250]

Temperature and altitude are measured automatically. The other parameters are set manually. Five bullet parameters are provided by the ammunition manufacturer. Once the parameters are modified, they will be stored automatically, and do not need to be re-entered later. Other parameters refer to Notes.

Exit ballistic menu, "▨ ▨" jumps to the corrected position after ballistic calculation, then shoot with "▨ ▨" aiming at target immediately.

Notice:

1) Bullet caliber, adopting international common Imperial units. For

example, .500 inch equals 12.7mm.

2) Bullet weight, unit grains.

3) Target range, input according to the optical ranging results described in section 4.1.

4) Target angle, which corresponds to the slope angle of the target, is automatically measured by the gyroscope inside. Figure 2.9 is an example of the target angle. If the target is higher than the NVDevice, the angle is >0, otherwise the angle is <=0. The screen zero point (as described later) aiming at the target, in Figure 2.10, " -2 " means the target is 2 degrees lower than the device. The value is measured in real-time by internal gyroscope, and the value should be input manually.
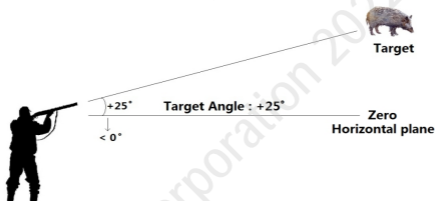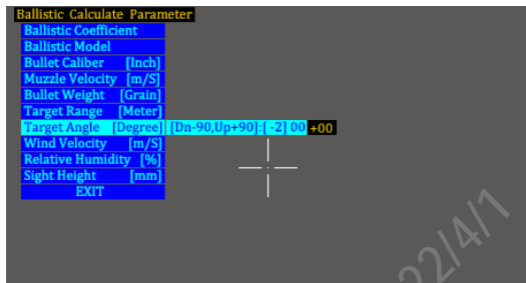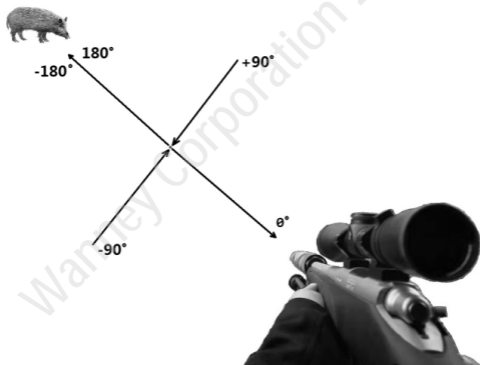

Figure 2.9

11

Figure 2.10

5) Wind Velocity

Figure 2.11

The wind direction is shown in Figure 2.11.

● Half speed wind, wind velocity = actual wind speed/2, wind direction ∈ [-30,-60], [-120,-150], [30,60], [120,150] degree.

- Full speed wind, wind velocity = actual wind speed, wind direction ∈ [-60,-120], [60,120].

- Downwind and headwind, Ignored.

The wind direction is clockwise from 0° to -180°, wind velocity <0, counterclockwise from 0° to 180°, wind velocity >0. The actual wind speed is judged by experience, such as leaf, tree, dust and other reference materials moving with the wind. Downwind and headwind can be ignored in the effective range.

6) Relative humidity, judged by experience and the datum is not recorded.

7) Sight Height: Distance from the center of the barrel to the NVDevice optical center, unit millimeter(mm).

2.5 Recharging

Figure 2.12

Remove cover on right side to allow charging cord to connect to charging port. The charging cord has a USB end and can be charged by 110V, 220V or by power bank.

3 Mobile APP

Please refer to the Information page.

4. Fast Range Assist

4.1 Range Finder

Range estimation is very important. We can estimate range by optical probabilistic ranging according to reference object.

4.2 Fast Aiming

For short distance.
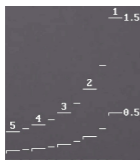

Figure 4.6 Fast Aiming

Horizontal scale. The center is zero point. Left 5 mils and right 5 mils.

Metric System, 100/200/300/400/500 meters aiming point.

Imperial System, 100/200/300/400/500 yards aiming point.

All of the shooting points are calculated from Ballistic Menu.

Scale of an object 0.5/1.5 meters height at 100/150/200/250/300/350/400/450/500 meters in Metric System.

Scale of an object 0.5/1.5 yards height at 100/150/200/250/300/350/400/450/500 yards in Imperial System.

`Tilt : 0 -2 1012`   Real-time tilt parameters.

5. Parameters

Application	Hunting and Entertainment
Shell material	Aluminum Alloy and Others
Color	Black
Type	Scope
Focus	60 mm
Diopter	– 5 to +3
Distance	Full dark > 300 Yards
WiFi	1080P
Resolution	1080P
TF Card	Max to 128GB
Optical Magnification	X4
Digital Zoom	X1 X2 X3 X4
Working Temperature	-10 to 55 degrees
Storage Temperature	-20 to 60 degrees
Relative Humidity	90%, non-condensing
Battery	Lithium Ion, 18650

Battery Capacity	> 6000mAh
Recharge current	5 V / 1.5A
Battery Life	More than 6hrs
Net Weight	1060g
Warranty	12 months

6. Attention and Disclaimer

● Attention

- Please do not use device under strong light.
- Try to avoid rain, fog, dust and corrosive gases.
- Avoid collision. Do not use device after glass damage.
- Store at normal temperature.
- Avoid surface condensation caused by humidity change and clean up immediately after discovery.
- If device is not used for a long time, please recharge it every 3 months to extend battery life.
- Do not remove TF card when device is recording, it is recommended to power off device before removing TF card.
- It is the user's responsibility for knowing and understanding laws in the area you are hunting.
- Always be aware of your surroundings and what is beyond your target.

● Disclaimer

In order to protect the legitimate rights and interests of users, please read the manual carefully before use and operation of the device in accordance with the correct text terms. Once you start using the device, we can deem that you have read, understood, approved and accepted instructions, descriptions, considerations and all the terms and contents. Users promise to use this product legally and bear the consequences. At any time, Company does not bear any joint liability.

Beyond the warranty period:

- Damage caused by improper use of the user (incorrect operation, immersion, breakage, impact, use in strong light).
- User disassembly.

Appendix A

Power, press "⏻" in 2 seconds, turn on/off NVDevice.

Force shutdown, long press "⏻" in 12 seconds, shutdown NVDevice.

1) **WiFi**, click "**WiFi**", WiFi turns on and cannot be turned off while device is still on.

2) **GPS**, long press "**GPS**", turn on/off positioning.

3) **Laser**, click "☀", turn on/off laser indicator.

4) **Shift**, long press "**Shift**" in 10 seconds, enter zeroing function, see below.

5) **Photo**, click "📷", Take a photo.

6) **Record**, long press "▭", record start or stop.

7) **Sensitivity**, click "◣", sensitivity from 00% to 100%.

8) **Contrast**, click "◑", contrast from 0 to 4.

9) **Brightness**, click "☀", brightness from 0 to 4.

10) **Zoom**, click "⛶", digital zoom function on/off, if on, the image is enlarged and no text information is on the screen, default off.

11) **OSD** type, click "**OSD**", select cursor/character type and ballistic calculation menu (see below).

12) **Cursor** Move, long press "**Shift**" in 10 seconds, until "NOW ZEROING" is displayed on screen, press "▲", "◀", "▼", "▶" reticle can be controlled up / left / down / right.

13) **Unit** Conversion, long press "**Unit**", units of altitude / temperature / ballistic / rangefinder can be changed.

FCC Requirement

Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

(1) This device may not cause harmful interference, and

(2) This device must accept any interference received, including interference that may cause undesired operation.

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.