

PATRIOT

NVECTECH

Instruction for the
thermal imaging monocular

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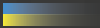
INTRODUCTION

DEVICE DESCRIPTION

Patriot 2 thermal imaging monoculars are reliable companions for tactical operations in extreme environments. They provide high resolution and detection range, allowing operators to see in the dark, through fog and smoke.

Patriot 2 is more than just a device, it is guaranteed accuracy and reliability that helps Ukrainian defenders carry out their missions with confidence and efficiency.

UKRAINE



FEATURES

Battery indicator:
Intelligent indication
battery charge.



A wide selection of lenses:

19 mm – 1200 m;
25 mm – 1500 m;
35 mm – 2000 m;
50 mm – 2900 m.



Updated menu:
More convenient
and functional interface.



Updated controls:
Even stronger, more
comfortable and sensitive.



**New altitude and
temperature sensors:**
Additional analysis environment.



Reinforced robust housing:
High degree protection of the
critical elements.



**The new most
sensitive matrix <18mK:**
(384x288px, 640x512px),
Even faster, even more sensitive.

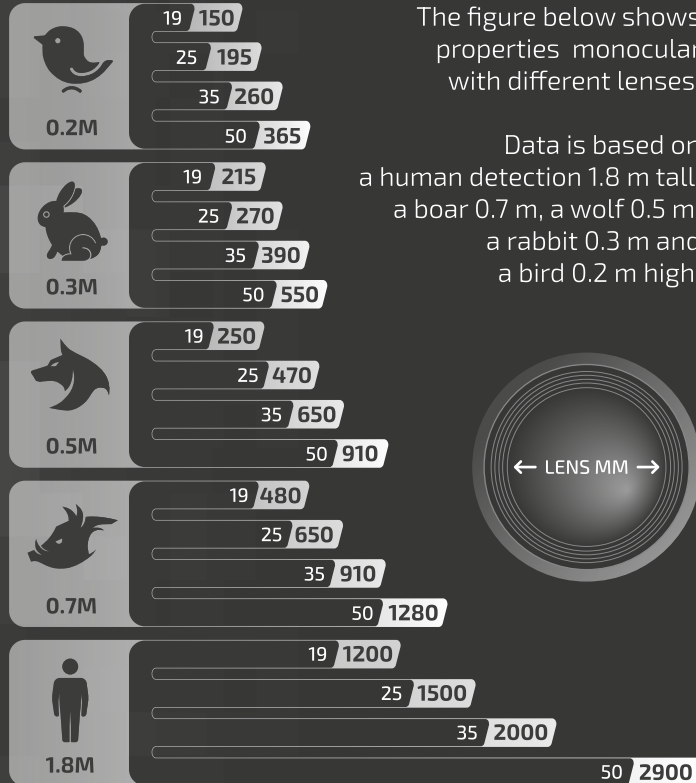


Development:
NVECTECH (Ukraine).



DETECTION RANGE

LENS MM RANGE M









The figure below shows properties monocular with different lenses.

Data is based on a human detection 1.8 m tall, a boar 0.7 m, a wolf 0.5 m, a rabbit 0.3 m and a bird 0.2 m high.

APPLICATION SCENARIOS

- Observation of animals
- Adventures in nature
- Protection of law and order
- Emergency search and rescue

WARNING

-  Avoid hard objects
-  Do not point the lens directly at the sun or high-temperature light sources
-  Do not overuse the device cold or hot environment
-  Charge the battery once every three months when it was not in use
-  Make sure the Type-C cover is tight closed in the water environment
-  Do not disassemble or modify the device in any way

PACKAGE CONTENT



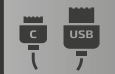
ONE MONOCULAR PATRIOT 2



TWO EYECUP (REGULAR AND CAT EYE)



ONE TACTICAL POUCH



ONE Type-C to USB CHARGING CABEL



ONE Type-C to Type-C VIDEO CABLE



ARM AND NECK STRAPS



ONE INSTRUCTION

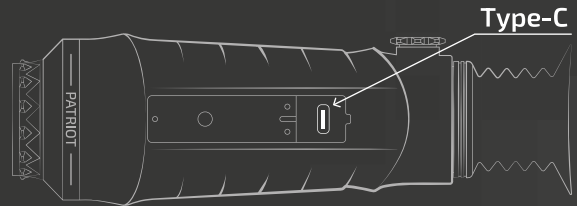
CHARGING

The battery should be fully charged before use.

Note: The battery is not user replaceable.

To charge the battery, follow these steps:

1. Remove the Type-C port cover.
2. Connect the cable from the kit to the Type-C port.
3. Insert the opposite end of the cable into the source USB power supply.



Note: 1 bulb - $\leq 20\%$ charge,
2 bulbs - $\leq 40\%$ charge,
3 bulbs - $\leq 60\%$ charge,
4 bulbs - $\leq 80\%$ charge,
5 bulbs - $\leq 100\%$ charge.

During charging, the corresponding light flashes.

BUTTONS



ON/OFF

Long press for 3 seconds to ON/OFF
Short press to enter/out standby mode



FOTO/VIDEO

Short press - FOTO, long press - VIDEO



LEFT JOYSTICK PRESS

AI range-finder



RIGHT JOYSTICK PRESS

Pseudo-color palette



UP JOYSTICK PRESS

Zoom



DOWN JOYSTICK PRESS

Zoom



CENTRAL JOYSTICK PRESS

One click - shutter, double - main menu

LENSES SETTINGS

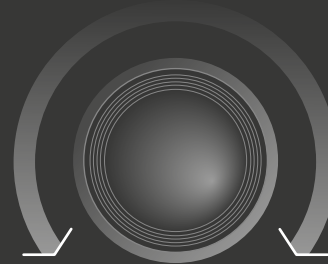
Diopter adjustment

Adjust the position while looking into the eyepiece diopter level to optimize sharpness image on the OLED display.



Focusing

Adjust the focus as needed lens manually.



PSEUDO-COLORS PALLETE



AI RANGE-FINDER



RIGHT JOYSTICK PRESS

Changes the pseudo-color to the following



Pseudo-color palette label

Pseudo color - the thermal distribution of objects converted into visual images using an infrared thermal imaging system and displayed on a monitor in shades of gray or pseudo color.



LEFT JOYSTICK PRESS

Activate AI Range-finder function



AI Range-finder label

AI Range-finder - Artificial Intelligence function that distinguishes targets of known size, determines the distance of these targets and notices them on the screen.

TOP MENU



- N** GPS N - North coordinate.
- E** GPS E - East coordinate.
- H** GPS H - Height above sea level in meters.
- X** Digital scale coeficient.
- The diameter of the objective lens.
- |...|** AI Range-finder (activated).
- |/|** AI Range-finder (deactivated).
- GPS (activated).
- GPS (deactivated).
- ☰** HOTSPOT (activeted)
- ▽** HOTSPOT (deactiveted)
- SP** Stabilisation picture (activeted)
- SP** Stabilisation picture (deactiveted)
- (80%)** Battery charge level.
- 19:04** Time.
- °C** The indicator of the temperature sensor in °C.
- A** Azimuth - clockwise angle relative to north.
- ⤴** Compass.
- ⤴** NorthEast
- ⤴** East
- ⤴** SouthEast
- ⤴** South
- ⤴** SouthWest
- ⤴** West
- ⤴** NorthWest
- ⤴** North

MAIN MENU



CENTRAL JOYSTICK DOUBLE PRESS

To enter the menu settings.

Note: select by moving the lever and short press the lever to confirm the selection.



IMAGE

Thermal image processing settings.



RETICLE

Adjusting the reticle properties.



WIRE+FILE

Wireless connection and saved files.



SETTINGS

General settings of monocular.



SENSORS

Monocular sensor settings.



SYSTEM

Basic settings and system lock.



IMAGE Thermal image processing settings.

BRIGHTNESS

Brightness of the picture.

SHARPNESS

Sharpness of the picture.

NOISE

Noise level of the picture.

CONTRAST

Contrast of the picture.

MENU


Brightness of the menu buttons.

SHOW MENU

Show or hide the top menu.

MODE

Image enhancement mode – WDR or OBJECT.

 **RETICLE** Adjusting the reticle properties.

RETICLE

ON/OFF the reticle.

BRIGHTNESS

Brightness of the reticle.

POINT

Color of the central point of the reticle.

TYPE

Form of the reticle.

COLOR

Changing the color of the reticle

XY

Moves the reticle pixel by pixel

 **WIRE+FILE** Wireless connection and saved files.

Makes monocular
position visible!!!

HOTSPOT

ON/OFF wireless connection.

FOTO

Saved photos.

 **SETTINGS** General settings of monocular.

PIP

ON/OFF picture in picture function.

BLINDPIXEL

Fixes damaged pixels on the thermal imaging matrix.

OLED

Brightness and color of the monitor backlight.

TRECKING

ON/OFF function that marks the hottest areas.

BATT. INDIC.

Set the operating mode of the battery level indicator.

SP

Stabilisation picture (vibration compensation).

VIDEO

Saved videos.

SENSORS Monocular sensor settings.

GPS

ON/OFF GPS and separately height above sea level.

TEMPERAT.

Set the operating mode of the temperature sensor.

COMPASS

ON/OFF compass and separately azimuth.

Compass Calibration: calibration can be carried out at any time. Preferably repeat periodically, especially after turning on the device. In this menu you can see more detailed instructions.

RANGING

Changes mode of the Range-finder (AI or MIL).

CORRECTION

Change mode of the shutter - auto or manual.

SYSTEM Basic settings and system lock.

UPDATE

Update soft.

RESTART

Restart monocular.

VERSION

Show the version of the installed soft.

DATE/TIME

Set the time and date.

LANGUAGE

Set the language.

BLOCK

Set the password to start the monocular.

UVC

Streaming video over a wire to a PC or monitor.

APPLICATION

Use application that you can find in the AppStore or PlayMarket.

FUNCTIONALITY

The application allows you to control the device in real time, view photos and video recordings and share them.

Fix target coordinates and share them (if the device supports this function or manual).

You can also find other NVECTECH products in the application.

SPECIFICATION

| MODELS | PATRIOT 2 | L19 | L25 | L35 | L50 | H50 | L50 PRO |
|--------------------|----------------|------------------------|-----------------|----------------|----------------|----------------|-------------------------|
| MICROBO LOMETER | RESOLUTION | 383X288 | | | | 640X512 | 383X288 |
| | PIXCEL PITCH | 12μm | | | | | |
| | NETD | ≤18mk@300k | | | | | |
| | SPECTRAL RANGE | 8-14μm | | | | | |
| | FRAME RATE | 50Hz | | | | | |
| OPTICS | OBJECTIVE LENS | 19mm (F0.8) | 25mm (F0.8) | 35mm (F0.8) | 50mm (F0.9) | | 25-50mm (F0.9) |
| | FOV | 13.8° x 10.4° | 10.5° x 7.9° | 7.5° x 5.6° | 5.3° x 4.0° | 8.8° x 7.0° | 10.5°x7.9/ 5.3°x4.0° |
| | MAGNIFICATION | 1.8X | 2.4X | 3.3X | 2.8X | 2.8X | 2.4X-4.8X |
| | DIGITAL ZOOM | 1 - 4X continuous zoom | | | | | |
| | EYE RELIEF | 40mm | | | | | |
| | EXIT PUPIL | 6mm | | | | | |
| | DIOPTER | ±5D | | | | | |

| MODELS | PATRIOT 2 | L19 | L25 | L35 | L50 | H50 | L50 PRO |
|-------------|---------------|---|-----|-----------|-----|-----------|---------|
| DISPLAY | TYPE | AMOLED | | | | | |
| | OLED COLORS | 6 | | | | | |
| | DISPLAY SIZE | 0.39inch | | | | | |
| | COLOR PALETTE | 6 | | | | | |
| | IMAGE MODE | WDR (Wide Dynamic Range) Mode | | | | | |
| BATTERY | BATTERY TYPE | Internal high capacity lithium ion (18650 x 2) | | | | | |
| | BATTERY LIFE | Continuous working time ≥20h | | | | | |
| INTERFACE | TYPE-C | Supports battery charging, data transfer, UVC video output | | | | | |
| | WIRELESS | Hotspot connection, App remote control | | | | | |
| ENVIRONMENT | WORK TEMPER. | -25°C — +50°C | | | | | |
| | IP RATING | IP67 | | | | | |
| | SIZE | 221x66x67 | | 224x66x67 | | 241x73x73 | |
| ACCESSORY | ACCESSORIES | Video cable, USB data cable, Wrist strap, Protective bag, User manual | | | | | |

| MODELS | PATRIOT 2 | L19 | L25 | L35 | L50 | H50 | L50 PRO |
|----------|-------------------|-----|-----|-----|------|-----|---------|
| FUNCTION | FOTO/VIDEO PLAY | | | | YES | | |
| | AI DIST. MASURE. | | | | YES | | |
| | MIL DIST. MASURE. | | | | YES | | |
| | RETICLE | | | | YES | | |
| | INBUILD MEMORY | | | | 64GB | | |
| | PIP | | | | YES | | |
| | HEAT TRACK | | | | YES | | |
| | GPS | | | | YES | | |
| | HEIGHT SENSOR | | | | YES | | |
| | TERMOMETER | | | | YES | | |
| | COMPASS | | | | YES | | |
| | AZIMUTH | | | | YES | | |
| | REAL TIME REC. | | | | YES | | |
| | UVC | | | | YES | | |

NVECTECH

Model:

Serial number:

Date of sale:

Seal and signature of the seller:

Kosmichna st. 49-g,
Dnipro, Ukraine

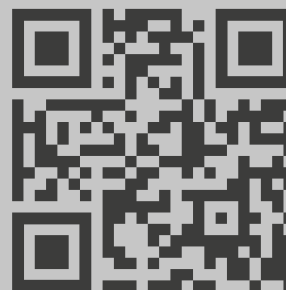
site: www.nvectech.com
e-mail: info@nvectech.com

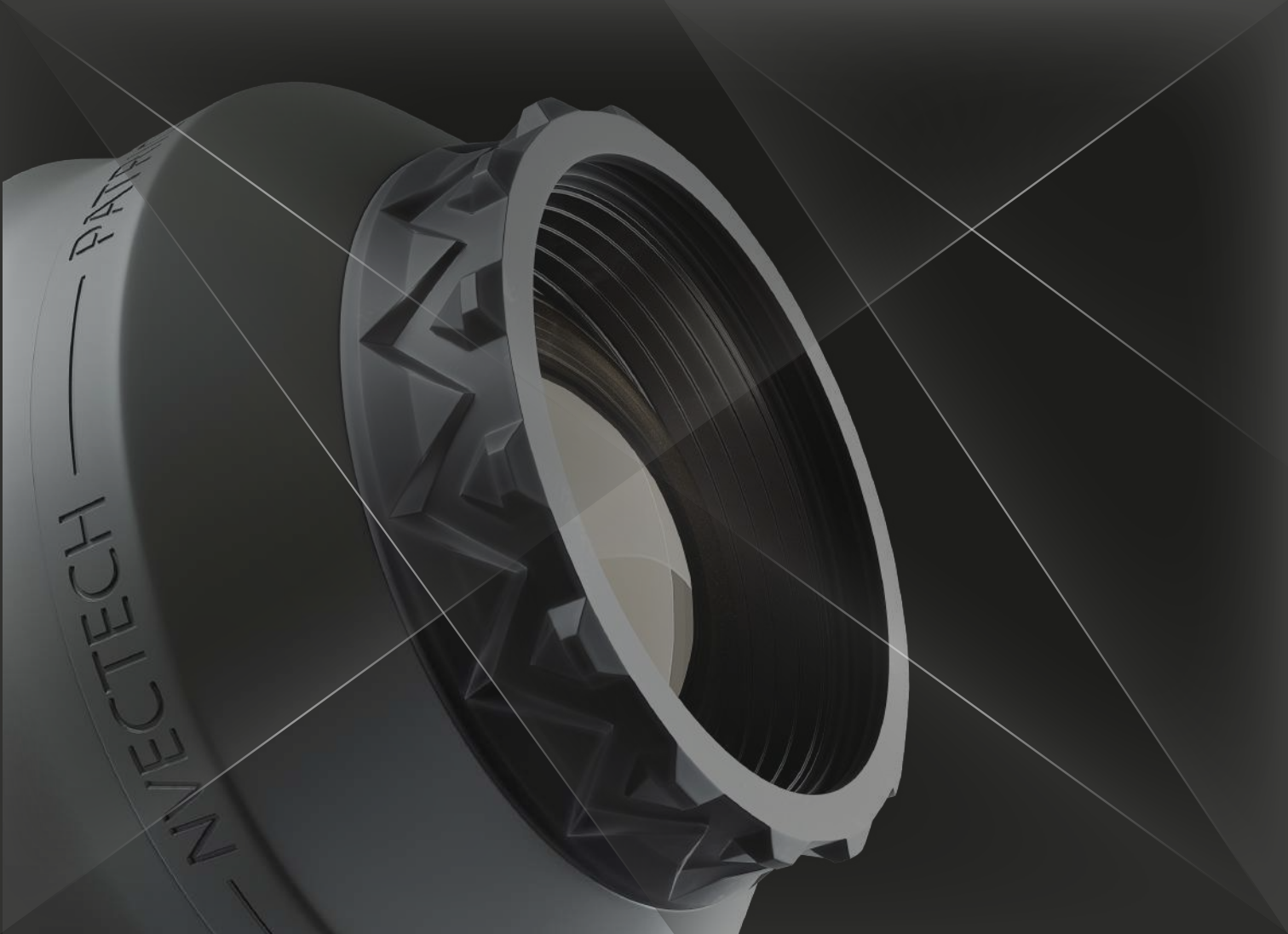
Manufacturer: LTD NVECTECH

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Warranty 2 years!

www.nvectech.com





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