



NIGHT PEARL

HARRPIA

USER MANUAL

VERSION V1.0



ENGLISH



DEAR CUSTOMER,

Thank you for purchasing our product and we believe it will meet your expectations.

This user manual is general for the entire series of devices, which means that the device you received may differ partially from the description given here. The actual product you received takes priority.

To ensure a reliable and trouble-free service life, we provide you with detailed information about the functions, maintenance, and safe use of the purchased device.

Before installing and using the device, please read this manual carefully and keep it for future reference.

Your Night Pearl team,

A handwritten signature in black ink, reading 'Jakob Rudel'.

01



- 01** OBJECTIVE
- 02** FOCUSING RING
- 03** OK BUTTON
- 04** CAPTURE BUTTON
- 05** PORT USB-C
- 06** EYEPIECE WITH DIOPTRIC CORRECTION



- 07** BATTERY COVER
- 08** BATTERY
- 09** ON/OFF/SB BUTTON
- 10** CONTROL KNOB

! DO NOT POINT THE DEVICE DIRECTLY AT THE SUN !

DEVICE DESCRIPTION

Focusing ring **02**

After turning on the device, aim at the target. If the image is not sharp, turn the focus wheel to focus the image of the target. Always focus the image using the focus wheel when aiming at a distant or near target. If the image is still not clear, please adjust eyepiece dioptic correction as described below in clause "Eyepiece **06**".

Port USB-C **05**

The external USB-C port can be connected to an external power supply with a cable and the device can be charged. External power supply parameters. The USB-C port is also used to connect the device to a computer and for data transfer.

Eyepiece **06**

After turning on the device make sure that all icons on the display are clearly visible. If the image is not clear, turn the eyepiece ring to adjust dioptic correction.

Battery compartment cover **07**

To replace the battery, unscrew the battery compartment cover. After inserting new battery, screw the cover back on and tighten. To keep the hermeticity of the battery compartment, the battery cover must be screwed on as far as it will go.

DESCRIPTION OF FUNCTIONS AND BUTTON CONTROLS:

ON/OFF/Stand-by button **09**

ON

Turn the OFF/ON/SB dial to the middle position (ON) and the device will turn on.

OFF

Turn the OFF/ON/SB dial to the leftmost position (OFF) and the device will turn off.

STAND-BY

Turn the OFF/ON/SB dial to the rightmost position (SB) and the device will enter standby mode.

Automatic stand-by: After the preset time

has elapsed, the device will automatically switch to standby mode. This time can be set in the main MENU of the device. To wake up the device from standby mode, press the OK/CAPTURE button or turn the CONTROL knob.

OK button 03

QUICK COLOR PALETTE SWITCHING:

Short press the OK button to change preset color palettes (between WH=white hot, BH=black hot, WW=warm white, CG=cold green, CB=cold blue, RB=rainbow).

MAIN MENU

Long press the OK button to enter the main menu of the device.

MOVE THROUGH THE MAIN MENU

After the main menu is displayed, rotate the CONTROL knob clockwise or counterclockwise to move through the main menu options. To confirm the selection of the function, put indicator on the selected function by rotating CONTROL knob (selected icon gets highlighted on the top of the display) and short press the OK button. To select individual parameters of the selected function and set them, rotate the CONTROL knob clockwise or counterclockwise. To directly set the selected parameter, press the OK button and then adjust by rotating the CONTROL knob clockwise or counterclockwise. Long press the OK button to exit the function settings or exit the main menu.

CONTROL knob 10

ZOOM IN

By rotating the CONTROL knob clockwise (to the right), you zoom in on the observed image in. When you reach maximum magnification, do not turn the ZOOM button further.

ZOOM OUT

By rotating the CONTROL knob counterclockwise (to the left), you zoom out the observed image in. When you reach minimum magnification, do not turn the ZOOM button further.

WHEN IN THE MAIN MENU:

RIGHT

By rotating the CONTROL knob clockwise (to the right), you scroll between the functions in the main menu to the right. When setting the function by turning the CONTROL knob clockwise (to the right), you increase the value.

LEFT

By rotating the CONTROL knob counterclockwise (to the left), you scroll between the functions in the main menu to the left. When setting the function by turning the CONTROL knob counterclockwise (to the left), you decrease the value.

CAPTURE button 04

PHOTO CAPTURE

Short press the CAPTURE button to take a picture of the observed image.

VIDEO RECORDING

Long press the CAPTURE button to start video recording of the observed image. After recording is started, recording indication is shown in the top left part of the display (red dot with recording time). To stop recording, long press the CAPTURE button again.

NOTE:

The maximum length of the recorded video

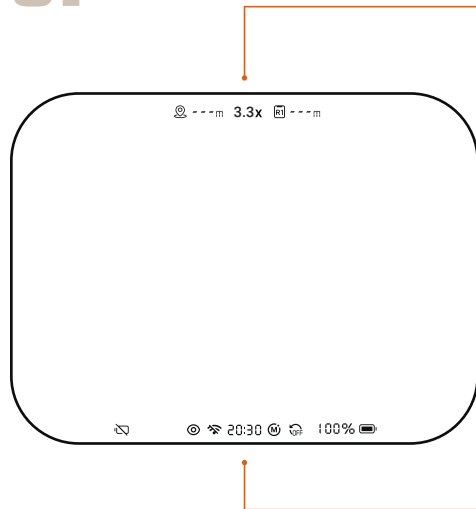
is 5 minutes. After this time, the video will be uploaded to a new file. The number of uploaded files is limited by the capacity of the device's internal memory.

Regularly check the free capacity of the device's internal memory and move files to another storage medium to free up space on the device's internal memory.

STATUS BAR on the display

The status bar is displayed on the top and bottom of the display and shows information on the actual operating status of the Night Pearl HARPIA.

01



The top of the display shows information including:

- Distance
- Magnification
- Rifle profile
- Zeroing distance

The bottom of the display shows information including:

- External battery capacity
- Display mode
- Wi-Fi status
- Real time
- Calibration mode
- Standby settings
- Built-in battery capacity

DEVICE DESCRIPTION

02

PACKAGE CONTENTS

Night Pearl Harpia device	1x
Rubber eyepiece extension	1x
Flip-up objective cover	1x
Battery cover extender	1x
Quick charge cable USB-C	1x
User manual	1x
Lens cleaning cloth	1x



ACCESSORIES DESCRIPTION



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MAIN MENU

1) CRYSTAL VISION:

When enter the main menu of the device, first function to be set is CRYSTAL VISION. You can switch it ON/OFF by short press OK/CAPTURE button. This mode highlights the details of the observed image and allows better observation of the target.

2) IMAGE EQUALIZER:

Short press OK/CAPTURE button to switch between Brightness / Contrast / Sharpness settings.

BRIGHTNESS: Rotate with the CONTROL knob to change Brightness value from 1-5.

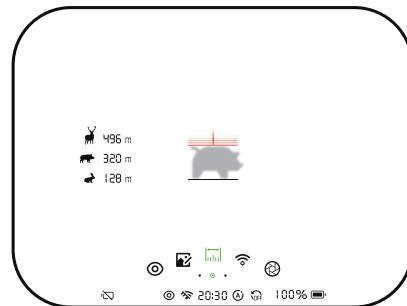
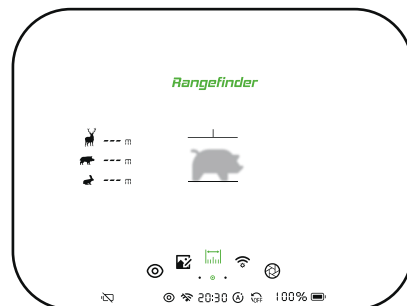
CONTRAST: Rotate with the CONTROL knob to change Contrast value from 1-5.

SHARPNESS: Rotate with the CONTROL knob to change Sharpness value from 1-5.

3) STADIA METRIC RANGEFINDER:

Night Pearl HARPIA is equipped with a stadia metric rangefinder which allows the user to estimate approximate distance to an observed object of a known size.

The display shows: Measurement bars, icons of three reference objects and respective distances for the three objects.



Three preset reference object heights are available:

RABBIT – height 0.2m

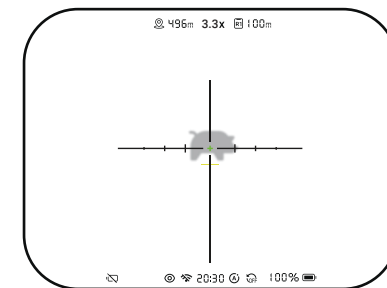
WILD BOAR – height 0.5m

DEER – height 1.7m

Press OK/CAPTURE button to enter this function. Move the lower fixed measuring bar to the bottom of the object and then rotate the CONTROL knob to move the upper measuring bar down/up to the top of the observed target. The target distance is automatically recalculated when you move the upper measuring bar down/up.

Press OK/CAPTURE button to choose reference object. Long press MENU to save & exit the stadia metric rangefinder, the range information will not disappear from the display automatically.

Yellow line “—” on the reticle accordingly suggests an aiming point.



FUNCTIONS DESCRIPTION

4) WI-FI:

Press OK/CAPTURE button to switch device's Wi-Fi ON/OFF.

5) CALIBRATION MODE:

Short press the OK/CAPTURE button to select the calibration mode and long press the OK button to save and exit.

A Automatic

M Manual

S Silent (close the lens cover when calibrating)

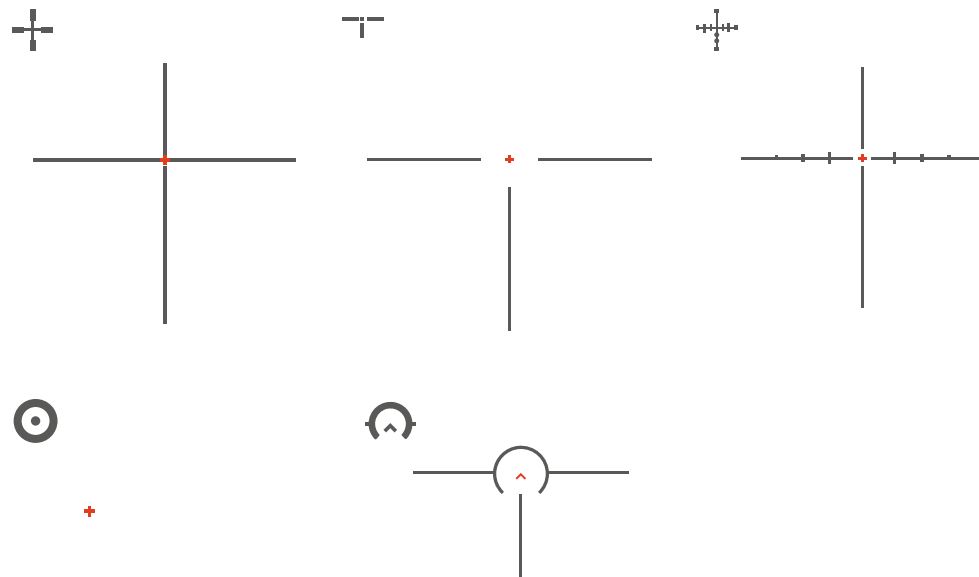
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6) RETICLE:

BRIGHTNESS: Short press OK/CAPTURE button to enter the reticle brightness selection and rotate with the CONTROL knob to change Brightness value from 1-5.

COLOR: Short press OK/CAPTURE button to enter the color selection and rotate the CONTROL knob to select the reticle color - Green, Red, White, and Black. Long press OK button to save and exit.

TYPE: Short press OK/CAPTURE button to enter the reticle type selection and rotate the CONTROL knob to select one from 5 reticle types. Long press OK button to save and exit.



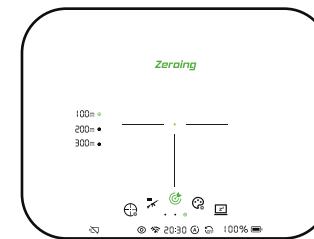
7) PROFILES:

Night Pearl HARPIA can store 3 individual weapon profiles. Short press the OK/CAPTURE button to select R1, R2 or R3. Long press OK to save and exit.

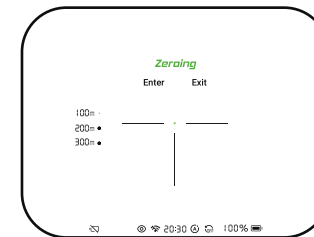
8) ZEROING:

Select the zeroing profile. Profile R1 is set as default.

Short press the OK/CAPTURE button to select the preset zeroing distance (100m / 200m / 300m).



Long press OK button to enter zeroing, select Enter or Exit by rotating the CONTROL knob. Short press OK button to confirm the selection.



FUNCTIONS DESCRIPTION

When Press OK/CAPTURE button to switch between individual settings of distance / X and Y axis / back / freeze / save and exit. Individual Back / Save and exit confirm with long press of OK button.

DISTANCE:

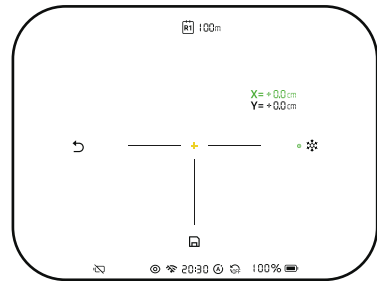
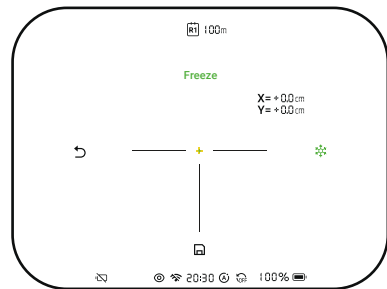
By turning CONTROL knob clockwise or counterclockwise set the individual distance for zeroing profiles by 10m. The minimum distance for zeroing is 10m the maximum distance for zeroing is 990m.

FREEZE:

The function of freezing is that there is no need to constantly hold the rifle scope at the point of aim.

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After the shot, the user needs to align the center point of the reticle with the center of the thermal target, and then long press the OK button to freeze of the current observed image, as shown in the following image. Then, the center of the reticle can be moved to the center of the point of impact by moving the X and Y axes.



When freezing the image, you can press the OK button to adjust the other options in the Zeroing mode.

BACK:

Long press the OK button to return to the previous menu, the current settings will not be saved.

NOTE: You can find a detailed description of the firing procedure in chapter **05 ZEROING GUIDE.**

9) COLOR MODE:

Short press OK/CAPTURE button to switch through the color modes. Then rotate the CONTROL knob to select activated or deactivated color palettes.

Color palletes can be selectively deactivated. Deactivated color modes will not show up when pressing OK button during use (to change color palettes).

The available Color palletes are:

WH = white hot, **BH** = black hot,
WW = warm white, **CG** = cold green,
CB = cold blue, **RB** = rainbow

10) STANDBY SETTINGS:

Short press OK/CAPTURE button to switch the option from OFF 2' 4' 6'. After the set time has elapsed, the device will go into Standby mode.

11) ADVANCED SETTINGS:

DEVICE INFO: Contains Model, Serial number, and Version.

LANGUAGE: Rotate the CONTROL knob to select from EN/DE/CZ/FR/ES, long press OK/CAPTURE button to save and exit.

UNIT: Rotate the CONTROL knob to select from Meter and Yard, long press OK/CAPTURE button to save and exit.

DATE / TIME: Rotate the CONTROL knob and short press OK/CAPTURE button to adjust real time and date, long press OK button to save and exit.

RESTORE: Rotate the CONTROL knob to select YES/NO, long press OK button to save and exit.

12) DEFECTIVE PIXEL REPAIR:

Cover the lens of the objective and then press the OK button to correct the defective pixels. A three-second countdown will appear on the screen and calibration will begin.

13) PURE MODE:

Press OK/CAPTURE button to turn Pure Mode On/Off. Icons of the status bar are

automatically hidden after 5 seconds. The reticle remains displayed.

14) PIP:

Press OK/CAPTURE button to turn PIP (Picture-In-Picture) On/Off. The PIP screen will appear in the center at the top of the display.

15) SCREEN BRIGHTNESS:

Press OK/CAPTURE button to enter and rotate the CONTROL knob to change the value of screen brightness from 1-5, long press OK button to save and exit.

FUNCTIONS DESCRIPTION

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When choosing a riflescope mount, we recommend keeping to quality and proven manufacturers and entrust the thermal riflescope adjustment to the mounting, including subsequent rectification (firing the gun set) into the hands of an expert in the field, preferably a gunsmith, armorer or professional with theoretical knowledge and practical skills.

Poor installation together with the unprofessional adjustment of the device is one of the main causes of unsatisfactory results in the zeroing of the thermal riflescope. In some cases, irreversible mechanical damage to the thermal riflescope can occur, which leads not only to a loss of reliability of the device but also to the voiding of the manufacturer's warranty.

RECOMMENDATIONS FOR THE MOUNTING OF NEW THERMAL RIFLESCOPE

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While aiming at the center of the heat target take one shot to see the point of impact. Place another heat target on the bullet hole after the first shot.

Long press **OK BUTTON** to enter main menu.

Turn the **CONTROL KNOB** clockwise or counterclockwise to select **ZEROING**.

Press **OK BUTTON** to select the zeroing distance (100m / 200m / 300m).

Long press **OK BUTTON** to enter the zeroing (Enter or Exit can be chosen by rotating the CONTROL knob and then press **OK BUTTON**).

While having rifle in a stable position move the reticle from the point of aim (first heat

ZEROING GUIDE

target) to the point of impact (put heat target on the top of the bullet hole).

X and **Y** respectively represent horizontal (windage) and vertical (elevation) axes.

To change **X** axis, choose X= by pressing **OK/CAPTURE BUTTON** and rotate **CONTROL KNOB** clockwise or counterclockwise to move with the reticle towards the point of impact.

To exit **X** axis adjustment, press **OK/CAPTURE BUTTON** and move to **Y** axis Y=. Rotate **CONTROL KNOB** clockwise or counterclockwise to move with the reticle towards the point of impact.

After adjustment take a shot to confirm zeroing. If necessary, adjust the point of impact using the steps above.

To leave **ZEROING** mode press **OK/CAPTURE BUTTON** to Save and exit and long press **OK BUTTON**.

CLICK VALUE FOR INDIVIDUAL MODELS OF THE NIGHT PEARL HARPIA SERIES:

CLICK VALUE (IN MM)	HARPIA 35 PRO	HARPIA 50 PRO	HARPIA 50 MAX
@ 50 m	6.4	4.5	8
@ 100 m	12.8	9	16
@ 200 m	25.7	18	32
@ 300 m	38.5	27	48

REMOVABLE BATTERY

The batteries should be charged before first use of Night Pearl HARPIA. Unscrew the battery compartment knob.

Install the battery based on the signs. Otherwise, Night Pearl HARPIA will not start. Replace the battery and close the battery compartment knob.

Always use a high-quality battery of the same type as the battery supplied with the device. Please insert the battery in the direction indicated on the pictogram on the tube of the device and do not use force when inserting.

BUILT-IN BATTERY

Night Pearl HARPIA is powered by built-in rechargeable battery of total 6400 mAh and 1 removable 18500 battery (with an extender of the battery compartment cover, 18650 can be used).

1. If there are built-in battery and removable battery in the device, two battery icons are displayed in the status bar. The removable battery capacity shows on the left bottom

	100%	90%	80%	70%	60%	50%	40%	30%	20%	10%	No battery	Charging
Removable Battery Capacity												
Built-in Battery Capacity												

of the status bar, and the built-in battery capacity shows on the right bottom.

2. When both type of batteries are fully charged, the device is powered by the removable battery. If there is low removable battery level, the device will switch to the built-in battery.

3. Battery charge status is displayed on the status bar.

4. It is possible to replace removable battery while Night Pearl HARPIA is on when it is powered by built-in battery (the device will continue to work properly).

EXTERNAL POWER SUPPLY

External power can be supplied from an external source, such as a power bank.

1. Connect the external power supply to the USB-C cable.

2. Night Pearl HARPIA takes to external power source while the built-in battery will gradually be recharged.

3. A rechargeable battery icon indicating a percentage of the battery life will appear in the status bar.

4. Night Pearl HARPIA supports quick fully charge in only 3 hours.

5. When you turn off external power source, Night Pearl HARPIA takes power from removable battery without turning off. When there is no removable battery or low power level the device takes power from the built-in battery.

BATTERY REPLACEMENT/CHARGING**NOTE**

- The batteries should be charged before first use.
- When installing a removable battery with a sufficient charge level, Night Pearl HARPIA will automatically switch on.
- If Night Pearl HARPIA is shut down by opening battery cover without proper power off, zeroing information will not be saved.
- Zeroing information will be saved when Night Pearl HARPIA is shut down because of empty battery.

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WARNING

When charging the battery, follow the method described in this manual and observe the safety instructions for charging. Improper charging can cause overheating or damage to the battery and can be dangerous for human health. Do not attempt to open or disassemble the battery under any circumstances. If any liquid leaks from the battery and gets into your eyes, rinse them immediately under running, clean water and seek medical attention immediately.

Do not place the battery in a high-temperature environment or near high-temperature objects. Do not short the positive and negative clamps of the battery contacts. Do not place the battery in a humid environment or into water.

BATTERY REPLACEMENT/CHARGING

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MAINTENANCE AND CLEANING

When maintaining and cleaning this device, observe the following rules:

The devices have a dustproof and waterproof construction, but like other optoelectronic devices, they require careful handling and protection of the optical surfaces from damage. If the device is not in use, it is advisable to protect the external optical surfaces with a cover. Dust on the mechanical parts of the device remove with a soft cloth, dust on the optical parts remove by blowing, or by lightly wiping with the antistatic cloth also included in the package. After using the device in the rain, we recommend thorough drying with a soft cloth.

Do not expose the devices directly to high-intensity thermal radiation, such as the sun, laser, etc.

Do not disassemble the device yourself, it could damage it and void the warranty.

MODEL NAME	HARPIA 35 PRO	HARPIA 50 PRO	HARPIA 50 MAX
Magnification	3,3x (optical), 4x (digital)	4,8x (optical), 4x (digital)	2,7x (optical), 4x (digital)
Sensor resolution	384x288 px	384x288 px	640x512 px
Core type	VOx, 12µm	VOx, 12µm	VOx, 12µm
Objective Ø	35 mm	50 mm	50 mm
Frame rate	50 Hz	50 Hz	50 Hz
NETD	<25mK	<25mK	<25mK
Display type	1024x768 px, OLED	1024x768 px, OLED	1024x768 px, OLED
Eye relief	55 mm	55 mm	55 mm
Field of view	13.2°×10°	9.2°×7°	15.4°×12.3°
Field of view (m/100m)	23,1x17,5	16,1x12,2	27x21,6
Dioptric correction	± 5 dpt	± 5 dpt	± 5 dpt
Color palletes	6 types	6 types	6 types
Detection range (1,7 m)	2 480 m	3 540 m	3 540 m

MODEL NAME	HARPIA 35 PRO	HARPIA 50 PRO	HARPIA 50 MAX
Recognition range (1,7m)	830 m	1 180 m	1 180 m
Wi-Fi	Yes	Yes	Yes
PIP (picture in picture)	Yes	Yes	Yes
Photo / Video	Yes	Yes	Yes
Start-up time	<5 sec	<5 sec	<5 sec
Storage	32 GB	32 GB	32 GB
Operational temperatures	-20 °C / +55 °C	-20 °C / +55 °C	-20 °C / +55 °C
Battery type	18650 built-in, external 18500/18650	18650 built-in, external 18500/18650	18650 built-in, external 18500/18650
Operational time (t=25 °C)	>12 h	>12 h	>12 h
Recoil resistance	Up to .338 Lapua Magnum	Up to .338 Lapua Magnum	Up to .338 Lapua Magnum
Weight	920 g	950 g	950 g
Dimensions (L, W, H)	372x87x73 mm	388x87x73 mm	388x87x73 mm

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1. The device cannot be started.

SOLUTION: Replace the battery or connect a charging adapter via the USB-C port.

2. The device does not capture images or record video.

SOLUTION: Internal storage is full, format the internal memory card.

3. The time on the device display does not correspond to the actual time.

SOLUTION: Reset the date and time in the main menu of the device.

4. Display turns off during usage.

SOLUTION: Short press any button or rotate with a CONTROL knob to activate the device again and the display will light up.

5. The image on the device is blurry during usage.

SOLUTION: Focus the image using the focusing ring on the objective of the device until the image is sharp.

TROUBLESHOOTING

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SAFETY INSTRUCTIONS

Suitable conditions for storage and transport of the device are given below.

For the correct functioning of the device, it is necessary to follow the given instructions. Keep the instructions for future reference.

STORAGE:

1. The device packed in its original packaging must be stored in a well-ventilated, clean place free from moisture and corrosive gases at a temperature of -30°C to 60°C. We recommend storing the device in the package together with a moisture trap, e.g., silica gel.

2. Every three months, remove and charge the device.

TRANSPORT:

During transport, the device must be protected against rain, immersion in liquid and falling. Avoid subjecting the device to severe vibrations and shocks. Handle the device with care and do not deliberately throw the device or subject it to excessive mechanical pressure and abrasion.



BATTERIES

Batteries must not be disposed of together with ordinary household waste. For this reason, according to law, any batteries must be returned. They may be disposed of free of charge near your place of residence (for example in stores or at a recycling center). Batteries are marked with a symbol of a crossed-out wheel bin as well as chemical symbols indicating dangerous substances contained in batteries: “Cd” for cadmium, “Hg” for mercury and “Pb” for lead.

CONFORMITY

The products conform with European Union directives 2004/108/EU, 2011/65/EU and 2012/19/EU.

SAFETY AND ECOLOGY

PRODUCT

At the end of its lifetime, the product must not be disposed of with household waste. For this reason, according to law, these products must be disposed of separately from standard household waste. They may be disposed of free of charge near your place of residence (for example thrown into an electrical waste container or handed over at a recycling center).

THE IMAGES USED IN THIS MANUAL ARE FOR ILLUSTRATION ONLY AND MAY DIFFER SLIGHTLY FROM THE PRODUCT YOU HAVE PURCHASED.



NOTES



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