



RANGEMASTER CRF MAX

INSTRUCTION MANUAL

Rangemaster CRF Max

APPLIED BALLISTICS
THE SCIENCE OF ACCURACY



FOREWORD

Dear customer,

We hope you enjoy using your new Leica product for many years to come.

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.

Your Leica Camera AG

SPARE PARTS/ACCESSORIES

Detailed information about the latest range of spare parts/accessories can be obtained from Leica Customer Care or your Leica dealer:

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

This device uses an invisible laser beam. Please read the chapters “Safety Information” 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.

LEGAL INFORMATION

LEGAL INFORMATION ABOUT THIS MANUAL

COPYRIGHT

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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.

BRANDS AND LOGOS

The brand names and logos used in this document 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

The production date of your product can be found on the stickers on the packaging. It appears in the format year/month/day.

CE MARK

The CE mark on our products documents compliance with the fundamental requirements of current EU regulations.

English

Declaration of conformity (DoC)

Leica Camera AG hereby confirms that this product complies with the fundamental requirements and other relevant stipulations established in Directive 2014/53/EU.

Customers can download a copy of the original DoC for our products from our DoC server:

www.cert.leica-camera.com

If you have further questions, please contact the Leica Camera AG product support team at:
Am Leitz-Park 5, 35578 Wetzlar, Germany

Depending on product (see technical data)



**This is a CLASS 1 – CONSUMER LASER
PRODUCT according to 50689:2021**

LASER TECHNICAL DATA

Laser class	IEC 60825-1 Class 1
Wavelength (nm)	903
Pulse duration (ns)	58
Power output (mW)	1.14
Beam divergence (mrad)	Vertical: 0.6 / Horizontal: 2.2

**CLASS 1
LASER PRODUCT**

Complies with 21 CFR 1040.10 and 1040.11 except for conformance with IEC 60825-1 Ed. 3., as described in Laser Notice No. 56, dated May 8, 2019.

APPLIED BALLISTICS and the  are registered in the United States Patent and Trademark Office.

DISPOSAL OF ELECTRICAL AND ELECTRONIC EQUIPMENT



(Applies within the EU and for other European countries with active waste separation policies.)

This device contains electric and/or electronic components which must not be disposed of in general household waste. Instead, it should be disposed of at a recycling collection point provided by your local authority.

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.

REGULATORY INFORMATION

The production date of your product can be found on the stickers on the packaging. It appears in the format day/month/year.

- Access the main menu by pressing and holding the Menu Selection button.
- Choose "About" in the main menu using the Menu Selection button.
- Press the main button to access the "About" sub-menu.
- In the settings menu, use the Menu Selection button to navigate down to "Regulatory information".
- Press the main button to access the info page.

SAFETY INFORMATION

WARNING

Non-observance of the following points can result in serious injuries 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 either of the two buttons 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

- Avoid looking directly at bright light sources through your Leica Rangemaster in order to prevent damage to the eyes.

CAUTION

Non-observance of the following points can result in injuries or damage to the device.

LASER

- If distance measurement is not currently required, do not press one of the two buttons to ensure that the laser beam is not emitted unintentionally.
- You should not disassemble, reassemble, or repair the Leica Rangemaster. 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.
- Remove the battery immediately and stop using the device if the device housing is damaged or if the device emits a strange sound after it has been dropped or for any other reason.

GENERAL INFORMATION

- Do not store the device within reach of small children.
- Do not look through the eyepiece while walking. This can cause falls.
- Do not use the Leica Rangemaster with other additional optical elements such as lenses or binoculars. Using the Leica Rangemaster with an optical device increases the risk of damage to the eyes.
- Do not attempt to disassemble or modify the device; exposing the internal electronics may cause damage, injury or electric shock.

BATTERY

- Use of the battery type named and described in this manual is mandatory. Improper use of these batteries or the use of unapproved battery types may result in an explosion!
- Do not expose batteries to sunlight, heat, humidity or moisture for prolonged periods of time. Likewise, they must not be placed in a microwave oven or a high-pressure container as this would pose a fire or explosion hazard!
- Never throw batteries into fire, or heat, charge, disassemble or break them open.
- Keep batteries out of the reach of children. Do not leave batteries lying around, as they could be swallowed by children or pets.

CARRYING STRAP

- Carrying straps are usually made of very robust material. You should therefore keep it out of the reach of children. A carrying strap is not a toy and poses a strangulation risk.
- Use the carrying strap only for its intended purpose on a camera or on binoculars. Any other use poses the risk of injury and may possibly result in damage to the carrying strap and is therefore not permitted.
- Carrying straps should also not be used for cameras/binoculars during sports activities that pose a risk of entanglement (e.g., when mountain climbing and similar outdoor activities).

IMPORTANT INFORMATION

GENERAL INFORMATION

- Do not try to dismantle the device. Repairs must only be carried out by authorized service centers.
- Remove the battery from the housing if the product will not be used for a longer period of time.
- 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.
- Batteries should be stored in a cool and dry place.
- Used batteries must not be disposed of with normal household waste as they contain toxic substances that are harmful to the environment. To recycle them properly, they should be turned in to a retailer or taken to a hazardous waste collection point.
- Do not touch glass surfaces with your fingers, especially if you have previously applied hand cream, insect repellent, or similar to them. These products can contain chemicals that damage or destroy the coatings on the glass surfaces.
- Make a note of the serial number of your device, as this information will be extremely important in case of loss.

EYEPiece

- An eyepiece can have the effect of a magnifying glass when exposed to direct frontal sunlight. The device must therefore be protected against extended exposure to direct sunlight. Storing the device in the shade or ideally in its case will help prevent damage to the device interior.

MEASURED VALUES

- Especially at long distances, the impact of all ballistically relevant factors increases significantly and considerable deviations can occur. The ballistic values displayed are therefore to be understood expressly as an aid.
- Regardless of how this information is used, you are responsible for assessing the respective hunting situation.
- Leica Camera AG cannot accept any liability for the accuracy of the values transmitted by third-party devices.
- 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.

Definition of the various categories of information found in this manual

Note

- Additional Information

Caution

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

Warning

- Non-observance can result in serious injuries or death

WARRANTY

Dear Leica customer,
Congratulations on purchasing your new Leica product – a world-famous brand product.
In addition to your legal warranty entitlements vis-à-vis the seller, 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 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 1, 2023. Please note that we do not provide a warranty for commercial use of our product.
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.
Further claims of any kind and those based on any legal grounds in connection with this Leica warranty are excluded.

EXCLUDED FROM THE LEICA WARRANTY

The following are excluded from the Leica Warranty: parts subject to wear and tear, such as eyecups, leather coverings, carrying 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.

VOIDANCE 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.

ASSERTION OF THE LEICA WARRANTY

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 submit a copy of the warranty certificate; please note that this must be completed in full and the product must have been purchased from 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 sport optics product	Warranty period Optics/ mechanics	Warranty period Electronics
Monocular rangefinder	3 years	3 years

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.

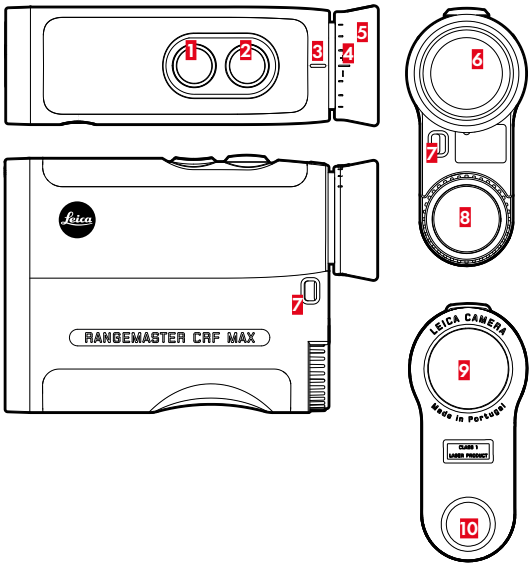
Contact: <https://leica-camera.com/contact>

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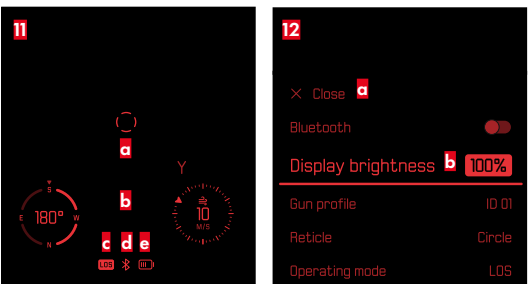
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DESIGNATION OF PARTS

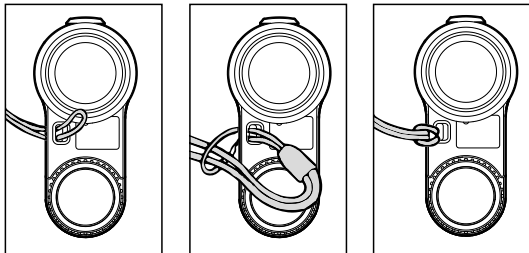


- 1 Menu Selection button
- 2 Main button
- 3 Index for diopters setting
- 4 Diopter scale
- 5 Eyecup
- 6 Eyepiece
- 7 Strap lug
- 8 Battery compartment
- 9 Lens
- 10 Laser transmission optics
- 11 Display
 - a Target mark
 - b Selectable display elements
 - c Operating mode
 - d Bluetooth
 - e Battery
- 12 Display
 - a Exit menu
 - b Active menu option



PREPARATIONS

ATTACHING THE CARRYING STRAP



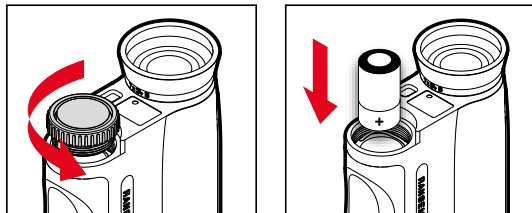
- Push the small loop of the carrying strap through the strap lug.
- Thread the carrying strap through the small loop.
- Tighten the carrying strap.
 - The created loop should fit tightly around the strap lug.

Caution

- After attaching the carrying strap, check it by pulling firmly. It should no longer be possible to adjust the carrying strap in length.

INSERTING/REPLACING THE BATTERY

A 3-volt lithium coin cell battery (type CR2) is required for power supply.



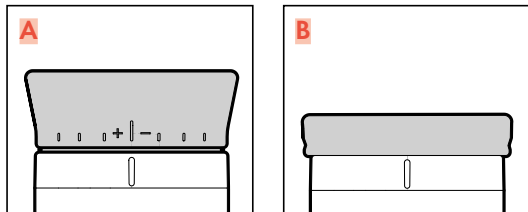
- Turn the battery compartment cover counterclockwise.
- Remove the cover.
- Insert the battery with the positive contact facing forward.
- Attach the cover.
- Tighten the cover clockwise.

BATTERY CHARGE STATUS

A depleted battery is indicated by a flashing measured value and target mark display. After the display flashes for the first time, it is still possible to take approximately 50 measurements at a progressively reduced range.

ADJUSTING THE EYECUP

The position of the eyecup depends on whether you wear glasses or not. If you wear contact lenses, you can adjust the setting as if you were using the device without glasses.



USING WITHOUT GLASSES

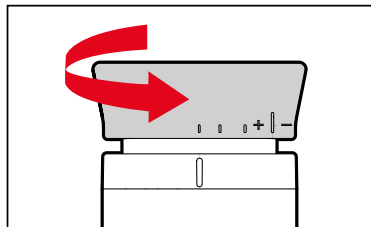
→ Fold up the eyecup (Fig. A).

USING WITH GLASSES

→ Fold back the eyecup (Fig. B).

SETTING THE DIOPTER

A diopter compensation function for up to ± 3.5 diopter is available for users of eye glasses.



The diopter adjustment allows you to set the sharpness of the target mark and the displays to your optimal value.

- Switch on the device.
 - The target mark appears.
- Aim at a far-away target.
- Turn the eyecup until the target mark has the optimal degree of sharpness.
 - You can read the adjusted value on the diopter scale.

Caution

- Never look at the sun or bright light sources through Leica optics. This can cause eye damage.

SETTINGS AND OPERATION

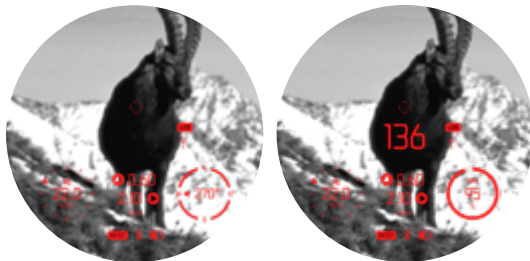
SWITCHING ON THE DEVICE

- Press the main button.
 - The device switches on and a target mark appears.

Note

- If Bluetooth® is disabled, the device will automatically switch off after 10 seconds.
- If Bluetooth® is enabled, the device will automatically switch off after the time selected under **AutoOff**.
- The power supply must not be interrupted during operation, as this may result in menu settings being lost.
 - Do not remove the battery during operation.
 - Do not completely discharge the battery during operation.
 - Wait 10 seconds to remove the battery once the device has switched off.

SIMPLE DISTANCE MEASUREMENT



- Briefly press the main button.
 - Aim at the object with target mark.
 - Press the main button again.
 - The target mark goes out briefly and 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 main button again.
- appears in the following cases:
- Object is less than 10 meters away.
 - Range exceeded
 - Object is insufficiently reflected.

SCAN MODE (OBJECT TRACKING)



- Briefly press the main button.
- Aim at the object with illuminated target mark.
- Press and hold the main button for approx. 2.5 seconds.

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. 3,400 m for highly reflective targets
- Approx. 2,000 m for trees
- Approx. 1,300 m for game

The measuring range is increased or decreased 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)

In sunny conditions and with good visibility, the following range and accuracy apply:

Range (in meters)	Accuracy (1σ) Standard operation	Accuracy (1σ) Scan mode
<200 m	±0.5 m	±2.0 m
200 m–1,000 m	±1.0 m	±3.0 m
>1,000 m	±0.15%	±0.5%

Note

- Distances less than 200 meters are displayed with one decimal place.

DISPLAY

The device is equipped with a red microLED display. The main menu is used for navigation. The display can be configured using the Leica Ballistics app. The display can show the following distance and ballistics information.



1	Wind direction and speed
2	Compass
3	Combined correction values for height and side
4	Height correction values
5	Side correction values
6	Shot probability analysis
7	EHR (equivalent horizontal range)
8	LOS (actual distance)
9	Density altitude (DA)

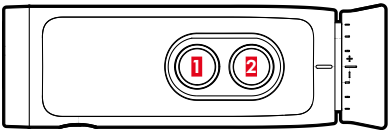
MENU CONTROL

ACCESS THE MAIN MENU

- Press and hold the Menu Selection button.
 - The main menu appears.

NAVIGATING THE MAIN MENU

- Briefly press the Menu Selection button **1** multiple times until the desired menu item appears.
- Briefly press the main button **2** multiple times until the desired setting appears.



STORING SETTINGS

Once the device switches to the main display, settings are automatically saved.

- or
- Press the Menu Selection button briefly.
 - **X Close** is selected.
 - Confirm by pressing the main button.
 - The main display appears.

Menu item	Settings	Description
Bluetooth	Toggle On	Activate Bluetooth®
	Toggle Off	Deactivate Bluetooth®
Operating Mode	LOS	Actual distance
	EHR	Equivalent horizontal range
	CUSTOM	Ballistics information and display customization
Target Mode	Best	Target mode for clearly visible and unobstructed targets
	First	Target mode for small targets within a short distance
	Last	Target mode for targets that are concealed by dense undergrowth or tall grass
Extended Mode	ON	Measurements up to 3,700 yds in 1.2 seconds
	AUTO	Automatically activate extended rangefinder mode when the target is between 2,000 and 3,700 yards away.
	OFF	Measurements up to 2,000 yds in 0.3 seconds

Menu item	Settings	Description
Units	US	Imperial units of measure
	EU	Metric units of measure
	CUSTOM	Custom setting in the app
Reticle	Circle	Target mark as a circle
	Square	Target mark as a square
	Cross	Target mark as a cross
Brightness	1-5	Display brightness in 5 increments
	Auto Adjustment	Display brightness is automatically adjusted using an integrated ambient light sensor.
AutoOff	1-3-5	Automatic shut-off after 1, 3, or 5 minutes
	Energy Saving	Device automatically switches to standby depending on the tilt angle
Compass Calibration	-	Compass calibration
About	Firmware (Device)	Installed device firmware
	Firmware (BT)	Installed Bluetooth firmware
	Serial number	Serial number
	Device name	Device name
	Factory reset	Reset to factory settings
	Contact / Support	Leica contact information
	Regulatory information	Regulatory information


MENU ITEMS

BLUETOOTH®

The device can be connected to external devices via Bluetooth®. This allows you to use your own ballistic curves from the Leica Ballistics app on your mobile device (see pages 20 and 25) or to display ballistic correction values from external ballistic devices (see page 22).

- Press and hold the Menu Selection button.
- Briefly press the Menu Selection button multiple times until the **Bluetooth** menu item appears.
- Briefly press the main button multiple times until the desired setting appears.

ACTIVATE BLUETOOTH®

- Setting: **Toggle On**
- When Bluetooth® is activated,  appears on the main display.

DEACTIVATE BLUETOOTH®

- Setting: **Toggle Off**

OPERATING MODE

The operating modes can be used to set the distance and ballistics displays.

- Press and hold the Menu Selection button.
- Briefly press the Menu Selection button multiple times until the **Operating Mode** menu item appears.
- Briefly press the main button multiple times until the desired setting appears.

ACTUAL DISTANCE

Only the actual measured linear distance is displayed (single measurements and scan mode).

- Setting: **LOS**

EQUIVALENT HORIZONTAL RANGE

Shots at higher or lower elevation targets are subject to changed ballistic conditions. They require knowledge of the equivalent horizontal range (EHR). The EHR can be determined using the device. The EHR is also important when using ballistic reticles. EHR values are indicated by the additional **EHR** display.

- Setting: **EHR**

BALLISTICS INFORMATION AND DISPLAY CUSTOMIZATION

The device is equipped with a ballistics calculator. In addition to the measured distance, ballistic correction values can also be displayed.

If a gun profile is activated, the preset output values customized in the Leica Ballistics app are displayed.

- Setting: **CUSTOM**
- Gun profiles can be created and activated in the Leica Ballistics app under **Gun Profiles**.
- Changes to the output values can be made in the Leica Ballistics app under **Rangefinder Settings/Display Customization**.

Note

- The factory setting uses a general gun profile (based on .308" 175 gr Sierra MatchKing). The preset gun profile may not correspond to the ammunition used.
- Always use the appropriate gun profile for the ammunition used.
- When the operating mode is set to **CUSTOM**, the gun profile last synchronized to the device by the Leica Ballistics app is used until a new gun profile is set. This also applies if the app is not connected.
- The operating mode is set to **CUSTOM** in the factory settings.

TARGET MODE

The target mode allows the device to be adjusted to different targets.

- Press and hold the Menu Selection button.
- Briefly press the Menu Selection button multiple times until the **Target Mode** menu item appears.
- Briefly press the main button multiple times until the desired setting appears.

BEST

Target mode for clearly visible and unobstructed targets, e.g., for hunting or sport shooting.

- Setting: **Best**

FIRST

Target mode for small targets within a short distance.

- Setting: **First**

LAST

Target mode for targets that are concealed by dense undergrowth or tall grass. This may cause the rangefinder to detect objects that are in front of the actual target and provide an inaccurate measurement.

- Setting: **Last**

EXTENDED RANGEFINDER MODE

Long distances can be measured in extended rangefinder mode.

- Press and hold the Menu Selection button.
- Briefly press the Menu Selection button multiple times until the **Extended Mode** menu item appears.
- Briefly press the main button multiple times until the desired setting appears.

ACTIVATE MODE

Distance values up to 3,700 yards are displayed. The measuring period is 1.2 seconds.

- Setting: **ON**

AUTOMATIC

The extended rangefinder mode is automatically activated when the target is between 2,000 and 3,700 yards away. The measuring period for distances between 2,000 and 3,700 yards is approximately 2 seconds.

The measuring period for distances under 2,000 yards is 0.3 seconds.

- Setting: **AUTO**

DEACTIVATE MODE

Distance values up to 2,000 yards are displayed. The measuring period is 0.3 seconds.

- Setting: **OFF**

UNIT OF MEASURE

The units of measurement displayed on the device can be set.

- Press and hold the Menu Selection button.
- Briefly press the Menu Selection button multiple times until the **Units** menu item appears.
- Briefly press the main button multiple times until the desired setting appears.

IMPERIAL

Setting for imperial units of measure.

- Setting: **US**

METRIC

Setting for metric units of measure.

- Setting: **EU**

USER-DEFINED

Adopt the units of measure set in the Leica Ballistics app. The units of measure can be set in the Leica Ballistics app under **Settings/App Units**.

- Setting: **CUSTOM**

OVERVIEW OF UNITS

Parameter	Imperial	Metric	User-defined
Distance	yard	meter	yard, meter
Temperature	Fahrenheit	Celsius	Fahrenheit, Celsius
Air pressure	inHG	mbar	inHG, mbar, foot, meter
Wind speed	mph	m/s	m/s, km/h, mph
Muzzle velocity V0	fps	m/s	m/s, fps
Energy	ft-lb	J	ft-lb, J
Bullet length	inch	cm	inch, cm
Weight	grain	gram	grain, gram
Weapon data	inch	cm	inch, cm

Note

The respective setting can always be seen on the display. In addition to the digits, M (for meters) or Y (for yards) appears.

TARGET MARK

Various target marks can be set.

- Press and hold the Menu Selection button.
- Briefly press the Menu Selection button multiple times until the **Reticle** menu item appears.
- Briefly press the main button multiple times until the desired setting appears.
 - Circle: **Circle**
 - Square: **Square**
 - Cross: **Cross**

DISPLAY BRIGHTNESS

The display brightness can be adjusted manually or automatically in 5 increments.

- Press and hold the Menu Selection button.
- Briefly press the Menu Selection button multiple times until the **Brightness** menu item appears.
- Briefly press the Menu Selection button once
- Briefly press the main button multiple times until the desired setting appears.

MANUAL

Set the display brightness manually in increments 1 to 5.

- Setting: **1 to 5**

AUTOMATIC

Display brightness is automatically adjusted using an integrated ambient light sensor.

- Setting: **Auto Adjustment**

AUTOMATIC SHUT-OFF

The device switches off automatically after a set time.

- Press and hold the Menu Selection button.
- Briefly press the Menu Selection button multiple times until the **AutoOff** menu item appears.
- Briefly press the main button multiple times until the desired setting appears.

SET THE SLEEP TIME

The sleep time can be set to 1, 3, or 5 minutes.

- Setting: **1, 3 or 5**

ACTIVATE ENERGY-SAVING FUNCTION

When the energy-saving function is activated, the device automatically switches to standby mode depending on the tilt angle.

- Setting: **Energy Saving**

COMPASS CALIBRATION

Some device functions require directional information. The device is therefore equipped with a digital compass. The compass is calibrated at the factory. Manual calibration is recommended to ensure proper functioning after a change of location, temperature fluctuations, incorrect readings, or battery replacement. Perform the calibration in an open area.

WITH LEICA BALLISTICS APP:

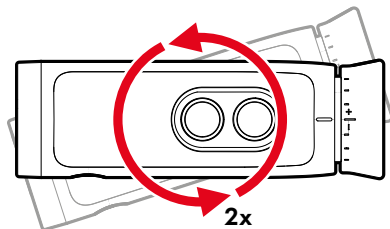
- Connect to the Leica Ballistics app.
- Select the compass calibration setting in the app.
- Follow the instructions in the app.

WITHOUT LEICA BALLISTICS APP:

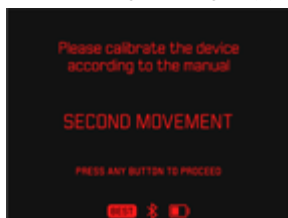
- Press and hold the Menu Selection button.
- Briefly press the Menu Selection button multiple times until the **Compass Calibration** menu item appears.
- Briefly press the main button.
 - The device switches to compass calibration mode.
 - The following message appears.



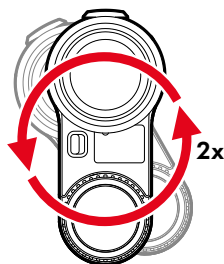
- Rotate the device counterclockwise around the vertical axis twice within 20 seconds.



- Briefly press the main button.
- The following message appears.



- Rotate the device counterclockwise around the horizontal axis twice within 20 seconds.



- Briefly press the main button.
- If calibration is successful, the message **Calibration finished successfully** appears.
 - If calibration fails, the message **Calibration failed** appears.
- Press the main button briefly to confirm.
- The main display appears.
- If calibration fails, restart calibration via the menu.

Note

- Metallic objects, magnetic fields, and other electronic devices can interfere with the compass function and result in incorrect measurements. Non-magnetic metals and alloys do not affect the compass function.
- Calibration can be performed at any time.
- The calibration process can be interrupted at any time by pressing the Menu Selection button. The calibration will not be saved.

GENERAL INFORMATION

General information about the device and the manufacturer can be displayed.

- Press and hold the Menu Selection button.
- Briefly press the Menu Selection button multiple times until the **About** menu item appears.
- Briefly press the main button multiple times until the desired setting appears.
 - Installed device firmware: **Firmware (Device)**
 - Firmware version: **Firmware (BT)**
 - Serial number: **Serial number**
 - Device name: **Device name**
 - Factory settings: **Factory reset**
 - Contact: **Contact / Support**
 - Regulatory information: **Regulatory information**

RESET TO FACTORY SETTINGS

- In the **About** submenu, press the Menu Selection button several times until the **Factory reset** menu item appears.
- Briefly press the main button.
- Use the Menu Selection button to select **YES** or **NO**.
- Press the main button briefly to confirm.
 - The device is reset to factory settings.
 - The device then automatically switches to the main display.

WIND CORRECTION

To display the side correction values, the wind speed and direction can be entered manually.

- Press the Menu Selection button briefly.
 - The wind menu appears.

WIND SPEED

- Press the main button several times briefly or hold it down to set the wind speed.
 - The wind speed can be set in the following increments.
 - 0 to 40 for km/h and mph
 - 0 to 20 for m/s
- Confirm the wind speed with the Menu Selection button.

WIND DIRECTION

- Press the main button several times briefly or hold it down to set the wind direction.
 - The wind direction is indicated by the clock.
- Confirm the wind direction with the Menu Selection button.
 - The display returns to the main screen. The set wind values are now taken into account in the calculation of the ballistic correction values.

Note

- No side correction values are displayed when the wind speed is 0.

SUB-DISPLAY

The sub-display shows the atmospheric conditions and ballistics from the last measurement.

- Briefly press the Menu Selection button twice.
 - After 10 seconds, the device automatically returns to the main display. Alternatively, you can press the main button.

ATMOSPHERIC CONDITIONS

The device calculates additional values during distance measurement to determine the exact point of impact.

- Angle of the device
- Temperature
- Air pressure

Note

- After significant temperature fluctuations, it can take up to 30 minutes for the sensor to display the correct ambient temperature again, e.g., when the device is taken from warm indoor areas into the cold outdoor air.

BALLISTICS INFORMATION

The following ballistics information from the last measurement is displayed.

- Target bullet velocity
- Energy
- TOF

CONNECTIONS

The device can be connected to the Leica Ballistics app or to external measuring devices.


CONNECTING TO THE LEICA BALLISTICS APP

The Leica Ballistics app can be used to create and save personal gun profiles. All of the device's functions and settings can also be controlled and set from a mobile device. To do this, the Leica Ballistics app must first be installed on the mobile device. A list of available functions and instructions for their use can be found in the app.

<http://www.leica-ballistics.com>

ESTABLISHING A CONNECTION

IN THE RANGEFINDER

- Press and hold the Menu Selection button.
- Briefly press the Menu Selection button multiple times until the **Bluetooth** menu item appears.
- Briefly press the main button multiple times until **Toggle On** appears.
 - When Bluetooth® is activated,  appears on the main display.

ON THE MOBILE DEVICE

- Activate Bluetooth®.
- Launch the Leica Ballistics app.
- Choose the desired device.

DISCONNECTING

- Press and hold the Menu Selection button.
- Briefly press the Menu Selection button multiple times until the **Bluetooth** menu item appears.
- Briefly press the main button multiple times until **Toggle Off** appears.

FIRMWARE UPDATES

Leica continually strives to further develop and optimize its products. As many functions are fully electronic, you can install improvements and functional enhancements as they become available. Leica publishes firmware updates at irregular intervals for this purpose. Firmware updates can be installed on the device via the Leica Ballistics app. The information in this instruction manual refers to the firmware version valid at the time of market launch.


- Connect to the Leica Ballistics app.
- Follow the instructions in the app.

Caution

- Do not switch off the device during the update process.

CONNECTION TO EXTERNAL MEASURING DEVICES

Ballistic correction values from external devices such as those from Nielsen-Kellermann (Kestrel® models) or Garmin® (Foretrex® GPS) can be used. These devices receive data such as the measured distance, angle, and target direction. The devices take this data into account when calculating the ballistic values and ultimately return the corresponding correction values.

- Configure the external device.
- Press and hold the Menu Selection button.
- Briefly press the Menu Selection button multiple times until the **Bluetooth** menu item appears.
- Briefly press the main button multiple times until **Toggle On** appears.
 - When Bluetooth® is activated,  appears on the main display.

Note

- The device can only be connected to a single smartphone or other external device. Any existing connection must therefore be actively disconnected beforehand (deactivate Bluetooth®).
- Note the range of the external devices used.
- For information on operating the external devices, refer to the corresponding instruction manual.

CARE/CLEANING

- No special care is required for the Leica rangefinder.
- Coarse dirt particles like sand can be removed with a soft brush or simply blown off.
- 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.
- Always rinse off any traces of salt water! Dried salt crystals could damage the surfaces.
- 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 rangefinder 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.
- Some parts of the device have a rubber coating, consisting mainly of natural rubber latex (NRL). A powdery white deposit may occasionally form on the rubber coatings. This is known as efflorescence and indicates high-quality NRL. It has no effect on the quality or durability of the product. The best way to remove efflorescence is to wipe it off with lukewarm water and pH-neutral soap.

TECHNICAL DATA

Designation	Leica Rangemaster CRF Max
Device type	Rangefinder
Type No.	4066
Order No.	40549
Scope of delivery	Rangefinder, carrying strap, carrying case, optics cleaning cloth, quick guide, test certificate, cylindrical lithium-ion cell 3 V (type CR2)
Magnification	7x
Lens diameter	24 mm
Exit pupil	3.4 mm
Twilight factor	13
Geometrical luminosity	11.8
Visual field (at 1,000 m / 1,095 yards)	115 m
Objective visual angle	6.6°
Exit pupil – longitudinal distance	15 mm
Prism type	Roof prism
Coating	On lenses: High Durable Coating (HDC™) and hydrophobic Aqua-Dura® coating on outer lenses On prisms: Phase correction coating P 40
Dioptr adjustment	±3.5 dpt
Compensation for glasses wearers	Yes, with reversible rubber eyepiece
Maximum range	3,400 m / 3,700 yds
Minimum distance	Approx. 10 m (33 ft)
Measurement accuracy	10–200 m: ±0.5 m, 200–1,000 m: ±1 m, >1,000 m: 0.15%
Display/unit of measure	Active-matrix microLED display
Maximum measuring period	Approx. 0.3 seconds (extended rangefinder mode: approx. 1.2 seconds)
Metering methods	Single measurement, scan mode
Laser	Invisible, safe for eyes according to EN and FDA Class I
Material	Glass-fiber-reinforced plastic
Interfaces	Bluetooth® 5.0 LE, Bluetooth Wireless Technology, frequency band (medium frequency): 2,402–2,480 MHz Max. output (dBm EIRP): 20
Resistance to water	Watertight up to 1 m (3.3 ft) water depth
Operating temperature	-20°C to 55°C (-4°F to 131°F)
Storage temperature	-40°C to 85°C (-40°F to 185°F)
Battery	Cylindrical lithium-ion cell 3 V (type CR2)
Dimensions (WxHxD)	Approx. 113 x 78 x 35 mm (4.45 x 3.07 x 1.38 in)
Weight (with battery)	Approx. 199 g (6.5 oz)

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

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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