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PULSAR

CORE RXQ30V

THERMAL IMAGING SIGHT

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

ENGLISH

ATTENTION!
Export of model **76483** with a refresh rate of 50 Hz may have export limitations depending on the laws in your region.

RoHS COMPLIANT PRODUCT

ENGLISH

SPECIFICATIONS:

SKU Model	76483 CORE RXQ30V
Microbolometer characteristics:	
Detector type	uncooled
Resolution, pixels	384x288
Pixel size, μm	17
Refresh rate, Hz	50
Optical characteristics:	
Magnification, x	1.6
Digital zoom	x2 / x4
Objective lens	F30/1.6
Eye relief, mm	50
Exit pupil, mm	5
Horizontal field of view, degree / m @100m	12.4 / 21.8
Diopter adjustment, D	-4/+3
Max. observation range of an animal 1.7 m high, m / y	900 / 985
Close-up range, m	5
Reticle	
Click value, mm@100 m (H/V)	34 / 34
Click range, mm@100m (H/V)	6800 / 6800
Display:	
Type	AMOLED (Green Sapphire)
Resolution, pixel	640x480
Operational characteristics:	
Power supply, V	4 - 6
Battery type	2xCR123A
External power supply	5V (USB) / 12V (EPS)
Max. operating time on a battery set, h (at t=22 °C)	4
Degree of protection, IP code (IEC60529)	IPX7
Max. recoil power on rifled weapon, Joules	6000
- smooth-bore rifle	cal. 12
Mount type	Weaver (76483) / QD112 (76483Q)
Operating temperature	-25 °C…+50 °C/-13 °F…122 °F
Dimensions, mm / inch	180x65x60 / 7x2.5x2.4
Weight (without batteries), kg/oz	0.45 / 15.9

1 PACKAGE CONTENTS

- Thermal imaging sight
- Carrying case
- Wireless remote control
- External power adapter*
- USB cable*
- Mount (with screws and hex-nut key)*
- User manual
- Cleaning cloth
- Warranty card

** May not be included for certain orders.*

The design and firmware 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

Thermal imaging sight **CORE RXQ30V** is designed for the use on hunting rifles both 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.). Unlike the image intensifier tube based night vision riflescopes, thermal imaging sight does not require an external source of light and are not affected by bright light exposure.

The **CORE RXQ30V** sights have a wide range application including night hunting, observation and terrain orientation, search and rescue operations.

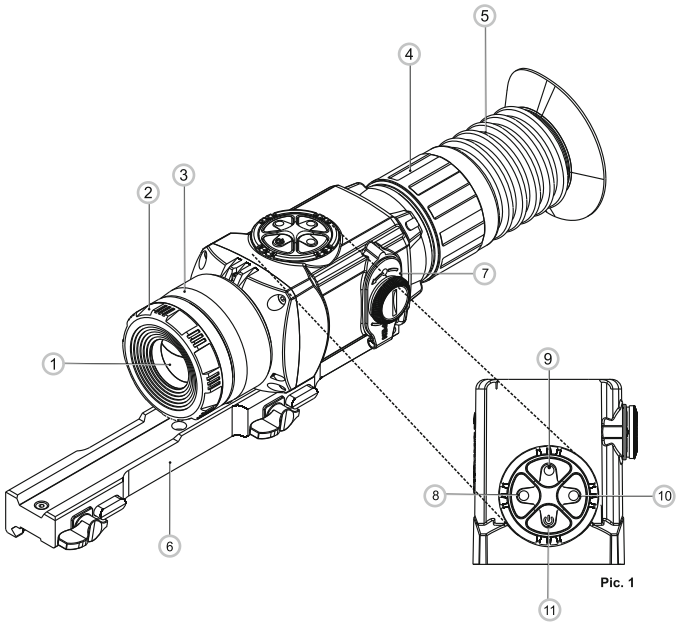
3 FEATURES

- Long eye relief (50 mm)
- 384x288 pixels Microbolometer sensor
- 640x480 pixels quality AMOLED display
- Function PiP («picture in picture»)
- Three calibration modes - manual, semiautomatic and automatic
- Three operation modes – “Rocks”, “Forest”, “Identification”
- Image inversion modes: “White hot” and “Black hot”
- Wide choice of selectable reticles in sight's memory
- One shot zeroing and zeroing with FREEZE function
- Memorization of zero-in parameters for three types of weapon or distances
- Choice of reticle colour
- Optional external power supply**
- High shock resistance
- Degree of protection IPX7
- Defective pixel repair option
- Wireless remote control
- Wide range of display brightness and contrast adjustment with memorization of user settings
- Display off function – protects against decamouflage and quick power on for immediate use

** *With external power adapter*

4 COMPONENTS AND CONTROLS

1. Lens diaphragm
2. Wheel for diaphragm opening
3. Lens focus ring
4. Eyepiece diopter adjustment ring
5. Eyeshade
6. Mount
7. Battery compartment cover
8. Navigation button **“RIGHT”**
9. Button **“MODE”**
10. Navigation button **“LEFT”**
11. Button **“ON/OFF”**



Pic. 1

Button	Operating mode	First short press	Next short presses	Long press
ON/OFF	Sight is off	Powering the sight on	Image calibration	Display off / Powering the sight off
	Display off	Display on		
	Sight is off	Image calibration		
MODE	Contrast	Brightness	Contrast	Enter the main menu
	Brightness	Contrast	Brightness	
RIGHT	Brightness and contrast	Increasing value		Activation of digital zoom or PiP (if PiP is activated in the menu)
	Menu navigation	Menu navigation – upwards and rightwards		
LEFT	Brightness and contrast	Decreasing value		Activation of image inversion (“White hot” and “Black hot”)
	Menu navigation	Menu navigation – downwards and leftwards		

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
	Brightness setting of menu icons
x2	x2 full magnification
	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

Other icons are shown in the section **“MENU”**.

6 GUIDELINES FOR OPERATION

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

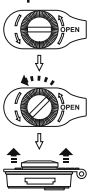
- Before use make sure that you have mounted and adjusted the unit according to the instructions of the section **"Operation"**.
- Store with the lens cap on in the carrying case.
- Switch off the unit after use.
- **Attempts to disassemble or repair the unit will void the warranty!**
- The unit is designed 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.

7 BATTERY INSTALLATION

- Turn the battery compartment knob **(7)** 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:



Pic.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.

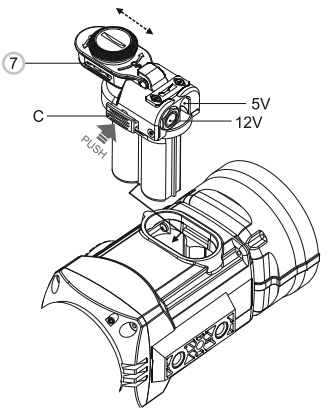
8 EXTERNAL POWER SUPPLY

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).

- Open and remove the battery compartment cover (see section 7).
- Install the external power adapter into the monocular's battery compartment **(see Pic. 3)** and press it firmly from above to make sure that the adapter's latches **(C)** have snapped on both sides.
- Secure the cover **(7)** on the adapter (see Pic. 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 12V 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.



Pic. 3

9 INSTALLATION OF MOUNT

- Before using the sight you need to install a mount.
- The sight can be used with two mount types such as Weaver and quick-release Weaver QD112 that allow the sight to be installed on different types of rifles.
- The mounting holes in the mount enable it 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.
- The mount can be attached with the help of two screws (supplied) depending on the chosen position of the mount.

MOUNTING THE QUICK-RELEASE MOUNT:

- Attach the mount to the base of the sight using a hex-nut wrench S4 and screws **(12)(Pic. 4)**.
  Note: *the mounting holes in the mount enable it 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.*
  Install the sight on the rifle rail and check if the position is suitable for you.
- Remove the sight from the weapon.
- Unscrew the screws one by one, apply some thread sealant (Loctite 638 for example) onto the thread of the screws and tighten them fully (do not overtighten). Let the sealant dry for a while.
- Move the clamps **(15)** to the **"OPEN"** position and relieve the retaining nuts **(13)** of the clamps **(15)** using the S5 hex-nut wrench **(Pic.6).**
- Install the mount with your sight on the rail of your weapon.
- Move the clamps **(15)** from **"OPEN"** to **"CLOSE"** position **(Pic. 6)**.
  By tightening the retaining nuts **(13)** of the clamps **(15)** with a hex-nut wrench S5 make sure that the mount is securely fixed on the rail without gaps.
- Check that the clamps **(15)** are securely fixed with the latches **(14)** in the "CLOSE" position - when trying to move the clamps from **"CLOSE"** to **"OPEN"** position - they should rest against the latches.
- If this does not happen (the clamps skip the latches) - increase the height of the clamps. To do this, use the S3 hex-nut wrench to rotate the retaining nuts
- **(16)** of the latches counter-clockwise until the clamps securely rest against the latches **(Pic. 7)**.
- Press the latches **(14)** and move the clamps **(15)** to the **"OPEN"** position; you should be able to easily remove the sight from the rail.
- The sight is ready for zeroing.
- After first installation of your sight on a rifle, please follow instructions in the section **"Zeroing"**.
  Note. *Please check that your sight is duly zeroed after changing a mount.*

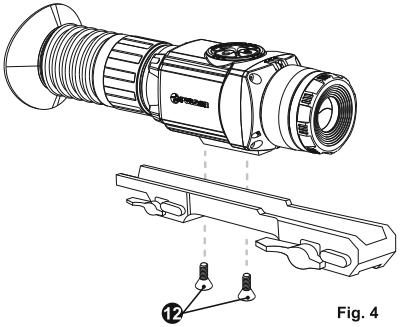


Fig. 4

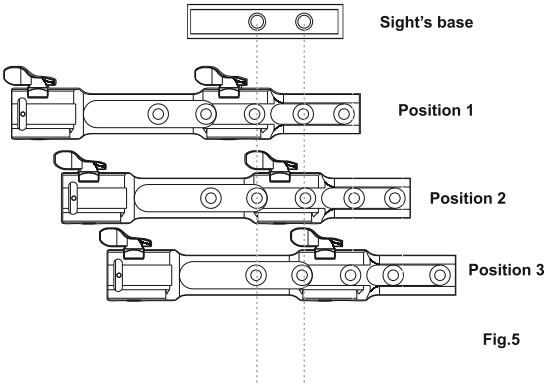


Fig.5

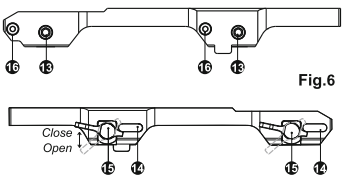


Fig.6

Fig.7

10 OPERATION. CALIBRATION.

Turn on the sight by pressing the **ON** button (**11**). If the battery has no charge, the empty battery icon in the status bar will start blinking.

- Perform image calibration (see below). Calibration enables levelling of the background temperature of the microbolometer and eliminates image flaws.
- Three calibration modes are available: manual (**M**), semiautomatic (**H**) and automatic (**A**).

Manual (silent) calibration mode

- Rotate the wheel **(2)** clockwise to open the diaphragm, counterclockwise to close it.
- Turn on the sight with a brief press of the **"ON/OFF" (11)** button, press and hold the **"MODE" (9)** button for two seconds to enter the menu.
- Use the navigation buttons **LEFT** (**10**) and **RIGHT** (**8**) 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 diaphragm. 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 diaphragm closed.

Semiautomatic calibration mode

Power on the sight, open the lens diaphragm.

- Press and hold the **"MODE" (9)** button for two seconds to enter the menu.
- Use the navigation buttons **LEFT** (**10**) and **RIGHT** (**8**) to select item Cal.
- Select mode **H**. Press MODE to confirm.
- Press the **ON/OFF** (**10**) 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 algorithm. The detector (microbolometer) is closed with the shutter automatically. User-assisted calibration using the ON/OFF button is allowed in this mode.

- Power on the sight, open the lens diaphragm.
- Press and hold the **"MODE" (9)** button for two seconds to enter the menu.
- Use the navigation buttons **LEFT** (**10**) and **RIGHT** (**8**) 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. Calibration may take place more frequently when the device is switched on.

- Rotate the wheel **(2)** clockwise to open the diaphragm,
- Adjust the sharpness of the icons on the status bar by turning the diopter adjustment wheel (**5**).
- To control display brightness, press briefly navigation buttons - LEFT (**10**) (to decrease) and RIGHT (**8**) (to increase). The brightness level selected (from 0 to 20) appears next to the icon in the top right corner of the display.
- To switch to contrast control, press briefly the **MODE** (**8**) button (icon appears). Press briefly navigation buttons - **LEFT** (**10**) (decrease) and **RIGHT (8)** (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 metres, for example.
- Rotate the lens focus knob (**3**) until you achieve optimum image quality. After this adjustment no further diopter 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 **LEFT (10)** button for two seconds to activate colour inversion (functions **"White Hot"** and "**Black Hot"**). When **"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** (**11**) for two seconds to turn the sight off.

11 ZEROING

The sight 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:

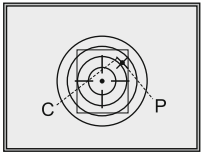


Fig.8

One shot zeroing:

- Mount the rifle with the sight installed on a bench rest.
- Set a target at a distance of about 100m.
- Adjust the sight according to the instructions of section "OPERATION".

- Aim the firearm at the target using and take a shot.
- If the point of impact does not match the aiming point, press the **MODE** button to enter menu **M2** and rotate the controller to select option **"Zeroing"** marked with icon ⌖).
- An auxiliary cross ✕ **(C)** appears in the centre of display. On the right of the icon appear horizontal arrows and coordinates of the auxiliary cross ⌖◂▸ X=00 Y=00
- Holding the reticle in the aiming point, pressing the **LEFT/RIGHT** buttons, move the auxiliary cross **(C)** horizontally or vertically relative to the reticle until the auxiliary cross matches the point of impact **(P)** (see pic. 8).
- To switch between movement direction push **MODE** to hear a click. Vertical lines appear next to the icon ⌖▴▾ X=00 Y=00 .

  Note: the auxiliary cross moves only within the limiting frame (see pic.) that defines its travel range: 200 clicks horizontally (+100/-100) and 200 clicks vertically (+100/-100).
- Exit submenu **"Zeroing"** with a long press MODE button. Message Ok confirms successful operation. The reticle will now move to the point of impact.

  Attention! Do not turn off the sight before zeroing settings are saved, otherwise your settings will be lost.
- Take another shot - the point of impact should now match the aiming point.
- The sight should now be zeroed-in for the specified distance.

ZEROING WITH FREEZE FUNCTION

- Before using this function, take a shot.
- Match the reticle of the sight with the aiming point (as a rule - target centre) While in the zeroing menu, press the **ON/OFF (11)** button or RC button **(19)** the image "freezes" and icon ❄ appears on the display.
  Note. *After the image freezes, you do not need to keep your weapon pointed at the target.*
- With buttons **LEFT/RIGHT** move the auxiliary cross within the limiting frame until the cross matches the point of impact.
- Brief press of the **MODE** button allows you to switch direction of auxiliary cross (horizontal or vertical). Long press of the **MODE** button saves zeroing settings and exits the menu.
- Saving the settings is confirmed with **"Ok"** message displayed instead of the coordinates.
- After exiting the menu, the image returns to normal.
  Note: zeroing parameters (coordinates X; Y) are saved in the sight's memory as number 1 in the menu option "Weapon choice". If you want to zero in the sight using another weapon or another distance, select option 2 or 3 (details in the menu option "Weapon choice" section 11) and do the zeroing.

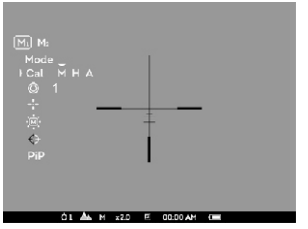
12 MENU

STATUS BAR

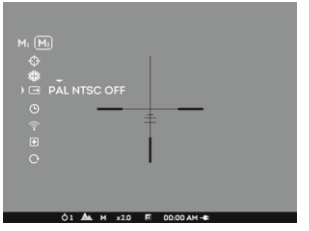
The status bar shows information as follows:
1. Number of weapon choice (1,2,3): ◎
2. Operating mode (**"Rocks"**,**"Forest"**,**"Identification"**): ▲
3. Calibration modes - manual, semiautomatic and automatic: **M**
4. Full magnification: **3.2x**
5. Image inversion is on: ◪
6. Running time: **00:00 AM**
7. Battery charge level ▭ or connected external battery ▭

There are two menus:
M1 – menu 1 (main menu);
M2 – menu 2 (additional menu);
Active menu is highlighted with a frame M1 . To switch to the other menu, press the navigation buttons (the frame will be flashing), and press briefly the **MODE (9)** button.

Menu M1 options:
- Operating mode selection **Mode**
- Calibration mode selection **Cal**
- Weapon selection (1,2,3) ◎ 1
- Selection of preloaded reticle ⊹
- Brightness control of onscreen symbols ☼
- Reticle colour selection ⌖
- Function PiP **PiP**



Menu M2 options:
- One shot zeroing ⌖
- Clock setup ◷
- Remote control activation ᯤ
- Defective pixel repair option ⊕
- Return to default settings ⟳



MENU M1:

▸ Mode **Operating modes**

There are three automatic operating modes: – **"Rocks"** (enhanced contrast), **"Forest"** (low contrast), **"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 the **"MODE" (9)** button for two seconds to enter the menu. Select option "Operating mode" with navigation buttons **"LEFT" (10)** and **"RIGHT" (11)**. Briefly press **MODE** to confirm your choice.
- Select the required operating mode with navigation buttons.
- Briefly press **MODE** to confirm your choice.
- Icon of the selected mode is shown on the status bar.

▸ Cal **Calibration mode selection.** Refer to section 10.

▸ **Weapon selection (1,2,3)**

This menu option allows selection of three positions of the aiming point for various types of weapons or for various distances. Also this option allows you to save three types of reticle for each weapon.

- Press and hold the **"MODE" (9)** button for two seconds to enter the menu. Select option "**Weapon selection**" with navigation buttons **"LEFT" (10)** and **"RIGHT" (11)**. Briefly press **MODE** to confirm your choice.
- To select required option, press **"MODE"** and select a number out of the list (1,2,3).
- Briefly press **MODE** to confirm your choice.
- Number of the selected variant of the weapon to use is shown in the status bar in the lower portion of the display.

Note. Originally the reticle for all the three variants is located in the display centre (coordinates X=0;Y=0). Further on, each type of weapon (distance) requires individual zeroing.

▸ **Selection of preloaded reticle**

This menu option allows selection of one of the 10 preloaded reticles. Menu option shows number of the reticle.

- Press and hold the **"MODE" (9)** button for two seconds to enter the menu.
- Select option "**Selection of preloaded reticle**" with navigation buttons **"LEFT" (10)** and **"RIGHT" (11)**. Briefly press **MODE** to confirm your choice.
- Select reticle number out of the list with the navigation buttons.
- Corresponding reticle will be shown on the display.
- Briefly press **MODE** to confirm your choice.
- List and full description of the reticles can be found at www.pulsar-nv.com

Note: *adequate operation of the reticles is supported for the optical (digital zoom off), and in the "PiP" mode ("Picture in Picture").*

▸ **Brightness control of onscreen symbols**

- Press and hold the **"MODE" (9)** button for two seconds to enter the menu. Select icon with navigation buttons **"LEFT" (10)** and **"RIGHT" (8).**
- Briefly press **MODE** to confirm your choice.
- Rotate the controller to select brightness level of icons – from 1 to 10.
- To exit the main menu, press and hold down the **MODE** button for two seconds or wait 10 seconds to exit automatically.

▸ **Reticle colour selection**

- Press and hold the **"MODE" (9)** button for two seconds to enter the menu. Select icon with navigation buttons **"LEFT" (10)** and **"RIGHT" (8).**
- Briefly press **MODE** to confirm your choice.
- With navigation buttons **"LEFT" (10)** and **"RIGHT" (8)** select one of the colors - black or white.
- Briefly press **MODE** to confirm your choice.

▸ **PiP** Function **PiP**

- Function PiP ("picture in picture") allows you to enlarge central area of the reticle twice which facilitates aiming without narrowing the field of view.
- Press and hold the **"MODE" (9)** button for two seconds to enter the menu. Select icon **PiP** with navigation buttons **"LEFT" (10)** and **"RIGHT" (8).**
- Briefly press **MODE** to confirm your choice.
- Select **"Yes"** to activate the mode. Select **"No"** to deactivate.
- Briefly press **MODE** to confirm your choice.

Note: digital zoom does not function when function PiP is activated.

MENU M2:

▸ **One shot zeroing**

Refer to section 11 "Zeroing".

▸ **Clock setup**

- Press and hold the **"MODE" (9)** button for two seconds to enter the menu.
- Select icon with navigation buttons **"LEFT" (10)** and **"RIGHT" (8).**
- Briefly press **MODE** to confirm your choice.
- 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**

Refer to section 13.

▸ **Defective pixel repair option**

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 the **"MODE" (9)** button for two seconds to enter the menu. Select icon ⊕ with navigation buttons **"LEFT" (10)** and **"RIGHT" (8).**
- Briefly press **MODE** to confirm your choice. 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" (11)** 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 **icon.**
- 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.**

▸ ⟳ Return to default settings

To return to default settings:

- Select icon ⟳ in the menu with navigation buttons **"LEFT" (10)** and **"RIGHT" (8).** Briefly press **MODE** to confirm your choice.
- To activate return to default settings, rotate the controller to select "Yes", briefly press **MODE**.

The following settings will return to their original status before the changes:

- **Operating mode** – "Forest";
- **Calibration mode** – automatic;
- **Weapon selection** – 1;
- **Selection of preloaded reticle** – 1 (for all weapon types);
- **Reticle colour** – black;
- **Brightness of menu symbols** – 5;
- **Display brightness level** – 10;
- **Display contrast level** – 6;
- **Full magnification** – digital zoom;
- **Image inversion** – off
- **Function "PiP"** – off

To cancel return to default settings, select "No" and press controller button to confirm.
Note: *zeroing coordinates do not return to default for all types of weapon.*

Function "Digital zoom"
On the display you can see the full magnification which is a product of the optical magnification and **x2 / x4** digital zoom.

Optical magnification	Digital zoom ratio	
	x2	x4
	Full magnification	
1.6x	3.2x	6.4x

Change the digital zoom values cyclically with a long press of the **RIGHT (8)** button:
off => x2 => x4 => off.
You can also operate the digital zoom with the remote control (PiP should be off) – please refer to section **"Remote control activation".**

13 REMOTE CONTROL ACTIVATION

Wireless remote control duplicates functions major functions:

Button	ON (17)	MODE (18)	CAL (19)
Short press	Power on the sight Display off/on	Change digital zoom or PiP	Calibration
Long press	Power off the sight	Image inversion	

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" (9)**, a message **"WAIT"** will show up and countdown will start within which you need to press any button of the **RC**.
- If the activation is successful, a message **"Complete"** will show up next to icon. The **RC** is ready for use.

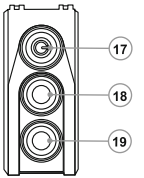


Fig. 9

- If the **RC** does not function, 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.

14 MAINTENANCE AND STORAGE

- The sight features degree of protection IPX7 (fully waterproof, submersible at 1 meter for 30 minutes) - when the device is used **without the external power adapter.**
  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.

15 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.
	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. Use external power supply.
	Battery cover is not fully closed.	Make sure that the battery cover has snapped on both sides.
The image is blurry, with vertical stripes and uneven background, spots of various size and brightness.	Calibration is to be done.	Do the calibration according to section 9 “OPERATION”
The image is too dark.	The lowest brightness or contrast level.	Adjust display brightness/contrast with navigation buttons.
The reticle is blurred and cannot be focused with the dioptre knob.	The dioptre cannot be adjusted to your eyesight.	If you wear prescription glasses with a range of -4/+3, 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 sight 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 sight dry by leaving it in a warm environment for 4 hours.
The aiming point shifts after firing rounds. The sight will not focus.	The sight is not mounted securely or the mount was not fixed with thread sealant.	Check that the sight 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 sight 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 sight will not focus.	Wrong settings.	Adjust the sight according to the instructions given in the Section “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 sight cannot be started with wireless remote control.	Remote control is not activated. Low battery.	Activate the remote control according to instructions in section 13. Install a new CR2032 battery.
The unit does not operate on external power supply.	Make sure your power supply provides output voltage. Make sure the central pin of the external power supply and plug contacts are intact.	Charge the external power supply (if required). If necessary, align the contacts in the external power supply pin with pincers or another suitable tool.
There is no image of the object under observation.	You are looking through glass.	Remove glass from the field of view.
When using the scope at negative temperatures image quality is worse than at positive temperatures.	Due to various thermal conductivity, objects (surrounding environment, background) under observation get warm faster at positive temperatures, which allows higher temperature contrast and, thus, quality of the image produced by a thermal imager, will be better. At low operating temperatures objects under observation (background) normally cool down to roughly equal temperatures which leads to lower temperature contrast, and to image quality (precision) degradation. This is normal for thermal imaging devices.	

GB

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

Participons à la protection de l'enviroment!
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 traitementsoit effectué.

DE AU

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

Samen het milieu beschermen!
Uw toestel bevat meerdere recycleerbare materialen.

Breng deze naar een containerpark of naar een erkend service center, bevoegd voor de recyclage.

ES

¡Participe en la concervación 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

Protezione dell'ambiente!
Il vostro apparecchio contiene materiale che può essere recuperato o riciclato.

Portarlo ad un punto di raccolta autorizzato.

GR

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

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

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.