



CALONOX 2 SIGHT
CALONOX 2 SIGHT – LRF

Instruction manual

FOREWORD

Dear customer,

We wish you a great deal of enjoyment and every success with your new Leica product.

Please read this manual to familiarize yourself with the full scope of functions your product has to offer.

Please use this product only as described in this manual. Only then can safe and easy operation be guaranteed.

All the information you need about your product is available anytime at:

<https://leica-camera.com/calonox>

Your Leica Camera AG

Please read the chapters “Safety Remarks” and “Important Information” before using the product for the first time. Knowledge of the content will prevent inadvertent damage to the product, possible injuries and other risks.

SCOPE OF DELIVERY

The standard scope of delivery* contains the following:

- Leica Calonox 2 Sight and/or Leica Calonox 2 Sight LRF
- Cordura case
- Charging cable
- Carry strap
- Quick Start Guide
- Lens cleaning cloth
- Rubber eyecup
- Tenebraex flip cover
- Test certificate

REPLACEMENT PARTS/ACCESSORIES

Contact Leica Customer Care or your specialist Leica dealer for details on the latest spare parts/accessory range:

<https://leica-camera.com/dealer-locator>

*The actual scope of delivery may vary depending on model.

LEGAL INFORMATION

LEGAL INFORMATION ABOUT THIS MANUAL

COPYRIGHT

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BRANDS AND LOGOS

The brand names and logos used in this documented are protected trademarks. These brands or logos must not be used without prior approval by Leica Camera AG.

LICENSE RIGHTS

Leica Camera AG intends to provide you with innovative and informative documentation. Due to the amount of creativity that has gone into its design, we ask for your understanding that Leica Camera AG must protect its intellectual property, including patents, trademarks and copyrights and that possession of the documentation does not infer any licensing rights of the intellectual property of Leica Camera AG.

REGULATORY INFORMATION

You will find the manufacturing date of your product on the stickers on the packaging. The date format is year/month/day.

- ▶ Access the main menu by pressing the Menu button.
- ▶ Choose “Settings” in the main menu using the “Scroll down” button.
- ▶ Press the Menu button to access the “Settings” submenu.
- ▶ In the “Settings” menu, choose “Info” using the “Scroll down” button.
- ▶ Access the Info page by pressing the Menu button.

TECHNICAL DATA

Product changes with regards to the product or services may have occurred after the editorial deadline. The manufacturer reserves the right to effect structural or shape changes, color deviations and changes to the scope of delivery or service, where these changes or deviations are reasonably acceptable for the customer, while taking into consideration the interests of Leica Camera AG. In that respect, Leica Camera AG reserves the right to changes and errors. The images in this manual may depict accessory, special features or other items that are not part of the standard scope of delivery or service. Some pages may contain model types and services, which are not offered in specific countries.

LASER TECHNICAL DATA

Laser class	IEC/EN Class 1
Wavelength (nm)	905
Power output (mW)	0.832 mW
Beam divergence (mrad)	8 mrad × 4 mrad

**CLASS 1
LASER PRODUCT**

Conforms to 21 CFR 1040.10 and 1040.11 with the exception of conformance to IEC 60825-1 Ed. 3, as described in Laser Notice No. 56 dated May 08, 2019.

CE MARK

The CE mark on our products documents compliance with the fundamental requirements of applicable EU guidelines.

English		
Declaration of Conformity (DoC)		
Leica Camera AG herewith confirms that this product complies with basic requirements and other relevant standards included in the directive 2014/53/EU.		
Customers can download a copy of the original DoC regarding our RF products from our DoC server here: www.cert.leica-camera.com		
Please contact The Leica Camera AG Product Support in case of any further questions: Am Leitz-Park 5, 35578 Wetzlar, Germany		
Depending on product (see technical data)		
Type	Frequency range (center frequency)	Max. output (dBm E.I.R.P.)
WLAN	2400-2484 MHz	20
Bluetooth® Wireless Technology	2402-2480 MHz	10



DISPOSAL OF ELECTRICAL AND ELECTRONIC EQUIPMENT



(Applies within the EU and for other European countries with segregated waste collection systems.)

This device contains electric and/or electronic components which must not be disposed of in general household waste! Make sure to bring this device to a local disposal collection point for recycling.

This service is free of charge. Any standard or rechargeable batteries used in this device must be removed and disposed of separately in accordance with local regulations.

Please contact your local authorities, waste disposal collection point or the retailer, from whom you purchased the device for more information on correct waste disposal.

Made in Germany

IMPORTANT INFORMATION

GENERAL INFORMATION

- You should not disassemble, reassemble, or repair Leica Calonox 2. Repairs must only be carried out in authorized workshops.
- Cold temperatures reduce battery performance. Therefore, if the ambient temperature is low, the device should be worn as close to the body as possible and operated with a new battery.
- Do not touch the glass surfaces with your fingers, especially if you have used hand cream, insect repellent, or similar. These products may contain chemicals that damage or destroy the coating of the glass surfaces.

MEASURED VALUES

- Especially at long distances, the impact of all ballistically relevant factors increases significantly and considerable deviations can occur.
- Regardless of how this information is used, you are responsible for assessing the respective hunting situation.
- Strong electromagnetic fields, such as those emitted from radar systems, can cause interference and/or incorrect values.
- The earth's magnetic field can also cause deviations in the values.

IMPORTANT NOTES REGARDING THE USE OF THERMAL IMAGING CAMERAS

LEGAL RESTRICTIONS ON USE

In Germany

- The use of thermal imaging cameras in the form of attachments is subject to weapons or hunting permits and other restrictions,

which may differ from region to region. Please make sure to request relevant information about their use from local authorities.

Outside of Germany

- The use of thermal imaging devices and associated technologies may be restricted in some countries or regions. You should therefore contact your travel agent or the embassy of your destination country for relevant information beforehand. Violations will be prosecuted by local authorities.

IMPORTANT NOTES REGARDING THE USE OF WLAN/BLUETOOTH® (CONNECTING TO THE LEICA 2HUNT APP)

See page 32 for instructions how to connect to the Leica 2Hunt app.

- Appropriate measures must be taken to ensure security and protect against disruptions to the systems in place where devices or computer systems are in use that require more stringent security than WLAN devices.
- Leica Camera AG shall not accept liability for damages arising from the use of the camera for purposes other than as a WLAN device.
- It is assumed that the WLAN function will be used in countries where this camera is sold. There may be a risk of breaching statutory wireless communication regulations when using the camera in other countries. Leica Camera AG shall not accept liability for such breaches.
- Please note that there is a risk of unauthorized third party interception of wirelessly communicated data. We highly recommend that you activate encryption in the wireless access point settings to ensure data safety.

- Avoid using the camera in areas where it can be exposed to magnetic fields, static electricity or other interferences, e.g. near a microwave oven. RF transmissions may otherwise not reach the camera.
- Using the camera near devices like microwave ovens or wireless phones that use the 2.4 GHz RF band may negatively affect the performance of both devices.
- Do not attempt to connect to wireless networks you are not authorized to use.
- The device will automatically search for wireless networks, once the WLAN function is enabled. A list, including networks you are not authorized to access, will be displayed (SSID: Network identifier for a WLAN network). Do not attempt to connect to such a network, as this could be construed as unauthorized access.
- We recommend disabling the WLAN function while on an aircraft.

SAFETY REMARKS

WARNING

Failure to observe the following information may result in serious injury or death.

LASER

- Hazardous radiation may be emitted if operating procedures other than those listed in this manual are used or adaptations are made to the device.
- If you can see the display in the eyepiece, the product is active and is emitting an invisible laser beam; the laser focusing optics must not be directed at anyone.
- Do not press the Function button while pointing at a human eye or looking at the optics from the lens side.
- Do not point the laser at anyone's eye.
- Do not point the laser at people.

GENERAL INFORMATION

- Do not use the device to look directly at very hot objects such as the sun or fire. This could result in damage to the sensor.

CAUTION

Failure to observe the following information may result in personal injury or damage to the device.

LASER

- If distance measurement is not currently required, do not press the Function button to ensure that the laser beam is not emitted unintentionally.
- You should not disassemble, reassemble, or repair Leica Calinox 2. Emitted laser radiation may pose a risk to your health. The device is no longer covered by the manufacturer's warranty if the device has been disassembled, reassembled, or repaired.
- Do not use the device if the housing of the device is damaged or if the device emits a strange sound after it has been dropped or for any other reason.

GENERAL INFORMATION

- Keep the device out of the reach of small children.
- Do not use the device while walking! You might trip and fall.
- Do not attempt to disassemble or modify the device; exposing the internal electronics may cause damage, injury or electric shock.

SENSOR

- Cosmic radiation (e.g. during flights) may cause pixel defects.

BATTERY

- New, rechargeable batteries must be charged before first use so they can be activated for use in the device. It is recommended that you fully charge the battery, as batteries are supplied only partially charged.
- Never throw devices with built-in rechargeable batteries into a fire as they may explode.
- Keep the battery away from heat sources if you notice leaking liquid or the smell of burning. Leaking liquid can ignite.
- Ensure that the power outlet used is readily accessible.

BLUETOOTH®

- Data (images and videos) transmitted wirelessly may be intercepted by third parties. We cannot not guarantee the security of data transmitted via wireless networks.
- Do not use the device in places where it is exposed to magnetic fields, static electricity, or radio interference.
- Do not use the transmitter near microwave ovens or other devices where the presence of magnetic fields, static electricity, or radio interference may prevent the reception of radio signals. Mutual interference may occur in the vicinity of other wireless devices that also operate in the 2.4 GHz band.
- The Bluetooth® transmitter operates in the 2.4 GHz frequency band. The standard output power is approximately 4.15 mW.

LEICA HUNTING ETHICS

HUNTING ETHICS AND LEICA THERMAL IMAGING CAMERAS

- We will only hunt wild boar and predators at night.
- We will hunt wild boar predominantly in areas of agricultural damage, but not in their habitats and refuge areas in the forest.
- We use the technology for monitoring and documentation purposes, and not just for detection.
- We want to improve the hunt by helping hunters more easily, and with greater accuracy, observe, identify, and evaluate game to prevent the shooting of the wrong type of animal.
- We use these new dynamics driven by technology for exciting hunting experiences while we track the game, and also help prevent damage caused by game.

WARRANTY CONDITIONS OF LEICA CAMERA AG

Dear Leica customer,

Congratulations on the purchase of your new Leica product. You have purchased a world-famous brand product.

In addition to your legal right to warranty claims against your retailer, we, Leica Camera AG ("LEICA"), grant you voluntary warranty services for your Leica product in accordance with the following provisions ("Leica Warranty"). The Leica Warranty therefore does not limit your legal rights as a consumer under the applicable law or your rights as a consumer against the dealer with whom you concluded the purchase contract.

THE LEICA WARRANTY

You have acquired a Leica product that is manufactured in compliance with special quality standards and which was thoroughly tested in each individual production step by experienced specialists. We grant the following Leica Warranty

for this Leica product, including the accessories found in the original packaging, which is valid as of April 01, 2023. Note that we do not provide a warranty for commercial use.

For some Leica products, we offer an extension of the warranty period if you register a Leica account with us. Details can be found on our website at www.leica-camera.com.

SCOPE OF THE LEICA WARRANTY

During the warranty period, claims based on manufacturing and material defects will be rectified free of charge, at LEICA's discretion, by repair, replacement of defective parts, or exchange for a similar Leica product in perfect condition. Replaced parts or products become the property of LEICA.

All other claims of any kind and regardless of legal basis shall not be accepted in connection with this Leica Warranty.

EXCLUSIONS FROM THE LEICA WARRANTY

The following are excluded from the Leica Warranty: parts subject to wear and tear, such as eyecups, leather coverings, carry straps, reinforcements, batteries and parts subject to mechanical stress, unless the defect was caused by manufacturing or material defects. This also applies to damage to surfaces.

CANCELLATION OF CLAIMS UNDER THE LEICA WARRANTY

Warranty claims are void if the defect in question occurs due to improper handling; they may also be void if, among other things, third-party accessories have been used, the Leica product has not been opened properly, or has not been repaired properly. Warranty claims are also void if the serial number is illegible.

MAKING A LEICA WARRANTY CLAIM

In order to make a claim under the warranty, we require a copy of the proof of purchase of your Leica product from a dealer authorized by LEICA ("Authorized Leica Dealer"). Proof of purchase must include the date of purchase, the Leica product with product number and serial number and details of the Authorized Leica Dealer. We reserve the right to ask you to submit the original receipt. Alternatively, you can send a copy of the warranty certificate. Note that this must be completed in full and the purchase must have been made through an Authorized Leica Dealer.

Please send your Leica product with a copy of the proof of purchase or the warranty certificate and a description of the claim to:

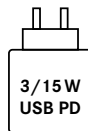
Leica Camera AG, Customer Care, Am Leitz-Park 5, 35578 Wetzlar, Germany

Email: customer.care@leica-camera.com, phone: +49 (0)6441 2080-189

Leica Sportoptik product	Warranty period Optics/mechanics	Warranty period Electronics
Thermal cameras	3 years	3 years

The Leica Calonox 2 models are protected against splash water (IP67).

The device was tested under controlled laboratory conditions and is classed as IP67 in accordance with DIN EN 60529. Please note: The protection against splash water and dust is not permanent and will reduce over time. The warranty does not cover damage from liquids. Any attempt to open the device by an unauthorized dealer or service partner will result in the immediate expiration of the splash water and dust warranty.



The output of the power supply unit for charging the camera battery depends on its operating mode. When the camera is switched off, a minimum output of 3 watts is required from the power supply unit. When the camera is switched on, an output of 15 watts is required.

USB-PD compatible.

PICK-UP SERVICE FOR REPAIR SHIPMENTS

(Applies for EU only)

We will organize the shipping of your device to our Customer Care department if you should notice a problem with your device during the warranty period. Please contact our service hotline to make the necessary arrangements (+49 (0)6441 2080 189). Our pick-up service will collect your Leica product at the agreed time from your premises free of charge and transport it to our Customer Care location for evaluation.

Contact: <https://leica-camera.com/contact>

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Definition of the various categories of information found in this manual

Warning

- Non-compliance can lead to death or serious injury

Caution

- Non-compliance can lead to moderate injuries

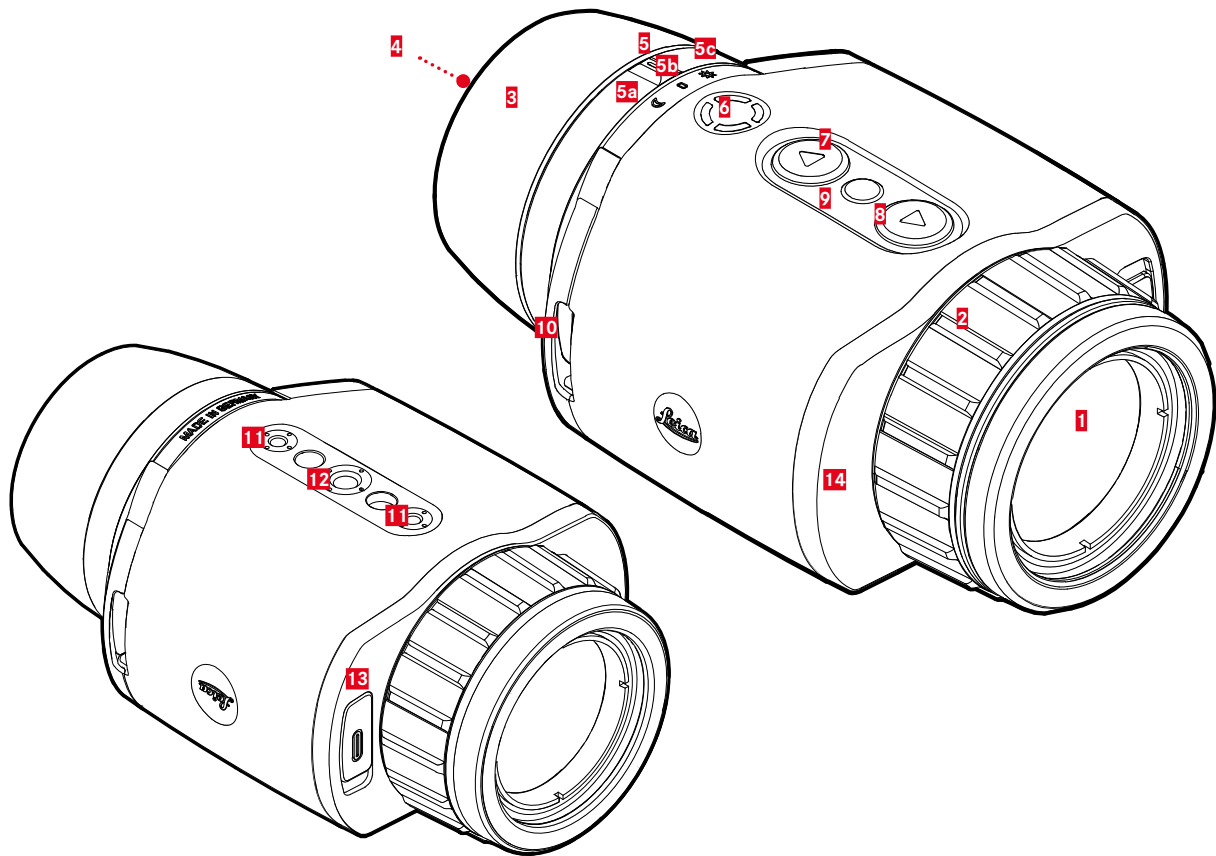
Note

- Non-compliance may result in damage to the device and accessories

Info

- Additional Information

DEVICE OVERVIEW



1 Front lens**2 Focus ring**

Focusing to the relevant distance

3 Eyecup

Prevents lateral light incidence


4 Eyepiece**5 Mode selector**

a Index point

b Modes

b Power ON/OFF

6 Function button

 Activation of distance measurement
(LRF model only)

 Zoom

7 [▶] button

– Menu navigation

– **Brightness**

8 [▶] button

 **Photo**

 **Video**

9 Menu Selection Button

– Accessing the menus

– Storing of settings

10 Strap lugs**11 Tripod thread**

M4 standard thread

12 Tripod thread

A 1/4 DIN 4503 (1/4")

13 USB-C port

– Data transfer

– Charging the battery

14 Laser transmission lens**Info**

- The device is not set to automatically power down by the factory.

* See page 28 for a detailed overview of the button functions.

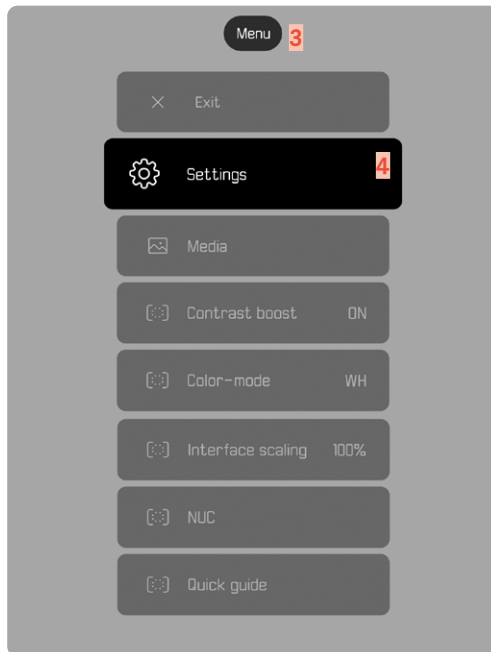
DISPLAYS

OBSERVATION MODE



- 1** Battery capacity
- 2** Magnification
- 3** Menu
- 4** Active menu item

MENU



CHARGE PERCENTAGE DISPLAY ON THE MONITOR

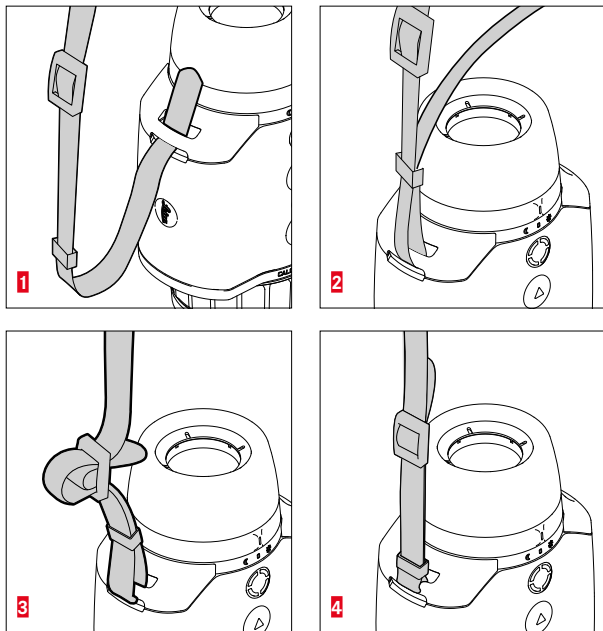
The battery charge percentage is displayed on the top of the status screen.



Display	Charge percentage
	Approx. 80-100%
	Approx. 60-79%
	Approx. 40-59%
	Approx. 20-39%
	Approx. 0-19% Battery replacement or battery charging required
	Battery is charging.

PREPARATIONS

ATTACHING THE CARRY STRAP

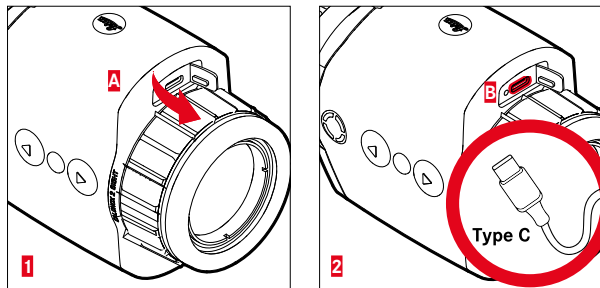


Note

- Once you have attached the carry strap, please make sure that the clips are mounted correctly to prevent the device from falling.

CHARGING THE BATTERY

A lithium-ion rechargeable battery supplies the device with power. The battery charge status is displayed in the header line.

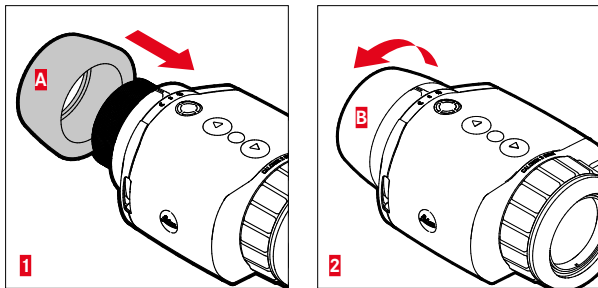


- ▶ Grab and pull the top of the cover cap (A).
- ▶ Insert the USB cable (USB-C) (B).
- ▶ Connect the other end of the USB cable to a suitable power adapter (min. 1.5 A/5 V input for optimal charging time).
 - A flashing status LED indicates charging is in progress. The LED lights up permanently once the battery has reached approx. 90%.
 - While the battery is charging, the ⚡ icon appears next to the battery icon in the header line when the device is switched on.

Note:

- Only use the cable included in the scope of delivery to charge the device.

MOUNTING THE EYECUP (USE AS HANDHELD DEVICE)



The eyecup supplied must be attached if the device is to be used as a handheld/monocular (without the rifle scope).

- ▶ Screw on the eyecup (A) and tighten by hand (B).
 - Don't use too much force!

ACCESSORY MOUNTING

Warning

- The device must not be installed upside down. Align the device so it is straight.
- Make sure the weapon is not loaded before doing any work and that the safety is on.

A relevant adapter will be needed if the device is to be mounted on the weapon in conjunction with a rifle scope. Leica generally recommends the use of adapters by the following manufacturers:

- Recknagel
- Rusan
- Hunting with precision

The following description may vary depending on manufacturer and model. Please read the instructions provided with your adapter before use.

Info

- The mounting thread of the Calonox 2 Sight is M43 x 0.75. If an existing M52 x 0.75 adapter is required, reducer ring 590-82 must be used. This reducer ring is available as an optional accessory.

MOUNTING THE REDUCER RING

To be able to use an existing Calonox 1 assembly, the reducer ring (available as an option) must first be screwed on.

- ▶ Screw the reducer ring onto the Calonox device as far as it will go.

MOUNTING THE ADAPTER RING

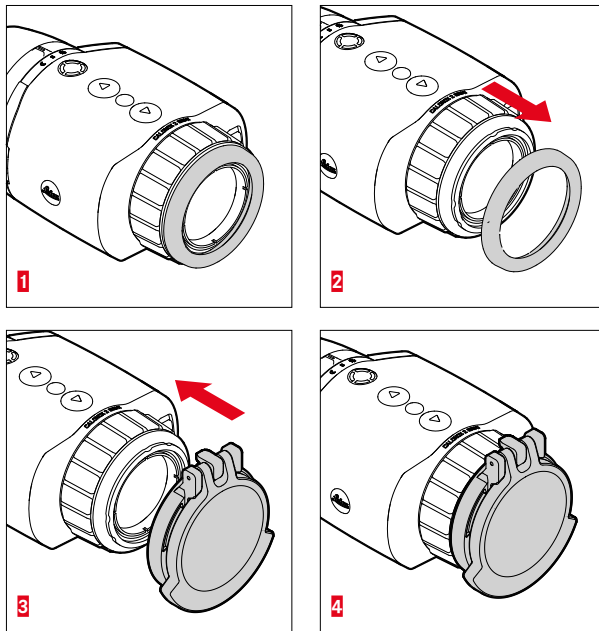
Proceed as follows to connect the reducer ring to an adapter:

- ▶ Screw the adapter onto the Calonox device to the stop.
- ▶ Rotate the attached adapter back until the locking mechanism is in the desired position.
- ▶ Tighten the locking ring by hand against the adapter.
- ▶ Slide the adapter with the attached Calonox device onto the lens area of the rifle scope to the stop.
 - Make sure that the adapter slides smoothly. It must have even contact all around.
- ▶ Actuate the clamping lever on the rifle scope (comply with manufacturer instructions).

The adapter and Calonox may have to be aligned to ensure that the display and reticle are not at an angle to each other.

MOUNTING THE FLIP COVER

Calonox 2 is supplied with a matching lens cap. Use the lens cap to prevent damage to the front lens.



- ▶ Removing the lens ring **1**
- ▶ Place the lens cap in the desired position and lock it by applying slight pressure.

Info

- The lens cap can be mounted in different directions.
- To produce accurate measurement results for the LRF model, ensure that the laser transmission optics **14** is not covered when the lens cap is open.

OPERATION

SWITCHING THE DEVICE ON/OFF

To switch on the device

- ▶ Day mode: Turn the operating mode selector switch **5** left to the sun symbol.
 - This switches on the device.
- ▶ Night mode: Turn the operating mode selector switch **5** right to the moon symbol.
 - This switches on the device.

Info

- Day and night mode differ in the initial brightness of the display and, if applicable, in color mode. These settings can be adjusted in the Leica 2Hunt app.

To switch off the device

- ▶ Set the operating mode selector switch **5** from the respective initial position to “0”. The display switches off after 3 seconds.

Info

- The device remains switched on for approx. 60 seconds in the “OFF” position and can be reactivated immediately by pressing the operating mode selector switch **5** again. Even if the device is accidentally switched on in the “incorrect” mode, it will not switch off for a short period of time.

SHARPENING THE IMAGE (FOCUSING)

Use the focus ring to sharpen the image.

To sharpen the image

- ▶ Select an image section.
- ▶ Turn the focus ring to sharpen the desired subject elements.

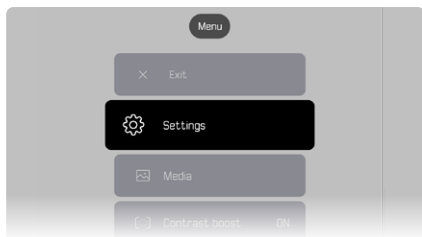
ACCESSING AND NAVIGATING THE MENU

To access the menu

- ▶ Press and hold the Menu Selection button or select the **Exit** menu item.
 - The menu appears.

To exit the menu

- ▶ Press and hold the Menu Selection button.
 - The device returns to observation mode.



To select a menu item

- ▶ Press the **[▲]** or **[▼]** button to navigate to the desired menu item.
- ▶ Press the Menu Selection button briefly.

Activating/deactivating an option

- ▶ Press the **[▲]** or **[▼]** button to navigate to the desired menu option.
- ▶ Press the Menu Selection button briefly.

SETTING THE IMAGE BRIGHTNESS

There are nine levels of brightness that can be set using the **[▲]** and **[▼]** buttons.

- ▶ Press the **[▼]** button briefly.
 - The Scroll Down menu opens.
- ▶ Press the **[▲]** or **[▼]** button to navigate to the desired image brightness.
 - The change is immediately visible.
- ▶ Briefly press the Menu Selection button to confirm the selected image brightness and exit the Brightness menu.
 - The device returns to observation mode.



SETTING THE COLOR MODE

There are six color modes to choose from.

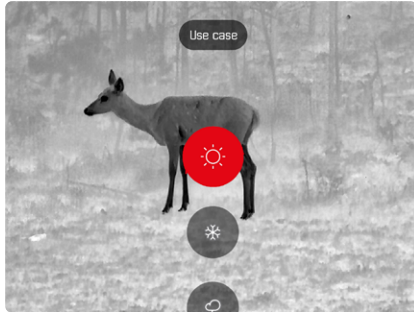
To set the color mode

- ▶ Press and hold the Menu Selection button.
- ▶ Use the [▼] button to navigate to the **Color mode** menu item.
- ▶ Press the Menu Selection button.
 - The **Color mode** menu opens.
- ▶ Press the [▲] or [▼] button to choose the desired color mode.
 - The change is immediately visible.
- ▶ Briefly press the Menu Selection button to confirm the desired color mode.
 - The device returns to the main menu.



SELECTING THE APPLICATION MODE

The device offers three preset application modes (use cases) for typical scenarios (individual modes after app updates).



- Summer scenario: mode for generally high temperatures and high contrasts. The image is re-sharpened to a lesser extent and should look as natural as possible.
- Winter scenario: mode for low ambient temperatures, but select areas with high temperatures, e.g., stones heated by the sun. The image should be as balanced as possible and not be more intense in hot spots.
- Rain scenario: mode for generally low temperature contrasts. Emphasis is placed on maximum contrast in order to gain as much image information as possible.

To select a scenario

- ▶ Press the Menu Selection button briefly.
 - The Scroll Down menu opens.
- ▶ Press the [▲] or [▼] button to navigate to the desired menu item and confirm by pressing the Menu Selection button.
 - The selected mode is shown in the status display and the device returns to observation mode.

SETTING TEMPORARY MAGNIFICATION

Temporary magnification is used for easier observation when using the Calonox 2 Sight in hand-held mode.

It enables a 2x digital zoom for 30 seconds. After this time, the device automatically switches to 1x magnification.

This prevents the sightline from appearing on the weapon in the event of accidental activation.

To activate temporary magnification

- ▶ Press and hold the **[▼]** button.
 - The device switches to 2x digital magnification.
- ▶ Press and hold the **[▼]** button again.
 - The device switches to 1x magnification (this is also done automatically after 30 seconds).

SETTING INTERFACE SCALING

This setting changes the display size of the menu to 50%, 75%, or 100%, depending on the rifle scope used. The factory setting for the display size is 100%.

To set interface scaling

- ▶ Press the Function button briefly.
 - The selection menu opens.
- ▶ Select the **UI Scaling** menu item and confirm by pressing the Menu Selection button.
 - The submenu with the values appears.
- ▶ Use the **[▲]** or **[▼]** button to navigate to the desired value and confirm with the Menu Selection button.

MEASURING DISTANCE

To measure distance

- ▶ Press and hold the Function button.
 - The target mark appears.
- ▶ Bring the object into focus.
- ▶ Press the Function button briefly.
 - The measured value is displayed.
 - As long as the target mark is still illuminated, a new measurement can be made at any time by pressing the Function button again.



“-” appears in the following cases:

- The object is less than 10 meters away.
- The distance measurement range has been exceeded.
- The object is insufficiently reflected.

For more information about measurement range, see page 31.

TAKING PHOTOS AND RECORDING VIDEOS

The device is equipped with an internal memory. It enables photos to be taken and videos to be recorded and saved locally.

To take photos

- ▶ Press the [▲] button briefly.
 - A “picture in picture” view of the captured scene is displayed.



To record videos

- ▶ Press and hold the [▲] button.
 - A camera icon in the top info bar and a video recording duration display are shown.



To end recording, press the [▲] button again.

Info

Alternatively, photo taking/video recording can also be activated via a separate menu item.

To take a photo/record a video via the menu

- ▶ Press and hold the Menu Selection button.
- ▶ Use the [▼] button to navigate to the **Media** menu item.
- ▶ Use the [▲] or [▼] button to select **Take a snapshot** or **Start video recording**.
- ▶ Confirm the selected option using the Menu Selection button.
 - The photo is taken or video recording is started.

CALIBRATING (NON-UNIFORMITY CORRECTION)

Non-uniformity correction is a procedure for improving the image quality.

Without non-uniformity correction, the image quality would decrease as the operating time of the thermal imaging camera increases because of the noise emitted by the sensor itself.

The device has an automatic non-uniformity correction function. If you feel that the image quality is deteriorating, you can correct non-uniformity manually.

To calibrate manually

- ▶ Press and **hold** the Menu Selection button.
 - The selection menu appears.
- ▶ Use the **[▼]** button to navigate to the **NUC** menu item.
- ▶ Press the Menu Selection button.
 - The **NUC** menu appears.
- ▶ Press the Menu Selection button.
- ▶ Close the lens cap or place the device with the lens on a homogeneous surface with the smallest possible temperature difference (e.g., a tabletop).
- ▶ Press the Menu Selection button.
 - The device is calibrated.
 - Calonox 2 does not use a mechanical shutter for the NUC. No noise is audible and no image freezing is apparent.

CORRECTING PIXEL ERRORS

Pixel errors may occur on the screen from time to time. These can be corrected.

To perform pixel correction

- ▶ Press and **hold** the Menu Selection button.
- ▶ Use the **[▼]** button to navigate to the **Settings** menu item.
- ▶ Press the Menu Selection button.
 - The **Settings** menu opens.
- ▶ Use the **[▼]** button to navigate to the **Bad Pixel** menu item.
- ▶ Press the Menu Selection button.
 - The **Bad Pixel** menu opens.
 - The **Initiate Bad pixel override** menu item is selected on the monitor screen.
- ▶ Press the Menu Selection button.
 - The prompt “Are you sure you want to initiate bad pixel override?” appears.
- ▶ Use the **[▲]** button to navigate to the **Yes** menu item.
- ▶ Press the Menu Selection button.
 - The instruction “Point the device towards a flat area and press a middle button” appears.
- ▶ Cover the lens with the flip cover or place the device with the lens on a homogeneous surface with as little temperature difference as possible (e.g., a tabletop).
- ▶ Press the Menu Selection button.
 - The device corrects pixel errors automatically.
 - Once the correction is complete, the message “Bad pixel override successfully completed” appears.
- ▶ Press the Menu Selection button.
 - The menu closes.

DELETING ALL PHOTOS AND VIDEOS

All photos and videos captured can be deleted from the internal memory.

- ▶ Press and **hold** the Menu Selection button.
- ▶ Use the **[▼]** button to navigate to the **Settings** menu item.
- ▶ Press the Menu Selection button.
 - The **Settings** menu opens.
- ▶ Use the **[▼]** button to navigate to the **Factory reset** menu item.
- ▶ Press the Menu Selection button.
 - The **Factory reset** menu opens.
- ▶ Use the **[▼]** button to navigate to the **Delete all media** menu item.
- ▶ Press the Menu Selection button.
 - The prompt “Are you sure you want to delete all media?” appears.
- ▶ Use the **[▲]** button to navigate to the **Yes** menu item.
- ▶ Press the Menu Selection button.

RESETTING THE DEVICE TO FACTORY SETTINGS

You can delete all manual settings and reset them to factory settings. All stored user profiles will be deleted.

If you have swapped out the Calonox 2 Go remote control, you can also delete the old remote control.

- ▶ Press and **hold** the Menu Selection button.
- ▶ Use the **[▼]** button to navigate to the **Settings** menu item.
- ▶ Press the Menu Selection button.
 - The **Settings** menu opens.
- ▶ Use the **[▼]** button to navigate to the **Factory reset** menu item.
- ▶ Press the Menu Selection button.
 - The **Factory reset** menu opens.
 - The **Reset to factory settings** menu item is selected.
- ▶ Press the Menu Selection button.
 - The prompt “Are you sure you want to reset?” appears.
- ▶ Use the **[▲]** button to navigate to the **Yes** menu item.
- ▶ Press the Menu Selection button.
 - The device will be reset.

Caution

- Make sure to check the settings after a **Factory reset**.

BUTTON FUNCTION OVERVIEW

		In observation mode	In the menu
[▲] button	Press <u>briefly</u>	Take photo	Up
	Press and <u>hold</u>	Start/Stop video recording	-
Menu Selection button	Press <u>briefly</u>	Open the selection menu for application mode	Select setting in the submenu/ Save or confirm
	Press and <u>hold</u>	Access the main menu	Return to observation mode
[▼] button	Press <u>briefly</u>	Change display brightness	Down
	Press and <u>hold</u>	Start and stop temporary 2x magnification	-
Function button	Press <u>briefly</u>	Set interface scaling	-
	Press and <u>hold</u>	Activation of measurement function (for LRF)	-

MENU STRUCTURE

The menu has three levels. The first menu item on each level is used to move up one level or to eventually close the main menu.

Main menu	Submenu 1	Submenu 2
Settings	Customization	Auto-display off
		Auto-power off
		Remote control function
	Language	
	Units	
	Factory reset	
	Bad pixel	
	Info	
Media		
Contrast boost		
Color mode		
Interface scaling		
NUC		
Quick Guide		

SETTINGS

CUSTOMIZATION

Auto-display off

The tilt-dependent display switch-off function (energy-saving mode) can be switched on or off. As soon as the device is tilted >70° up or down, the display is deactivated and the device switches to standby mode.

The time period before power-off can be set in the Leica 2Hunt app. See „LEICA 2HUNT-APP“ auf Seite 32.

Auto-power off

The device's automatic power-off function can be switched on or off. The corresponding time period before power-off can be defined in the Leica 2Hunt app.

Remote control function

If a Calonox 2 Go remote control is used, the remote control function can be selected here:

- **Rangefinder:** Start distance measurement (for LRF models only).
- **Snapshot/video:** Start video recording.

LANGUAGE

Defines the system language. English, French, German, Italian, and Spanish are available. The factory setting is English.

UNITS (for LRF models)

Defines the unit for distance measurement. Meters or yards are available.

FACTORY RESET

Resets the device to factory settings. See page 27.

BAD PIXEL

Corrects pixel errors on the monitor screen. See page 26.

INFO

Displays the serial number and firmware version of the device as well as regulatory information.

MEDIA

Starts photo taking or video recording.

CONTRAST BOOST

Switches contrast boosting on or off. Contrast boosting can be useful in difficult conditions such as rain. Small temperature differences are visualized more clearly, which enables observation in greater detail.

COLOR MODE

Sets the color mode of the thermal image. See page 22.

NUC

Performs manual calibration of the device. See page 26.

QUICK GUIDE

Displays an overview of the device's default button assignment.

MEASURING RANGE/ACCURACY

The maximum range is achieved under the following conditions:

- If targets reflect well
- With a visual range of approximately 10 km
- High ranges can be measured or achieved more reliably if the rangefinder is held very steadily and/or placed on something steady.

The maximum ranges are:

- Approx. 1000 m for highly reflective targets
- Approx. 250 m for game

The measuring range is influenced by the following factors:

Range	Higher	Lower
Color	White	Black
Angle in relation to lens	Perpendicular	Acute
Object size	Large	Small
Sunlight	Low light (cloudy)	Bright light (midday sun)
Atmospheric conditions	Clear	Hazy
Object structure	Homogeneous (house wall)	Inhomogeneous (bush, tree)

CALONOX 2 GO REMOTE CONTROL

It is possible to control the Calonox 2 device remotely up to a distance of 5 m using a remote control (available as an option).

PAIRING

The pairing process starts automatically when the device is switched on and the remote control is operated for the first time. If, for example, a new remote control is connected following the loss of the Calonox 2 Go, the process will not start automatically. In this case, the process must be controlled with a factory reset, see page 27.

SELECTING FUNCTION MODE

With Calonox 2, you can select which function Calonox 2 Go will trigger (see „Remote control function“ auf Seite 29).

The Function button **A** has two steps, depending on the operating mode:

- 1. Press** (automatic standby mode is ended)
 - Activates the electronics and displays if necessary
 - After 10 minutes of inactivity, Calonox 2 Go reverts to standby mode.
- 2. Press** (depending on selected function mode)
 - Photo taking/video recording starts.
 - Press again to end a video recording in progress.
 - The distance is measured and the value is displayed on the device for a few seconds.

Info

To properly operate the Calonox 2 Go remote control, read the provided Quick Start Guide.

LEICA 2HUNT APP

The device can be remotely controlled via smartphone or tablet. This will require installation of the Leica 2Hunt app on the mobile device. A list of available functions and instructions for their use can be found in the app.

- ▶ The app is available from the Apple App Store™/Google Play Store™ for download and installation.

CONNECTION

CONNECTING TO THE MOBILE DEVICE FOR THE FIRST TIME

When connecting to a mobile device for the first time, Calonox 2 must be paired with the mobile device. This is done when the device is set up for the first time using the connection wizard.

CONNECTION WIZARD

ON THE DEVICE

- ▶ Switch on Calonox 2.
 - Bluetooth® is activated.

Info

- Bluetooth® is continuously active and does not need to be switched on manually.

ON THE MOBILE DEVICE

- ▶ Activate Bluetooth®.
- ▶ Launch the Leica 2Hunt app.
- ▶ Tap the “Start connection” button.
 - A list of devices appears.
- ▶ Select the desired device.
 - A connection is established. This may take a few seconds.
 - The successful connection is displayed in the app.

Info

- Pairing only needs to be completed once for each mobile device. The device is added to the list of known devices.
- A wireless connection is required to use the gallery. Please follow the instructions in the Leica 2Hunt app.

DISCONNECTION

We recommend disabling the Bluetooth function, once a connection to the mobile device is no longer needed.

- ▶ Launch the Leica 2Hunt app.
- ▶ Tap the “Device info” button.
- ▶ Tap the “Disconnect device” button.
 - The device is disconnected.

CARE/CLEANING

- Your Leica product requires no special care.
- Coarse dirt particles like sand can be removed with a soft brush or simply blown off.
- Fingerprints, etc. on front lenses and eyepiece lenses can be pre-cleaned with a damp cloth and then wiped dry with a clean leather or lint-free cloth.
- The device should be stored in a well-ventilated, dry and cool place to prevent fungal growth (particularly important in humid climates).
- Do not use alcohol or chemical cleaning solutions on the optics or housing.
- Do not use excessive force when cleaning a severely soiled lens surface. The coating is abrasion resistant, but not impervious to sand or salt crystals.
- The housing should be cleaned using a damp leather cloth only. Using a dry cloth may cause friction, which may result in a static discharge.
- Always rinse off any traces of salt water! Dried salt crystals could damage the surfaces.

TECHNICAL DATA

Designation	Leica Calonox 2 Sight	Leica Calonox 2 Sight LRF
Device type	Thermal imaging device	Thermal imaging device
Type No.	1966	1986
Order No.	50511	50510
Scope of delivery	Calonox 2 Sight, cordura case, charging cable, carry strap, Quick Start Guide, lens cleaning cloth, rubber eyecup, Tenebraex flip cover, test certificate	Calonox 2 Sight LRF, cordura case, charging cable, carry strap, Quick Start Guide, lens cleaning cloth, rubber eyecup, Tenebraex flip cover, test certificate
Sensor type	VOx	VOx
Sensor size	640 × 480 pixels	640 × 480 pixels
Pixel size	12 µm	12 µm
Screen type	OLED	OLED
Screen diagonal	0.49", active area 0.35"	0.49", active area 0.35"
Screen resolution	1280 × 960 pixels	1280 × 960 pixels
Image repetition frequency	60 Hz	60 Hz
Lens focal length	42 mm	42 mm
Optical basic magnification	1×	1×
Field of view	10.3° × 7.7° (18 m × 13.5 m/100 m)	10.3° × 7.7° (18 m × 13.5 m/100 m)
Range/resolution (calculated for image subject 1.7 m × 0.5 m)		
Detection range / Resolution	2210 m/2 pixels	2210 m/2 pixels
Recognition range / Resolution	770 m/6 pixels	770 m/6 pixels
Identification range / Resolution	390 m/12 pixels	390 m/12 pixels
Laser	-	Invisible, safe for eyes according to EN and FDA Class 1
Wavelength	-	905 nm
Range	-	1000 m for highly reflective targets; 250 m for low reflective targets
Video output	Wi-Fi, USB-C	Wi-Fi, USB-C
Video recording	Yes	Yes

Designation	Leica Calonox 2 Sight	Leica Calonox 2 Sight LRF
Video/photo resolution	640 × 480 pixels	640 × 480 pixels
Cable socket	USB-C	USB-C
Wireless connection	Bluetooth® ¹ / Wi-Fi (2.4 GHz)	Bluetooth® ¹ / Wi-Fi (2.4 GHz)
Internal storage	32 GB	32 GB
Protection type	IP67, nitrogen-filled	IP67, nitrogen-filled
Operating temperature	-20 to +50 °C	-20 to +50 °C
Operating temperature (charge battery)	+10 to +30 °C	+10 to +30 °C
Battery life	Approx. 6.45 h	Approx. 5 h
Accessory thread	M43 × 0.75	M43 × 0.75
Tripod thread	A ¼ DIN 4503 (¼"), M4 standard thread	A ¼ DIN 4503 (¼"), M4 standard thread
Housing material	Glass fiber reinforced plastic with silicone reinforcement	Glass fiber reinforced plastic with silicone reinforcement
Dimensions (L×W×H)	139 × 90 × 61 mm	139 × 110 × 61 mm
Weight (with battery)	613 g	658 g
Shutter	Shutterless	Shutterless
Additional assembly	Picatiny	Picatiny
Accessories		
Remote control (mountable button)	59 083	59 083

Subject to changes in design, production, and scope of delivery.

¹ The device's Bluetooth® connection is permanently switched on. It is used to connect to the optional Calonox 2 Go remote control and to automatically connect to the Leica 2Hunt app (see „LEICA 2HUNT-APP“ auf Seite 32).

LEICA CUSTOMER CARE

Please contact Leica Camera AG Customer Care for the maintenance of your Leica equipment and for help and advice regarding Leica products and how to order them. You can also contact the Customer Care department or the repair service provided by your regional Leica subsidiary for repairs or warranty claims.

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