

Digital Riflescope

DIGISIGHT ULTRA N355

I N S T R U C T I O N S

ENGLISH

Stream your
discoveries



**STREAM
VISION**



RoHS
COMPLIANT
PRODUCT



SPECIFICATIONS

Model	N355
SKU# (Weaver mount/No mount)	76370/76370X
Optical characteristics	
Generation	Digital
Magnification, x	3.5
Continuous zoom, x	3.5-14
Digital zoom	x2 / x4
Relative aperture, D/f	1:1.2
Field of view (at 3.5x) (at 100m), angular degree / m	6 / 11.1
Eye relief, mm	50
Exit pupil, mm	5
Max. observation range of an animal 1.7 m high, m / yard	500 / 547
Eye-piece adjustment, diopter	±5
Close-up range, m	5
Reticle	
Click value // Click range, mm@100m (H/V)	17/17 // 1360 / 1700
Electronic characteristics	
Sensitivity of the device, mW, not more than, mW (wavelength 780 nm, resolution 25 lines/mm)	1.5x10 ⁵
Sensitivity of the device, mW, not more than, mW (wavelength 915 nm, resolution 25 lines/mm)	5.5x10 ⁵
Sensor type / Resolution, pixel	CCD / 752x582
Display type / Resolution, pixel	AMOLED / 640x480
Built-in IR Illuminator	
Type / Wavelength, nm	LED / 940
Operational characteristics	
Operating voltage, V	3.1-4.2
Battery type / Capacity / Output voltage	Li-Ion Battery Pack IPS5 / 5000 mAh / DC 3.7V
External power supply	5V (USB)
Operating time on IPS5 (IR off/on)(t=22 °C), h	8 / 5
Max. recoil power on rifled weapon, Joules	6000
Max. recoil power on smooth-bore weapon, caliber	12
Degree of protection, IP code (IEC60529)	IPX7
Operating temperature	-25 °C... +50 °C / -13 °F... 122 °F
Dimensions (LxWxH), mm / inch	314x67x91 / 12.3x2.6x3.6
Weight (with / without battery), kg / oz	0.87/0.74 // 30.7 / 26.1
Video recorder	
Video / photo resolution, pixel	640x480
Video / photo format	.avi / .jpg
Built-in memory	8 Gb
Built-in memory capacity	150 min video or 10 000+ pictures
Wi-Fi channel	
Frequency	2.4GHz
Standard	802.11 b/g/n
Line-of-riflescope reception range, m	15

1

● PACKAGE CONTENTS

- Riflescope Digisight Ultra N355
- IPS5 Battery Pack
- Battery charger with mains charger
- Wireless remote control
- Carrying case
- MicroUSB cable
- IR Illuminator connector plug
- Mount (with screws and hex-nut wrench(-es))*
- User manual
- Lens cloth
- Warranty card

* Supplied with model 76370

The design and software of this product are subject to change for development purposes.

The latest edition of this user manual is available at www.pulsar-nv.com

2

● DESCRIPTION

The **Digisight Ultra N355** riflescope is designed for observation and shooting in twilight or nighttime. In complete darkness (no stars or the Moon) use of the built-in LED IR Illuminator with 940nm wavelength (invisible range) is highly recommended.

Your riflescope is a versatile device designed for a wide range of professional and amateur applications such as hunting, sports shooting, night video recording and observation.

3

● FEATURES

Key features:

- Observation range up to 500m
- Colour modes
- Variable zoom
- High caliber recoil resistance: 12 gauge., 9.3x64, .375H&H
- Long eye relief
- 3 profiles / 15 zeroing distances
- Integration with iOS and Android based mobile devices
- Built-in video- and audiorecorder
- Continuous operating time in Wi-Fi mode up to 8 hours
- Fully waterproof (IPX7)

Other features

- 13 selectable reticles in riflescope's memory
- Zoom zeroing
- Display off function
- Replaceable long-range IR Illuminator
- Wide range of operating temperatures (-25...+50°C)
- **Wi-Fi.** Remote control and viewing using smartphone
- **YouTube.** Direct video streaming and recording to the smartphone using the Stream Vision application
- Weapon tilt indicator
- Stadiametric rangefinder
- Optional operation on Power Bank
- Informative on-screen display symbols

Battery Pack

- Quick-release Li-Ion battery packs IPS5/IPS10
- Operating time in Wi-Fi mode up to 16 hours*
- Operation on AA or CR123 batteries**
- Charging IPS5/IPS10 batteries via USB

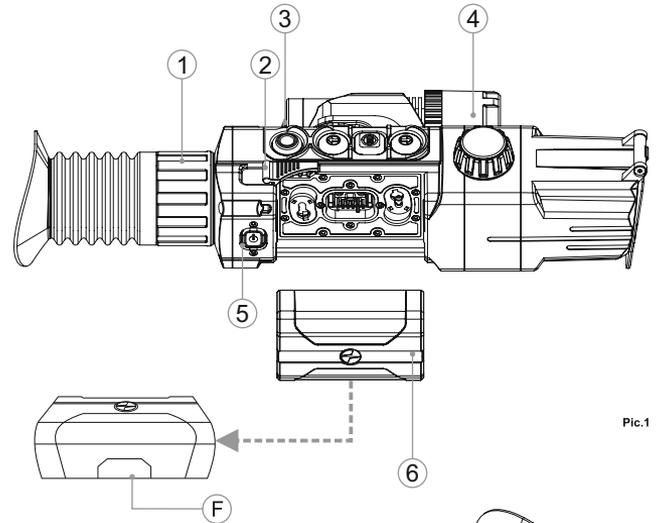
* on Battery Pack IPS10 (sold separately).

** using a battery container (sold separately).

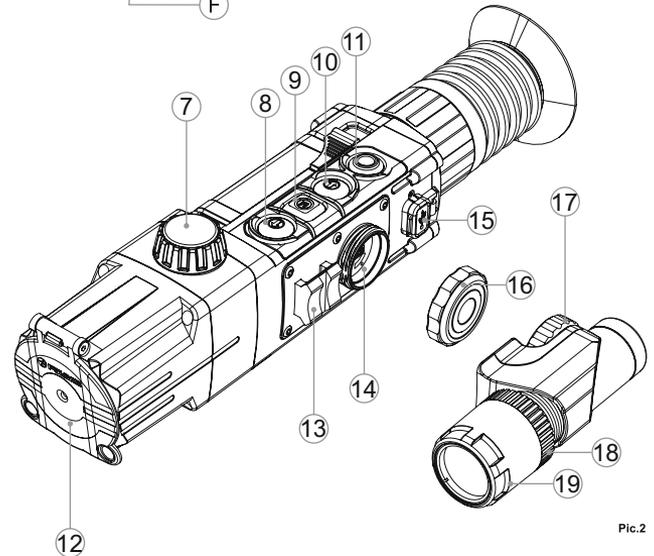
4

EXTERNAL VIEW AND COMPONENTS

- ① Eyepiece adjustment ring
- ② Lever
- ③ IR button
- ④ Built-in IR Illuminator
- ⑤ ON button
- ⑥ IPS5 Battery Pack
- ⑦ Lens focus knob
- ⑧ UP button
- ⑨ Menu (M) button
- ⑩ DOWN button
- ⑪ REC button
- ⑫ Lens cover
- ⑬ Weaver side rail
- ⑭ IR Illuminator connector
- ⑮ microUSB port
- ⑯ IR Illuminator connector plug
- ⑰ IR Illuminator fixing ring
- ⑱ Locking ring
- ⑲ IR Illuminator hood



Pic.1



Pic.2

DESCRIPTION OF CONTROLS

BUTTON	SIGHT STATUS (CURRENT OPERATING MODE)	FIRST SHORT PRESS	OTHER SHORT PRESSES	LONG PRESS
ON	Sight is off	Power riflescope on	Turn display off	Power riflescope off
	Display off	Turn display on	Turn display off	
	Sight is on (Video / Photo)	Turn display off	Turn display on	
UP	Video mode	Activate SimLight	Deactivate SimLight	Wi-Fi ON/OFF
	Photo mode			
MENU (M)	Video mode	Enter hot menu		Enter main menu
	Photo mode			
DOWN	Video mode	Change digital zoom		PIP ON/OFF
	Photo mode			
REC	Video mode	Start video recording	Stop video recording	Switch to photo mode
	Photo mode	Take a photograph		Switch to video mode
IR		Turn on built-in IR Illuminator / Switch IR power levels		Turn on built-in IR Illuminator

GUIDELINES FOR OPERATION

The riflescope has been designed for long-term use. To ensure long performance, please adhere to the following:

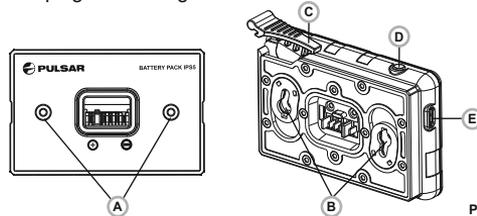
- Before use make sure that you have installed and fixed the mount according to the instructions of the section “Installation of mount”.
- Store with the lens cap on in the carrying case.
- Turn the scope off after use.
- **Attempts to disassemble or repair the scope will void the warranty!**
- The riflescope can be used in various operating temperatures. However, if it has been brought indoors from cold temperatures, do not turn it on for 3 to 4 hours. This will prevent external optical surfaces from fogging.
- If the scope is unable to mount onto the rifle securely, or you have doubts about the mounting system, see a qualified gunsmith. Using the weapon with a poorly mounted scope can lead to inaccurate target shooting!
- To ensure reliable performance, it is recommended to carry out regular technical inspections of the unit.

USING THE BATTERY PACK

The riflescope is supplied with a rechargeable Li-Ion Battery Pack IPS5 which allows operation for up to 8 hours. Please remember to charge the Battery Pack before first use.

Charging:

- Lift the lever (C) of the charger.
- Remove the protective cover from the Battery Pack.
- Install the Battery Pack into the charger by inserting the pins (A) of the battery into the grooves (B) of the charger – the Pulsar logo on the battery pack should be located closer to the lever; click the lever (C)(Pic.3).
- Upon installation, a green LED indicator (D) on the charger will start to glow and begin flashing:
 - once if the battery charge ranges from 0% to 50%;
 - twice if the battery charge ranges from 51% to 75%;
 - three times if the battery charge ranges from 75% to 100%;
- If the indicator lights green continuously, the battery is fully charged.
- You can remove the battery from the charger by lifting the lever (C).
- If the indicator of the charger lights red continuously upon battery installation, probably the battery's charge level is lower than acceptable (the battery has been long in deep discharge). Keep the battery in the charger for a long time (up to several hours), remove and re-insert it. If the indicator starts blinking green, the battery is good; if it keeps lighting red it's defective. **Do not use the battery!**
- Connect the Micro-USB plug of the USB cable to the port (E) of the charger.
- Connect the Micro-USB plug to the charger.
- Insert the plug of the charger to the 220V socket.



Pic.3

INSTALLATION:

- Remove the protective cover from the Battery Pack.
- Lift the lever (2).

- Install the battery into the dedicated slot on the riflescope housing so that element **F (Pic. 1)** appears from below.
- Fix the battery by clicking the lever.

SAFETY MEASURES:

- Only use the charger supplied with the Battery Pack. The use of any other charger may irreparably damage the Battery Pack or the charger and may cause fire.
- **When keeping the battery for a long period, the battery should not be fully charged or fully discharged.**
- **Do not charge the battery immediately after bringing the battery from cold environment to a warm one. Wait for 30-40 minutes for the battery to get warm.**
- Do not leave a battery unattended while charging.
- Never use a modified or damaged charger.
- Charge the Battery Pack at a temperature from 0 °C to +45 °C. Otherwise battery's life will decrease significantly.
- Do not leave the Battery Pack with a charger connected to the mains longer than 24 hours after full charge.
- Do not expose the battery pack to high temperature or to a naked flame. Do not submerge the battery in water.
- Do not connect external device with a current consumption that exceeds permitted levels.
- The Battery Pack is short circuit protected. However, any situation that may cause short-circuiting should be avoided.
- Do not dismantle or deform the Battery Pack. Do not drop or hit the battery.
- When using the battery at negative temperatures, battery's capacity decreases, this is normal and is not a defect.
- Do not use the battery at the temperatures above those shown in the table – this may decrease battery's life. Keep the battery out of the reach of children.

8

EXTERNAL POWER SUPPLY

The riflescope can be powered with an external power supply such as Power Bank (5V).

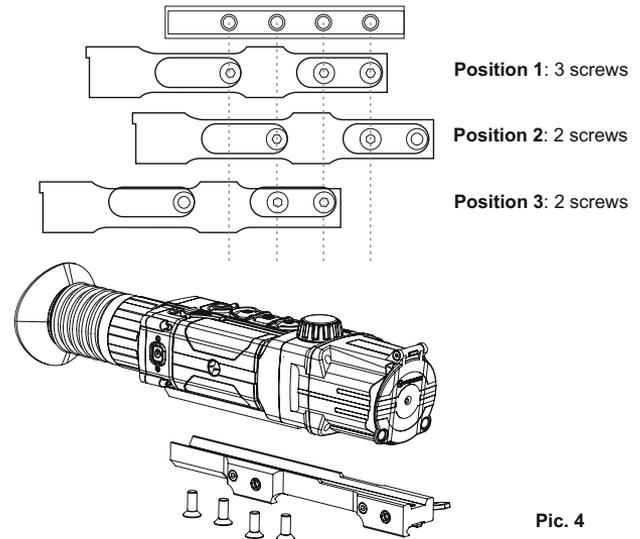
- Connect the external power supply to the USB port (**15**) of the riflescope (**Pic. 1**).
- The riflescope switches to operation from external power supply, and the IPS5 Battery Pack will begin slowly charging.
- The display will show the battery icon  with charge level as a percentage.
- If the riflescope operates on external power supply but the IPS5 battery is not connected, the icon  is shown.
- When the external power supply is disconnected, the riflescope switches to the internal battery pack without powering off.

9

OPERATION

INSTALLATION OF MOUNT

- Before using the riflescope you need to install a mount (may not be included).
The mounting holes in the base of the riflescope enable the mount to be installed in one of the multiple positions. The choice of the mounting position helps the user to ensure the correct eye relief depending on the rifle type.
 - Attach the mount to the base of the riflescope using a hex-nut wrench and screws.
 - Install the riflescope on the rifle and check if the position is suitable for you.
- If you are happy with its position, remove the riflescope, unscrew the screws halfway, apply some thread sealant onto the thread of the screws and tighten them fully (do not overtighten). Let the sealant dry for a while.
- The riflescope is ready to be installed on a rifle and to be zeroed.
 - After first installation of your riflescope on a rifle, please follow instructions in the section "Zeroing".



Pic. 4

Powering on and image setup

- Open the lens cover (12).
- Turn the unit on with a short press of the **ON (5)** button.
- To obtain a crisp image of the icons on the display, rotate the dioptre adjustment ring (1). After this there is no need to rotate the dioptre adjustment ring for distance or any other conditions.
- To focus on the object being observed rotate the lens focus knob (7).
- To set up display brightness and contrast, digital zoom, please refer to the **HOT MENU FUNCTIONS** section.
- After use, hold down the **ON** button to turn the unit off.

10

● ZEROING

The riflescope features two zeroing methods - "one shot" zeroing and using FREEZE function.

Zeroing should be done at operating temperatures, by following the order of these steps:

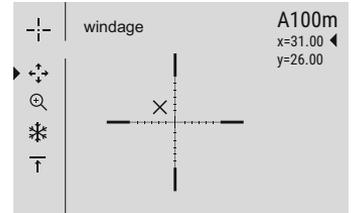
- Mount the rifle with the riflescope installed on a bench rest.
- Set a target at a certain distance.
- Adjust the riflescope according to the instructions of section "Powering on and image setup".
- Select the zeroing profile (see main menu option «Zeroing Profile» ).
- Aim the firearm at the target and take a shot.
- If the point of impact does not match the aiming point (centre of the riflescope's reticle), hold down the **M (9)** button to enter the main menu.
- Enter the submenu "Zeroing"  with a short press of the M button.
- Set the zeroing distance value (see main menu option "Zeroing" => submenu "Add new distance" .
- Enter the submenu with a short press of the **M** button



- Select icon  with **UP/DOWN** buttons. Press briefly the **M** button.
- Additional menu for zeroing parameters setup appears on the display
- An auxiliary cross  appears in the centre of display, and coordinates of the auxiliary cross X and Y appear in the top right corner (see **Pic. 5**).



- Select icon  with **UP/DOWN** buttons. Press briefly the M button.
- Holding the reticle in the aiming point, move the auxiliary cross horizontally or vertically with **UP/DOWN** buttons relative to the reticle until the auxiliary cross matches the point of impact.
- **Attention!** Not to hold the reticle in the aiming point, you can use the **FREEZE** function – freezing the zeroing screen (refer to main menu option "Zeroing" => submenu "Distance" => submenu "Zeroing parameters setup" => submenu **FREEZE** ).
- Switch between movement directions of the auxiliary cross from horizontal to vertical with a short press of the **M (9)** button.
- Save the new position of the reticle with a long press of the **M** button. Message "zeroing coordinates saved" confirms successful operation.
- Menu exit takes place. The reticle will now move to the point of impact.
- Exit the submenu, take another shot - the point of impact should now match the aiming point.



Pic.5

11

● DISCRETE DIGITAL ZOOM

The riflescope allows you to quickly increase the basic magnification (please refer to the "Digital zoom" line in the specifications table) by two times or four times, as well as to return to the basic magnification. To operate the discrete digital zoom, press successively the **DOWN (10)** button.

12

● HOT MENU FUNCTIONS

The Hot menu allows change of basic settings (display brightness and contrast, continuous digital zoom, stadiametric rangefinder, information on the actual profile and zeroing distance).

- Enter the menu with a short press of the **M (9)** button.
- To toggle between the functions below, press successively the **M** button.

To exit the hot menu, hold down the M button.

Automatic exit takes place in 3 sec of inactivity.

- **Brightness** ☀️ – press the **UP (8)** and **DOWN (10)** buttons to change display brightness from 00 to 20.
- **Contrast** 🗲 – press the **UP/ DOWN** buttons to change display contrast from 00 to 20.
- **Digital zoom** 🔍 – press the **UP/ DOWN** buttons to change digital zoom from 1.0x to 4.0x. Continuous digital zoom is in 0.1x increments.

The initial value of the continuous digital zoom is x1.0 if the discrete digital zoom is not active; x2.0 is discrete digital zoom is 2x; x4.0 is discrete digital zoom is 4x.

Notes.

- actual magnification is the product of the basic magnification value and continuous digital zoom value. For example: the riflescope's basic magnification is 3.5x, continuous digital zoom value x2.7. Actual magnification is 9,4x (3,5*2,7).

- display brightness and contrast settings are saved in the memory when the unit is turned off.

The stadiametric rangefinder 📏 — press the **UP/ DOWN** buttons to change distance to an object being ranged (please refer to section 17 for more details).

A100 \bar{T} - information on the actual profile and zeroing distance, at which zeroing was done in this profile (for example, profile A, zeroing distance 100m).

Toggle between zeroing distances with the **UP** and **DOWN** buttons.

13

MAIN MENU FUNCTIONS

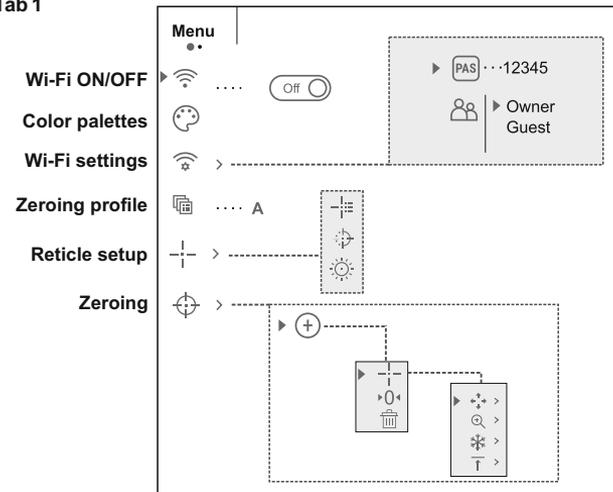
- Enter the main menu with a long press of the **M (9)** button.
- Press the **UP (8)** and **DOWN (10)** buttons to toggle between the main menu options.
- Main menu navigation is cyclical: as soon as the last menu option of the first tab is reached, first menu option of the second tab starts.
- Enter a submenu of the main menu with a short press of the **M** button.
- Exit the submenu with a long press of the **M** button.
- Exit the main menu with a long press of the **M** button.

- Automatic exit takes place in 10 sec of inactivity.
- Upon exit from the menu the cursor location ▶ is memorized only for the duration of the working session (i.e. until the unit is turned off).
- Upon restarting the riflescope and entering the menu the cursor will be located on the first menu option.

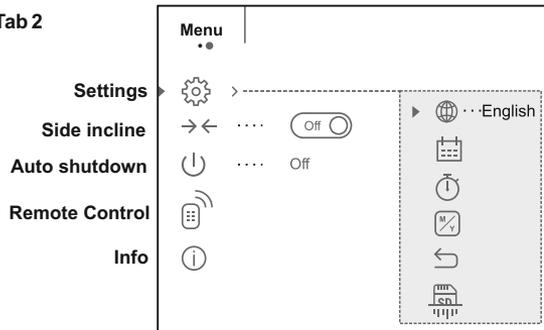
The menu includes two tabs. To toggle between the tabs, press the **UP (8)** and **DOWN (10)** navigation buttons – when the last menu option of the **M1** tab is reached, you move to the first menu option of the **M2** tab and viceversa.

MENU STRUCTURE:

Tab 1



Tab 2



 **Wi-Fi** **Wi-Fi ON/OFF**

▶  ...  Off

- Hold down the **M (9)** button to enter the main menu.
- Select submenu with **UP (8)** and **DOWN (10)** buttons.

▶  ...  Off

- Press briefly the **M** button the enter the submenu.
- Turn Wi-Fi on with a short press of the **M** button.
- Turn Wi-Fi off with a short press of the **M** button.
- You can also turn Wi-Fi on/off with a long press of the **UP (8)** button during operation.

 **Color palettes**

Selection of colour palettes

- Hold down the **M (9)** button to enter the main menu.
- Select submenu with **UP (8)** and **DOWN (10)** buttons.
- Press briefly the **M** button the enter the submenu.
- Select one of the palettes below with a short press of the **UP / DOWN** buttons.
- Confirm selection with a short press of the **M** button.

Colour palette	Colour of rangefinder's bars
"Standard" ("black and white (standard) palette")	Red
"Negative" ("black and white palette. Inversion of the standard palette")	Red
"Red Monochrome"	White
"Ultramarine"	White
"Sepia"	White

Color palette "Negative" is shown with icon  in the status bar.

 **Wi-Fi setup**

Wi-Fi settings This menu option allows you to set up your riflescope for operation in a Wi-Fi network.

Password setup This submenu allows you to set a password to access your riflescope from an external device.

▶  ... 12345 The password is used to connect an external device (i.e. smartphone) to your riflescope.

- Hold down the **M (9)** button to enter the main menu.
 - Select submenu with **UP (8)** and **DOWN (10)** buttons.
 - Press briefly the **M** button the enter the submenu.
 - The default password "12345" appears on the display.
 - Set the desired password with the **UP and DOWN** buttons (button UP to increase value; button DOWN to reduce). Switch between digits with a short press of the **M** button.
 - Save the password and exit the submenu with a long press of the **M** button.
-

Access level setup

 ▶ Owner
 Guest

This submenu allows you to set required access level of the Stream Vision application to your riflescope.

Access level **Owner**. The Stream Vision user has the complete access to all riflescope's functions.

Access level **Guest**. The Stream Vision user has the access only to the real time video stream from the riflescope.

- Hold down the **M (9)** button to enter the main menu.
- Select submenu with **UP (8)** and **DOWN (10)** buttons.
- Press briefly the **M** button the enter the submenu.
- Set the desired access level with the **UP and DOWN** buttons.
- Save your selection and exit the submenu with a long press of the **M** button.

 **Zeroing profile**

This main menu option allows you to select between one of the three profiles. Each profile includes the following:

- 1) Set of distances with zeroing coordinates for each.
- 2) Reticle color
- 3) Reticle type

Various profiles can be used when employing the riflescope on different rifles and when shooting different cartridges.

- Hold down the **M (9)** button to enter the main menu.
- Select submenu with **UP (8)** and **DOWN (10)** buttons.
- Press briefly the **M** button the enter the submenu.

- Select one of the zeroing profiles (shown with letters A; B; C) with the **UP/DOWN** buttons.
- Confirm you selection with a short press of the **M** button.
- The name of a selected profile is displayed in the status bar.



Reticle setup

This main menu option allows you to select reticle shape, color and brightness.



Reticle type

- Hold down the **M (9)** button to enter the main menu.
- Select submenu with **UP (8)** and **DOWN (10)** buttons.
- Press briefly the **M** button the enter the submenu.
- Select the desired reticle shape out of the list of 13 reticles with **UP/DOWN** buttons.
- The reticle types change as the cursor goes down the reticle list.
- Confirm you selection with a short press of the **M** button.



Reticle color

- Hold down the **M (9)** button to enter the main menu.
- Select submenu with **UP (8)** and **DOWN (10)** buttons.
- Press briefly the **M** button the enter the submenu.
- Select the desired reticle color: black or white (main color), red, green (extra color for small elements like reticle centre, ticks) - with **UP/DOWN** buttons.
- Confirm you selection with a short press of the **M** button.



Reticle brightness



- Hold down the **M (9)** button to enter the main menu.
- Select submenu with **UP (8)** and **DOWN (10)** buttons.
- Press briefly the **M** button the enter the submenu.
- Set the desired reticle brightness from 0 to 10 with **UP/DOWN** buttons.
- Confirm your selection with a short press of the **M** button.



Zeroing



Adding new distance:

To zero your rifle scope, you need to set a zeroing distance first.

You can zero your rifle scope at any distance ranging from 1 to 910m (1 to 955 yards).

- Hold down the **M (9)** button to enter the main menu.
- Select submenu with **UP (8)** and **DOWN (10)** buttons.
- Press briefly the **M** button the enter submenu “Add new distance” ▶ ⊕.
- Set the values for each digit with the **UP/DOWN** buttons. Switch between the digits with a short press of the **M** button ⊙ 150m .
- Having set the desired distance, hold down the **M** button to save it.
- The distance you set first becomes a primary distance – shown with icon ▶ 0 ◀ on the right to the distance value.

Note: max. number of zeroing distances is 5 for each profile.

Operating the distances:

- Hold down the **M (9)** button to enter the main menu.
- Select submenu with **UP (8)** and **DOWN (10)** buttons and enter it with a short press of the **M** button.
- Enter the submenu “**Operating the distances**” and enter it with a short press of the **M** button – distances at which zeroing has been done will be shown.
- The values (for example, +7.0) shown ▶ 300m +7.0 on the right of the distance values, stand for the number of clicks along the Y axis, at which the reticle position at other distances differs from the reticle position in the primary distance. 600m ▶ 0 ◀ ⊙
- To re-zero at any distance, select the desired distance and press briefly the **M** button.
- Zeroing screen which allows the change of zeroing coordinates will appear.

Changing the primary distance

- Select a non-primary distance and enter the submenu for operating the distances with a short press of the **M** button.
- Select icon  primary distance.
- Press briefly the **M** button.
- Icon  next to the selected distance confirms the change of primary distance.

Deleting added distance

- Select the distance you wish to delete and enter the submenu for operating the distances with a short press of the **M** button.
- Select icon  “delete distance”.
- Select “Yes” in the dialog box to delete a distance. “No” – to cancel deletion.
- When selecting “Yes” you go to the submenu “list of distances”; “No” – return to the previous screen “operating the distances”.

Attention! If the primary distance is deleted, the first distance on the list automatically becomes the new primary distance.

Additional menu for zeroing parameters setup

Having selected a zeroing distance and having entered the submenu , the display shows the following:

Windage/Elevation correction

Magnification

Zeroing with the FREEZE function

Edit distance title

Additional menu option “Windage/Elevation correction” allows you to correct the reticle position as follows:

- First select in the submenu “Operating the distances” at which the reticle position needs to be corrected.
- Select icon  with a short press of the **M** button.
- For detailed description of the reticle position correction please refer to section 9 “Zeroing”.



Magnification

This submenu allows you to increase the riflescope's digital zoom when zeroing which reduced the click value this improving accuracy of zeroing.

- Having selected a zeroing distance and having entered the submenu, select submenu “Magnification” with a short press of the **M** button.
- Select the digital zoom value (i.e. 4x) with the **UP (3) and DOWN (5)** buttons.
- Confirm you selection with a short press of the **M** button.



Freeze

Function FREEZE is designed to zero your riflescope.

The **highlight of the function is that**, unlike in the “one shot zeroing” method, **you do not need to hold the riflescope in the aiming point**.

- Having selected a zeroing distance and having entered the submenu, enter the submenu FREEZE with a short press of the **M** button or press briefly the **ON** button when in the zeroing mode.
- A screen shot (image freezing) will be made – icon  will appear on the display.
- For detailed description of the zeroing procedure, please refer to section 9 “Zeroing”.



Edit distance title

This submenu allows you to change the value of the current distance.

- Having selected a zeroing distance and having entered the submenu, enter the submenu “Edit distance title” with a short press of the **M** button.
- Select values for each digit with the **UP/DOWN** buttons. Toggle between the digits with a short press of the **M** button.
- Confirm you selection with a long press of the **M** button.



Settings

The following settings are available:

- ▶  English
Language

Interface language selection

- Hold down the **M (9)** button to enter the main menu.
- Select submenu “General settings” with **UP (8) and DOWN (10)** buttons.
- Press briefly the **M** button the enter the submenu “Language”.





Date

- Select one of the available interface languages with a short press of the **UP/DOWN** buttons: English, French, German, Spanish.
- Switch between languages with a short press of the **M** button.
- Save selection and exit the submenu with a long press of the **M** button.

Date setup

- Hold down the **M (9)** button to enter the main menu.
- Select submenu "General settings" with **UP (8)** and **DOWN (10)** buttons.
- Press briefly the **M** button the enter the submenu "**Date**".

Date format is displayed as: **YYYY/MM/DD**
(2017/04/24).

- Select the correct values for the year, month and date with a short press of the **UP/DOWN (5)** buttons.
- Switch between digits with a short press of the **M** button.
- Save selected date and exit the submenu with a long press of the **M** button.



Time

- Hold down the **M (9)** button to enter the main menu.
- Select submenu "General settings" with **UP (8)** and **DOWN (10)** buttons.
- Press briefly the **M** button the enter the submenu "**Time**".

- Select the desired time format with a short press of the **UP and DOWN** buttons: **24 or PM/AM**.
- Switch to hour setup with a short press of the **M** button.
- Select hour value with a short press of the **UP and DOWN** buttons.
- Switch to minute setup with a short press of the **M** button.
- Select minute value with a short press of the **UP and DOWN** buttons.
- Save selected date and exit the submenu with a long press of the **M** button.

Units of measure

Selection of units of measurement

- Hold down the **M (9)** button to enter the main menu.



Meters

- Select submenu "General settings" with **UP (8)** and **DOWN (10)** buttons.
- Press briefly the **M** button the enter the submenu "Unit of measure".
- Select the desired time format with a short press of the **UP/ DOWN** buttons, press **M** again. Exit to "General settings" will take place automatically.

NOTE: unit of measurement is used both for the stadiametric rangefinder and the zeroing distances. When changing the unit of measurement, distance titles change too.



Reset

Restore default settings

- Hold down the **M (9)** button to enter the main menu.
- Select submenu "General settings" with **UP (8)** and **DOWN (10)** buttons.
- Press briefly the **M** button the enter the submenu "Restore default settings".
- With a short press of the **UP and DOWN** buttons select "Yes" to restore default settings or "No" to abort.
- Confirm selection with a short press of the **M** button.
- If "Yes" is selected, display will show "Return default settings?" and "Yes" and "No" options. Select "Yes" to restore default settings.
- If "No" is selected, action is aborted and you return to the submenu.

The following settings will be restored to their original values before changes made by the user:

- Operating mode of video recorder – video
- Display brightness - 10
- Display contrast - 10
- Zeroing profile - A
- Reticle selection – 1
- Reticle color – black
- Reticle brightness – 5
- Interface language – English
- Wi-Fi – off (default password)
- Zoom - optical; digital zoom off
- Colour palette – Standard
- Unit of measurement - metric
- PiP – off
- Side incline – off
- Auto shutdown – off
- SumLight - off
- IR Illuminator - off



Format

This menu option allows you to format your rifle scope's integrated memory card.



Formatting of the integrated memory card will irrevocably delete all saved files.

Make sure that you do not need the files to delete or back up the files using an alternative carrier.

- Hold down the **M (9)** button to enter the main menu.
- Select submenu "General settings" with **UP (8)** and **DOWN (10)** buttons.
- Press briefly the **M** button the enter the submenu "**Format**".
- With a short press of the **UP and DOWN** buttons select "Yes" to format the memory card or "No" to return to the submenu.
- Confirm selection with a short press of the **M** button.
- Message «Memory card formatting» means that formatting is in progress.
- Upon completion of formatting the message «Formatting completed» is shown.
- If "No" is selected, formatting is aborted and you return to the submenu.



Side incline

This option allows you to activate/deactivate the side (horizontal) incline of the weapon.

Side incline is indicated by "sector" arrows on the edges of the horizontal line of the reticle. Arrows show the direction in which you should move your rifle to eliminate side incline.

There are three modes of side incline:

5°-10° - one sector arrow;

10°-20° - two sector arrow;

>20° - three sector arrow.

A side incline of less than 5° is not shown on the display.

- Hold down the **M (9)** button to enter the main menu.
- Select submenu with **UP (8)** and **DOWN (10)** buttons.
- Press briefly the **M** button the enter the submenu.
- Select "On" with the **UP (3) and DOWN (5)** buttons to activate side incline; «Off» to deactivate.
- Confirm your selection with a short press of the **M** button.



Auto shutdown

This option allows you to activate automatic shutdown the rifle scope which recognizes whether your rifle scope is in a shooting position. Automatic shutdown is actuated after you move the rifle scope relative to the optical axis:

Upwards > 70°; Downwards > 70°; Leftwards > 30°; Rightwards > 30°

- Hold down the **M (9)** button to enter the main menu.
- Select submenu with **UP (8)** and **DOWN (10)** buttons.
- Press briefly the **M** button the enter the submenu.
- With the **UP/DOWN** buttons select the time period (1 min, 3 min, 5 min) upon expiry of which the rifle scope will automatically shut down. Select "Off" if you wish to desactive Auto shutdown.
- Confirm your selection with a short press of the **M** button.

Note: respective icons on the status bar show the status of the function:

- off:

- auto shutdown time (i.e. 1 min):



Remote Control

Before operating the remote control, remember to activate it as follows:

- Hold down the **M (9)** button to enter the main menu.
- Select submenu with **UP (8)** and **DOWN (10)** buttons.
- Press briefly the **M** button the enter the submenu.
- Countdown starts (30 sec), within which hold down for two seconds any RC button.
- If activation is successful, the message «Connection complete» appears .
- If error occurs the message «Connection failed» appears. Repeat the procedure.
- The RC is activated and ready for use.



Info

- Hold down the **M (9)** button to enter the main menu.
- Select submenu with **UP (8)** and **DOWN (10)** buttons.
- Press briefly the **M** button the enter the submenu.

This option allows the user to view the following information about the riflescope:

- Full name
- SKU number
- serial number
- software version
- hardware version
- service information

14

● STATUS BAR

The status bar is located in the lower part of the display and shows information on the actual operating status of the riflescope, including:

- Color palette (Standard - if on)
- Actual zeroing profile (for example A)
- Zeroing distance* (for example, 100 m)
- SumLight (on or off)
- Operation of the IR Illuminator (power level 3)
- Current full magnification
- Wi-Fi connection
- Function "Auto shutdown" (for example 1 min)
- Running time
- Battery charge level (if the riflescope is powered by the Battery Pack)
or
- External battery power indicator (if the riflescope is powered by an external power supply)
or
- Battery charge with current level in per cent (if battery is installed or it is being charged by external power supply)

* Distance is not shown before zeroing is done or if "empty" reticle is selected (no reticle on the display).

The status bar shows the distance value at which zeroing was initially done. After multiple zeroing distances are set, the status bar shows the distance value selected in the hot menu.



15

● IR ILLUMINATOR

The riflescope is equipped with a detachable IR Illuminator with a wavelength of 940 nm which allows the user to increase observation range in lowlight or in complete darkness.

- Make sure that the IR Illuminator is mounted and connected to the riflescope – the display will show icon of the connected IR or disconnected IR Illuminator.
- To activate the IR Illuminator: turn the riflescope with the ON button, press briefly the IR button (3) on the edge of the IR Illuminator. IR power level upon start is minimal (IR1). IR Illuminator icon with respective power level is shown in the bar status.
- To switch between power levels (IR or IR) press briefly the IR button.
- To focus the IR spot, rotate the IR Illuminator hood (19).
- To deactivate the IR Illuminator, hold down the IR button.
- To remove the IR Illuminator, rotate the IR locking nut (17) counterclockwise. Screw the connector plug (16).
- In place of the supplied IR Illuminator you can mount:
- laser IR Illuminator **Pulsar Ultra AL-915** (#79138) operating at 915nm.

Notes:

- Upon turning the IR off, power level is not saved in the riflescope's memory. Upon turning on, the IR Illuminator switches to the minimum power level - IR1.
- In order to align the IR spot vertically or horizontally relative to the field of view, turn the locking ring (18) 5-10 degrees counterclockwise. Move the IR Illuminator hood to match the spot with the image seen through the riflescope. Tighten the locking ring.
- Operation of the IR Illuminator is only possible in the Video and Photo modes.

16

● WI-FI FUNCTION

Your riflescope features wireless connection option (Wi-Fi) which links it with external appliances (tablet, smartphone).

- Turn on the wireless module with a long press of the UP (8) button. Wi-Fi operation is shown in the status bar as follows:

Connection status	Status bar icon
Wi-Fi is off	
Wi-Fi activated by the user, Wi-Fi in the riflescope is being activated	
Wi-Fi is on, no connection with riflescope	
Wi-Fi is on, riflescope connected	

- Your riflescope is detected by an external device as “**Digiriflescope Ultra_XXXX**”, where **XXXX** – is the last four digits of riflescope's serial number».
- After a password is generated on an external appliance (please refer to the menu option “Wi-Fi setup” of the section “Main menu functions” of this user manual) and connection is established, the icon  in the status bar changes to  ; transmission of the video signal to the display of external device starts automatically.

● “SUMLIGHT™” FUNCTION

- “**SumLight™**” function substantially increases sensitivity of the CCD array thus enabling observation in low light without using the IR Illuminator.
- To activate the function **SumLight™**, press briefly the **UP (8)** button.
- To deactivate the function, press briefly the **UP** button again.
- Icon “**SumLight™**” (on **S** or **S** off) is shown in the status bar.

Attention! Please note that higher sensitivity causes an increased noise level in the picture, lower frame rate; image slows down, if the riflescope is rapidly moved from one side to the other, the picture may be blurred for a moment.

Neither of these effects is a flaw of the unit. After the SumLight™ Signal Processing Program is activated, light dots (pixels) may appear in the field of view which is explained by operation peculiarities of this function.

This is not a defect either.

The riflescope features video recording and photography of the image being saved to the internal memory card.

Before using this feature, please read the menu options “Date setup”, “Time setup” of the section “Main menu functions”.

The built-in recorder operates in two modes:

- **Photo**  (photography; in the top right corner of the display you can see a photography icon),

If estimated number of photos that can be saved to the Flash card is more than 100, message «>100» is shown.

- **Video**  (video recording; in the top right corner of the display you can see a video icon, current video resolution, total video time left in the format HH:MM:SS (hours : minutes : seconds)

When switched on, the riflescope is in the Video mode. Toggle between Video and Photo modes with a long press of the **RIGHT (6)**. Switching is cyclical (Video-> Photo-> Video...).

Photo mode. Photography

Switch to the Photo mode with a long press of the **REC (11)** button.

Take a picture with a short press of the **REC** button. The image freezes for 0.5 sec and a photo is saved to the internal memory.

Video mode. Video recording

- Switch to the Video mode with a long press of the **REC (11)** button.
- Start video recording with a short press of the **REC** button.
- Upon start of video recording icon  disappears, icon Rec and recording timer in the format MM:SS (minutes : seconds) appear instead:
- Pause and resume recording video with a short press of **REC**.
- Stop recording video with a long press of **REC**.

Video files are saved to the memory card:

- After stopping video / after taking a picture;
- Upon powering the unit off if recording was on;
- When the memory card is overfilled during record message “Memory full” appears.

Notes:

- you can enter and navigate the menu during video recording;
- recorded videos and photos are saved to the built-in memory card in the format img_XXX.jpg (photos); video_XXX.avi (videos). XXX – three-digit counter for videos and photos;
- counter for multimedia files cannot be reset;
- if a file is deleted from the middle of the list, its number is not taken by another file;
- when the counter is full, a new folder is created – img_XXXX. Where XXXX is folder counter.
- the maximum duration of a recorded file is seven minutes. After this time expires a video is recorded into a new file. The number of recorded files is limited by the capacity of unit's internal memory.
- check regularly the free capacity of the internal memory, move recorded footage to other storage media to free up space on the internal memory card;
- graphic data (status bar, icons and other) are not shown in recorded video/photo files.

IMPORTANT!

To playback video files recorded by the riflescope on iOS-based computers, we recommend that you use **VLC** video player or **Elmedia player**.

Download links and QR codes are shown below:



VLC VIDEO PLAYER

<http://www.videolan.org/vlc/download-macosx.html>



ELMEDIA VIDEO PLAYER

<https://itunes.apple.com/us/app/elmedia-multiformat-video/id937759555?m=12>

19

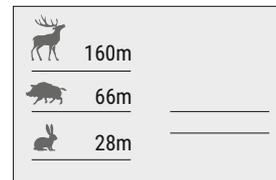
● STADIAMETRIC RANGEFINDER

Thermal riflescopes are equipped with a stadiametric rangefinder which allows the user to estimate approximate distance to an object of known size.

- To select option “stadiametric rangefinder” enter the hot menu a short press of the **M (9)** button and select icon  with **UP and DOWN** buttons.
- You will see on the display: measurement bars, icons of three reference objects and respective distances for the three objects.

- There are three pre-set reference objects:

- **Hare** – height 0.3 m
- **Wild boar** – height 0.7 m
- **Deer** – height 1.7 m



Move the lower fixed bar under the object being ranged and, while pressing the **UP and DOWN** buttons, move the upper horizontal bar relative to the lower fixed bar until the object fits entirely between the two bars.

The distance to the object is automatically recalculated as you move the upper line.

- If ranging does not take place within 10 seconds, the information disappears from the display.
- To select the unit of measurement (metres or yards), go to the respective menu option.
- Before it appears on the display, a measured distance value is rounded up to 5 m for larger values, and rounded down to 1 m for smaller values.
- Exit rangefinder mode with a short press of the **M** button or wait 10 seconds to exit automatically.

20

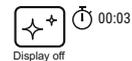
● FUNCTION DISPLAY OFF

The DISPLAY OFF function activates stand-by mode which allows the riflescope to be quickly powered on.

Operating scenarios for the «Display off» function

Scenario 1. The riflescope is turned off. Turn the riflescope on and activate «Display off».

- Turn the riflescope on with a short press of the **ON** button.
- Activate «Display off» with a long press of the **ON** button. Message “Display off” with countdown appears.



- Release the **ON** button.

Scenario 2. «Display off» is on, the riflescope needs to be turned off.

- Hold down the **ON** button. Message “Display off” with countdown appears (1,2,3)
- Hold down the **ON** button until the riflescope turns off (the riflescope turns off after 1 is reached).

● FUNCTION PiP

PiP (“Picture in Picture”) allows you to see a zoomed image simultaneously with the main image in a dedicated window.

- Turn on/off the PiP function with a long press of the **DOWN (10)** button.
- Change zoom ratio in the PiP window with a short press of the **DOWN** button.
- The zoomed image is displayed in a dedicated window, with the full magnification being shown.
- The rest of the image is displayed only with the optical magnification (digital zoom is off).
- When PiP is turned off, the image is shown with the full magnification set for the PiP function.

● STREAM VISION

The riflescope supports Stream Vision technology which allows you to stream an image from the display of your riflescope to a smartphone or PC tablet via Wi-Fi in real time mode. You can find further guidelines on Stream Vision in a separate booklet or at our web site www.pulsar-nv.com

Note: the Stream Vision application allows you to update the software features of your riflescope.

Scan the QR codes to download Stream Vision free of charge:



Google Play (Android OS):



iTunes (iOS):

● CONNECTION TO PC VIA USB

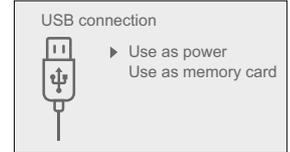
- Connect one end of the USB cable to the Micro-USB (**15**) port of your riflescope, and the other end to the USB port of your PC/laptop.
- Turn the riflescope on with a short press of the **ON (5)** button (riflescope that has been turned off cannot be detected by your computer).

- Your riflescope will be detected by the computer automatically; no drivers need to be installed.

- Two connection modes will appear on the display:

Memory card (external memory) and **Power**.

- Select connection mode with **UP and DOWN** buttons.
- Confirm selection with a short press of the **M** button.



Connection modes:

- **Memory card** (external memory). In this mode the riflescope is detected by the computer as a flash card. This mode is designed to manage the files saved in riflescope's memory. The riflescope's functions are not available in this mode; the riflescope turns off automatically.

- If video recording was in progress when connection was made, recording stops and video is saved.

- **Power**

In this mode your PC/laptop is used as an external power supply. The status bar shows icon . The riflescope continues operating and all functions are accessible. The IR will switch off and cannot be switched on.

Note: The Battery pack installed in the riflescope is not being charged!

- **USB disconnection.**

When USB is disconnected from the riflescope where connection is in the USB Mass storage riflescope mode, the riflescope remains on the OFF state. Turn the riflescope ON for further operation.

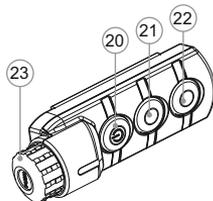
When USB is disconnected from the riflescope when in the Power mode, the riflescope keeps operating with Battery Pack, if available, and it has sufficient charge.

● WIRELESS REMOTE CONTROL

Wireless remote control (RC) duplicates the POWER ON function, digital zoom, video start/stop and menu navigation.

The RC controls are:

- **ON Button (20):** duplicates the functions of the **ON (5)** button.
- **Button (21):** digital zoom activation. Function PiP.
- **Button (22):** duplicates the functions of the **REC (6)** button.
- **Controller (23):** duplicates the functions of the **M (9)** button when pressed; duplicates the functions of the **UP (8)/DOWN (10)** upon rotation (in hot menu/main menu).



	Controller (23)	Button ON (20)	Button ZOOM (21)	Button REC (22)
Short press	Enter hot menu	Turn unit on	Discrete zoom on	Start recording
Long press	Enter main menu	Display off / Turn unit off	Turn PiP on	Toggle video/photo modes
Clockwise rotation	Increase value, upward movement	—	—	—
Counter-clockwise rotation	Decrease value, downward movement	—	—	—

● USING THE WEAVER RAIL

The riflescope is equipped with a Weaver rail (13) which allows the user to mount extra accessories such as:

- LED IR Illuminators **Pulsar-805/Pulsar-940/Pulsar- X850** (#79071/79076/79074)
- Laser IR Illuminators **Pulsar AL915** (#79132)

● TECHNICAL INSPECTION

Please check:

- External view (there should be no cracks on the housing).
- Correct mounting of the riflescope on your weapon (clearances are not allowed).
- The state of the Battery Pack (should be charged) and electric terminals (there should be no oxidation).
- Correct functioning of the controls.

● MAINTENANCE

Maintenance should be carried out at least twice a year, and should consist of the following measures:

- Wipe external plastic and metal surfaces clean of dust and dirt with a soft cloth moistened with a synthetic cleaning agent.
- Clean the electric terminals of the Battery Pack and riflescope's battery slot using a grease-free organic solvent.
- Check the objective and eyepiece lenses. If required, remove dust and sand (preferably by a noncontact method). Clean the external surfaces of the lenses with products expressly designed for this purpose.

● STORAGE

Always store the riflescope in its carrying case in a dry, well-ventilated space. For prolonged storage, remove the battery.

● TROUBLESHOOTING

The table presented below lists some potential problems that may occur when using the riflescope. If a problem encountered with the riflescope is not listed, or if the recommended action does not resolve the problem, the unit should be returned for repair.

Problem	Check	Corrective action
The riflescope will not turn on.	Battery Pack is discharged.	Charge the battery.
The riflescope does not operate on external power supply.	USB cable is damaged.	Replace USB cable.
	External power supply is discharged.	Charge the external power supply (if necessary).
The image is too dark.	Brightness or contrast level is too low.	Adjust brightness/contrast with the UP/DOWN buttons.
The reticle is blurred and cannot be focused with the dioptre knob.	The dioptre cannot be adjusted to your eyeriflescope.	If you wear prescription glasses with a range of +/- 4, keep glasses on when looking through the eyepiece
With a crisp image of the reticle, the image of the observed target that is at least 30 m away is blurred.	Dust and condensate are covering the outside optical surfaces after the riflescope was brought in from the cold into a warm environment, for example.	Clean the lens surfaces with a blower and soft lens cloth. Let the riflescope dry by leaving it in a warm environment for 4 hours.
	The objective lens is not focused.	Adjust the image by rotating the lens.
The aiming point shifts after firing rounds.	The riflescope is not mounted securely or the mount was not fixed with thread sealant.	Check that the riflescope has been securely mounted, make sure that the same type and calibre bullets are being used as when the scope was initially zeroed; if your riflescope was zeroed during the summer, and is now being used in the winter (or the other way round), a small displacement of the aiming point is possible.
The riflescope will not focus.	Wrong settings.	Adjust the riflescope according to the instructions given in the Section 9 "OPERATION" and check the surfaces of the eyepiece and objective lenses and clean them if necessary from dust, condensation, frost, etc; to prevent fogging in cold weather, apply a special anti-fog solution.
	The riflescope is used in the daytime at long distances.	Check focusing the nighttime.

Problem	Check	Corrective action
The riflescope cannot be powered on with wireless remote control.	Remote control is not activated. Low battery.	Activate the remote control according to instructions. Install a new CR2032 battery.
Smartphone or tablet PC cannot be connected to the riflescope.	Password in the unit was changed.	Delete network and connect again inserting the password saved in the riflescope.
	There are too many Wi-Fi networks in the area where the riflescope is located which may cause signal interference.	To ensure stable Wi-Fi performance, move the riflescope to an area with few or no Wi-Fi networks.
Poor image quality / Detection range reduced.	Problems described may arise in adverse weather conditions (snow, rain, fog etc.).	
The built-in IR is not functioning.	Examine and clean the contacts in the riflescope and the IR Illuminator. Check that the contacts are not blocked.	
Barely visible texture which does not hinder detection range or efficiency of observation can be noticed on the display after the extra laser IR Illuminator (AL915) is activated.	This is normal for eye safe laser IR illuminators.	This is not a defect.



GB

- i** Environment protection first!
Your appliance contains valuable materials which can be recovered or recycled.
- ➔** Leave it at a local civic waste collection point.

FR BE

- i** Participons à la protection de l'environnement!
Votre appareil contient de nombreux matériaux valorisables ou recyclables.
- ➔** Confiez celui-ci dans un point de collecte ou à défaut dans un centre service agréé pour que son traitement soit effectué.

DE AU

- i** Schützen Sie die Umwelt!
Ihr Gerät enthält mehrere unterschiedliche, wiederverwertbare Wertstoffe.
- ➔** Bitte geben Sie Ihr Gerät zum Entsorgen nicht in den Hausmüll, sondern bringen Sie es zu einer speziellen Entsorgungsstelle für Elektrokleingeräte (Wertstoffhof).

NL

- i** Samen het milieu beschermen!
Uw toestel bevat meerdere recycleerbare materialen.
- ➔** Breng deze naar een containerpark of naar een erkend service center, bevoegd voor de recycling.

ES

- i** ¡Participe en la conservación del medio ambiente!
Su electrodoméstico contiene materiales recuperables y/o reciclables.
- ➔** Entréguelo al final de su vida útil, en un Centro de Recogida Específico o en uno de nuestros Servicios Oficiales Post Venta donde será tratado de forma adecuada.

IT

- i** Protezione dell'ambiente!
Il vostro apparecchio contiene materiale che può essere recuperato o riciclato.
- ➔** Portarlo ad un punto di raccolta autorizzato.

GR

- i** Ας συμβάλλουμε κι εμείς στην προστασία του περιβάλλοντος!
Η συσκευή σας περιέχει πολλά αξιοποιήσιμα ή ανακυκλώσιμα υλικά.
- ➔** Παραδώστε τη παλιά συσκευή σας σε κέντρο διαλογής ή ελλείψει τέτοιου κέντρου σε εξουσιοδοτημένο κέντρο σέρβις το οποίο θα αναλάβει την επεξεργασία της.

DK

- i** Vi skal alle være med til at beskytte miljøet!
Apparatet indeholder mange materialer, der kan genvindes eller genbruges.
- ➔** Bring det til et specialiseret indsamlingssted for genbrug eller et autoriseret serviceværksted, når det ikke skal bruges mere.

SF

- i** Huolehtikaamme ympäristöstä!
i Laitteesi on varustettu monilla arvokkailla ja kierrätettävillä materiaaleilla.
- ➔** Toimita laitteesi keräyspisteeseen tai sellaisen puuttuessa vaikka valtuutettuun huoltokeskukseen, jotta laitteen osat varmasti kierrätetään.