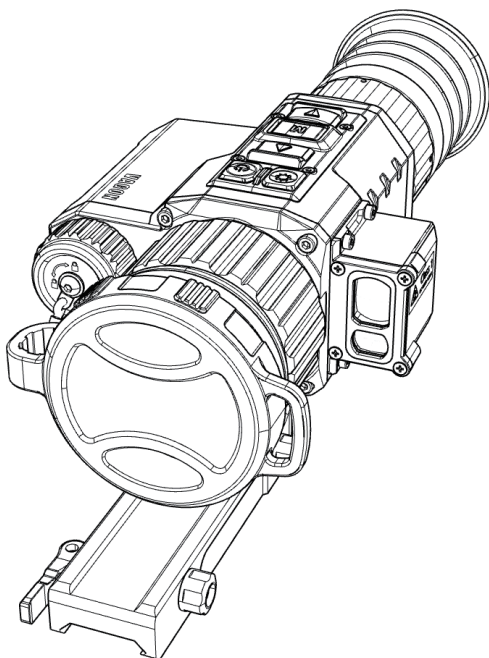


CONOTECH

VAGON

Thermal Scope



Attention!

Export of **VAGON** models
May have export limitations depending on
the laws in your region.

RoHS  

Content

Attention	01
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Attention!



Proper usage of this device is essential for safe operation. Please read this manual carefully before use.



If the device has been in storage for an extended period, check its functionality before use.



Do not disassemble the device. Only an authorized repair center is allowed to do this.



Ensure the external optical surfaces remain clean. Avoid touching them with bare hands.



Sand and sea water can damage the optical coatings.



Never point the device directly at the sun.



Image quality may vary depending on environmental and atmospheric conditions. For instance, at sunset, temperature differences between objects can enhance contrast.



Remove batteries and store them in polyethylene bags to avoid contact with metal if the device will be stored for an extended period.



Use the protective lens cap during transportation or storage.



Condensation may fog the optical surfaces. This occurs when the device transitions between environments with differing temperatures or humidity levels. Once the temperature stabilizes, condensation will dissipate. Wipe away moisture with the towel.



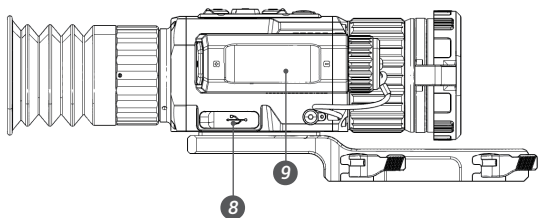
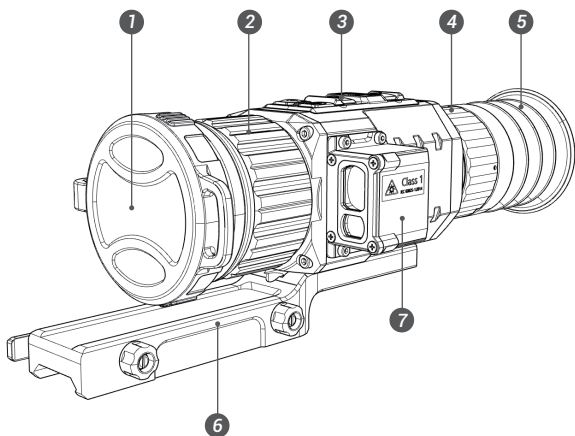
Clean lenses with the Lens Cloth.



**LEGAL
NOTICE**

Attaching this device to a weapon is the sole responsibility of the user. Check regional legal regulations before doing so.

Appearance

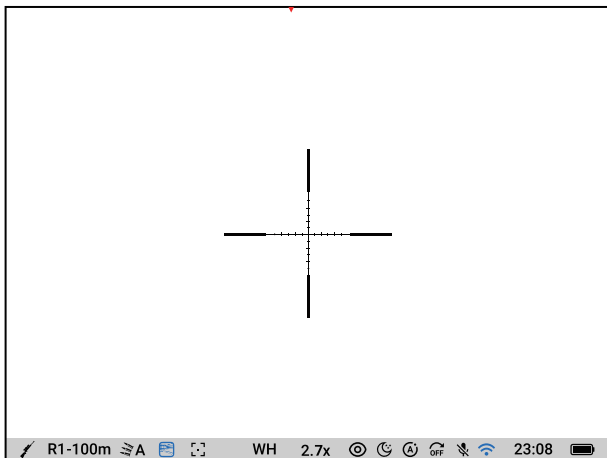




All images used in this instruction manual are for illustrative purpose only. Actual product may vary due to product enhancement. (V.2.0)

- 1** Lens cover
- 2** Focus ring
- 3** Buttons
- 4** Eyepiece
- 5** Eyepiece rubber
- 6** Mounting rail
- 7** Laser rangefinder
- 8** USB
- 9** Battery compartment

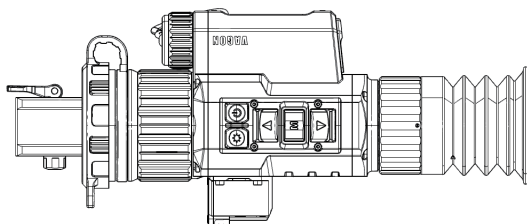
Status Display








The status bar is on the bottom of the display and shows information on the actual operating status of the Vagon.


- Weapon Type
- Zeroing Distance
- Bullet Type
- Ballistic Calculator
- Laser Rangefinder
- Palatte
- Magnification
- Extreme Mode
- Image Mode
- Calibration Mode
- Auto Standby
- Microphone
- Wi-fi Status
- Time
- Battery Capacity

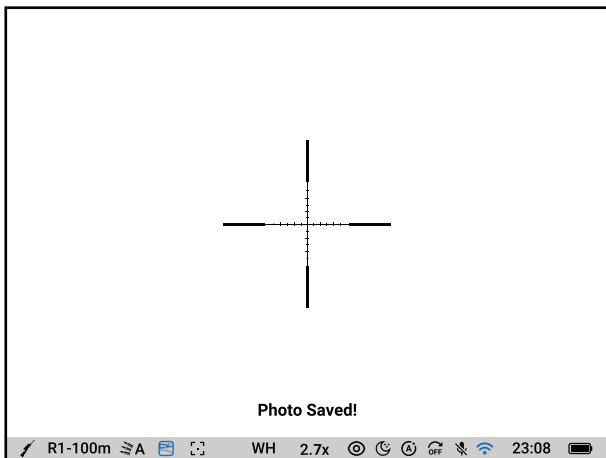
Controls



	Short Press	Long Press
	Enter/Exit standby mode	Turn on/off
	Enter Single Measurement	Enter Continuous Measurement /Exit laser rangefinder
	Take photo	Video recording
	Enter/Exit quick menu	Enter/Exit main menu
	Magnification	NUC


Photography

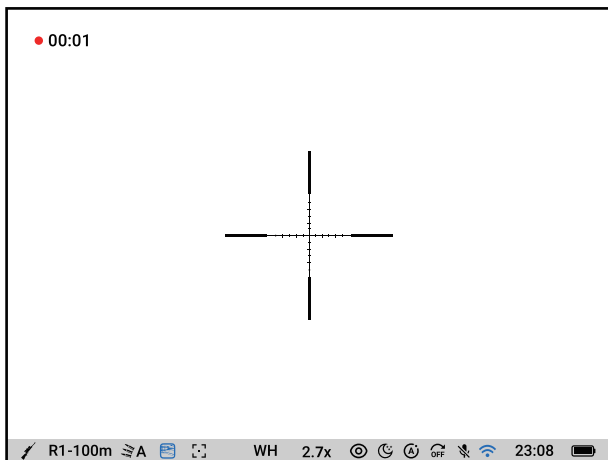
Short press  to capture a photo. A "Photo Saved" icon will appear on the screen.



All photos are stored in the device's built-in 64GB memory. Users can download photos via the CONOTECH app or by connecting to a computer.

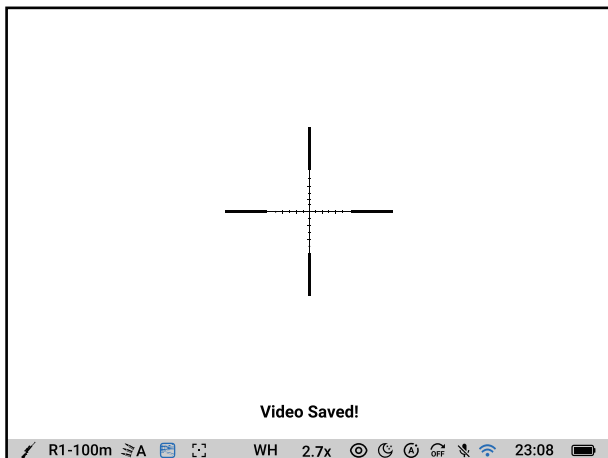
Video recording

Long press  to start video recording. The recording time is displayed on the screen in MM:SS format (minutes:seconds).



While recording, a short press of the allows users to capture a photo. Users can access the quick menu or main menu without interrupting the recording.

Long press the again to stop and save the recording. A "video saved" icon will be appear on the screen.




All videos are stored in the device's built-in 64GB memory. Users can download videos via the CONOTECH app or by connecting to a computer.

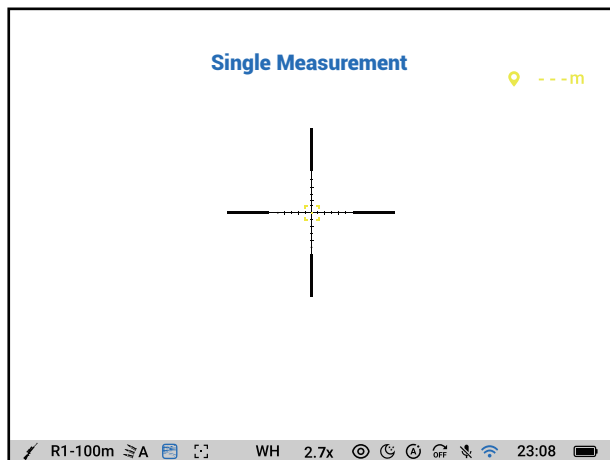



NOTE

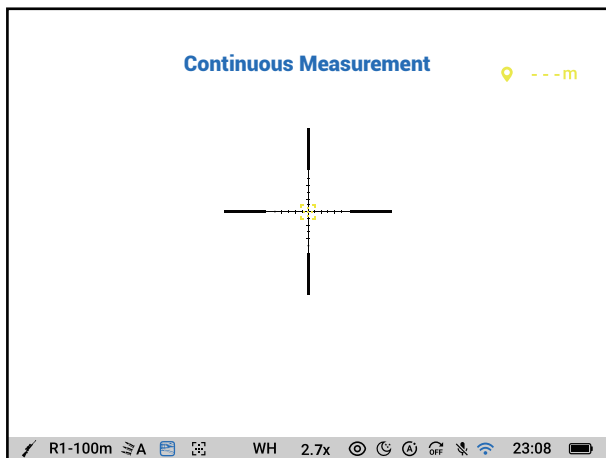
The number of files is limited by the device's internal memory capacity. To ensure sufficient storage, regularly check the available space and transfer videos and photos to external media as needed.

Laser rangefinder

Short press  to enter single Measurement, the press again to active the function, the relevant distance will show up on the screen.



Long press  to enter continuous Measurement, the relevant distance will show up on the screen.



 Single Measurement

 Continuous Measurement

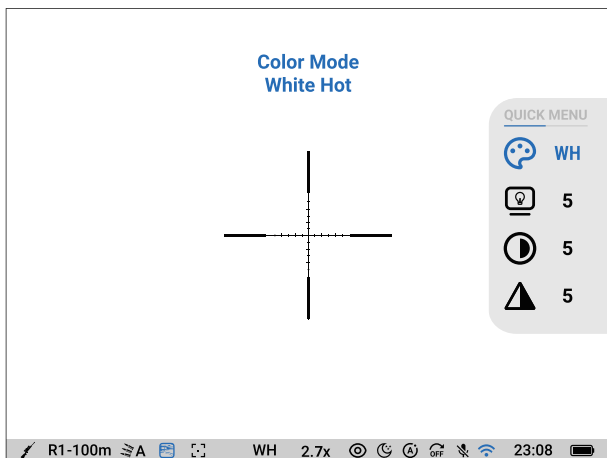
Single Measurement: Measure the distance once.

Continuous Measurement: Measure the distance continuously.

Quick Menu



Short press **M** to enter the quick menu. Long press **M** to exit the quick menu. When entering the quick menu, short press the **▲** and **▼** to select the menu options, then short press **M** to confirm the settings.



Palettes

Short press **▲** and **▼** to select from WH-RB-RH-BH.

WH--White Hot RB--Rainbow

RH--Red Hot BH--Black Hot



Screen Brightness

Short press  and  to select from 1-10.



Contrast

Short press  and  to select from 1-10.





Sharpness

Short press  and  to select from 1-10.



Image Mode

Short press  and  to select from Clear Night, Rain, and Foggy.



PIP

Short press  to turn on/off the function.



Hot Tracking

Short press  to turn on/off the function.



Wi-fi settings

Short press  to turn on/off the function.

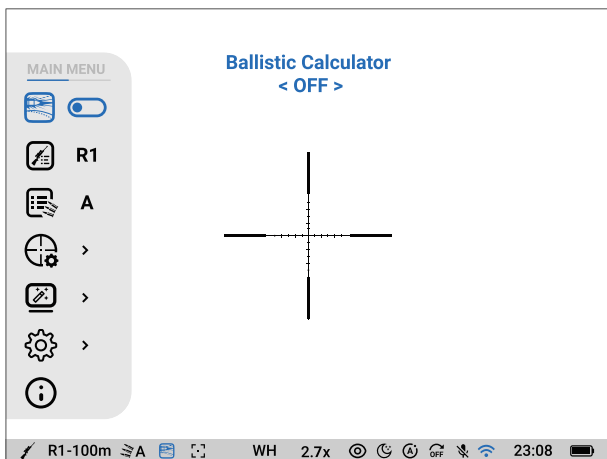
The Wifi password is 12345678.

Menu



NOTE

Long press **M** to enter Main Menu, short press **▲** and **▼** to select the functions.

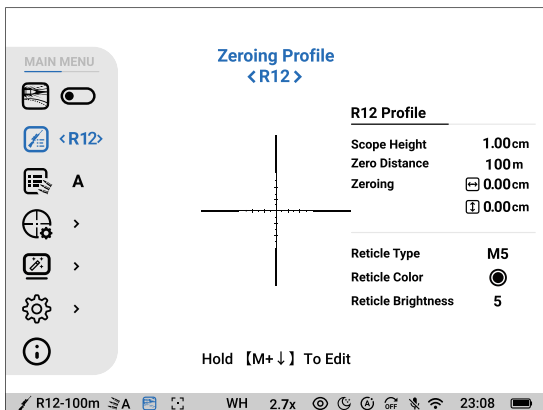


Ballistic Calculator

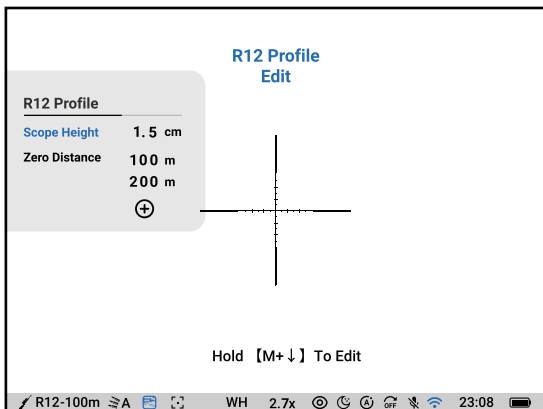
Short press **M** to turn on/off Ballistic Calculator.

Zeroing Profile

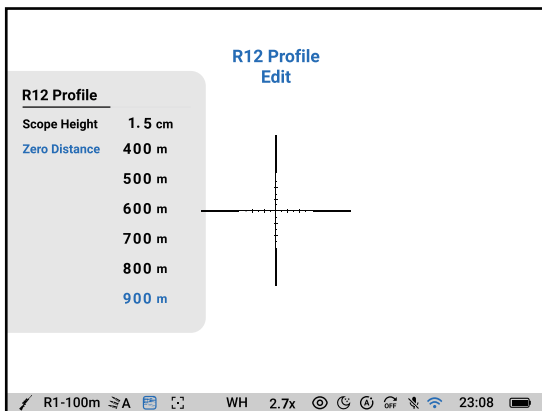
Short press **(M)** to enter Zeroing Profile, then short press **(▲)** and **(▼)** to select various zeroing profiles from R1-R12.



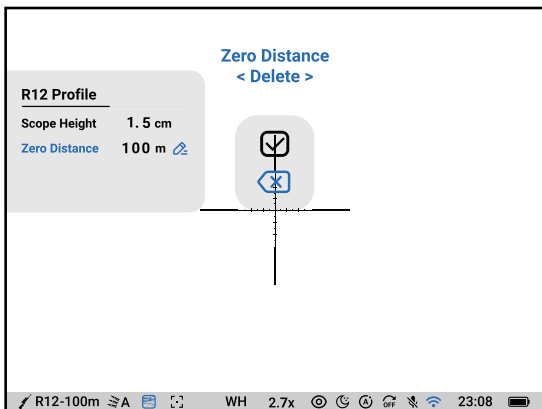
Then short press **(M)** and **(▼)** to edit the zeroing profile.



Short press **(M)** to select Scope Height or Zero Distance, then press **(▲)** and **(▼)** to select the value and short press **(M)** to save. New Zero distance can be added by short pressing **(M)**, then repeat the same process to set value.

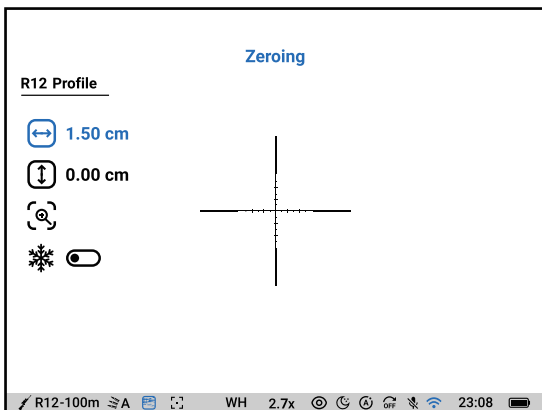


Short press **(A)** to enter Zero Distance, press **(▲)** and **(▼)** to select **(✓)** or **(✗)**, then short press **(M)** to save.






XY value

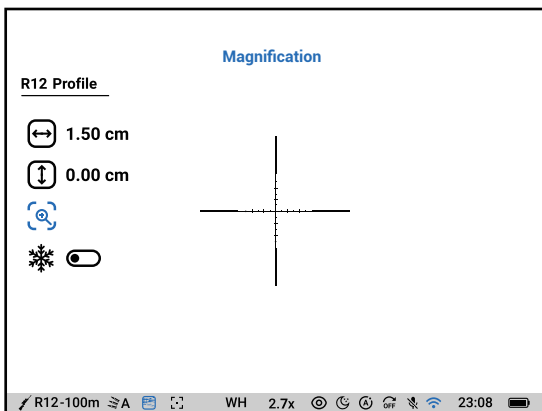
Take a shot, adjust X and Y value separately based on short press **(M)** to edit, then short press **(▲)** and **(▼)** together to select the value and short press **(M)** to save.



Magnification

Magnification allows you to use a digital zoom of the riflescope when zeroing, which reduces the minute of angle click for zeroing accuracy improving. Short press

 and  to select the Magnification, then short press  to confirm.



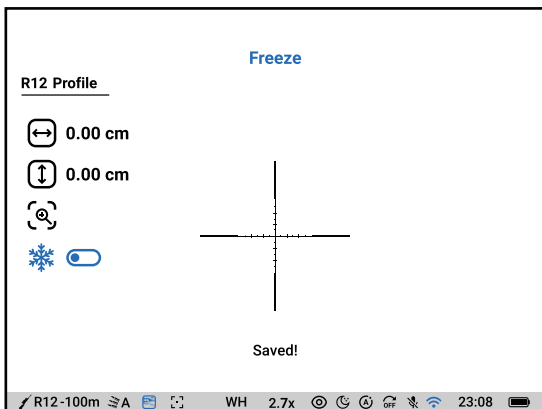
Freeze

The feature of the freeze function is that there is no need to constantly keep the riflescope at the point of aiming.

After shooting, the user needs to align the dividing center point with the center of the cross target, and then

short press **(M)** to freeze the infrared image of the current frame, as shown in the following figure. When

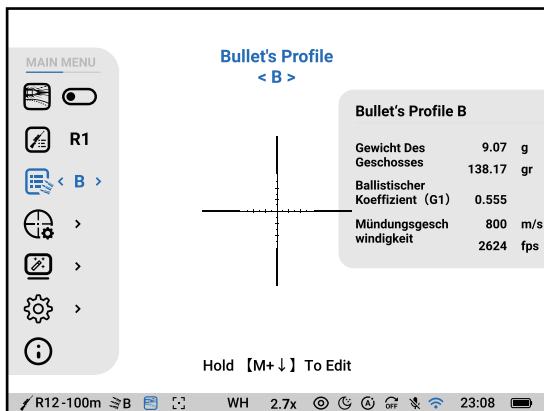
freezing the image, short press **(▲)** and **(▼)** to adjust other options in the zero calibration.





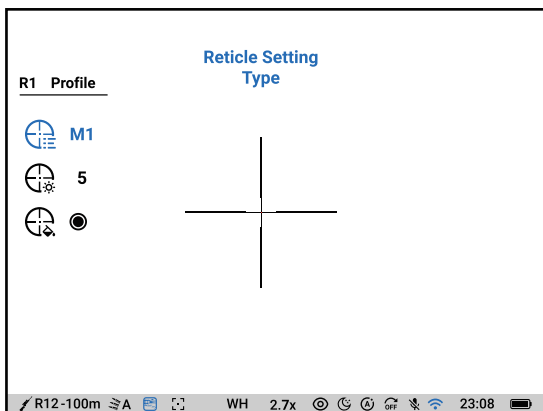
Bullet's Profile

Short press **(M)** to enter Bullet's Profile, then short press **(▲)** and **(▼)** to select various zeroing profiles from A-E. Then short press **(M)** and **(▼)** together to enter editing page. Short press **(M)** to select Bullet weight, Ballistic Coefficient, and Muzzle Velocity, then press **(▲)** and **(▼)** to select the value and short press **(M)** and **(▼)** together to save.



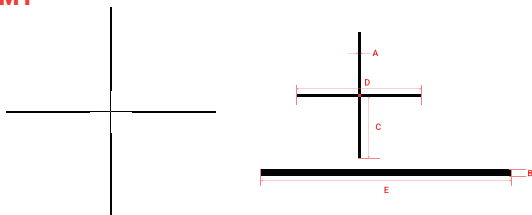
Note: Bullet weight, Ballistic Coefficient, and Muzzle Velocity on the bullet package or ask the bullet supplier.

Reticle Setting



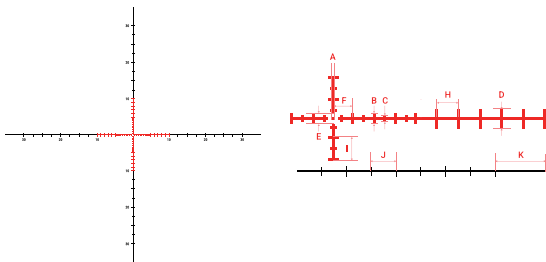
Short press **(M)** to enter Reticle Setting, then short press **(▲)** and **(▼)** to select various Reticle Setting Type from M1-M5. Same process to select Reticle Setting Brightness from 1-10, and select the Reticle Setting Color.

M1



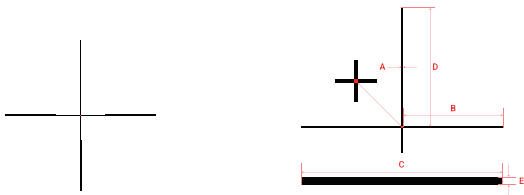
Section	335		650	
	MOA	cm@100m	MOA	cm@100m
Section A	0.43	1.24 (0.1 MIL)	0.53	1.55 (0.15 MIL)
Section B	1.28	3.72 (0.31 MIL)	1.60	4.65 (0.46 MIL)
Section C	10.26	29.75 (2.95 MIL)	11.77	34.12 (3.36 MIL)
Section D	20.52	59.51 (5.81 MIL)	23.0	66.69 (6.57 MIL)
Section E	40.61	117.78 (11.6 MIL)	44.92	130.28 (12.84 MIL)

M2



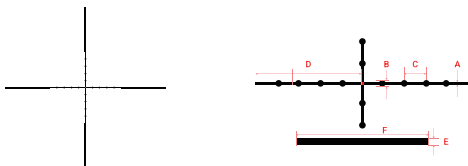
Section	335		650	
	MOA	cm@100m	MOA	cm@100m
Section A	0.43	1.24 (0.1 MIL)	0.53	1.55 (0.15 MIL)
Section B	2.14	6.20 (0.51 MIL)	2.67	7.75 (0.76 MIL)
Section C	1.28	3.72 (0.31 MIL)	1.60	4.65 (0.46 MIL)
Section D	2.99	8.68 (0.86 MIL)	3.74	10.86 (1 MIL)
Section E	2.14	6.20 (0.51 MIL)	2.67	7.75 (0.76 MIL)
Section F	3.42	9.92 (1 MIL)	3.74	10.86 (1 MIL)
Section H	3.42	9.92 (1 MIL)	3.74	10.86 (1 MIL)
Section I	3.42	9.92 (1 MIL)	3.74	10.86 (1 MIL)
Section J	8.55	24.80 (2.5 MIL)	10.16	29.47 (2.9 MIL)
Section K	17.53	50.83 (5 MIL)	19.25	55.83 (5.5 MIL)

M3



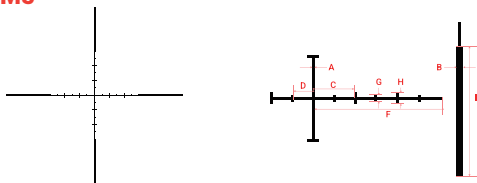
Section	335		650	
	MOA	cm@100m	MOA	cm@100m
Section A	0.43	1.24 (0.1 MIL)	0.53	1.55 (0.1 MIL)
Section B	24.37	70.67 (7 MIL)	27.81	80.65 (7.95 MIL)
Section C	48.74	141.33 (13.96 MIL)	54.01	156.64 (15.43 MIL)
Section D	73.53	213.24 (20.98 MIL)	81.82	237.29 (23.38 MIL)
Section E	1.28	3.72 (0.31 MIL)	1.60	4.65 (0.46 MIL)

M4



Section	335		650	
	MOA	cm@100m	MOA	cm@100m
Section A	0.43	1.24 (0.1 MIL)	0.53	1.55 (0.15 MIL)
Section B	1.28	3.72 (0.31 MIL)	1.60	4.65 (0.46 MIL)
Section C	3.42	9.92 (1 MIL)	3.74	10.86 (1 MIL)
Section D	17.53	50.83 (5 MIL)	19.25	55.83 (5.5 MIL)
Section E	1.28	3.72 (0.31 MIL)	1.60	4.65 (0.46 MIL)
Section F	21.38	61.99 (6.1 MIL)	23.53	68.24 (6.72 MIL)

M5

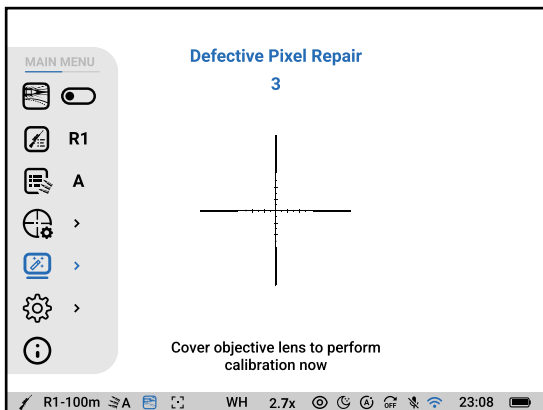


Section	335		650	
	MOA	cm@100m	MOA	cm@100m
Section A	0.43	1.24 (0.1 MIL)	0.53	1.55 (0.15 MIL)
Section B	1.28	3.72 (0.31 MIL)	1.60	4.65 (0.46 MIL)
Section C	6.84	19.84 (2 MIL)	8.02	23.26 (2 MIL)
Section D	3.42	9.92 (1 MIL)	3.74	10.86 (1 MIL)
Section F	20.95	60.75 (6 MIL)	23.53	68.24 (6.72 MIL)
Section G	1.28	3.72 (0.31 MIL)	1.60	4.65 (0.46 MIL)
Section H	2.14	6.20 (0.51 MIL)	2.67	7.75 (0.76 MIL)
Section I	20.95	60.75 (6 MIL)	23.53	68.24 (6.72 MIL)



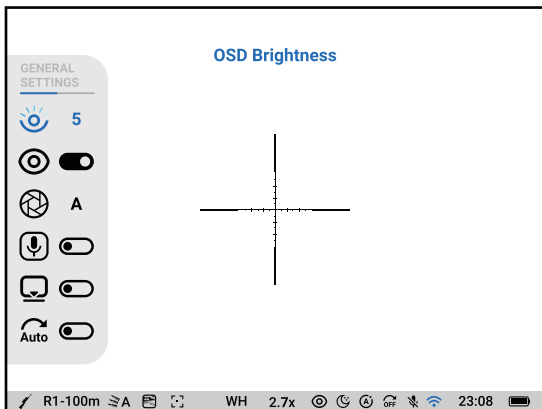
Defective Pixel Repair

Short press **M** to enter Defective Pixel Repair, prompt to close the lens cover, and complete after counting down.



General Setting

Short press **(M)** to enter General Setting, then short press **(▲)** and **(▼)** to select various function settings, then short press **(M)** again to enter the chosen function.



OSD Brightness

Short press **(▲)** and **(▼)** to select value from 1-10. Then short press **(M)** to save.




Extreme Mode

Short press **(M)** to turn on/off Extreme Mode, then short press **(▲)** and **(▼)** to save.




Calibration Mode

Short press  and  to select value from A, M or S.




Then short press  to save.

-  Auto
-  Manual
-  Silent calibration




Microphone

Short press  to turn on/off Microphone, then short press  and  to save.




Pure Mode

Short press  to turn on/off Pure Mode, then short press  and  to save.




Auto Standby

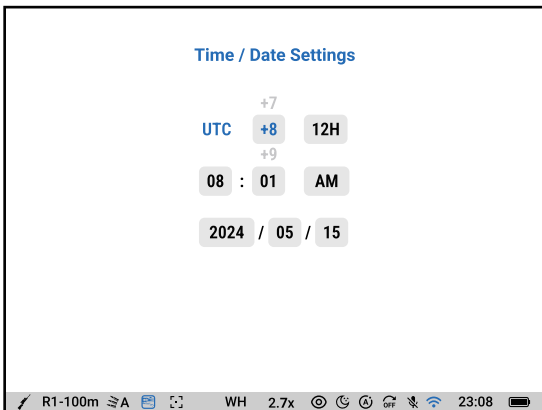
Short press  to turn on/off Auto Standby, then short press  and  to save.

Unit Settings




Short press  and  to select Metric and Imperial.
Then short press  to save.

Time/Date Settings






Short press  and  to select Time/Date. Then long press  to save.

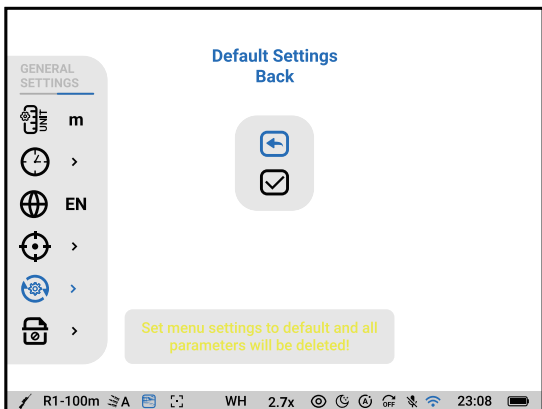


Language Settings






Short press  and  to select language. Then short press  to save.

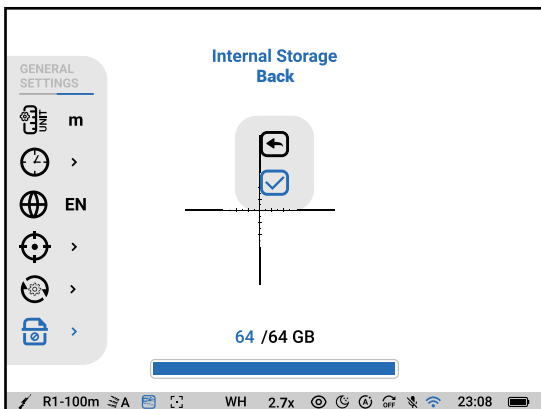
Default Settings

Short press  and  to select  or . Then short press  to save.



Internal Storage

Short press  and  to select  or . Then short press  to save.



Device Info

It indicates the Model name, S/N, software version and hardware version and ASIC Version.

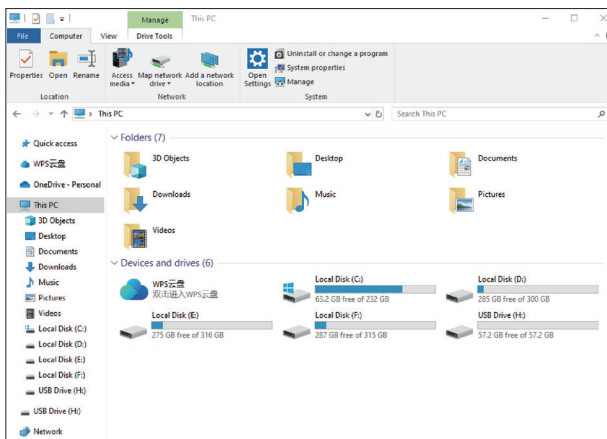
Firmware update via APP

Easily keep your device at the forefront of technology with firmware updates directly through our dedicated app.

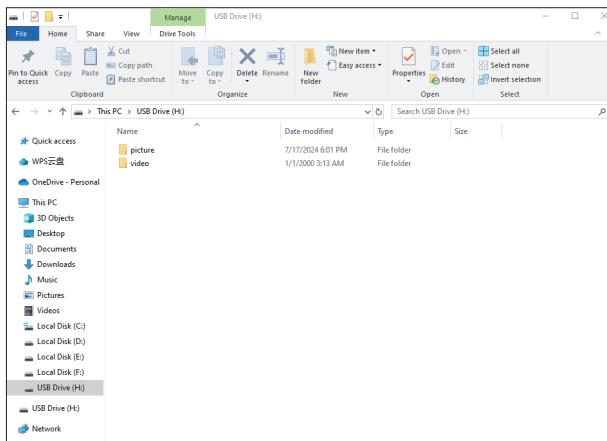


How to replay on PC

Connect the USB-C cable to the PC



Turn on WIFI and wait 10s.



Battery Installation

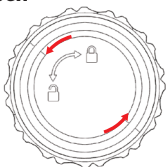
Turn the battery compartment knob counterclockwise until stop.

Please install the battery according to the positive and negative signs.

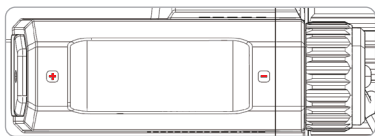
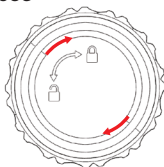
Otherwise, the device will not start.

Replace the battery and close the compartment knob.

Open



Close



NOTE:

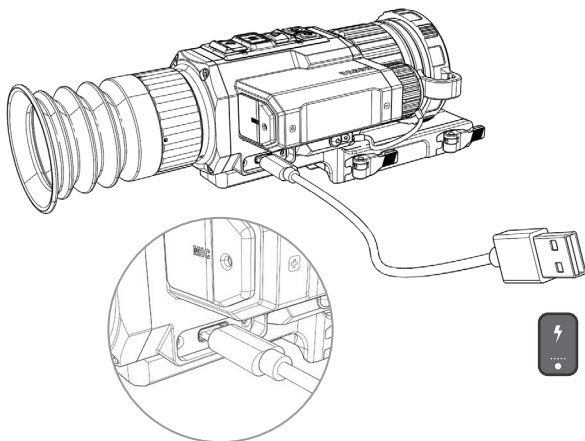
Zeroing information will be saved when unit shut down due to empty battery.

If unit is shut down by opening battery cover without proper power off, Zeroing information will not be saved.

1. Power supply / Firmware update

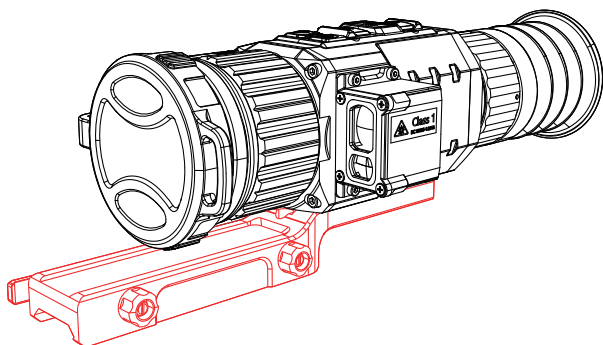


Serves for external power supply and firmware update



Attach to Rifle

To ensure accurate shooting Vagon should be properly mounted on the rifle. When mounting Vagon, adjust the position of the scope on the rifle to achieve optimal, comfortable eye relief. Failure to comply with this recommendation may result in injury to the shooter.



Storage and Transportation

- Clean the device thoroughly before storage, ensuring it is free of moisture and dust.
- Make sure that the batteries are removed and that the battery compartment is empty.
- It is possible for the device to be stored for short periods in a suitable soft pack, bag, or cartridge box.
- Store the device in a dry, enclosed, unheated, and ventilated space for long-term storage.
- Avoid exposing the product to aggressive environments, temperatures below -50°C or above $+60^{\circ}\text{C}$, relative humidity over 80%, or prolonged periods of direct sunlight.
- Before transportation, neatly pack the product in its original packaging (transport bag), ensuring all items and accessories are carefully placed in the bag. Then, securely place the bag in the transport suitcase.
- The device can be shipped via various transport methods, up to an altitude of 12.000 m.

Specification

Vagon Specification									
Model	Vagon 225LRF	Vagon 335	Vagon 335LRF	Vagon 350	Vagon 350LRF	Vagon 635	Vagon 635LRF	Vagon 650	Vagon 650LRF
Main Characteristics									
Detector	Uncooled Vox								
Resolution	256×192	384×288				640×512			
Frame rate	50HZ								
Pixel	12μm								
Spectral range	8-14μm								
NETD	<25mK	<20mK							
Optical Characteristics									
Objective lens	25mm	35mm	35mm	50mm	50mm	35mm	35mm	50mm	50mm
Magnification	3.6×	3.4×	3.4×	4.8×	4.8×	1.9×	1.9×	2.7×	2.7×
FOV(H×V), m@100m	18.65×13.99	13.17×9.87		9.27×6.91		21.94×17.55		15.36×12.29	
Functions									
Zoom	1×/2×/3×	1×/2×/4×							
Palettes	Mutiple								
Firmware update via APP	YES								
Display									
Type	OLED								
Resolution	1024×768								
External video	WIFI								
Power Supply									
Battery type	1×18650								
External power supply	5V USB-C								
Operating time (at t=22°C)	7h	6.5h				6h			

Vagon Specification									
Model	Vagon 225LRF	Vagon 335	Vagon 335LRF	Vagon 350	Vagon 350LRF	Vagon 635	Vagon 635LRF	Vagon 650	Vagon 650LRF
Physical Characteristics									
Weight	600g	570g	600g	570g	600g	570g	600g	570g	600g
Dimension, mm	211×98×60	216×98×60		228×98×60		216×98×60		228×98×60	
Environmental Compatibility									
Ingress protection rating	IP67								
Working temperature	-20°C+50°C								
Storage temperature	-40°C+70°C								
Shock resistance	6000J								
Laser Rangefinder									
Safety class for laser equipment according to IEC 60825-1:2014	1	/	1	/	1	/	1	/	1
Measuring range	5-1000m	/	5-1000m	/	5-1000m	/	5-1000m	/	5-1000m
Measurement accuracy	±1m	/	±1m	/	±1m	/	±1m	/	±1m



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