PULSAR

CORE FXQ38 FXQ50

THERMAL IMAGING SCOPE - FRONT ATTACHMENT

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

ENGLISH / FRANÇAIS / DEUTSCH / ESPAÑOL / ITALIANO / PУССКИЙ

Attention!
CORE FXQ thermal imaging devices require a license if exported outside your country.

Attention!
Les dispositifs thermiques CORE FXQ nécessitent une licence s'ils sont exportés hors de votre pays.

Achtung!
Wärmebildgeräte CORE FXQ benötigen eine Lizenz, wenn sie außerhalb Ihres Landes exportiert werden.

¡Atención!
Los dispositivos de visión térmica CORE FXQ requieren una licencia si se exportan fuera de su país.

Attenzione!
I dispositivi termici CORE FXQ necessitano una licenza se esportati al di fuori del proprio paese.

Внимание!
Тепловизионные приборы CORE FXQ требуют лицензии, если они экспортируются за пределы Вашей страны.

SPECIFICATIONS:

SKU	76453	76459
Model	Core FXQ38	Core FXQ50
Microbolometer characteristics:		
Detector type	Uncooled	Uncooled
Resolution, pixels	384x288	384x288
Pixel size, μm	17	17
Refresh rate, Hz	50	50
Optical characteristics:		
Magnification, x		
- monocular	3.1	4.1
- attachment	1	1
Lens	F38/1.2	F50/1.2
Digital zoom, x	2	2
Monocular's eye relief, mm	16	16
Monocular's exit pupil, mm	5	5
Horizontal Field of view, m @100m	9,8 / 17,2	7,5 / 5,6
Diopter adjustment, D	+5/-5	+5/-5
Max. observation range of an animal 1.7 m high, m / y	1400 / 1531	1800 / 1970
Close-up range, m	3-5	5-7
Max. recommended magnification of day device, x	3	5
Display:		
Type	OLED (Green Sapphire)	
Resolution, pixel	640x480	640x480
Operational characteristics:		
Power supply	5 - 7.2 V	5 - 7.2 V
Battery type	2xCR123A	2xCR123A
External power supply	5V (USB) / 12V (EPS)	
Max. operating time on a battery set, h	4	4
Degree of protection, IP code (IEC60529)	IPX5 / IPX7	IPX5 / IPX7
Operating temperature, °C / °F	-25 … +50 / -13 ... +122	
Dimensions, mm inch	180x65x60 / 7x2.6x2.4	190x65x60 / 7.5x2.6x2.4
Weight (without/with batteries), kg//oz	0.4 / 0.48 // 14.1 / 17	

1 ● PACKAGE CONTENTS

- Monocular **CORE**
- Attachment's eyepiece
- Carrying case
- Hand strap
- External power adapter*
- USB cable*
- Wireless remote control
- User manual
- Cleaning cloth
- Warranty card

  * May not be included for certain orders.

  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

CORE is a multifunctional thermal imaging device that can be operated either as a monocular or a front attachment. The **CORE** unit as an attachment is designed for the use in the nighttime and in the daylight in inclement weather conditions (fog, smog, rain) to see through obstacles hindering detection of targets (branches, tallgrass, thick bushes etc.).
CORE as a monocular allows the user to observe an object at a distance of above 1000 metres. Unlike the image intensifier tube based night vision devices, thermal imagers **CORE** do not require an external source of light and are not affected by bright light exposure. The **CORE** unit has a wide range application including night hunting, observation and terrain orientation, search and rescue operations.

3 ● FEATURES

- Quick "monocular-attachment" conversion (2 in 1 unit)
- Quick mounting and removal of attachment
- Detection range above 1 km
- High contrast green monochrome display
- Increased Recognition and Detection Software (IRIS technology) (software based on intellectual dynamic equalization algorhythm)
- Monocular's digital zoom 2x
- Three calibration modes - manual, automatic, semiautomatic
- Three operating modes – **"Rocks"**, **"Forest"**, **"Identification"**
- Wireless remote control
- External power supply available
- Sustainable operation at temperatures from -25 °C to +50 °C
- Degree of protection IPX5 / IPX7
- Compact size
- Low weight

4
● **COMPONENTS AND CONTROLS**

① Lens cap
② Objective lens
③ Lens focus knob
④ Eyepiece diopter adjustment ring
⑤ Eyepiece locking ring
⑥ Battery compartment cover
⑦ Bayonet-type ring of attachment's eyepiece
⑧ Attachment's eyepiece
⑨ **"ON/OFF"** button
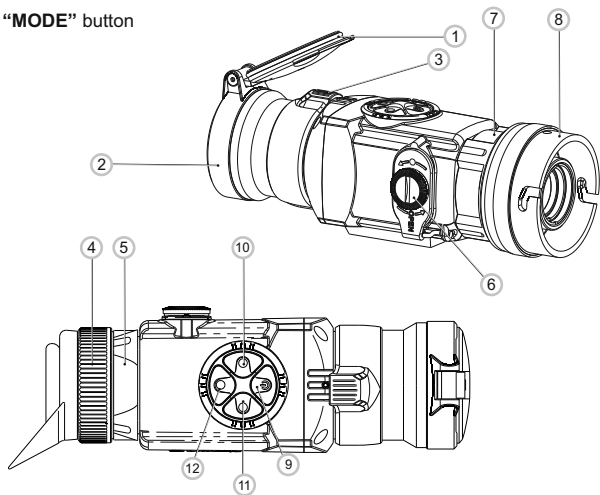⑩ **"LEFT"** navigation button
⑪ "**RIGHT**" navigation button
⑫ **"MODE"** button

Fig. 1

	First short press	Next short press	Long press	Menu operation	
				Short press	Long press
"ON/OFF"	Powering the unit on	Unit calibration	Powering the unit off	Unit calibration, confirmation of defective pixel elimination – in corresponding menu option	Powering the unit off
"RIGHT"	Increasing brightness and contrast level*	Increasing brightness and contrast level*	x2 digital zoom (only for monocular)	Menu navigation – upwards and rightwards	
"LEFT"	Decreasing brightness and contrast level	Decreasing brightness and contrast level	Color inversion	Menu navigation – downwards and leftwards	
"MODE"	Activating contrast control mode	Activating brightness control mode	Entering the menu	Confirmation and menu option exit	Confirmation and menu option exit**, main and auxiliary menu exit.

* depending on the mode selected with MODE.   **in some menu options (clock setup).

5
● **MENU / STATUS BAR ICONS:**

⛰	Operating mode **"Rocks"**
🌲	Operating mode **"Forest"**
👁	Operating mode **"Identification"**
M	Manual calibration mode
H	Semiautomatic calibration mode
A	Automatic calibration mode
🕐	Clock setup
☀M	Brightness setting of menu icons
x2	2x digital zoom
⊕	Defective pixel repair option
✕	Cross for defective pixel repair
☼◐	Brightness and contrast setup
◩	Image inversion modes: **"White hot"/"Black hot"**
↻	Return to default defective pixel pattern
▬	Low battery indicator

GUIDELINES FOR OPERATION

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

- Before use make sure that you have mounted and adjusted the unit according to the instructions of the section 8 **"Operation"**.
- Store with the lens cap on in the carrying case.
- Switch off the unit after use.
- **Attempts to disassemble or repair the unit will void the warranty!**
- The unit is designed for use in various operating temperatures. However, if it has been brought indoors from cold temperatures, do not turn it on for 2 to 3 hours. This will prevent external optical surfaces from condensation.
- To ensure reliable performance, it is recommended to carry out regular technical inspections of the unit.
  WARNING! Do not point the objective lens of the unit at intensive sources of light such device emitting laser radiation or the sun. This may render the electronic components inoperative. The warranty does not cover damage caused by improper operation.

BATTERY INSTALLATION

- Turn the battery compartment knob **(6)** counterclockwise until stop and remove it.
- Install two CR123A batteries according to the marking on the battery compartment cover and inside it.
- Replace the battery cover and press it until its clicking position - **make sure the cover is closed on both sides.**
- Battery charge level is displayed on the status bar (▭).
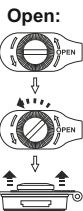- In case of complete battery discharge, icon ▭ is flashing on the status bar.

Open:

Fig.2

Warning: do not use rechargeable batteries since their use causes inaccurate battery level indication and and possible disconnection during operation.

Note: please do not use batteries of different types or batteries with various charge levels.

EXTERNAL POWER SUPPLY

The supplied external power adapter allows you to use the following as external power supply:
- power bank (output voltage 5V, USB plug) or
- EPS3I or EPS5 Battery Pack (output voltage 12V; 2.1 mm plug).

How to connect:

- Open and remove the battery compartment cover **(see section 7)**.
- Install the external power adapter into the monocular's battery compartment **(see Fig. 3)**. Make sure that the adapter's latches **(C)** have snapped on both sides.
- Secure the cover (6) on the adapter **(see Fig. 3)**.
- Connect your power bank to the USB port (5V) or your EPS3I/EPS5 battery Pack to the external power jack (12V).
- Power the unit on with a short press of the **"ON/OFF" (9)** button.
- To remove the external power adapter, push the latches on both sides and pull it.

Note. When using your own external power supply, central pin of the power supply that you connect to the "power" jack of the unit, must have marking "+".
The power supply or the plug may have marking –◈–+

Warning! When the unit operates on external power supply, the low battery indicator (icon ▭) **does not show** the actual battery charge level.

Fig. 3

● **OPERATION**
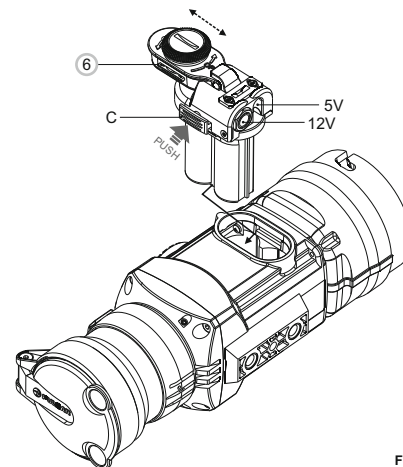
Unit **CORE** can be used as a monocular or front attachment for day device. Original design allows the monocular to be quickly converted into attachment and vice versa.

8.1. CORE as monocular.
Detailed description of the monocular **CORE** can be found in section **9 "OPERATION. CALIBRATION".**

8.2. CORE as front attachment.

CORE as attachment is designed to use a day device both in the nighttime and daytime in inclement weather (fog, smog, rain etc.).

To convert the monocular into attachment and to mount it on a day device, please follow instructions as follows:

Stage 1. Mounting attachment's eyepiece on CORE unit.

- Rotate the eyepiece locking ring **(5)** counterclockwise until you hear a click and remove the eyepiece **(Fig. 4)**.
- Mount the attachment's eyepiece on the unit as follows:

  - Make sure that the salients **(A)** of the attachment's eyepiece are located above the lower salients **(see Fig.5)**.
  - Locate the attachment's eyepiece so that the lock **(B)** is parallel to the Pulsar logo **(L)** on unit's body **(Fig.6)**.
  - Insert the attachment's eyepiece into unit's body until stop and secure it by turning the bayonet-type ring **(7)** clockwise.

correct   wrong

Fig.5

Fig.4

Fig.6
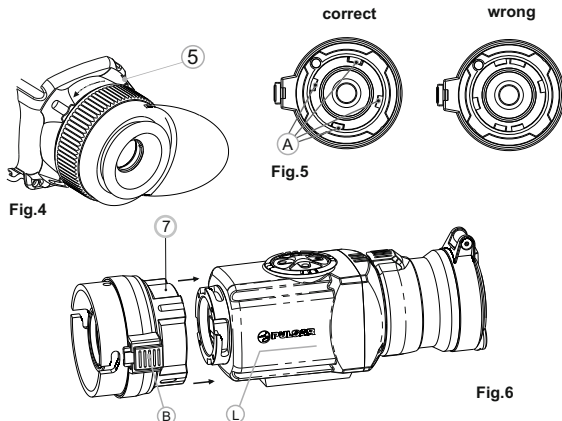
Stage 2. Installing the cover adapter on day device (using metal Cover-adapters DN42/50/56 mm" (SKU#79124/79125/79126)

- Select a cover adapter with an insert (bought separately) of the required diameter depending on the outer diameter of the objective lens of the day device.
- The figures 42 mm, 50 mm, 56 mm in adapter's model name correspond to the optical diameter of the lens of your day device.
- Measure the outer diameter of the housing of the lens of your day device and select an insert based on the data in the table below.
  Example. If the lens diameter of your day device is 42mm, and the measured outer diameter of the housing of the lens of your day device is 47.2 mm, you need to use an insert with marking "Ø 47".

Compatibility chart of inserts for day devices

Lens diameter of day device, mm	Outer diameter of the housing of device's objective lens, mm	Inner diameter of the insert, mm
42	45.5	45.5
	46	46
	46.5	46.5
	46.7-47.6	47
	47.7-48.6	48
	48.7-49.6	49
	49.7-50.6	50
50	51.6	51.6
	53.4	53.4
	54.7-55.6	55
	55.7-56.6	56
	56.7-57.6	57
	57.7-58.6	58
	58.7-59.6	59
56	59.7-60.6	60
	60.7-61.6	61
	61.7-62.6	62
	62.7-63.6	63
	63.7-64.6	64
	64.7-65.6	65

- Remove the cover **(13)** from the Cover by turning it counterclockwise.
- Install the insert **(14)** into the adapter **(15)** all the way in **(Fig.4)**
  Important! The insert must be installed with the narrowed part facing downward.
- Install firmly the adapter with the insert onto the objective lens **(17)** of an day device **(Fig.7).**
- Snap the lever **(18)** from the original **OPEN** position to the **CLOSE** position **(Fig.7)**. Check that the adapter firmly fits the objective lens. If you see there is a clearance, please:
  - Loosen the locking screw **(19)** with the hex-nut wrench (S=2mm).
- Tighten the screw **(20)** with hex-nut wrench (S=4mm) with a clamping force necessary to ensure that the adapter fits tightly the objective lens.
- Tighten the locking screw **(19)**.

It is recommended that you degrease the objective lens of your day device and the inner side of the insert before installing the cover adapter.
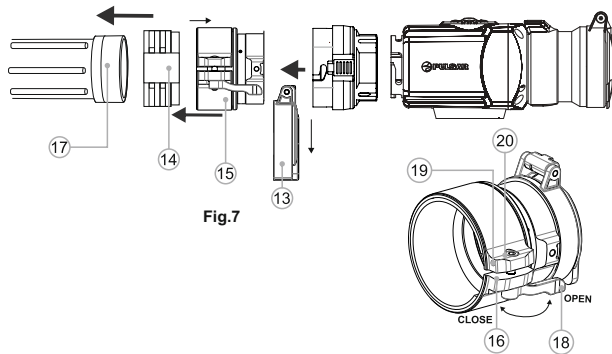

Fig.7

Stage 3. Mounting CORE unit on a day device
- Insert firmly the **CORE** unit with mounted attachment's eyepiece into the cover adapter so that the pins in adapter's body enter grooves of the attachment's eyepiece. Turn the **CORE** unit counterclockwise to hear a click.
- Tighten the screw **(20)** with the hex-nut wrench, to ensure that when turning the lever, the adapter with insert tightly fits the objective lens of day device.
  Mounting eyepiece on CORE unit
- To mount the eyepiece on the unit, make sure that the lower salients **(C)** of the eyepiece match the lower yellow salients **(Fig. 8)**.
- Insert the eyepiece into the unit's body and turn the locking ring **(5)** clockwise.

Having turned the unit on, please make sure that the line of horizon of you day device is parallel to the upper and lower edges of the display of the CORE monocular.

correct	wrong	
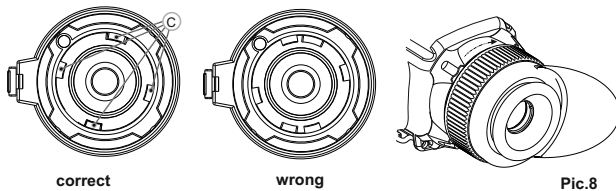
Pic.8

OPERATION. CALIBRATION.

- Power on the unit with **"ON/OFF" (9)** button. In case of low battery icon will start flashing on the status bar.
- Do the image calibration. Calibration levels background temperature of the microbolometer and eliminates image flaws.ee calibration modes are available: manual **(M)**, semiautomatic **(H)** and automatic **(A)**.

Manual (silent) calibration mode
- Open the lens cap **(1)**.
- Press briefly the **"ON/OFF" (9)** button to power on the unit, hold down the **"MODE" (12)** button for two seconds to enter the menu.
- Use the navigation buttons **"LEFT" (10) and "RIGHT" (11)** to select item Cal. Select mode **M**. Press **"MODE"** to confirm. To exit the menu, press and hold **"MODE"** for two seconds or wait 10 seconds for automatic exit.
- Close the lens cap. Press the **"ON/OFF"** button to calibrate. The image will freeze for 1-2 seconds. Then open the lens cap. Calibration is completed.
- If you see image flaws (such as frozen image, vertical stripes etc.) re-calibrate the unit with the lens cap closed.

Semiautomatic calibration mode
- Power on the unit, open the lens cap.
- Hold down the **"MODE" (12)** button for two seconds to enter the menu.
- Use the navigation buttons **"LEFT" (10)** and **"RIGHT" (11)** to select item Cal. Select mode **H**. Press **"MODE"** to confirm.
- Press the **"ON/OFF" (9)** button to calibrate. The image will freeze for 1-2 seconds and you will hear the sound of the internal shutter. Calibration is completed.

Automatic calibration mode
- In automatic calibration mode the thermal imager calibrates by itself according to the software algorythm. The detector (microbolometer) is closed with the shutter automatically. User assisted calibration with the **"ON/OFF"** button is allowed in this mode.
- Power on the unit, open the lens cap.
- Hold down the **"MODE"** button for two seconds to enter the menu.
- Use the navigation buttons **"LEFT" (10)** and **"RIGHT" (11)** to select item Cal. Select mode **A**. Press MODE to confirm.
- At the moment of the automatic calibration the image will freeze for 1-2 seconds and you will hear the sound of the internal shutter.
  Note: time intervals between calibrations depend on the heat of the detector. The unit may require calibration more frequently on activation.

Focusing and adjusting the image
- Open the lens cap **(1)**.
- Adjust sharp image of icons on the status bar by turning the eyepiece diopter adjustment ring **(4)**.
- To control display brightness, press briefly navigation buttons - **"LEFT" (10)** (decrease) and **"RIGHT" (11)** (increase). Selected brightness level (from 0 to 20) appears next to icon ☼ in the top right corner of the display.

- To switch to contrast control, press briefly the **"MODE" (12)** button (icon ◑ appears). Press briefly navigation buttons - **"LEFT" (10)** (decrease) and **"RIGHT" (11)** (increase) to select contrast level (from 0 to 20). Corresponding contrast level appears next to icon in the top right corner of the display.
- Point the unit at a warm object located at a certain distance, 100 meters, for example.
- Rotate the lens focus knob **(3)** until you achieve quality image.
- After this adjustment no further dioptre adjustment should be required, regardless of distance or other factors. Adjust image quality only with the lens focus knob.

Other functions

- Press and hold down the **"RIGHT" (11)** button for two seconds to activate 2x digital zoom (available only if the unit is used as a monocular). Icon **x2** appears on the status bar.
- Press and hold down the **"LEFT" (10)** button for two seconds to activate colour inversion (functions "Hot white" and "Hot black"). When function "White hot" is used, warm objects are represented in shades of bright colour; "Black hot" represents objects in shades of dark colour.
- Press and hold down **"ON/OFF" (9)** for two seconds to switch off the unit.

11 ● MENU

The menu includes options as follows:

- Operating mode   Mode
- Calibration mode   Cal
- Brightness setting of menu icons ☀
- Clock setup ⏱
- Remote control activation 🛜
- Defective pixel repair ⊕

Status bar

The status bar shows information as follows:
- Operating modes (**"Rocks", "Forest", "Identification"**)
- Calibration mode (manual, semiautomatic, automatic)
- Digital zoom x2 activated
- Color inversion activated
- Clock setup
- Battery status

Operating modes

The unit features three automatic operating modes: **"Rocks"** ▲▲ (enhanced contrast), **"Forest"** ▲ (low contrast) and **"Identification"** ◉ (improved detail rendering).
Each mode includes optimal combination of parameters (brightness, contrast, gain etc.) to deliver best possible image in specific viewing conditions.

- Press and hold down the **"MODE" (12)** button for two seconds to enter the menu.
- Press briefly **"MODE"** to confirm your choice.
- Icon of the selected mode is shown on the status bar.

Calibration modes

Please see section 8 **"Operation"** for details.

Brightness setting of menu icons

- Press and hold down the **"MODE" (12)** button for two seconds to enter the menu.
- Press briefly navigation buttons - **"LEFT" (10)** and **"RIGHT" (11)** to select icon ☀
- Select brightness level (1 to 10) with navigation buttons.
- To exit the main menu, hold down the **"MODE"** button for two seconds or wait 10 seconds to exit automatically.

Clock setup

- Press and hold down the **"MODE" (12)** button for two seconds to enter the menu.
- Press briefly navigation buttons - **"LEFT" (10)** and **"RIGHT" (11)** to select icon ⏱. Press **"MODE"**.
- Select time format **"24"** or **"AM/PM"** with navigation buttons.
- Press **"MODE"** to proceed to hour setup. Set with navigation buttons.
- Press **"MODE"** again to proceed to minute setup. Set with navigation buttons.
- To exit the main menu, hold down the **"MODE"** button for two seconds or wait 10 seconds to exit automatically.

Remote control activation

The wireless remote control duplicates activation of unit, color inversion and image calibration.
It has three buttons:

The remote control has three buttons:
- Button **"ON" (22)** – turning on/off the unit (on – brief press/off – long press (2 sec)).
- Button **(23)** - color inversion
- Button **"CAL" (24)** – image calibration To start using the wireless remote control you will need to activate it:
- Turn on the scope and select menu option **"RC activation"** (icon 🛜).
- Press **"MODE" (12)** button, message **"WAIT"** will appear and countdown will start within which you need to press and hold for two seconds any RC button.
- If the activation is successful, message **"Complete"** will appear next to icon 🛜. The RC is ready for use.
- If the RC does not work, replace the battery. To do this, unscrew the screws on the rear panel of the RC, remove the cover, pull out the old battery and insert a new CR2032 battery.
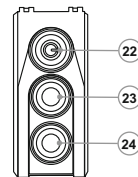
Defective pixel repair

When operating the thermal imager, there is a possibility of defective (dead) pixels (bright or dark dots with constant brightness) appearing on the detector which are visible on the image.
Thermal unit **CORE** allows you to repair defective pixels on the detector (microbolometer) using a software-based method.

- Press and hold down the **"MODE" (12)** button for two seconds to enter the menu.
- Press briefly navigation buttons - **"LEFT" (10)** and **"RIGHT" (11)** to select icon ⊕ , press **"MODE"**.
- Select icon ✕ in the pop-up submenu and press **"MODE"**.
- A red cross appears in the centre of display, coordinates (X; Y) ↕ $^{X=50}_{Y=50}$ of the cross relative to the centre of display appear in the place of pop-up icons, icons disappear.
- Use navigation buttons to align the center of the cross with a defective pixel (defective pixel should go out). Switch direction of the cross from horizontal to vertical by a short press of the **"MODE"** button.
- After the centre of the cross is aligned with a defective pixel, press the **"ON/OFF" (9)** button to repair the pixel.
- In case of success a short **"OK"** message appears next to the coordinates.
- Further on, move the cross to repair another defective pixel. When moving the cross to the coordinates area, the latter goes to the lower right portion of the display.
- To exit menu option **"Defective pixel repair"**, press and hold button **"MODE"** for two seconds.

Return to default defective pixel pattern

- If you wish to return to the default defective pixel pattern (i.e. restore all defective pixels previously repaired), select icon in the pop-up submenu and press the **"MODE"** button.
- Options **"Yes"** and **"No"** appear on the right of the **"MODE"** button.
- Use navigation buttons to select **"Yes"** and press the **"MODE"** button.
- If you choose not to return to default pixel pattern, select "No" and press **"MODE"** button.
- To exit the main menu, press and hold down the **"MODE"** button for two seconds or wait 10 seconds to exit automatically.

Attention! One or two pixels in the form of bright white or black 1-2 pixels dots are allowed on the display of thermal imager. These pixels cannot be repaired and are not a defect.

12
● **MAINTENANCE AND STORAGE**

- The unit in monocular mode features degree of protection IPX7 (fully waterproof, submersible at 1 meter for 30 minutes); in attachment mode IPX5 - protection against water jets.
- **Attempts to disassemble or repair the scope will void the warranty!**
- Clean the scope's optical surfaces only if necessary, and use caution. First, remove (by blowing with a blower brush or canned air) any dust or sand particles. Then proceed to clean by using camera/lens cleaning equipment approved for use with multicoated lenses. Do not pour the solution directly onto the lens!
- Always store the unit in its carrying case in a dry, well-ventilated space. For prolonged storage, remove the batteries.
- Batteries shall not be exposed to excessive heat such as sunshine, fire or the like.

13
● **TROUBLESHOOTING**

Listed below are some potential problems that may occur when using the scope. Carry out the recommended checks and troubleshooting steps in the order listed. Please note that the table does not list all of the possible problems. If the problem experienced with the scope is not listed, or if the suggested action meant to correct it does not resolve the problem, please contact the manufacturer.

Problem	Possible cause	Corrective action
The unit will not turn on.	Batteries have been incorrectly installed.	Reinstall the batteries observing polarity.
	Battery cover is not tightly closed.	Close tightly the battery cover.
	Oxidized contact points in the battery compartment or on the battery cover due to "leaky" batteries or contact points becoming exposed to a chemically reactive solution.	Clean the contacts of the battery compartment or the battery cover.
	The batteries are fully exhausted or one or several batteries are faulty.	Install fresh batteries.
The image is blurry, with vertical stripes and uneven background.	Calibration is to be done.	Do the calibration according to section 9 "OPERATION"
The image is too dark.	The lowest brightness level is set.	Adjust display brightness.
Point of impact does not match the aiming point.	Display calibration needs to be done.	Do display calibration as per guidelines below.

Display calibration

- Press **simultaneously** and hold for two seconds buttons **"LEFT" (10)** and **"MODE" (12)** or RC buttons **(23)** and **(24)** to enter the auxiliary menu. Press buttons **"LEFT" (10)** or **"RIGHT"(11)** to select menu item ⊕ **"Display calibration"**. Press **"MODE"** to confirm.
- Auxiliary cross in a limiting frame ⊠ and symbols will appear on the display 1↔ .
- **First,** match the auxiliary cross and the centre of sight's reticle.
- To move the frame with the cross horizontally and vertically, press buttons **"LEFT"** or **"RIGHT"** (or RC buttons **(22),(24)**). Movement takes places upon both short and long press. To switch movement direction from horizontal to vertical, press button **"MODE"** or **(23)** RC button.
- **Second,** hold **"MODE"** (or **(23)** RC button) for two seconds. Figure **"2"** and X, Y coordinates values appear next to the icon 2 : $^{X=-02}_{Y=06}$.

- While holding the reticle in the aiming point, move the auxiliary cross to the point of impact with buttons **"LEFT"** or **"RIGHT"** (or RC buttons **(22),(24)**). To switch movement direction from horizontal to vertical, press button **"MODE"** or **(23)** RC button. *Horizontal/vertical travel range of the auxiliary cross relative to the limiting frame is +/-10.*

- Eventually the auxiliary cross should match the point of impact, with the sight's reticle being held in the aiming point.

- To save display calibration parameters, keep the **"MODE"** button (or **(23)** RC button) pressed for two seconds - display will show **"OK"** message; the image of the target centre should now coincide with the centre of the of sight's reticle.

To restore factory settings, select **"Yes"** in the item ↻ **"Default settings"**.

Parameters as follows are restored to factory settings:

- **Operating mode** – **"Forest"**;
- **Brightness of menu symbols** – 5;
- **Magnification** – x1;
- **Brightness settings** – 10;
- **Image calibration mode** – automatic;
- **Display calibration** – coordinates X=0, Y=0;
- **Color inversion** - off;
- **Contrast settings** – 6.

*Note. Auxiliary menu items (**"Display calibration"** and **"Default settings"**) are only available when the unit is in attachment mode.*