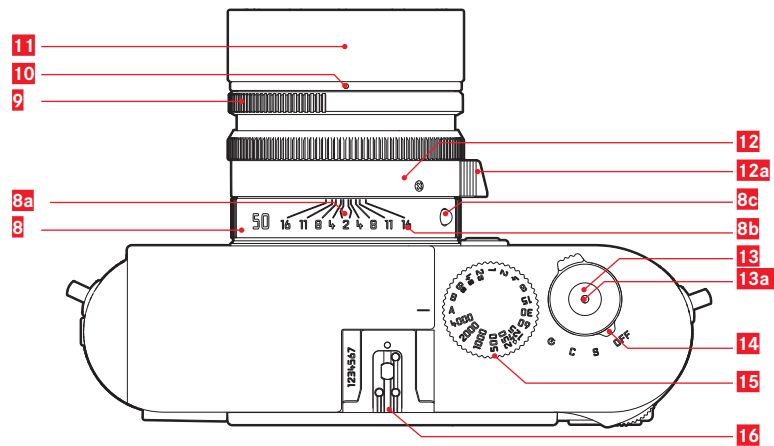
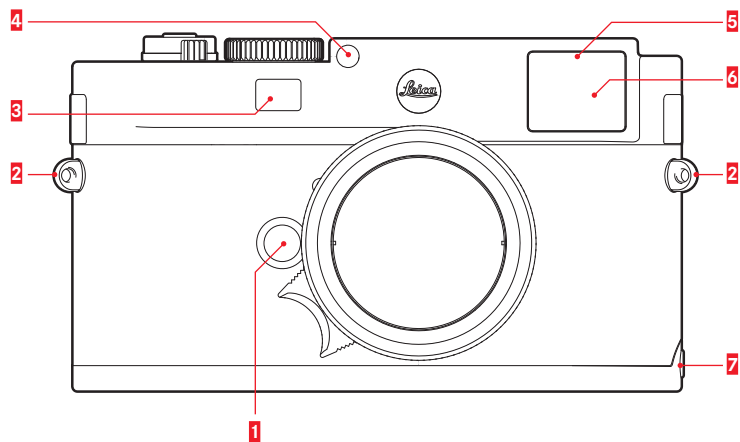
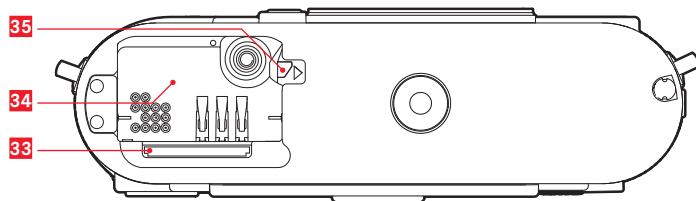
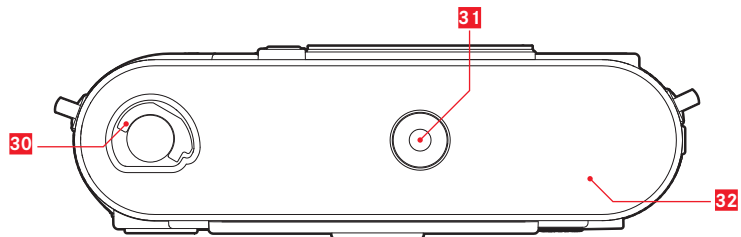
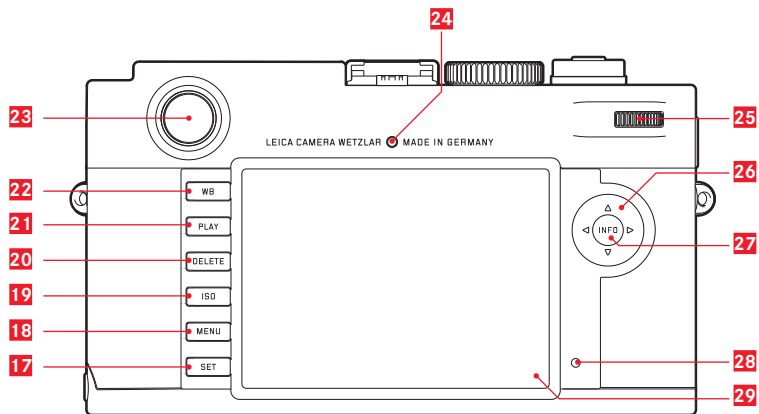


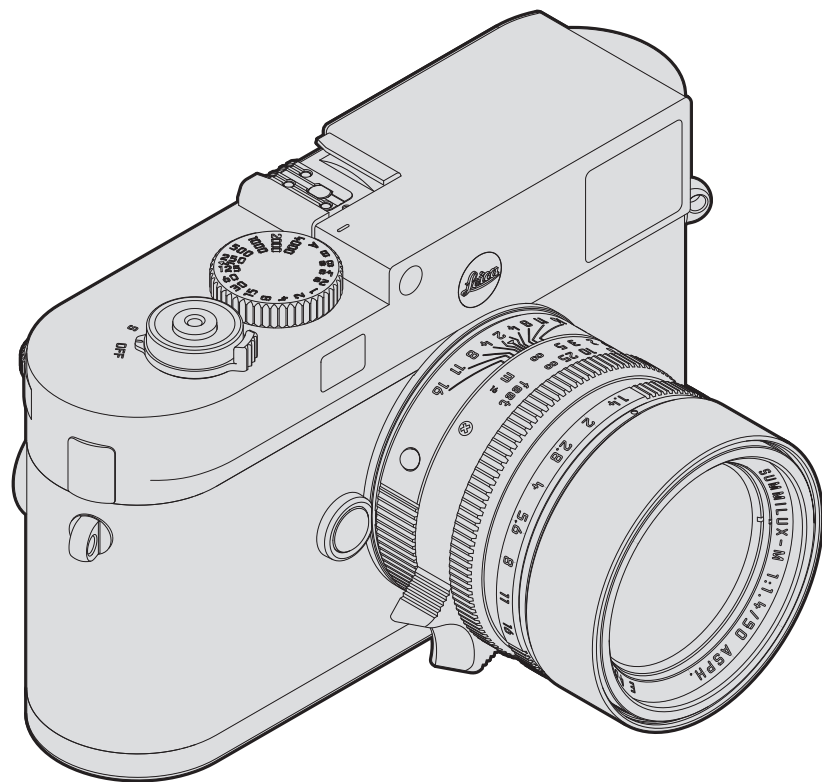


LEICA M

Anleitung | Instructions







LEICA AKADEMIE

Neben anspruchsvollen Produkten der Höchstleistungsklasse für Fotografie und Beobachtung bieten wir in der Leica Akademie seit vielen Jahren als besonderen Service praxisgerechte Seminare und Schulungen an, in denen das Wissen um die Welt der Fotografie von der Aufnahme über die Bildbearbeitung bis zur Präsentation sowohl Anfängern als auch fortgeschrittenen Foto-Enthusiasten nahegebracht wird. Die Inhalte der Kurse variieren von allgemeiner Fotografie bis zu interessanten Spezialgebieten und bieten eine Fülle von Anregungen, Informationen und Ratschlägen für die Praxis. Sie werden von einem ausgebildeten Team von Fachreferenten in modern ausgestatteten Kursräumen durchgeführt. Nähere Auskünfte und das aktuelle Seminarprogramm einschließlich der Fotoreisen sind erhältlich bei:

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 Leica Akademie
 Am Leitz-Park 5
 D-35578 Wetzlar
 Telefon: +49(0)6441-2080-421
 Telefax: +49(0)6441-2080-425
 la@leica-camera.com

LEICA PRODUCT SUPPORT

Anwendungstechnische Fragen zu den Leica Produkten einschließlich der ggf. mitgelieferten Software beantwortet Ihnen schriftlich, telefonisch oder per E-Mail die Product Support-Abteilung der Leica Camera AG.

Auch für Kaufberatungen und die Bestellung von Anleitungen ist er Ihr Ansprechpartner. Alternativ können Sie Ihre Fragen ebenso über das Kontaktformular auf der Website der Leica Camera AG an uns richten.

Leica Camera AG
 Product Support / Software Support
 Am Leitz-Park 5
 D-35578 Wetzlar
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 Telefax: +49(0)6441-2080-490
 info@leica-camera.com / software-support@leica-camera.com

LEICA CUSTOMER CARE

Für die Wartung Ihrer Leica Ausrüstung sowie in Schadensfällen stehen Ihnen die Customer Care-Abteilung der Leica Camera AG oder der Reparaturdienst einer Leica Landesvertretung zur Verfügung (Adressenliste siehe Garantiekarte).

Leica Camera AG
 Customer Care
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 customer.care@leica-camera.com



Leica M

Instructions

FOREWORD

Dear Customer,

Leica would like to thank you for purchasing the Leica M and to congratulate you on your choice. With this unique digital view and range finder camera, you have made an excellent choice. We wish you a great deal of pleasure and success using your new camera.

In order to make best use of all the opportunities offered by this high performance camera, we recommend that you first read these instructions.

Notes:

- Leica is constantly working on developing and optimizing the Leica M. As many functions on digital cameras are controlled by software, improvements and extensions to the range of functions may need to be installed on the camera at a later date. Leica publishes firmware updates for this purpose. Cameras are always supplied from the factory with the latest firmware, but you can easily download the updates to your camera yourself from our website. If you register as an owner on the Leica Camera website, you will receive a newsletter informing you when a new firmware update is available. You will find more information on registration and firmware updates for your camera, as well as changes and additions to the operating instructions, in the "Customer" area at: <https://owners.leica-camera.com> To check whether your camera is running the latest firmware version, select **Firmware** in the main camera menu (see p. 128, 179).
- Before using your camera for the first time, please check that the accessories supplied are complete.

This is a Class B product based on the standard of the Voluntary Control Council for Interference from Information Technology Equipment (VCCI). If this is used near a radio or television receiver in a domestic environment, it may cause radio interference. Install and use the equipment according to the instruction manual.

FCC Note:

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

FCC Caution:

To assure continued compliance, follow the attached installation instructions and use only shielded interface cables with ferrite core when connecting to computer or peripheral devices. Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

Trade Name:	LEICA
Model No.:	LEICA M (Typ 262)
Responsible party/	
Support contact:	Leica Camera Inc. 1 Pearl Count, Unit A Allendale, New Jersey 07401 Tel.: +1 201 995 0051 Fax: +1 201 995 1684 technicalinfo@leicacamerausa.com

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

LEICA M (Typ 262)



Tested To Comply
With FCC Standards

FOR HOME OR OFFICE USE

For Canada only:

CAN ICES-3 (B)/NMB-3(B)

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The CE identification of our products documents compliance with the fundamental requirements of the valid EU directives.

WARNING MESSAGES

- Modern electronic elements react sensitively to electrostatic discharge. As you can easily pick up charges of tens of thousands of volts, by walking on synthetic carpets for example, a discharge can occur when you touch your camera, particularly if it is placed on a conductive surface. If only the camera housing is touched, this discharge is harmless to the electronics. However, despite built-in safety circuits, outer contacts should not be touched if at all possible for safety reasons.
- For any cleaning of the contacts, do not use an optical micro-fiber cloth (synthetic); use a cotton or linen cloth instead! Before touching the contacts, you can make sure you discharge any electrostatic charge by deliberately touching a heating or water pipe (conductive, earthed material). You can also avoid soiling and oxidization of the contacts by storing your camera in a dry place with the lens or bayonet cover fitted.
- Use only the recommended accessories to prevent faults, short circuits or electric shock.
- Do not attempt to remove parts of the housing (covers); qualified repairs can be carried out only at authorized service centers.
- Always use the accessory shoe cover (included in the scope of supply) when no accessories are in use.

LEGAL INFORMATION

- Please ensure that you strictly observe copyright laws. The recording and publication of pre-recorded media such as tapes, CDs, or other published or broadcast material may contravene copyright laws.
- This also applies to all of the software supplied.
- The SD and HDMI logos are registered trademarks.
- Other names, company and product names referred to in these instructions are trademarks or registered trademarks of the relevant companies.



DISPOSAL OF ELECTRICAL AND ELECTRONIC EQUIPMENT

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

This device contains electrical and/or electronic components and should therefore not be disposed of in general household waste. Instead it should be disposed of at a recycling collection point provided by the local authority. This costs you nothing. If the device itself contains replaceable (rechargeable) batteries, these must be removed first and, if necessary, also be disposed of in line with the relevant regulations.

Further information on this issue is available from your local administration, your local waste collection company, or in the store where you purchased this device.

Camera production date

The production date of your camera can be found on the stickers in the warranty card and/or on the packaging.

The date convention is: Year/Month/Day

DESIGNATION OF PARTS

Figures in the front and rear cover pages

Front view

- 1** Lens release button
- 2** Eyes for carrying strap
- 3** Range finder viewing window
- 4** Brightness sensor¹
- 5** Self-timer LED
- 6** Viewfinder viewing window
- 7** Bottom cover locking point

Top view

- 8** Fixed ring with
 - a. Index for distance setting
 - b. Depth of field scale
 - c. Red index button for changing lenses
- 9** Aperture setting dial
- 10** Index point for aperture setting
- 11** Lens hood
- 12** Focusing ring with
 - a. recessed grip
- 13** Shutter release button with
 - a. thread for cable release
- 14** Main switch with detent positions for
 - **OFF** (camera turned off)
 - **S** (single pictures)
 - **C** (serial exposures)
 -  (self-timer)
- 15** Shutter speed dial with detent positions for
 - **A** Automatic shutter speed control
 - **Shutter speeds** $\frac{1}{4000}$ – 8s (incl. intermediate values)
 - **B** (Long-time exposure)
 -  Flash sync speed ($\frac{1}{180}$ s)
- 16** Accessory shoe

¹ Leica M lenses with viewfinder attachment cover the brightness sensor.
Information about functions with these and other lenses can be found under
"Displays / In the viewfinder", p. 192, and "Leica M lenses", p. 121.

Rear view**17 SET** button

- For calling up the picture parameters menu
- For calling up sub-menus in the menu system
- For applying settings/functions selected in sub-menus

18 MENU button for calling up and exiting the main menu and sub-menus**19 ISO** button for calling up the sensitivity setting**20 DELETE** button for selecting the delete function**21 PLAY** button

- For activating (continuous) review mode
- To return to full-screen display

22 WB button for calling up the white balance settings**23** Viewfinder window**24** Brightness sensor for monitor**25** Setting dial

- For navigating in the menus
- For setting the selected menu options / functions
- For setting an exposure compensation value
- For enlarging/reducing pictures viewed
- For scrolling through the picture memory

26 Direction pad

- For navigating in the menus
- For setting the selected menu options / functions
- For scrolling through the picture memory

27 INFO button

- For displaying picture settings/data
- For displaying picture data during picture review
- For applying settings

28 LED for indicating picture mode / recording data**29** Monitor**Bottom view**

(with bottom cover fitted)

30 Locking toggle for bottom cover**31** Tripod thread A ¼, DIN 4503 (¼")**32** Bottom cover

(with bottom cover removed)

33 Memory card slot**34** Battery compartment**35** Battery locking slider

QUICK-START GUIDE

YOU WILL NEED THE FOLLOWING ITEMS:

- Camera
- Battery
- Memory card (not supplied)
- Charger and mains cable

PREPARATIONS

1. Charge the battery (see p. 115)
2. Insert the battery (see p. 118)
3. Insert the memory card (see p. 118)
4. Turn on the camera (see p. 124)
5. Set the menu language (see p. 132)
6. Set the date and time (see p. 132)
7. Format the memory card, if necessary (see p. 176)

TAKING PHOTOGRAPHS

8. Attach the lens (see p. 123)
9. Set the shutter speed setting dial to **A** (see p. 127)
10. Set the subject focus (see p. 144)
11. Turn on the camera (see p. 124)
12. Turn on exposure metering (see p. 125)
13. Correct the exposure, if necessary (see p. 146)
14. Release the shutter (see p. 125)

VIEWING PICTURES

The camera is preset to display the last picture automatically for a short time (see p. 165).

You can turn on review mode (for an unlimited period) at any time using the **PLAY** button (see p. 164).

To view different pictures, press left or right on the direction pad (see p. 168).

To enlarge the pictures, turn the setting dial to the right (see p. 169).

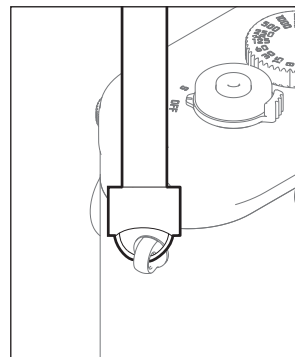
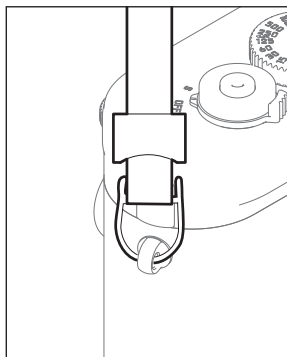
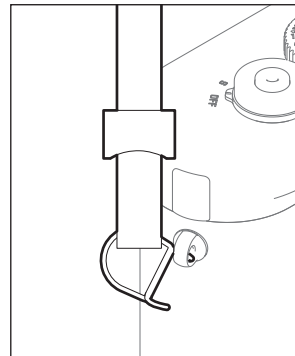
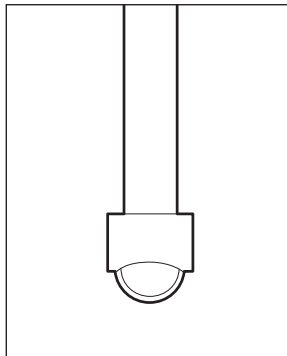
DELETING PICTURES

Press the **DELETE** button and follow the instructions in the monitor (see p. 170).

DETAILED GUIDE

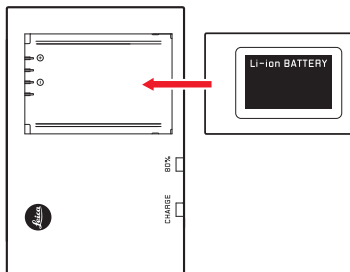
PREPARATIONS

ATTACHING THE CARRYING STRAP



CHARGING THE BATTERY

The camera is powered by a lithium ion battery.



Note:

The **80%** LED lights up after around 2 hours due to the charging characteristics.

The charger should be disconnected from the mains when charging is complete. There is therefore no risk of overcharging.

- The green LED marked **CHARGE** starts flashing to confirm that charging is in progress. As soon as the battery has charged to at least $\frac{2}{3}$ of its capacity, the yellow LED marked **80%** also lights up. When the battery is fully charged, the green LED also changes from flashing to continuously lit.

Caution:

- Only the battery type specified and described in this manual (order no. 14 499), or battery types specified and described by Leica Camera AG, may be used in this camera.
- These batteries may only be used in the units for which they are designed and may only be charged exactly as described below.
- Using this battery contrary to the instructions and using non-specified battery types can result in an explosion under certain circumstances!
- The batteries must not be exposed to heat or sunlight for prolonged periods, or to humidity or moisture. Likewise, the batteries must not be placed in a microwave oven or a high pressure container as this results in a risk of fire or explosion.
- A safety valve in the battery guarantees that any excess pressure caused by improper handling is discharged safely.
- Only the charger specified and described in this manual (order no. 14 494) is to be used. The use of other chargers not approved by Leica Camera AG can cause damage to the batteries and, in extreme cases, can cause serious or life-threatening injuries.
- The charger supplied should be used exclusively for charging this battery type. Do not attempt to use it for other purposes.
- The car charging cable supplied must never be connected while the charger is connected to the mains.
- Ensure that the mains outlet used for charging is freely accessible.
- The battery and charger must not be opened. Repairs may only be carried out by authorized workshops.

Notes:

- The battery should be charged before the camera is used for the first time.
- The battery must have a temperature of 10°–30°C to be charged (otherwise the charger will not turn on, or will turn off again).
- Lithium ion batteries can be charged at any time, regardless of their current charge level. If a battery is only partly discharged when charging starts, it is charged to full capacity faster.
- The batteries warm up during the charging process. This is normal and not a malfunction.
- If the two LEDs on the charger flash rapidly (> 2Hz) after starting charging, this indicates a charging error (e.g. maximum charging time exceeded, voltages or temperatures outside the permitted ranges, or short circuit). In this case, disconnect the charger from the mains and remove the battery. Ensure that the above temperature conditions are met and then restart the charging process. If the problem persists, please contact your dealer, the Leica office in your country or Leica Camera AG.
- A new battery only reaches its full capacity after it has been fully charged and – by use in the camera – discharged again 2 or 3 times. This discharge procedure should be repeated every 25 cycles. To ensure a maximum service life of the battery, it should not be exposed to constant extremes of temperature (e.g. in a parked car in the summer or winter).
- Even when used under optimum conditions, every battery has a limited service life! After several hundred charging cycles, this becomes noticeable as the operating times become significantly shorter.
- The battery should be replaced after a maximum of four years, as its performance deteriorates and reliable operation can no longer be guaranteed, particularly in cold conditions.
- Defective batteries should be disposed of according to the respective instructions (see p. 185).
- The replaceable battery provides power to a back-up battery which is permanently fitted in the camera. This back-up battery retains the set date and time for up to 2 months. If this back-up battery becomes discharged it must be recharged by inserting the replaceable main battery. Once the replaceable battery has been inserted, the full capacity of the back-up battery is recovered after about a few days. This process does not require the camera to be turned on.

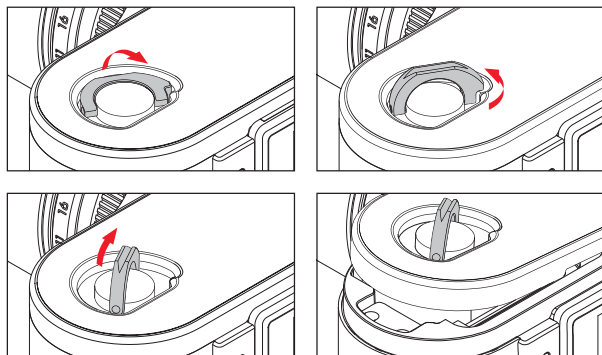
REPLACING THE BATTERY AND MEMORY CARD

Set the main switch **14** to OFF.

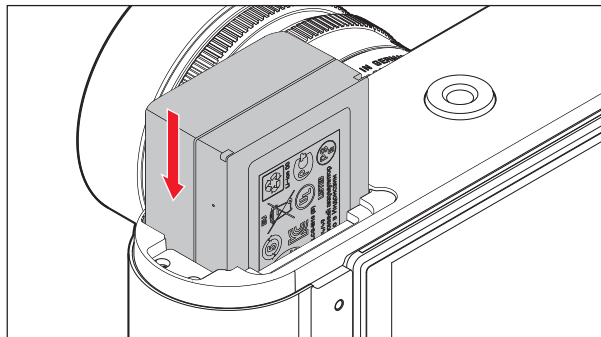
Important:

Do not open the bottom cover or remove the memory card or battery whilst the red LED recording and/or data saving to the card **28** at the bottom right next to the monitor **29** is flashing. Otherwise unsaved (or not completely saved) picture data may be lost.

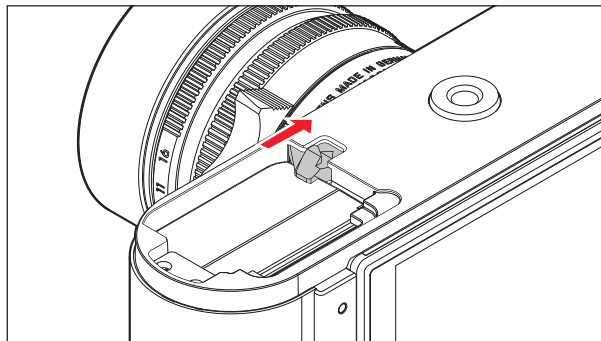
Removing the bottom cover



Inserting the battery



Removing the battery



Charge level displays

In picture mode, the battery charge level is displayed in the monitor **29** by pressing the **INFO** button **27**.

Notes:

- Remove the battery if you will not be using the camera for a long period of time.
- A maximum of 2 months after the capacity of a battery left in the camera is exhausted (see also the last note under “Charging the battery”, p. 115), the date and time need to be re-entered.
- As the battery capacity deteriorates or if using an older battery, depending on the function being used warning messages and displays may appear and functions may be restricted or blocked.

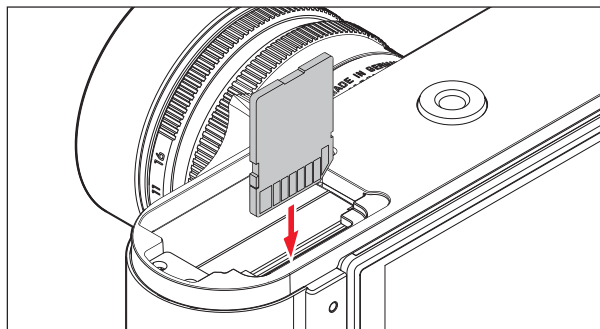
Inserting/removing memory card

The camera saves the pictures on an SD (secure digital), SDHC (high capacity), or SDXC (extended capacity) card. SD/SDHC/SDXC memory cards are available from various suppliers and with different capacities and read/write speeds. Particularly those with high capacities and read/write speeds allow data to be recorded and retrieved very quickly. The cards have a write protection switch, which can be used to prevent unintentional storage and deletion of pictures. This switch takes the form of a slider on the non-beveled side of the card; in the lower position, marked LOCK, the data on the card is protected.

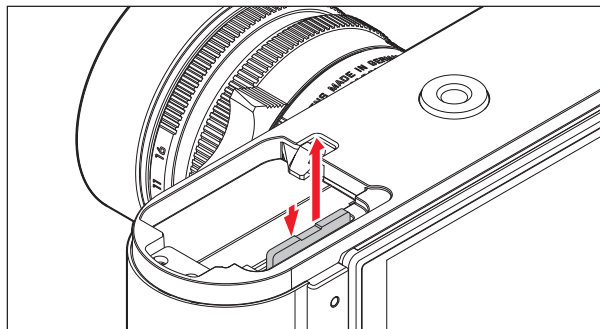
Note:

Do not touch the memory card contacts.

Inserting the memory card



Removing the memory card



Notes:

- The range of SD/SDHC/SDXC cards is too large for Leica Camera AG to be able to completely test all available types for compatibility and quality. Although using other card types is not likely to damage the camera or the card, some "no name" cards do not comply with the SD/SDHC/SDXC standards, and Leica Camera AG is unable to provide any guarantee that they will function correctly.
- If the memory card cannot be inserted, check that it is aligned correctly.
- If you remove the bottom cover or take out the memory card when the camera is turned on, the monitor displays the corresponding warning messages instead of the normal displays:
 - **Attention Bottom cover removed**
 - **Attention No card inserted.**
- As electromagnetic fields, electrostatic charges, and defects on the camera or the card can lead to damage or loss of the data on the memory card, we recommend that you also transfer the data to a computer and save it there (see p. 177).
- For the same reason, it is recommended that the card is always stored in its antistatic cover.

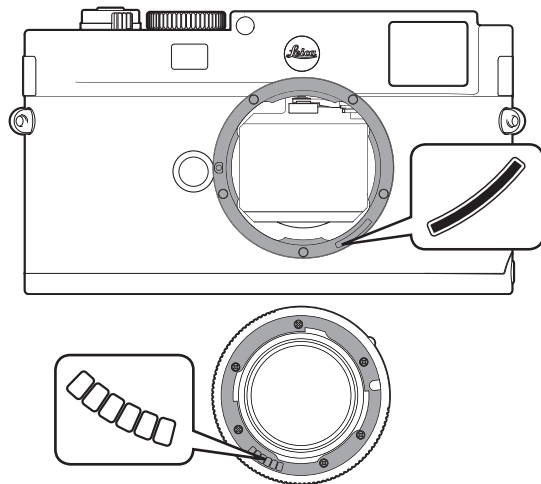
LEICA M LENSES

Generally: most Leica M lenses can be used. Details on the small number of exceptions and restrictions can be found in the following notes.

They can be used regardless of the lens features, and whether it does or does not have 6-bit coding in the bayonet.

Even without this additional feature, i.e. when using Leica M lenses without identification, the camera will deliver excellent pictures in most situations.

To ensure optimum picture quality in these situations, we recommend entering the lens type (see p. 136).



Important:

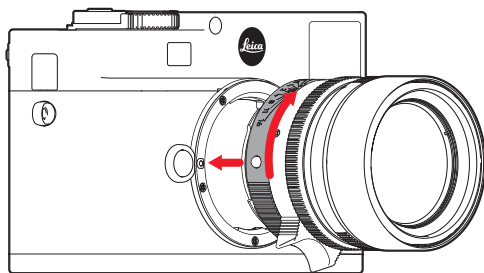
- The following cannot be used:
 - Hologon 15mm f/8
 - Summicron 50mm f/2 with close up.
 - Elmar 90mm f/4 with retractable tube (manufactured from 1954-1968)
 - Some versions of the Summilux-M 1.4/35mm (not aspherical, manufactured from 1961-1995, Made in Canada) cannot be fitted to the camera or will not focus to infinity. The Leica Customer Care department can modify these lenses so that they can be used on the camera.
- The following can be used, but risks damaging the camera or lens: Lenses with retractable tube can only be used with the tube extended, i.e. their tube must never be retracted into the camera. This is not the case with the current Macro-Elmar-M 1:4/90mm, as its tube does not protrude into the camera body even when retracted. It can therefore be used without any restrictions.

- The following can be used with restrictions
Despite the high precision of the range finder on the camera, exact focusing with 135mm lenses with an open aperture cannot be guaranteed due to the very low depth of field. Therefore, stopping down by at least 2 stops is recommended.
- Possible, but excluded from the exposure metering
 - Super-Angulon-M 21mm f/4
 - Super-Angulon-M 21mm f/3.4
 - Elmarit-M 28mm f/2.8 with serial nos. before 2 314 921.

Notes:

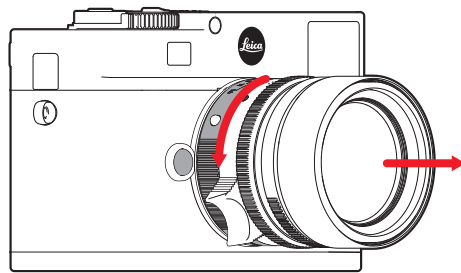
- The Leica Customer Care department can upgrade many Leica M lenses with 6-bit coding. (Address, see p. 204).
- The use of Leica R lenses in conjunction with the R adapter M is not expedient.

Attaching the lens



1. Turn off the camera.
2. Hold the lens at the fixed ring **11**
3. Align the red index button **11b** on the lens with the release button **1** on the camera housing
4. In this position, insert the lens straight
5. Turn the lens slightly to the right, and you will hear and feel it click into place.

Detaching the lens



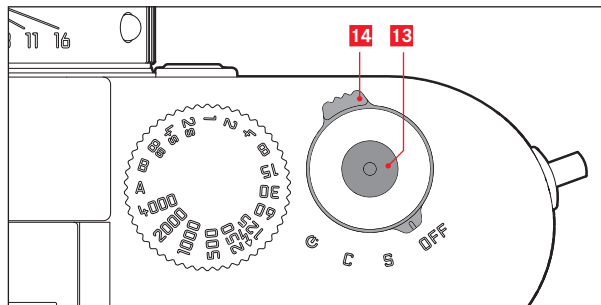
1. Turn off the camera
2. Hold the lens at the fixed ring **11**
3. Press down the release button **1** on the camera body
4. Turn the lens to the left until its red index button **11b** is aligned with the release button
5. Remove the lens.

Notes:

- Generally: To protect the Leica T against ingress of dust etc. into the interior of the camera, it is important always to have a lens or a cover fitted to the camera body.
- For the same reason, when changing lenses work quickly and in an environment that is as dust-free as possible.
- Camera or lens rear covers should not be stored in your pants pocket as they attract dust that can get into the camera when they are fitted.

THE MOST IMPORTANT SETTINGS / CONTROLS

TURNING THE CAMERA ON AND OFF



The camera is turned on and off using the main switch **14**. This is below the shutter release button **13** and is a lever with four detent positions:

- a. **OFF** – Camera turned off
- b. **S** – Single picture
Pressing the shutter release takes a single picture regardless of how long it is held down for. Activation of the shutter release button is extremely quiet and causes minimum vibration.

- c. **C** – Continuous series
A series of pictures are taken for as long as the shutter release is held down and the capacity of the memory card used and the internal buffer memory is sufficient. At least 8 pictures are taken in rapid succession, subsequent pictures with a reduced frequency.
- d.  – Self-timer
Pressing the shutter release starts the set delay time (see p. 160), then the picture is taken.

TURNING ON

After turning on, i.e. after setting one of the three functions **S**, **C** or , the LED **28** lights up briefly and the displays in the viewfinder appear (see p. 192).

Note:

After turning on, the camera is ready to use after approx. 1s.

TURNING OFF

Even if the main switch is not set to **OFF**, the camera is automatically turned off if an automatic power off time has been set in the menu (**Auto Power Off**, see p. 134), and none of the controls are used during this time.

Note:

If the camera is out of use for an extended period or is stored in a case, always turn it off at the main switch. This prevents any power consumption, including that which continues to occur in standby mode after the exposure meter is turned off automatically and the display is extinguished. This also prevents pictures from being taken accidentally.

SHUTTER RELEASE BUTTON

The shutter release button **13** has two pressure points:

1. Pressing down to the 1st pressure point
 - Activates exposure metering
 - Saves the metered exposure value in aperture priority mode, i.e. the shutter speed determined by the camera (for more details, refer to the “Metering memory lock” section on p. 147)
 - Restarts a self-timer delay time that is already in progress (see p. 160)

If the shutter button is kept at this pressure point, the displays remain visible, or if the camera had previously been set to review mode, it switches back into picture mode. If the camera had previously been in stand-by mode, it will be reactivated and the displays switched on.

If you release the shutter button, the metering system and the displays remain activated for around a further 30 s (for more details, refer to the sections on p. 152).

Note:

The shutter button remains blocked

- if the internal buffer memory is (temporarily) full, e.g. after a series of ≥ 8 pictures, or
- if the memory card inserted and the internal buffer memory are (temporarily) full, or
- if the battery has exceeded its performance limits (capacity, temperature, age)

2. Pressing the shutter release button all the way down takes the picture or starts a preselected self-timer delay time. The data is then transferred to the memory card.

The shutter button has a standard thread **13** for a cable release.

Notes:

- If review mode (see p. 164) or menu control (see p. 128) had been activated, pressing the shutter button causes the camera to switch immediately into picture mode.
- To avoid wobble, the shutter button should be pressed gently, not jerkily, until the shutter is released with a soft click.

Serial exposures

You can not only take single pictures – by setting the main switch **14** to **(S [Single])** – but also series of pictures, by setting the main switch to **(C [Continuous])**, e.g. to capture sequences of movement in several stages.

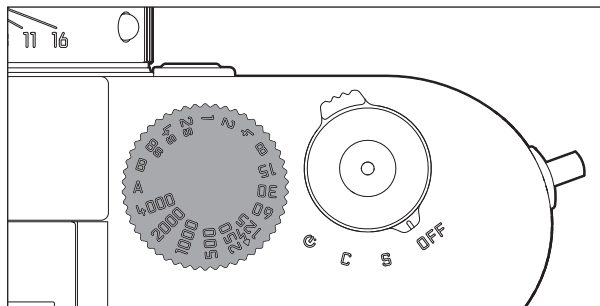
Apart from operation of the shutter button **13**, series of pictures are taken in the same way as single pictures: A series of pictures is taken for as long as you hold down the shutter button (provided that the memory card has sufficient capacity). If you only press it briefly, the camera continues to take single pictures.

A maximum of around 3 frames per second can be produced. At least the first 8 of these are taken in rapid succession, after which the image frequency is reduced slightly.

Notes:

- The specified picture frequency and the maximum possible number of pictures in a series relate to a default setting – **ISO 200** and the format **JPG fine**. The frequency and number may be lower when using different settings or depending on the memory card used.
- Regardless of how many pictures have been taken in a series, both review modes (see p. 164) initially show the last picture in the series or the last picture in the series saved on the currently active card, if not all of the pictures in the series have been transferred from the internal buffer memory to the relevant card yet.

SHUTTER SPEED SETTING DIAL



The exposure modes are selected using the shutter speed dial **19**.

- Aperture priority mode by setting the **A** position marked red (see p. 146),
- Manual mode by selecting a shutter speed of $\frac{1}{4000}$ s to 8s, (intermediate values in $\frac{1}{2}$ step positions are also available), and
- The shortest possible sync speed of $\frac{1}{180}$ s for flash mode, marked with the  symbol (see p. 159), and
- **B** for long exposures (see p. 152).

The Leica M shutter speed dial has no stop, i.e. it can be turned in either direction from any position. It detents at all marked positions and at the intermediate values. Values between the detent positions cannot be used. More details on setting the correct exposure can be found in the sections from p. 145.

MENU CONTROL

Many settings for the camera are controlled using two separate menus (see p. 197).

The split into two menus allows what experience has shown to be the most frequently used options to be called up and set quickly and easily.

When the camera is turned on, an overview of the relevant settings and step-by-step instructions for setting these options can be viewed in the monitor **29**.

Settings are made in the same way in both menus, the differences are only in calling up and exiting them.

MAIN MENU

The main menu comprises 16 options split between two pages.

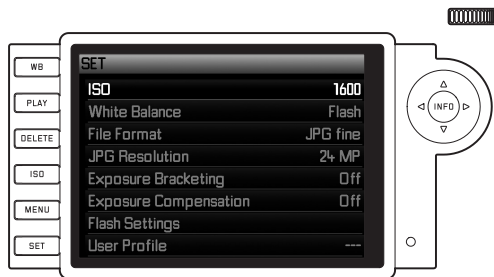
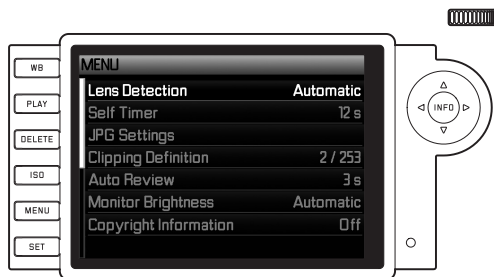
PICTURE PARAMETERS MENU

The picture parameters menu is made up of 8 options. In addition to basic picture settings, it contains two options relating to exposure metering, one containing settings for flash mode and one that can be used to create and call up user profiles.

Setting the menu functions

- The main menu is called up using the **MENU** button **18**, the picture parameters menu using the **SET** button **17**.
 - The first page containing the first 8 options then appears in the main menu, and all options in the picture parameters menu.

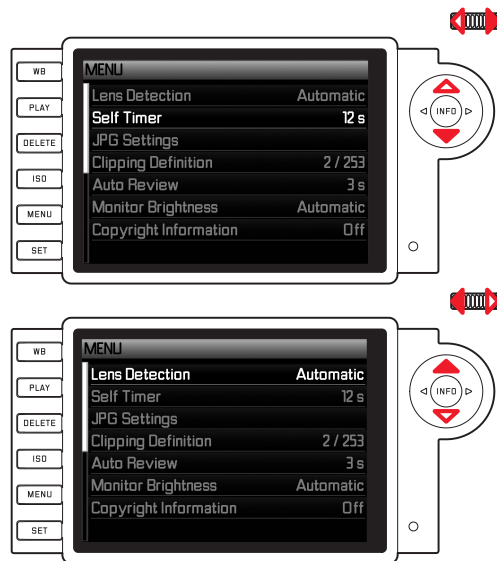
The active option when a menu is called up is always the last one selected.



Note:

The picture parameters menu is only accessible when the camera is in picture mode.

2. You can select the relevant option either using the setting dial (25; turn right = down in menu, turn left = up in menu) or the direction pad (26; press up or down).



Notes:

- Using the setting dial is normally not only more convenient but also significantly faster.
 - Some options, such as **GPS** and **Format SD card**, as well as some sub-menu options, can only be called up in certain situations. Further explanations can be found in the relevant sections.
 - This is indicated by the lettering in the corresponding lines being grayed out.
3. You can select the relevant sub-menus with both the **SET** button and the **INFO** button 32 or by pressing right on the direction pad.
- The displays in the header change: On the left of the main menu always **MENU** (in the picture parameters menu always **SET**), with the selected menu option in white on the right. The sub-menus usually consist of different numbers of function options, which can be directly selected in the next step.
- In some cases, there is also a scale for setting values, or the sub-menus consist of secondary entries for which function options can be selected in turn.

4. Select the relevant function option/value, either using the setting dial or by pressing the corresponding direction on the direction pad, i.e.

- up/down to change lines or to select options
- left/right for settings within a line or on a scale

For sub-entries with selectable options, it is also possible to change line using the **INFO** button.

- The displays in the header change again: The sub-entry is specified in black on the left, with the selected option in white on the right.

Note:

Options such as **Date / Time**, and the functions **Exposure Bracketing** and **White Balance** require further settings. The corresponding explanations, as well as further details about the other menu functions, can be found in the relevant sections.

5. Save your setting using the **SET** or **INFO** button.
 - The monitor screen reverts to its initial condition. The new function option set is then shown on the right of the corresponding menu line.

Note:

You can exit the menus and sub-menus at any time - without applying the settings made - by pressing the following buttons:

	Shutter release button	PLAY	MENU
Main menu			One step back (e.g. to previous menu level)
Picture parameters menu	Camera switches to picture mode	Camera switches to review mode	One step back (e.g. to previous menu level), or return to main menu

PRESETS

CAMERA DEFAULT SETTINGS

MENU LANGUAGE

The camera is set to English by default. German, French, Italian, Spanish, Russian, Japanese, Korean and Traditional or Simplified Chinese can all be selected as alternative menu languages.

Setting the function

1. In the main menu (see p. 128/197), select **Language**, and
2. select the desired language in the sub-menu.
 - Apart from a few exceptions (button names, short designations), all linguistic information changes.

DATE AND TIME

These entries can be made under the menu item **Date / Time**.

Setting the functions

1. In the main menu (see p. 128/197), select **Date / Time**, and
2. call up the sub-menu. This is made up of the three options **Auto Time / Time Zone**, and **Time**.

DATE

There are 3 options available for the sequence of the date.

3. In the **Date / Time** sub-menu, select **Date**. It contains the 2 options **Format** and **Setting**.
 4. Select **Format**.
 5. In the **Format** sub-menu, select which of the 3 possible conventions you wish to use **day/month/year**, **month/day/year**, and **year/month/day**.
 6. Save your setting.
 - The **Date** sub-menu appears again.
 7. Select **Setting**.
 - A further sub-menu appears, with columns for the year and day figures and for the month names. The currently active, i.e. editable, column is indicated by red underlining, with the heading in white and the figures and names that can be set in red.
- Use the setting dial **25** or direction pad **26** to set the numbers/ months and the **SET** button **17** or **INFO** button **27** or direction pad to switch between the columns.
8. After making the setting, confirm all 3 headings and save them.

TIME

The time can either be shown in 24-hour or 12-hour format. Both the display format and the actual figures are set using the **Time** option, essentially in the same way as described for the **Date** option in the previous section.

Note:

Even if no battery is inserted or the battery is flat, an integrated back-up battery retains the date and time setting for around 2 months. After this time the date and time must be set again as described above.

AUTOMATIC POWER OFF

This function turns the camera off automatically after a preset time.

Setting the function

1. In the main menu (see p. 128/197), select **Auto Power Off**, and
2. select the desired duration in the sub-menu.

Note:

Even if the camera is in standby mode, i.e. the displays have gone out after 30s or the activated **Auto Power Off** function has turned it off, it can be reactivated at any time by pressing the shutter release button **13**.

THE MONITOR

The camera features a large 3" LCD color monitor **29**. It is used to view the pictures taken on the memory card in review mode.

Setting the brightness

The brightness of the monitor image can be set using the menu. You can choose from automatic control, i.e. depending on the ambient brightness, and five manual levels, so that you can adapt it perfectly to the relevant situation:

Setting the function

1. In the main menu (see p. 128/197), select **Monitor Brightness**, and
2. select the automatic setting or the desired level in the sub-menu.

PICTURE DEFAULT SETTINGS

LENS TYPE DETECTION

The 6-bit coding in the bayonet fastening of current Leica M lenses allows the camera to identify the type of lens fitted using the sensor in the bayonet socket.

- Among other things, this information is used to optimize the picture data. For example, edge darkening which can be noticeable with wide-angle lenses and large apertures can be compensated in the corresponding picture data.
- Flash mode control also uses the lens data (see "Compatible flash units", p. 154).
- In addition, the information is written to the EXIF data for the picture. When displaying extended image data, the lens focal length is also shown.

Setting the function

1. In the main menu (see p. 128/197), select **Lens Detection**, and
2. select the desired option in the sub-menu:
 - **Off**, or
 - **Automatic**, if a coded lens is attached, or
 - **Manual**, if a non-coded lens is attached.

Note:

When using lenses without 6-bit coding, the lens type identification function must be deactivated to prevent malfunctions, or the lens type used must be entered manually.

Manual lens type / focal length entry

The camera is unable to recognize previous Leica M lenses as they have no identification. However, this "identification" can be carried out in the menu.

3. Select the lens you are using from the list in the **Manual** sub-menu.
 - The monitor shows a list of lenses, which also includes the relevant item numbers to ensure clear identification.

Notes:

- On many lenses, the item number is engraved on the reverse side of the depth of field scale.
- The list contains lenses that were available without coding (prior to around June 2006). Lenses introduced more recently are only available with coding and therefore cannot be selected manually.
- When using the Leica Tri-Elmar-M 16-18-21mm f/4 ASPH, the set focal length is not transferred to the camera and thus is not included in the EXIF data for pictures. If required, you can enter the relevant focal length manually.
- By contrast, the Leica Tri-Elmar-M 1:4/28-35-50mm ASPH features mechanical transfer of the set focal length to the camera, necessary to display the appropriate bright line frame in the viewfinder. It is detected by the camera electronics and used for focal length specific compensation. However, only one item number - 11 625 - is listed in the menu for reasons of space. Of course, the other two versions - 11 890 and 11 894 - can be used and the settings made in the menu also apply to them.

FILE FORMAT

The picture data is recorded either

- a. in **JPG fine**,
- a. **DNG** or
- b. in a combination of the two file formats **DNG+JPG fine**, i.e. two files are always created for each picture.

On the one hand this allows you to take account of the intended usage and the available memory card capacity, and on the other hand provides the security and flexibility essential for deciding on the usage later.

Setting the function

1. In the picture parameters menu (see p. 128/197) select **File Format**, and
2. select the desired file format(s) in the sub-menu

Notes:

- The standardized DNG (Digital Negative) format is used for storage of completely unprocessed raw picture data.
- If simultaneous storage of picture data as **DNG** and **JPG** is selected, the existing resolution setting is used for the JPEG format, i.e. the resolutions of the two files can be quite different.
- The remaining number of pictures shown in the monitor does not necessarily change after every picture. This depends on the subject; with JPEG files very fine structures result in higher quantities of data, homogeneous surfaces in lower quantities.

JPEG RESOLUTION

The picture data can be recorded in JPEG format at four different resolutions. This allows you to adjust the setting precisely to the intended use or to the available memory card capacity. At the highest resolution (which also means the largest data volume), which you should select for optimum quality for large prints, a card can hold significantly fewer pictures than at the lowest resolution.

Setting the function

1. In the picture parameters menu (see p. 128/197), select **JPEG Resolution**, and
2. select the desired resolution in the sub-menu.

Note:

In DNG format, the resolution is always 24MP, i.e. regardless of any different setting made for JPEG format.

WHITE BALANCE

In digital photography, white balance ensures neutral rendition of color in any light. It is based on the camera being preset to reproduce a particular light color as white.

You can choose from ten different settings:

 Automatic	for automatic control, which delivers neutral results in most situations.
Seven fixed presets for the most frequent light sources	
 Daylight	e.g. for outdoor pictures in sunshine
 Cloudy	e.g. for outdoor pictures with cloudy skies
 Shadow	e.g. for outdoor pictures with the main subject in shadow
 Tungsten	e.g. for indoor pictures with (predominantly) incandescent lamp light
 Fluorescent warm	e.g. for indoor pictures with (predominantly) light from fluorescent tubes, for example for homes with warm light similar to incandescent lamps at approx. 2700K
 Fluorescent cool	e.g. for indoor pictures with (predominantly) light from fluorescent tubes, for example for working areas and external lighting with cool light at approx. 4000K
 Flash	e.g. for pictures with electronic flash lighting,
 Grey card	for manual setting by metering
Color temperature¹	for a directly adjustable color temperature value.

¹ All color temperatures are specified in Kelvin.

Note:

When using system-compatible flash units, the white balance can be set to **Automatic** for correct color reproduction.

However, if other flash units are used, which are not specially designed for the camera and do not automatically adjust the white balance, the  **Flash** setting should be used.

Setting the function

With the WB button

1. Press the **WB** button **22**.
 - The corresponding sub-menu appears in the monitor **29**.

The further steps are possible in two ways.

If you hold the **WB** button pressed:

2. At the same time, turn the setting dial **25** or press up/down on the direction pad **26** to choose the desired setting or **Automatic**.

Your setting is immediately saved and applied immediately.

- The sub-menu remains visible for around 2s after releasing the **WB** button.

If, on the other hand, you press the **WB** button only briefly, the further steps are as described in the following section from step 2.

Using the menu

For automatic or fixed settings

1. In the picture parameters menu (see p. 128/197), select **White Balance**, or press the **WB** button and
2. select the desired function in the sub-menu.

For direct setting of color temperature

You can directly set values between 2000 and 13100 (K¹) (from 2000 to 5000K in increments of 100, from 5000 to 8000K in increments of 200 and from 8000 to 13,100K in increments of 300). This provides you with a broad scope, covering almost all color temperatures that can occur in practice and within which you can adapt the color reproduction very sensitively to the existing light color and/or your personal preferences.

2. In the second step, select **Color temperature**.
3. Use the setting dial **25** or press up/down on the direction pad **26** to select the desired value, and
4. confirm your setting with the **INFO 27** or **SET** button **17**.

For manual setting by metering

2. In the second step, select  **Greycard**.
 - The message **Please take a picture for setting the white balance** appears on the monitor.

3. Take the picture, making sure that the image field contains a white or neutral gray (reference) surface.
 - The monitor shows
 - the image based on the automatic white balance setting,
 - cross hairs in the center of the image.
 - Press the direction pad in the desired direction to move the cross hairs to the subject detail you want to use as the basis for the new white balance setting (e.g. the reference surface mentioned above).
4. Press the **INFO** button.
 - The reproduction of color in the image is adjusted accordingly.
5. You can now either
 - apply this new white balance setting, by pressing the **SET** button,
 - The message **White balance is set** appears on the monitor
 - or make any number of further settings, as described under 4. – 5.

A value set in this way remains saved for and will be used for all pictures until it is superseded by a new metered value or you use one of the other white balance settings.

Note:

In parallel to a saved white balance setting, the picture is saved with the corresponding color reproduction instead of the original picture.

ISO SENSITIVITY

The ISO setting covers a range of ISO 200 – 6400 in 1/2 ISO increments, and thus enables you to adapt the shutter speed/aperture values to the relevant situation as required. The **Pull 100** setting has the same brightness as a sensitivity of ISO 100. However, pictures taken using this setting have a lower contrast range. When using this sensitivity setting, it is important to make sure that important parts of the image are not overexposed. As well as the fixed settings, the camera also features the **Auto**¹ function, in which the camera automatically adjusts the sensitivity to the ambient brightness and the shutter speed/aperture settings. In conjunction with the aperture priority mode (see p. 146), this extends the range for automatic exposure control. A manual setting provides more flexibility for using the desired shutter speed/aperture combination. However, when using the function it is also possible to specify priorities, for example for compositional reasons.

Note:

Particularly at high ISO values and when editing pictures, noise as well as vertical and horizontal stripes may become visible, especially in large, uniformly bright areas of the subject. Accordingly, these features are identified by the suffix **Push**.

Setting the function

With the ISO button

1. Press the **ISO** button **23**.
 - The corresponding sub-menu appears in the monitor **29**.

The further steps are possible in two ways.

If you hold the **ISO** button depressed:

2. At the same time, turn the setting dial **25** or press left/right on the direction pad **26** to choose the desired sensitivity or **Auto**. Your setting is immediately saved and applied immediately.
 - The sub-menu remains visible for around 2s after releasing the **ISO** button.

If, on the other hand, you press the **ISO** button only briefly, the further steps are as described in the following section from step 2.

Using the menu

1. In the picture parameters menu (see p. 128/197), select **ISO** and
2. turn the setting dial **25** or press up/down on the direction pad **26** to set the desired sensitivity or **Auto**, and
3. confirm your setting with the **INFO** **27** or **SET** button **17**.

¹ The function is not available when using flash units.

To set the sensitivity automatically

- Select in the 2nd step **Auto**.
 - The previously grayed-out (unavailable) sub-menu options are now enabled.

Note:

By factory default, the **Maximum AUTO ISO** function is limited to **ISO 800**.

To restrict the automatic setting range

- In this sub-menu, select **Maximum AUTO ISO** and/or **Maximum Exposure Time**. In the **Maximum AUTO ISO** sub-menu, select the highest sensitivity to be used, and hence the range within which the automatic setting is to operate, or in the **Maximum Exposure Time** sub-menu either set one of the three focal length-specific settings - **1/focal len.**, **1/[2xf]**, **1/[4xf]**² if you wish to leave it to the camera to ensure wobble-proof shutter speeds, or the slowest shutter speed that you wish to set ($\frac{1}{2}$ s - $\frac{1}{500}$ s in whole steps). In the focal length-specific settings, the camera only switches to a higher sensitivity if the shutter speed would fall below the threshold due to lower brightness, e.g. with a 50mm lens at slower speeds than $\frac{1}{60}$ s at **1/focal len.**, or $\frac{1}{125}$ s at **1/[2xf]**, or $\frac{1}{250}$ s at **1/[4xf]**.
- Confirm your setting with the **INFO** **27** or **SET** button **17**.

Specifying AUTO ISO mode in manual exposure setting

- In this sub-menu select **AUTO ISO in M Mode**, and then **On** or **Previous ISO**.
- If you select **On**, automatic control is active (where appropriate within the limit you specified in the **Maximum AUTO ISO** sub-menu item). With **Previous ISO** the last manually set sensitivity will be used.
- Confirm your setting with the **INFO** **27** or **SET** button **17**.

Note:

The following rule applies when using automatic bracketing (see p. 150): The sensitivity automatically determined by the camera for the uncorrected picture is also used for all other pictures in a series, i.e. this ISO value is not changed during a series. This may mean that the slowest shutter speed specified under **Maximum Exposure Time** is exceeded.

² This function requires the use of coded lenses or setting of the lens type used in the menu (see p. 136).

PICTURE PROPERTIES / CONTRAST, SHARPNESS, COLOR SATURATION

Note:

The functions and settings described here refer exclusively to pictures in one of the JPEG formats. If the **ONE** file format is specified, these settings have no effect as in this case the image data is always saved in its original form.

In digital photography, key picture properties can be changed very easily. While photographic software – after recording and transfer to a computer – provides great scope for doing this, the camera itself allows you to influence three of the most important picture properties even before taking the picture:

- The contrast, i.e. the difference between light and dark areas, determines whether a picture has a more “matt” or “glossy” effect. As a consequence, the contrast can be influenced by increasing or reducing this difference, i.e. by lighter reproduction of light sections of the image and darker reproduction of dark sections.
- Sharp reproduction – at least of the main subject – using the correct distance setting is a prerequisite for a successfully picture. In turn, the impression of sharpness of a picture is to a great extent determined by the sharpness of the edges, i.e. by how small the transition area between light and dark is at the edges in the picture. The impression of sharpness can thus be changed by expanding or reducing these areas.

- The color saturation determines whether the colors in the picture tend to appear as “pale” and pastel-like or “bright” and colorful. While the lighting and weather conditions (hazy/clear) are given as conditions for the picture, there is definite scope for influencing the reproduction.

All three picture properties can be adjusted – independently – to five different levels using the menu, so that you can set the optimum values for any situation, i.e. the prevailing lighting conditions. In the case of **Saturation**, a black-and-white setting is available as a sixth variant.

Setting the functions

1. In the main menu (see p. 128/197), select **UPG-Settings**.
2. in the corresponding sub-menu **Sharpness**, or **Saturation**, or **Contrast**, and
3. select the desired level or **0** in the sub-menu.

BRIGHT-LINE VIEW AND RANGE FINDER

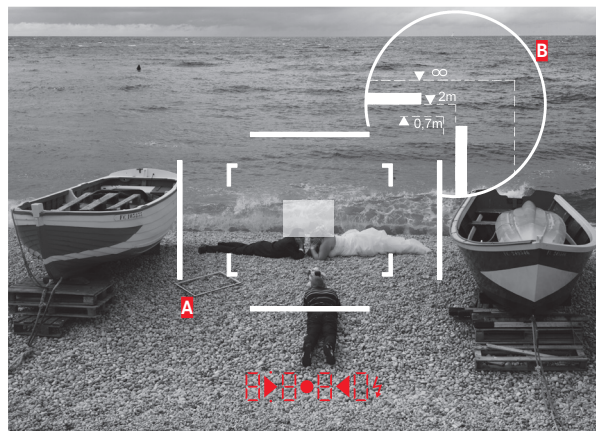
This camera's bright-line view and range finder is not only a very high-quality, large, brilliant and bright viewfinder, it is also a highly accurate range finder coupled to the lens. All lenses with focal lengths from 16 to 135mm connect automatically when fitted on the camera. The viewfinder has a magnification factor of 0.68x.

When using lenses with focal lengths of 28 (Elmarit from serial number 2 411 001), 35, 50, 75, 90 and 135mm, the relevant LED-lit frame is automatically illuminated in the combinations 28+90mm, 35+135mm, and 50+75mm.

The size of the bright-line frame corresponds to a sensor size of 23.9 x 35.8mm at a range setting of 2m. It is linked to the range setting to ensure that the parallax - the offset between the lens and the viewfinder axis - is automatically compensated. At a range of below 2m the sensor detects slightly less than shown by the inner edges of the bright-line frame, and slightly more at longer ranges (see adjacent diagram). These slight variations, which are hardly ever critical in practice, are due to the operating principle.

Bright-line frames on a viewfinder camera must be matched to the image angle of the relevant lens focal lengths. However, the nominal image angles change slightly when focusing due to the changing extension, i.e. the distance between the optical system and the sensor plane. If the set range is less than infinity (and the extension correspondingly greater), the actual image angle is smaller - the lens captures less of the subject. In addition, the differences in the image angle tend to be greater at longer focal lengths, as a result of the greater extension.

In the middle of the viewfinder image is the square range metering image, which is brighter than the surrounding image field. If the exposure meter is turned on, the exposure meter LEDs and the flash symbol LED appear at the lower edge of the viewfinder image. For more details about setting the range and exposure metering, as well as flash mode, refer to the relevant sections on p. 144/145/154.



All pictures and bright-line frame positions relative to 50mm focal length

A	Bright-line frame
B	Actual image field
Set to 0.7m:	The sensor detects approx. one frame width less.
Set to 2m:	The sensor detects exactly the image field shown by the inner edges of the bright-line frame.
Set to infinity:	The sensor detects approx. 1 or 4 (vertical or horizontal) frame width(s) more.

RANGE MEASUREMENT

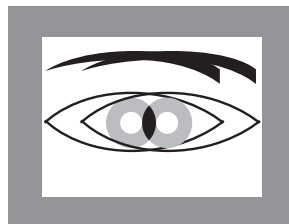
Due to its large effective metering basis, the range finder on this camera is very precise. The benefits of this are particularly noticeable when using wide-angle lenses with their relatively high depth of field.

Mechanical metering basis (Distance between the optical axes of the viewfinder window and the range finder viewing window)	x viewfinder zoom	= Effective metering basis
69.25mm	x 0.68	= approx. 47.1mm

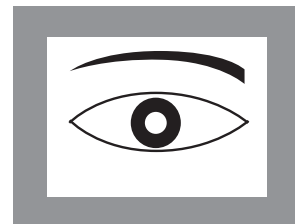
The range finder metering field is visible as a bright, sharply defined rectangle in the center of the viewfinder. The focus can be set using either the superimposed image or split image method:

Superimposed image method (double image)

In a portrait, for example, aim the metering field at the eye and turn the distance setting ring on the lens until the contours in the metering field are brought into line. Then choose the subject detail.



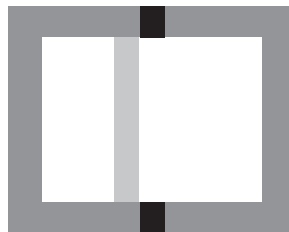
Out of focus



In focus

Split image method

When taking photographs of architecture, for example, aim the range finder metering field at the vertical edge or another clearly defined vertical line and turn the distance setting ring on the lens until the contours of the edge or line can be seen at the limits of the metering field with no misalignment. Then choose the subject detail.



Out of focus



In focus

TURNING THE EXPOSURE METER ON / OFF

The exposure meter is turned on by tapping the shutter release button **13**, provided the camera is turned on at the main switch **14** and the shutter speed dial **15** is not set to **B**.

The displays in the viewfinder or monitor light up continuously to indicate that the exposure meter is ready:

- in aperture priority mode the LED display of the shutter speed,
- and in manual mode one of the two triangular LEDs in the viewfinder lights up, either individually or in conjunction with the center circular LED, while the light balance is displayed in the monitor.

If you let go of the shutter release button without activating the shutter, the exposure meter remains turned on for around 30s more, and the relevant LED(s) remain lit for the same time. If the shutter speed setting dial is set to **B**, the exposure meter is disabled.

Notes:

- In aperture priority mode, if correct exposure cannot be achieved using the available shutter speeds, the shutter speed display gives a warning by flashing (only in the viewfinder, for more details, refer to the "Aperture priority mode" section on p. 146).
- If the exposure meter reading is below the metering range in very low lighting conditions, the left hand triangular LED in the viewfinder flashes as a warning, or the left-hand bar of the light balance flashes in the monitor. In aperture priority mode, the shutter speed is still displayed. If the required shutter speed falls below the slowest possible setting (ISO-dependent, but max. 60s), this display also flashes in the viewfinder.
- If the camera is out of use for an extended period or is stored in a case, always turn it off at the main switch. This also prevents pictures from being taken accidentally.

EXPOSURE MODES

The camera provides two exposure modes: Aperture priority mode and manual mode. Depending on the subject, situation and your individual preferences, you can thus choose between

- the familiar “semi automatic” operation, or
- setting a fixed shutter speed and aperture.

APERTURE PRIORITY

If the shutter speed setting dial **15** is in the **A** position, the electronics within the camera generates the exposure time automatically and continuously in the range $\frac{1}{4000}$ s to max. 60s (ISO-dependent, is shorter with higher sensitivity values), in accordance with the film speed setting, the metered brightness and the manually selected aperture. The calculated shutter speed is displayed in half steps to provide a better overview.

For shutter speeds slower than 2s the remaining exposure time is counted down and displayed in seconds after the shutter release. The actually generated and continuously controlled exposure time can however vary from the half step value displayed: For example, if the display shows **16** (the closest value) before releasing the shutter, but the calculated exposure time is longer, the countdown after releasing the shutter may actually start from **19**.

Under extreme lighting conditions, based on all the parameters the exposure meter may generate a shutter speed that is outside the working range, i.e. brightness values that would require shorter exposures than $\frac{1}{4000}$ s or longer than 60s (ISO-dependent). In such cases the specified minimum or maximum shutter speed is nevertheless used, and these values flash in the viewfinder as a warning.

Notes:

- As described in connection with the ISO setting on p. 140, a certain amount of noise becomes apparent when using higher sensitivities, and particularly with uniform dark surfaces. To reduce this annoying phenomenon, after pictures with slow shutter speeds and high ISO values the camera automatically takes a second “black picture” (taken with the shutter closed). The noise present in this parallel picture is then digitally “subtracted” from the data for the real picture. As a result, the message **Noise Reduction** appears for **12s**¹ in the monitor. This doubling of the “exposure” time can be significant at longer exposure times, and must be allowed for. During this time the camera should not be turned off.
- If the **B** function is selected in conjunction with the auto shutter release (see p. 152, the shutter release button does not need to be kept pressed; the shutter will remain open until the shutter release button is pressed a second time (this is then equivalent to a **T** function)).

¹ Time data is an example

EXPOSURE LOCK

For compositional reasons, the most important part of the subject is often not in the center of the picture, and as a result such important parts of the subject may be excessively light or dark. Center-weighted metering, however, records predominantly or exclusively an area in the center of the image and is calibrated to an average gray scale value.

Subjects and situations of this type can be overcome very easily even in aperture priority mode, using exposure lock.

Using the function

1. Aim at the important subject detail or alternatively at another detail with average brightness.
2. Pressing the shutter release button **13** down to the first pressure point activates metering and storage.
 - As long as the pressure point is held, a small red dot appears in the viewfinder at the top in the digits line for confirmation, and the exposure time no longer changes even if the lighting conditions are different.
3. Keeping the shutter release pressed, move the camera to capture the final trimming,
4. The shutter can then be released using the exposure originally determined.

Changing the aperture setting after using exposure lock has no effect on the shutter speed, and will lead to an incorrect exposure. Exposure lock is canceled when you remove your finger from the shutter release pressure point.

EXPOSURE COMPENSATION

Exposure meters are calibrated to an average gray scale value (18% reflection), which corresponds to the brightness of a normal, i.e. average photographic subject. If the actual subject detail does not match this assumption, an appropriate exposure compensation can be performed.

Particularly when taking several pictures in succession, for instance if for any reason a series of pictures is taken deliberately using slight under or overexposure, exposure compensation is a very useful function: In contrast to exposure lock, once set it remains effective until it is reset.

Exposure compensation can be set in the range $\pm 3\text{EV}$ in $\frac{1}{3}\text{EV}$ steps (EV: Exposure Value).

Entering and canceling an exposure compensation

Two options are available for setting an exposure compensation: You can make the setting using the menu or – provided the function is enabled – with the setting dial.

Setting using the menu is recommended if, for example, you know before taking a series of pictures that you want your subjects to be slightly under or overexposed. The exceptionally fast option using the setting dial is ideal when unexpected situations occur and enables you to track your subject in the viewfinder without interruptions.

Using the menu

1. In the picture parameters menu (see p. 128/197), select **Exposure Compensation**.
 - A scale appears in the monitor instead of a sub-menu, with an EV value indicated in red and a white triangle to indicate the relevant setting. If they are at a value of 0, this means that the function is deactivated.
2. Set the desired value.
 - In the initial menu list, a set compensation is indicated by **EV±X¹**.

Using the setting dial

1. In the picture parameters menu (see p. 128/197) select **Exposure Compensation**, and
2. press up/down on the direction pad **26** to select the **Direct Adjustment** option.
3. Select **On** if you want to work faster with the setting dial, or **Off** if you wish to make the settings using the menu.

If you selected **On**:

4. Set the desired compensation value using the setting dial **25**.
 - The compensation value in the viewfinder changes accordingly, for example **1.0-** / **0.5**.

Important:

An exposure compensation set on the camera only influences metering of the available light, i.e. not flash light (for more information about flash photography, refer to the sections starting on p. 154).

Regardless of how the set compensation was originally entered:

- It remains effective until it is manually reset to 0, regardless of whether the camera has been turned off and back on in the meantime.
- It can be reset using either the menu or the setting dial.

¹ Example, either plus or minus, "±X" stands for the relevant value

AUTOMATIC BRACKETING

Many attractive subjects are very rich in contrast, i.e. they have both very light and very dark areas. The effect can be quite different, depending on which sections you base your exposure on. In such cases, the automatic bracketing function in aperture priority mode on the Leica M enables you to produce several alternatives with graduated exposure, i.e. using different shutter speeds. You can then select the most suitable picture for further use, or use appropriate software to create a picture with an exceptionally high contrast range (HDR).

The following are available:

- 4 graduations: **0.5EV**, **1EV**, **2EV** and **3EV**
- 2 numbers of pictures: 3 or 5

Setting the function

1. In the picture parameters menu, select **Exposure Bracketing**.
 - A sub-menu containing the three options **Number of Frames**, **Aperture Stops** and **Automatic** is displayed in the monitor, with a scale below. If an exposure compensation is set at the same time, this is indicated by a corresponding value below the scale.
2. Under **Number of Frames**, select whether you want to use bracketing and the number of pictures to use.
 - White triangles appear above the selected intervals marked in red in the scale. They specify the relevant exposure values.
3. Confirm the setting.
 - The setting for **Aperture Stops** is marked as ready for editing.
4. Select the desired function graduation.
 - The marked intervals and the triangles change positions according to the selected graduation.

Notes:

- If the bracketing exceeds the range of $\pm 3\text{EV}$ - due to the combination of the number of pictures and graduation - the scale division changes from $\pm 3\text{EV}$ to $\pm 6\text{EV}$. The intervals and triangles displayed adjust accordingly.
- Note that both settings have to be made and confirmed, otherwise the function will not be active.

5. Confirm the setting.
 - The setting for **Automatic** is marked as ready for editing.
6. Select the desired setting: **On** to start bracketing automatically when the shutter is released once, **Off** to release the shutter individually for each picture.
7. Confirm the setting.
 - A set exposure series is indicated in the initial menu list by **xEV/x¹**.
8. All pictures are produced by pressing the shutter release button once or several times (see p. 125).

Notes:

- The following rule applies when using automatic bracketing: The sensitivity automatically determined by the camera for the uncorrected picture is also used for all other pictures in a series, i.e. this ISO value is not changed during a series. This may mean that the slowest shutter speed specified under **Maximum Exposure Time** is exceeded.
- Depending on the initial shutter speed, the working range for automatic bracketing may be limited.
- Regardless of this, the specified numbers of pictures are always taken, which may mean that several pictures in a series have the same exposure.
- Automatic bracketing is also possible when using flash. It is implemented without regard to the state of charge of the flash unit, meaning the series may contain shots both with and without flash.
- The function remains active until it is deactivated again in the **Number of Frames** sub-menu, i.e. even after the camera has been turned off and back on. If it is not deactivated, another series of pictures is taken each time the shutter release button is pressed.

¹ Example, the first "x" stands for the graduation, the second for the number of pictures

MANUAL EXPOSURE SETTING

If the exposure setting is performed entirely manually, the shutter speed dial **15** must be clicked to one of the engraved exposure times or to one of the intermediate values.

Then:

1. Turn on the exposure meter, and
2. turn the shutter speed dial and /or the aperture setting ring **9** on the lens – in each case in the direction indicated by the triangular LED that is lit up – until only the circular LED is lit up.

As well as the direction of rotation of the shutter speed setting dial and aperture setting ring necessary for correct exposure, the three LEDs in the light balance also indicate underexposure, overexposure and correct exposure in the following way:

- ▶ Underexposure by at least one aperture stop; turning to the right is required
- ▶ ● Underexposure by ½ aperture stop; turning to the right is required
- Correct exposure
- ◀ Overexposure by ½ aperture stop; turning to the left is required
- ◀ Overexposure by at least one aperture stop; turning to the left is required

Note:

For shutter speeds slower than 2s the remaining exposure time is counted down and displayed in seconds after the shutter release.

B SETTING / T FUNCTION

With the **B** setting, the shutter remains open for as long as the shutter release button is held down (up to a maximum of 60s; depending on the ISO setting).

In conjunction with the self-timer, a T function is also available: If **B** is set and the self-timer is activated by tapping the shutter release button (see also p. 160), the shutter opens automatically after the selected delay time. It then remains open until you press the shutter release button a second time – you do not need to hold the button down. This enables you to largely prevent any blurring, even with long exposures, by pressing the shutter release button.

In both cases, the exposure meter is disabled; after the shutter is released however the digital display in the viewfinder counts the elapsed exposure time in seconds, for guidance.

Notes:

- Long exposure times can be associated with very heavy picture noise.
- To reduce this annoying phenomenon, following exposures with slower shutter speeds (below approx. $\frac{1}{30}$ s, differing depending on other menu settings) the Leica M automatically takes a second "black picture" (with the shutter closed). The noise present in this parallel picture is then digitally "subtracted" from the data for the real picture.

This doubling of the "exposure" time can be significant at longer exposure times, and must be allowed for. During this time the camera should not be turned off.

- At shutter speeds of more than 2s, the message **Noise Reduction 12s¹** appears in the monitor.

VALUES ABOVE AND BELOW THE METERING RANGE

If the exposure meter reading is below its working range in very low lighting conditions and in manual mode, the left hand triangular LED (▶) flashes as a warning in the viewfinder, while the right hand LED (◀) does the same if there is too much light. In aperture priority mode, the shutter speed is still displayed. If the required shutter speed is more than the slowest possible or less than the fastest possible of $\frac{1}{4000}$ s, these displays also flash. As the exposure is metered with the working aperture, this situation can come about by stopping down the lens. Even if you are below the metering range, the exposure meter remains on for around 30s after you let go of the shutter release button. If the lighting conditions improve in this time (e.g. through a change in the subject detail or opening of the aperture), the LED display changes from flashing to continuously lit, indicating that the meter is ready.

¹ Time data is an example

FLASH MODE

The camera determines the necessary flash power by firing one or more ranging flashes, fractions of a second before taking the actual picture. Immediately after this, at the start of exposure, the main flash is fired. All factors that influence the exposure (such as picture filter and changes to the aperture setting) are automatically taken into account.

COMPATIBLE FLASH UNITS

The following flash units, when used on the camera, are capable of all the functions described in this manual, including TTL flash metering:

- With its compact dimensions and design that matches the camera, the Leica SF 26 system flash unit is the perfect solution. It is also extremely easy to operate.
- Other Leica system flash units.
- System-compatible flash units that allow guide number control and are HSS-compatible¹ (see p. 158).
- Other commercially available flash attachments with standard flash foot² and positive center contact, and fired by the center contact (X contact, **16**) can also be used.

ATTACHING THE FLASH UNIT

Before attaching a flash unit to the accessory shoe **20** on the camera,

- the cover that protects the accessory shoe and the socket **28** when not in use, must be detached to the rear, and
- the camera and flash unit must be turned off.

When attaching a flash unit, you should ensure that the foot of the flash unit is fully inserted into the accessory shoe and the clamping nut is tightened to prevent it accidentally falling out. This is particularly important for flash units with additional control and signal contacts, because if the position in the accessory shoe changes the necessary contacts can be broken, leading to malfunctions.

Caution:

Do not touch the contacts in the accessory shoe.

Note:

Ensure that the accessory shoe cover is always fitted when no accessories are in use.

¹ When using system-compatible flash units, the white balance (see p. 138) can be set to **Automatic** for correct color reproduction.

² However, if flash units not specially designed for the camera are used and do not automatically adjust the white balance on the camera, the  setting should be used (see p. 138).

FLASH MODE

Fully automatic flash mode, i.e. controlled by the camera, is available on the camera with the system-compatible flash units listed in the previous section, and in aperture priority **A** and manual exposure modes. In addition, automatic illumination control is operational in both exposure modes. This means that in order to ensure a balanced relationship between flash and other lighting at all times, the flash power is reduced by up to 1 2/3EV as ambient brightness increases. However, if the ambient brightness plus even the shortest possible flash sync time of 1/800s would cause overexposure, a non-HSS compatible flash unit will not be fired in aperture priority mode. In such cases the shutter speed is governed by the ambient brightness and is shown in the viewfinder. In aperture priority mode **A** and with manual setting, the camera also allows the use of creative flash techniques such as synchronization of flash firing with the 2nd shutter curtain rather than the 1st, as is usual, and flash with slower shutter speeds than the sync speed of 1/800s. These functions are set on the camera using the menu (for more details, refer to the relevant sections below). In addition, the camera transfers the set sensitivity to the flash unit. This allows the flash unit, provided it has received such information and the aperture manually set on the lens is also input to the flash unit, automatically to adjust its range values accordingly. With system compatible flash units, the sensitivity setting cannot be influenced from the flash unit as it is transferred from the camera.

Notes:

- Studio flash systems may have a very long burning time. Therefore, when using them it may be useful to select a slower shutter speed than 1/800s.
- The same applies to radio controlled flash triggers for "un-chained flash", as the radio transmission can cause a delay.
- The following sections describe only those settings and functions that are available when using this camera with system-compatible flash units.
- An exposure compensation set on the camera (see p. 148) only influences the measurement of available light! If you want to simultaneously use compensation of the TTL flash exposure metering in flash mode – in parallel or in the opposite direction, you must make this additional setting!
- More details of flash use, in particular for other flash units not specially adapted to this camera and for different flash modes, can be found in the relevant manuals.

Settings for camera-controlled automatic flash mode

After the flash unit in use has been turned on and set to guide number control mode (e.g. TTL or GNC), the following actions on the camera are necessary:

1. Before taking each flash picture by gently pressing the shutter release, so that the display in the viewfinder shows the shutter speed or switches to the light balance. If this stage is missed out by fully depressing the shutter release in one quick movement, the flash unit will not fire even if required.
2. The shutter speed dial must be set to **A**, to the flash sync speed ($\frac{1}{180}$ S), or to a slower shutter speed (including **B**). In aperture priority mode, the camera switches automatically to the sync speed or to a slower shutter speed appropriate to the ambient light. (see "Selecting the sync speed / the sync speed range", p. 158).
3. The desired aperture, or the aperture required for the relevant distance to the subject, must be set.

Note:

If the automatically controlled or manually set shutter speed is faster than $\frac{1}{180}$ S, the flash is not fired unless the flash unit is HSS-compatible (see p. 158).

Flash exposure displays in the viewfinder with system-compatible flash units

A flash-shaped LED appears in the viewfinder as confirmation and to display the various operating conditions. This LED appears together with the displays for exposure metering for the ambient light level, described in the relevant sections.

In automatic flash mode

(flash unit set to GNC or TTL)

-  does not appear despite the flash unit being switched on and ready for use:
A faster shutter speed than $\frac{1}{180}$ S is set manually on the camera and the connected flash unit is not HSS-compatible. In such cases the camera will not fire the flash unit even though it is switched on and ready for use.
-  flashes slowly (at 2Hz) before the picture is taken:
The flash unit is not yet ready to use
-  is lit up before the picture is taken:
The flash unit is ready for use
-  remains continuously lit after taking the picture, and the other displays go out:
The flash power was sufficient, the flash unit remains ready for use.

-  flashes rapidly after taking the picture (at 4Hz), and the other displays go out:
The flash power was sufficient, but the flash unit is not yet ready for further use.
-  goes out after taking the picture, together with the other displays:
The flash power was not sufficient, e.g. due to the choice of too small an aperture stop for the subject. If the flash unit is set to a partial discharge power, because of the lower power requirement it may be ready for use despite the flash LED not lighting up.

When the flash unit is set to camera control (A) or manual mode (M)

-  does not appear despite the flash unit being switched on and ready for use:
An exposure time shorter than $\frac{1}{180\text{S}}$ has been set manually on the camera. In such cases the camera will not fire the flash unit even though it is switched on and ready for use.
-  flashes slowly (at 2Hz) before the picture is taken:
The flash unit is not yet ready for use.
-  is lit up before the picture is taken:
The flash unit is ready for use.

FLASH EXPOSURE COMPENSATION WITH LEICA SF 26

This function can be used to selectively reduce or strengthen the flash exposure regardless of the exposure of the available light, e.g. in a picture taken in the evening, to lighten the face of a person in the foreground while retaining the lighting atmosphere.

Setting the function

1. In the picture parameters menu, select **Flash Settings**, and
2. in the corresponding sub-menu **Flash Exposure Compensation**.
 - A scale appears in the monitor instead of a sub-menu, with an EV value indicated in red and a white triangle to indicate the relevant setting. If it is at a value of , this means that the function is deactivated.
3. Set the desired value.
 - In the initial menu list, a set compensation is indicated by **EV+ X¹**.

Notes:

- This function is only available with system-compatible flash units that do not have their own compensation setting, e.g. not with the Leica SF58. On the Leica SF 58 and similar flash units, the correction is made directly at the flash unit.
- Brighter flash illumination selected using a positive compensation requires a higher flash power, and vice versa. Therefore, flash exposure compensation has a more or less significant impact on the flash range: A positive compensation reduces the range, while a negative compensation increases it.
- A flash exposure compensation setting remains active until it is reset to  (see step 2.), i.e. after any number of pictures and even after turning off the camera.

¹ Example, either plus or minus, "X" stands for the respective value

LINEAR FLASH MODE (HIGH SPEED SYNCHRONIZATION)

Fully automatic, i.e. camera controlled, linear flash operation is available with this camera when using the Leica SF 58 flash unit, with all shutter speeds and in aperture priority and manual exposure modes. The camera activates it automatically if the selected or calculated shutter speed is faster than the sync speed of $\frac{1}{180}$ s. If the flash unit is set correctly, this change does not require the photographer to do anything else.

Important:

The range for HSS flash is significantly lower than for TTL flash.

SELECTING THE SYNC SPEED / THE SYNC SPEED RANGE

Reproduction of the available light is determined by the shutter speed and the aperture. A fixed setting to the fastest possible shutter speed for flash operation, the sync time, leads unnecessarily in many situations to a greater or lesser underexposure of all parts of the subject not directly lit by the flash.

This camera allows you to combine flash operation with the shutter speed generated in aperture priority mode to subtly change the lighting conditions for the relevant subject to suit your compositional ideas. You can choose any of five ways of doing this:

Setting the function

1. In the picture parameters menu, select **Flash Settings** and there **Auto Slow Sync.**, and
2. in the sub-menu select the automatic lens-specific setting - **1 / 1**, or whether you want to specify a particular shutter speed yourself - **Manual Setting**.
3. In the **Manual Setting** sub-menu, set the range of shutter speeds permitted by specifying the fastest speed permitted.

Notes:

- **1/1** results in the slowest shutter speeds based on the rule of thumb for blur-free pictures taken from the hand, e.g. $\frac{1}{60}$ s with a 50mm lens. However, in the **Auto Slow Sync.** menu it is limited to $\frac{1}{25}$ s, even if the focal length used is longer.
- The setting field in the **Manual Setting** sub-menu initially shows the current slowest shutter speed setting.
- Manual exposure control also allows any shutter speed up to the sync speed of $\frac{1}{180}$ s to be set.
- If the Leica SF 58 (see p. 154) is being used and faster shutter speeds than $\frac{1}{180}$ s are set on the camera, the flash unit automatically switches to HSS mode.

¹ Only when using Leica M lenses with 6-bit coding in the bayonet and lens detection enabled in the menu.

SELECTING THE FIRING MOMENT

Flash photographs are illuminated by two light sources, the available light and the light from the flash. Parts of the subject that are exclusively or primarily illuminated by the flash are almost always reproduced sharply (with correct focusing) due to the extremely fast pulse of light. By contrast, all other parts of the subject – those that are sufficiently illuminated by the available light or illuminate themselves – are portrayed with different degrees of sharpness in the same picture. Whether these parts of the subject are reproduced sharply or “blurred”, and the degree of blurring, is determined by two independent factors:

1. The shutter speed, i.e. for how long these parts of the subject “act upon” the sensor, and
2. how quickly these parts of the subject – or the camera itself – are moving during exposure.

The longer the exposure time or the faster this movement, the greater the extent to which the two – superimposed – parts of the picture can differ.

With the conventional time for firing the flash, at the beginning of the exposure, i.e. immediately after the 1st shutter curtain has completely opened the image window. This can actually lead to visible contradictions, e.g. in the picture of the motorcycle, which is being overtaken by its own light trail.

The camera allows you to choose between this conventional firing moment and synchronization with the end of the exposure, i.e. immediately before the 2nd shutter curtain starts to close the image window again. In this case, the sharp image reflects the end of the movement captured. In the photograph, this flash technique gives a natural impression of movement and dynamics.

The function is available

- for all camera and flash unit settings
- in aperture priority mode and with manual shutter speed selection
- in automatic and manual flash mode.

The displays are identical in both cases.

Setting the function

1. In the picture parameters menu, select **Flash Settings** and there **Flash Sync. Mode**, and
2. select the desired option in the sub-menu.

ADDITIONAL FUNCTIONS

TAKING PHOTOGRAPHS WITH THE SELF-TIMER

You can use the self-timer to take a picture with a delay of either 2 or 12s. This can be particularly useful, for example in the first case if you want to avoid the picture being out of focus due to camera shake when releasing the shutter or, in the second case, for group photographs where you want to appear in the picture yourself.

Setting and using the function

1. Turn the main switch **14** to .
2. In the main menu (see p. 128/197), select **Self timer**, and
3. select the required delay time in the associated sub-menu.
4. To start the delay time, press the shutter release button **13** to the 2nd pressure point (see p. 125).
 - The LED **5** on the front of the camera flashes – for the first 10s of a 12s delay time – to show the progress of the delay time. The countdown is shown in the monitor at the same time.

While the 12s self-timer delay time is running, it can be canceled at any time by pressing the **SET** **17** or **MENU** button **18** – the relevant setting is retained and the function can be restarted by pressing one of the shutter release buttons again.

Important:

In self-timer mode, the exposure is not set by pressing the shutter release button to the pressure point, it is set immediately before the picture is taken.

USER/APPLICATION-SPECIFIC PROFILES

On this camera, any combination of menu settings can be permanently stored, e.g. so that they can be retrieved quickly and easily at any time for recurring situations / subjects. A total of four memory slots are available for these combinations, as well as a factory default setting that can be retrieved at any time and cannot be changed. You can change the names of the saved profiles. Profiles set on the camera can be transferred onto a memory card, for example for use in other camera units, while profiles stored on a card can be transferred onto the camera.

Saving settings / Creating a profile

1. Set the desired functions in the menu.
2. In the picture parameters menu (see p. 128/197), select **User Profile**.
3. select **Save as Profile** in the sub-menu, and
4. select a memory slot in the sub-menu.

Selecting a profile

1. In the picture parameters menu (see p. 128/197), select **User Profile**.
 - If user profiles are stored, the profile name appears in gray, while free memory slots are green.
2. Select the required profile in the sub-menu, either one of the saved profiles, or **Default Profile**.

Note:

If you change one of the settings for the profile currently in use — appears instead of the name of the profile you were previously using in the initial menu list.

Renaming profiles

1. In the picture parameters menu (see p. 128/197), select **User Profile**.
2. select **Manage Profiles**, and
3. select **Rename Profiles** in the sub-menu.
 - The profile name and name appear, with the number marked as ready for editing.
4. Select the profile to be renamed by turning the setting dial **25** or pressing up or down on the direction pad **26**.
5. Confirm your setting by pressing the **SET 17** or **INFO 27** button or by pressing right on the direction pad.
 - The next position is marked as ready for setting.
6. The numbers and letters in the name are changed by turning the setting dial or by pressing up and down on the direction pad, while you select different positions by pressing either
 - the **INFO** button,
 - or the **SET** button,
 - or left or right on the direction pad.

The available characters are upper case letters from **A** to **Z**, the numbers from **0** to **9** and a space which appear in this order in an endless loop.
7. Confirm your setting - only possible if the last position is active
 - by pressing the **SET** or **INFO** button.

Saving profiles to a card / transferring profiles from a card

1. In the picture parameters menu (see p. 128/197), select **User Profile**.
2. select **Manage Profiles**, and
3. select **Import profiles from card?** or **Export profiles to card?** in the corresponding sub-menu.
 - A confirmation prompt appears in the monitor.
4. Confirm your setting by pressing the **SET** **17** or **INFO** **27** button, and confirm that you really want to import or export the profile(s).

Note:

When exporting, all 4 profile slots are transferred to the card, i.e. including any empty profiles. As a result, when importing profiles any existing profiles in the camera will be overwritten, i.e. deleted.

RESETTING ALL CUSTOM SETTINGS

This function allows you to delete all previous custom settings in the main and picture parameters menus at once, and reset them to the factory default settings.

Setting the function

1. In the main menu (see p. 128/197) select **Reset**, and
2. select **No** or **Yes** in the sub-menu.

Note:

This reset also affects any stored individual user profiles defined.

MARKING THE PICTURE FILES FOR COPYRIGHT PROTECTION

This camera enables you to mark your picture files by entering text or other characters.

You can enter up to 17 characters of information under 2 headings for each picture.

1. In the main menu (see p. 128/197), select **Copyright-Information**.
 - A sub-menu containing the three options **Copyright-Information**, **Information** and **Artist** appears in the monitor. Only the **Copyright-Information** line is initially activated.
2. Turn on the **Copyright-Information** function and confirm the operation.
 - The information lines are activated and the first position is marked as ready for editing.
3. Use the setting dial **25** to select the desired characters and press the relevant direction on the direction pad **26** to move between positions.

You move to the **Artist** lines either by pressing the appropriate directions on the direction pad or using the **INFO** **27** or **SET** **17** button.

The available characters include various punctuation marks, the numbers from **0** to **9**, upper and lower case letters and space which appear in this order in an endless loop.

Confirm your setting by pressing the **SET** or **INFO** button.

REVIEW MODE

To review pictures in the monitor **29**, you can select:

- **PLAY** Review for an unlimited time
- or
- **Auto Review** Brief review immediately after taking the picture

REVIEW FOR UNLIMITED TIME – PLAY

By pressing the **PLAY** button **21** you can switch to review mode.

- The last picture taken appears in the monitor along with the corresponding displays (see p. 194).
However, if the memory card inserted does not contain any image files, the following message appears when you switch to review mode: **Attention No image to display.**

Notes:

- Depending on the function previously set, pressing the **PLAY** button generates different responses:

Initial situation	After pressing the PLAY button
a. Full review display of a picture	Picture mode
b. Review of an enlarged section / several reduced pictures (see p. 213)	Full review display of the picture
c. One of the menu controls (see p. 128), or DELETE or delete protection function (see p. 170) is activated.	Full review display of the last displayed picture

- The Leica M (Typ 262) can also be used to review picture data from the Leica M (Typ 240) and Leica M Monochrome (Typ 246).

AUTOMATIC REVIEW OF LAST PICTURE

In **Auto Review** mode, each picture is displayed immediately after it is taken.

This allows you to quickly and easily check whether the picture was successful or needs to be taken again.

This function enables you to select the time for which the picture will be displayed.

Setting the function

1. In the main menu (see p. 128/197), select **Auto Review**.
2. select the desired function or time in the sub-menu: (**Off**, **1 s**, **3 s**, **5 s**, **Permanent**, **Release button pressed**).

From **Auto Review** mode, you can switch back at any time to normal, i.e. unlimited, **PLAY** review mode.

Note:

If you have been taking photographs using the picture series function (see p. 126), the last picture in the series or the last picture in the series stored on the card - if not all pictures in the series have been transferred from the camera's internal back-up memory to the card at this point - is displayed first. Details of how to select the other pictures in the series and further options in review mode are described in the sections below.

Review

To allow uninterrupted viewing of the pictures, only the information in the header appears in normal review mode.



If a detail is shown, the header disappears and a corresponding display appears .

In addition to normal review, a further 3 options with different additional information are available. They are arranged in an endless loop and can be selected by (repeatedly) pressing the **INFO**  button.

Note:

This camera can also be used to review video recordings made with the models Leica M (Typ 240) and Leica M Monochrome (Typ 246). See also 'The displays / In the monitor / During review / During video playback', p. 94. For further details of playing back a video, please refer to the manual of the camera with which the video was recorded.

Review with histogram

The histogram depicts the brightness distribution in the picture. The horizontal axis shows the brightness values from black (left) through gray to white (right). The vertical corresponds to the number of pixels at each brightness level. This form of representation – together with the impression of the picture itself – provides an additional quick and easy assessment of the exposure setting. Press the **INFO** button once (starting from normal review mode), to display the histogram. It appears in the lower half of the picture.

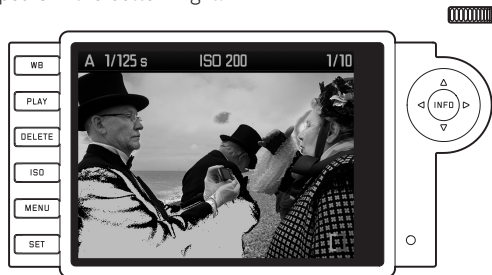


Review with clipping indicators

You can use the menu to set the clipping thresholds for displaying both the light and dark areas.

Press the **INFO** button twice (starting from normal review mode), to display the areas without marking.

- Excessively light areas are indicated in red, excessively dark areas in blue, flashing in each case. The clipping symbol (L) also appears in the bottom right.



Setting the function

- In the main menu (see p. 128/197), select **Clipping Definition**, and
- set the upper and lower thresholds in the sub-menu.
 - The scale shows the clipping areas relative to the overall exposure range.

Notes on the histogram and the clipping indicators:

- Both indicators are available when viewing both the entire picture and a section of it, but not when simultaneously viewing 4, 9 or 36 reduced pictures (see p. 168).
- Both indicators always relate to the detail of the picture currently displayed.

Review with additional information

Press the **INFO** button three times (starting from normal review mode) to display additional picture data and a reduced picture.



Note:

This review option only allows you to view the entire picture, even if only a section was previously selected.

VIEWING OTHER PICTURES / SCROLLING IN THE MEMORY

You can open other saved pictures by pressing left and right on the direction pad **26**. Pressing left takes you to earlier pictures, pressing right to later pictures. After the first and last picture, the series of pictures begins again in an endless loop, which means you can reach all pictures in either direction.

- The picture and file numbers in the monitor change accordingly.



ENLARGING / SELECTING THE TRIMMING / SIMULTANEOUSLY VIEWING SEVERAL REDUCED PICTURES

With this camera it is possible to open an enlarged section of an individual picture in the monitor to study it more closely, with a free choice of section. Conversely, you can also view up to 36 pictures simultaneously in the monitor, e.g. to gain an overview or to find the picture you are looking for more quickly.

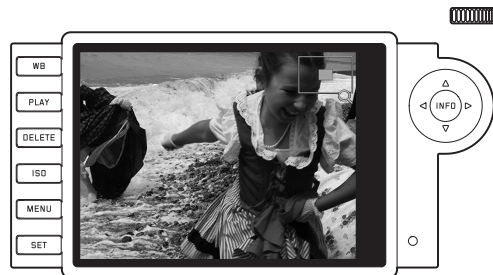
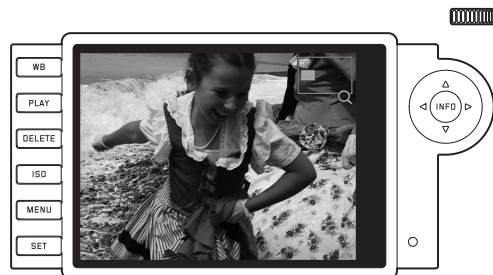
Notes:

- Not all zoom levels are available for pictures with low resolution, e.g. 1.7 MP.
- While an enlarged picture is displayed, left/right on the direction pad are no longer available to open other pictures, instead they are used to "navigate" within the picture (exception: see next note).

Turning the setting dial **25** to the right enlarges a central trimmed area. Enlargement is possible up to 1:1, i.e. until 1 pixel of the monitor displays 1 pixel of the picture.

The four directions on the direction pad **26** can be used to select any position for the section to be enlarged. To do this, press the direction (several times) in which you want to shift the section.

- In addition to the enlargement, the rectangle within the frame in the top right-hand corner of the monitor symbolizes the position of the section displayed.



Note:

You can also switch from an enlarged picture directly to another picture, which will then be shown at the same enlargement. This is done by pressing left or right on the direction pad - but while holding down the **PLAY** button **21**.

By turning the setting dial to the left (starting from normal size), you can simultaneously view 4 - or by turning the dial further 9 or 36 - pictures in the monitor.

- Up to 36 reduced images are shown in the monitor including the picture previously being viewed at normal size, which is marked with a red border.

You can use the four directions on the direction pad to navigate freely among the reduced images, and the relevant image is marked accordingly. You can return this picture to normal size by turning the setting dial to the right or by pressing the **INFO** or **PLAY** button.

Note:

When 36 pictures are displayed, turning the setting dial further to the right places the red frame around the entire group of pictures, which then allows you to scroll more quickly, a block at a time.

DELETING PICTURES

When a picture is displayed in the monitor, you have an opportunity to delete it if you wish to do so. This can be useful, for example if the pictures have already been saved to other media, if you no longer require them or if you need to free up more space on the memory card.

You can delete single pictures, or all pictures at the same time, as required.

Notes:

- Deleting is only possible in review mode, but regardless of whether a picture is being displayed at normal size or several reduced pictures are displayed (but not if the 36 picture review is activated with a red frame around the entire block).
- For protected pictures, the protection must first be canceled before they can be deleted (see also next section).

Procedure

1. Press the **DELETE** button **20**.
 - The corresponding sub-menu appears in the monitor.

**Note:**

The delete process can be canceled at any time using the **PLAY** **21** or **DELETE** button.

2. The first step is to decide whether you want to delete individual pictures **Delete Single**, or all pictures at once **Delete All**.
3. Confirm your selection with the **SET** button. You can still open other pictures by pressing right and left on the direction pad.

Notes:

- If the picture shown is protected (see p. 172), the **Single** option cannot be selected in the sub-menu.
- When deleting all pictures, to prevent accidental deletion there is an intermediate step in which you must reconfirm that you definitely want to delete all pictures on the memory card.

Displays after deleting

After deleting, the subsequent picture appears. If there are no more pictures saved on the card, the following message appears: **Attention No image to display.**

Deleting all pictures on the memory card

After deleting, the following message appears:

Attention No image to display. However, if one or more pictures were protected, that picture or the first of those pictures then appears.

Note:

When a picture is deleted, the subsequent pictures in the picture counter are re-numbered as follows: For example, if you delete picture no. 3, what was previously picture no. 4 then becomes no. 3, the previous no. 5 becomes no. 4 and so on. However, this does not apply to the picture numbering on the memory card.

PROTECTING PICTURES /CLEARING DELETE PROTECTION

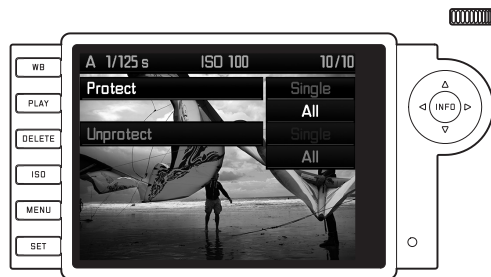
The pictures stored on the memory card can be protected against accidental deletion. This protection can then be cleared at any time.

Notes:

- Pictures can only be protected, or the protection can only be cleared, in review mode, irrespective of whether a picture is displayed at normal size or as one of several reduced pictures (but not when viewing 36 pictures with a red frame round the entire block, see p. 169).
- For details of the different procedures/responses when you attempt to delete protected pictures, refer to the previous section.
- If you decide you want to delete them, clear the protection as described below.
- Protection is only effective on the camera.
- Even protected pictures are deleted if the memory card is reformatted (see next section for details).
- On SD memory cards, you can prevent accidental deleting by sliding the write protection switch on the card (see p. 119) to the position marked LOCK.

Procedure

1. Press the **SET** button **17**.
 - The corresponding sub-menu appears in the monitor.



Note:

The setting process can be canceled at any time

- either by pressing the **PLAY** button **21** – to return to normal review mode,
- or by tapping the shutter release button **13** to go to picture mode.

2. Select
 - whether you want to protect individual pictures - **Protect Single**, or
 - simultaneously protect all pictures - **Protect All**, or
 - whether you want to clear the existing protection for individual pictures - **Unprotect Single**, or
 - for all pictures - **Unprotect All**.

Note:

The following functions cannot be performed and the menu text appears in dark instead of light gray to indicate this:

- Protecting a picture that is already protected
 - Clearing delete protection for a picture that is not protected
3. Confirm your selection with the **SET** button. You can still open other pictures by pressing right and left on the direction pad **26**.

Displays after protection / clearing protection

After completing the process, the original monitor display appears again, with the corresponding symbol (Ⓒ) for protected pictures.

Note:

The display (Ⓒ) also appears if a protected picture is called up.

ADDITIONAL FUNCTIONS

FOLDER MANAGEMENT

The picture data on the memory card is stored in folders, which are created automatically. The folder names always consist of eight characters - three figures and five letters. In the factory default setting, the first folder is named "100LEICA", the second "101LEICA", etc. The next available number is always used as the folder number, and a maximum of 999 folders are possible. If the number capacity is exhausted, a corresponding warning message appears in the monitor.

Within the folder, the individual pictures are given continuous numbers up to 9999 unless a the memory card in use already contains a picture with a higher number than the last number assigned by the camera. In such cases, the numbering used on the card is continued. If the current folder contains picture number 9999, a new folder is created automatically and the numbering begins again at 0001. If folder number 999 and picture number 9999 are reached, a corresponding warning message appears in the monitor and the numbering must be reset (see below).

On this camera you can also create new folders at any time, give them names of your choice and change the file names.

Changing folder name

1. In the main menu (see p. 128/197), select **Image Numbering**, and
2. select **New Folder** in the sub-menu.
 - The folder name appears (initially always **XXXLEICA**). The fourth character is marked as ready for editing. Positions 4-8 can be changed.

Note:

If you are a using memory card that was not formatted with this camera (see p. 174), the camera automatically creates a new folder.

3. The numbers and letters are changed by turning the setting dial **25** or by pressing up and down on the direction pad **26**, while you select different positions by pressing
 - the **INFO** button **27**,
 - or the **SET** button **17**,
 - or left or right on the direction pad.

The available characters are upper case letters from **A** to **Z**, the numbers from **0** to **9** and the underscore **_** which appear in this order in an endless loop.

4. Confirm your settings - only possible if the eighth position is active - by pressing the **SET** or **INFO** button.
 - A further sub-menu appears, showing **Reset file numbering?**
5. Select **Yes** or **No**.

Changing picture file names

1. In the main menu (see p. 128/197), select **Image Numbering**, and
2. select **Change Filename** in the sub-menu.
 - The name of the picture file appears. The first character is marked as ready for editing.
Positions 1-4 can be changed.
3. The numbers and letters are changed by turning the setting dial **25** or by pressing up and down on the direction pad **26**, while you select different positions by pressing
 - the **INFO** button **27**,
 - or the **SET** button **17**,
 - or left or right on the direction pad.

The available characters are upper case letters from **A** to **Z**, the numbers from **0** to **9** and the underscore **_** which appear in this order in an endless loop.
4. Confirm your settings - only possible if the fourth position is active - by pressing the **SET** or **INFO** button.
 - The setting menu described under 2. appears again.

¹ The X characters are placeholders.

Resetting picture file names

1. In the main menu (see p. 128/197), select **Image Numbering**, and
2. select **Reset** in the sub-menu.
 - A further sub-menu appears, showing **Reset file numbering?**.
3. Select **Yes** or **No**.
 - After confirming your selection by pressing the **INFO** **27** or **SET** button **17**, the setting menu described under 2. appears again.

FORMATTING THE MEMORY CARD

It is not normally necessary to format memory cards that have already been used. However, if a card that has yet to be formatted is inserted for the first time, it must be formatted.

Note:

You should get into the habit of copying all your pictures onto a secure bulk storage medium, e.g. the hard drive on your computer, as soon as possible. This is particularly important if the camera is being sent for servicing along with the memory card.

Procedure

1. In the main menu (see p. 128/197), select **Format SD card**, and
2. select **Format SD card?** in the sub-menu.
3. Press the **SET** **17** or **INFO** button **27** to format the memory card.

Notes:

- If the memory card has been formatted in another device, such as a computer, you should reformat it in the camera.
- If the memory card cannot be formatted/overwritten, you should ask your dealer or the Leica Information Service (for address, see p. 204) for advice.

¹ The X characters are placeholders.

TRANSFERRING DATA TO A COMPUTER

The picture files can also be transferred to other computers using a standard card reader for SD/SDHC memory cards. Card readers with a USB interface are available for computers with a USB interface.

Note:

Connecting two or more devices to a computer or connecting using a USB hub or extension cables can result in malfunctions.

Data structure on the memory card

When the data stored on a card is transferred to a computer, it is stored in folders with the names 100LEICA, 101LEICA, etc.

These folders can each hold up to 9999 pictures.

WORKING WITH DNG RAW DATA

If you have selected DNG (Digital Negative) format, you require specialist software to convert the saved raw data into optimum quality, for example the professional raw data converter Adobe® Photoshop® Lightroom®. It provides quality-optimized algorithms for digital color processing, delivering exceptionally low noise photographs with incredible resolution.

During editing, you have the option of subsequently adjusting parameters such as white balance, noise reduction, gradation, sharpness etc. to achieve an optimum image quality.

INSTALLING FIRMWARE UPDATES

Leica is constantly working on developing and optimizing its products. As many functions of the camera are entirely controlled by software, some of these improvements and extended functions can be installed at a later date. Leica provides firmware updates for this purpose.

Information about any resulting changes or additions to the details in this manual can be found on our website.

To check whether your camera is running the latest firmware version, select **Firmware**.

You can download new firmware from the Download section of our website and transfer it to your camera:

1. Format a memory card in the camera.
2. Turn off the camera and insert the card into an SD/SDHC/SDXC card reader – either integrated or connected to your computer.
3. Download the firmware file from the camera page using the “UPDATES” link.
4. Save the file m-X_xxx.upd at the top level of the card's folder structure. X_xxx stands for the relevant version.
5. Remove the card from your card reader and insert it in the camera. Close the bottom cover.
6. Hold down the **INFO** button  and turn on the camera.

The update process begins. This can take up to 15 minutes.

Notes:

- If the battery is not charged sufficiently, the warning message **Attention Battery capacity is low, please change the battery soon** appears. In this case, first charge the battery and then repeat the process described above.
- Observe all the instructions concerning putting the camera into operation again.

MISCELLANEOUS

SYSTEM ACCESSORIES

INTERCHANGEABLE LENSES

The Leica M system provides a basis for optimum adaptation to fast and unobtrusive photography. The range of lenses incorporates focal lengths from 16 to 135mm and light intensities up to 1:0.95.

FILTERS

UVa filters and a universal polarization filter M are available for current Leica M lenses fitted with standard filter thread sizes.

Note:

Leica UV/IR filters specially developed for use on the Leica M8 and M8.2 should not be used on the Leica M as they can cause color shifts at the edges of pictures, particularly when using wide angle lenses.

UNIVERSAL WIDE ANGLE VIEWFINDER M

The Leica universal wide-angle viewfinder M is a thoroughly practical accessory. It can be used without restriction on all analog and digital Leica M models and – just like the viewfinder in the camera – uses a reflected bright-line frame to outline the picture area for wide angle focal lengths 16, 18, 21, 24 and 28mm. The viewfinder is equipped with parallax compensation and a vial (spirit level) for exact leveling of the camera.
(Order No. 12 011)

MIRROR VIEWFINDER M

Mirror viewfinders are available for 18, 21, and 24mm lenses. They feature an exceptionally compact design and a bright viewfinder image. Bright line frames like those in the camera viewfinder are used to select the trimming (order no. 18mm: 12 022 black, 12 023 silver / 21mm: 12 024 black, 12 025 silver / 24mm: 12 026 black / 12 027 silver).

VIEWFINDER MAGNIFIERS M 1.25x AND M 1.4x

The Leica M 1.25x and M 1.4x viewfinder magnifiers significantly simplify picture composition when using focal lengths above 35mm. They can be used on all Leica M models and magnify the central area of the viewfinder image. The 1.25x viewfinder magnifier gives the 0.68 x viewfinder on this camera a magnification of 0.85 x, while the 1.4 x gives 0.95 x magnification. A security chain with snap fasteners prevents loss and can be used to hang the viewfinder on the carrying strap's fastening ring. The viewfinder magnifiers are supplied in a leather bag. A loop on the case allows the viewfinder magnifier to be stored on the camera's carrying strap, where it is protected and ready for use. (Order no. 12 004 M 1.25x, 12 006 M 1.4x)

FLASH UNIT

With its compact dimensions and design that matches the camera, the Leica SF 26 system flash unit is the perfect solution. It is extremely easy to operate. (Order No. 14 622)

Note:

Ensure that the accessory shoe cover is always fitted when no accessories are in use.

HAND GRIP M

As a practical accessory, we recommend the Hand Grip M for particularly steady holding and one-handed carrying of the Leica M. It is fitted in place of the standard bottom cover. (Order No. 14 496)

FINGER LOOP M

(Order No. S: 14 646/M: 14 647/L: 14 648)

CORRECTIVE LENSES

For optimum adaptation of the eye to the camera's viewfinder, we offer corrective lenses with the following positive or negative diopter values (spherical): $\pm 0.5/1/1.5/2/3$.

CASES

The new M ever-ready case has been specially developed for the new Leica M. It protects the camera reliably during transport and can be left connected to the camera so that the camera can be used quickly when taking photographs.

For effective protection during intensive photography, the front of the case can be detached and the section remaining on the camera then acts as a camera protector.

(Order No. 14 547)

For your full set of camera equipment, the classic Billingham combination case made of waterproof fabric is also available. This either holds two cameras and two lenses or one camera and three lenses. It has enough space for even large lenses and a fitted M hand grip. A zipped compartment also provides space for a Leica SF 26 flash and for other accessories.

(Order no. 14 854 black, 14 855 khaki)

SPARE PARTS

Order No.

Camera cover M	14 397
Accessory shoe cover M	14 900
Carrying strap	14 312
Li ion battery BP-SCL2	14 499
Charger BC-SCL2 (with EU/USA mains cables, in-car charging cord)	14 494
Mains cable for AUS and UK	14 422 and 14 421

SAFETY AND CARE INSTRUCTIONS

GENERAL PRECAUTIONS

- Do not use your camera in the immediate vicinity of devices with powerful magnetic, electrostatic or electromagnetic fields (e.g. induction ovens, microwave ovens, television sets or computer monitors, video game consoles, cell phones, radio equipment).
- If you place the camera on or very close to a television set, its magnetic field could interfere with picture recordings.
- The same applies for use in the vicinity of cell phones.
- Strong magnetic fields, e.g. from speakers or large electric motors, can damage the stored data or the pictures.
- Do not use the camera in the immediate vicinity of radio transmitters or high-voltage power lines. Their magnetic fields can also interfere with picture recordings.
- If the camera malfunctions due to the effects of electromagnetic fields, remove the battery and turn the camera on again.
- Protect the camera from contact with insect sprays and other aggressive chemicals. Petroleum spirit, thinner and alcohol may not be used for cleaning.
- Certain chemicals and liquids can damage the camera's housing or the surface finish.
- As rubber and plastics sometimes emit aggressive chemicals, they should not remain in contact with the camera for a long time.
- Ensure that sand and dust cannot get into the camera, e.g. on the beach. Sand and dust can damage the camera and the memory card. Take particular care when changing lenses and when inserting and removing the card.
- Ensure that water cannot get into the camera, e.g. when it is snowing or raining and on the beach. Moisture can cause malfunctions and even permanent damage to the Leica M and the memory card.
- Ensure that the accessory shoe cover is always fitted when no flash is in use.
- Do not touch the contacts of the accessory shoe.
- If salt water spray gets onto the camera, wet a soft cloth with tap water, wring it out thoroughly and wipe the camera with it. Then wipe down thoroughly with a dry cloth.

MONITOR

The monitor is manufactured using a high-precision process. This ensures that of the total of more than 921,600 pixels only a very small number will not work correctly, i.e. remain dark or always be lit. However, this is not a malfunction and it does not impair the reproduction of the picture.

- If the camera is exposed to significant temperature fluctuations, condensation can form on the monitor. Wipe it carefully with a soft dry cloth.
- If the camera is very cold when it is turned on, the displays may at first appear darker than usual. As soon as it warms up, it will reach its normal level of brightness.

SENSOR

- Cosmic radiation (e.g. on flights) can cause pixel defects.

CONDENSATION MOISTURE

- If condensation has formed on or in the camera, you should turn it off and leave it to stand at room temperature for around an hour. Once the camera temperature has adjusted to room temperature, the condensation will disappear by itself.

CARE INSTRUCTIONS

As any soiling also represents a growth medium for microorganisms, you should take care to keep the equipment clean.

FOR THE CAMERA

- Clean the camera only with a soft, dry cloth. Stubborn dirt should first of all be covered with a well-thinned cleaning agent and then wiped off with a dry cloth.
- To remove stains and fingerprints, the camera and lenses should be wiped with a clean lint-free cloth. Tougher dirt in hard to reach corners of the camera body can be removed with a small brush. The shutter blades may not be touched when doing this.
- All mechanically operated bearings and sliding surfaces on your camera are lubricated. Please remember this if you will not be using the camera for a long period of time. To prevent the lubrication points becoming gummed up, the camera shutter should be released a number of times every three months. It is also recommended that you repeatedly move and use all other controls. The range and aperture adjustment rings on the lens should also be moved periodically.
- Take care not to scratch the sensor for the 6-bit coding in the bayonet fastening (see p. 121), or to get it dirty. Take care also that no grains of sand or similar particles enter the fastening, where they could scratch the bayonet. Only clean this component when dry and do not exert any pressure on the glass cover.

FOR LENSES

- Normally, a soft hair brush is sufficient to remove dust from the outer lens elements. However, in case of more stubborn dirt, they can be carefully cleaned with a very clean, soft cloth that is completely free of foreign matter, using circular motions from the inside to the outside. We recommend micro-fiber cloths (available from photographic and optical specialists) that are stored in a protective container and can be washed at temperatures of up to 40°C (without fabric softener, never iron!). Cloths for cleaning glasses, which are impregnated with chemicals, should not be used as they can damage the lens glass.
- Take care that the 6-bit coding (see page 121) in the bayonet fastening does not become soiled or scratched. Take care also that no grains of sand or similar particles enter the fastening, where they could scratch the bayonet. Never wet this component when cleaning it!
- For optimum front lens protection in unfavorable photographic conditions (e.g. sand, salt water spray), use transparent UVa filters. However, you should bear in mind that, like all filters, they can cause unwanted reflections in certain backlight situations and with high contrasts. The generally recommended lens hood also protects the lens from unintentional fingerprints and the rain.

FOR THE BATTERY

Rechargeable lithium ion batteries generate power through internal chemical reactions. These reactions are also influenced by the ambient temperature and humidity. Very high and low temperatures shorten the operating time and service life of the batteries.

- Always remove the battery, if you will not be using the camera for a long period of time. Otherwise, after several weeks the battery could become totally discharged, i.e. the voltage is sharply reduced as the camera still consumes a small amount of current (for saving your settings) even when it is turned off.
- Lithium ion batteries should only be stored in a partially charged condition, i.e. not completely discharged or fully charged (in the corresponding display in the monitor). If the battery is stored for a long period of time, it should be charged around twice a year for approximately 15 minutes to avoid a full discharge.
- Always ensure that the battery contacts are clean and freely accessible. Whilst lithium ion batteries are proof against short circuits, they should still be protected against contact with metal objects such as paper clips or jewelry. A short-circuited battery can get very hot and cause severe burns.
- If a battery is dropped, check the casing and the contacts immediately for any damage. Using a damaged battery can damage the camera.

- In case of noise, discoloration, deformation, overheating or leaking fluid, the battery must be removed from the camera or charger immediately and replaced. Continued use of the battery results in a risk of overheating, which can cause fire and/or explosion.
- In case of leaking fluid or a smell of burning, keep the battery away from sources of heat. Leaked fluid can catch fire!
- A safety valve in the battery guarantees that any excess pressure caused by improper handling is discharged safely.
- Batteries have only a limited service life. We recommend replacing them after around four years.
- Take damaged batteries to a collection point to ensure correct recycling.
- The batteries must not be exposed to heat, sunlight, humidity or moisture for long periods. Likewise, the batteries may not be placed in a microwave oven or a high pressure container as this results in a risk of fire or explosion.

FOR THE CHARGER

- If the charger is used in the vicinity of radio receivers, it can interfere with the reception; make sure there is a distance of at least 1 m between the devices.
- When the charger is in use, it can make a noise (buzzing) – this is quite normal and is not a malfunction.
- When it is not in use, disconnect the charger from the mains as otherwise it uses a certain (very small) amount of power even when no battery is inserted in it.
- Always keep the charger contacts clean, and never short circuit them.
- The car charging cable supplied
 - may only be operated with 12V electrical systems,
 - may never be connected while the charger is connected to the mains.

FOR MEMORY CARDS

- Whilst a picture is being stored or the memory card is being read, it may not be removed, nor may the Leica M be turned off or exposed to vibrations.
- For safety, memory cards should only ever be stored in the anti-static case supplied.
- Do not store memory cards where they will be exposed to high temperatures, direct sunlight, magnetic fields or static discharge.
- Do not drop or bend a memory card as this can damage it and result in loss of the stored data.
- Always remove the memory card if you will not be using the Leica M for a long period of time.
- Do not touch the connections on the rear of the memory card and keep them free of dirt, dust and moisture.
- It is recommended that the memory card be reformatted from time to time, as fragmentation occurs when deleting, which can block some of the memory capacity.

Notes:

- Simple formatting does not cause the data on the card to be irretrievably lost. Only the directory is deleted, which means that the existing files are no longer directly accessible. The data can be accessed again using appropriate software. Only the data that is then overwritten by saving new data is actually permanently deleted. You should nevertheless get into the habit of transferring all your pictures onto a secure bulk storage medium, e.g. the hard drive on your computer, as soon as possible. This is particularly important if the camera is being sent for servicing along with the memory card.
- Depending on the memory card used, formatting can take up to 3 minutes.

CLEANING THE SENSOR / DUST DETECTION

If any dust or dirt particles should adhere to the sensor cover glass, depending on the size of the particles this can be identified by dark spots or marks on the pictures.

You can use the **Dust Detection** function to check whether or how many particles are on the sensor.. This is much more accurate than a visual inspection and is therefore a reliable method of assessing whether cleaning is required.

The camera can be returned to Leica Camera AG Customer Service (address: see p. 204) for chargeable cleaning of the sensor; this cleaning is not covered by warranty.

You can also carry out cleaning yourself, using the **Sensor Cleaning** function in the menu. This allows access to the sensor by keeping the shutter open.

DUST DETECTION

1. In the main menu (see p. 128/197), select **Sensor Cleaning**.
 - The relevant sub-menu appears.
2. Select **Dust Detection**.
 - The following message appears: **Attention Please close the aperture to the largest value [16 or 22], and take a picture of a homogeneous surface (defocussed)**.
3. Press the shutter release button **13**.
 - After a short time, a "picture" appears in the monitor, in which black pixels represent grains of dust.

Note:

If dust detection is not possible, a corresponding message appears instead. After a few seconds, the display reverts to that described under 2. The picture can then be taken again.

CLEANING

1. In the main menu (see p. 128/197), select **Sensor Cleaning**.
 - The relevant sub-menu appears.
2. Select **Open Shutter**.
3. Select **Yes**. If there is sufficient battery capacity, i.e. at least 60%, the shutter then opens.
 - The message **Please switch off camera after inspection** appears.

Note:

If the battery capacity is lower, the warning message **Battery too low for sensor cleaning** appears instead to indicate that the function is not available, i.e. **Yes** cannot be selected.

4. Perform the cleaning. Make sure you follow the instructions below.
5. When cleaning is complete, turn off the camera. As a precaution, the shutter is only closed 10s later.
 - The message **Please stop sensor cleaning immediately** appears.

Notes:

- Generally: To protect the camera against ingress of dust etc. into the interior of the camera, it is important always to have a lens or a cover fitted to the camera body.
- For the same reason, when changing lenses work quickly and in an environment that is as dust-free as possible.
- As plastic parts can easily pick up a static charge and then attract more dust, the lens caps and covers should only be stored for short periods in pockets in clothing.
- As far as possible, both inspection and cleaning of the sensor should be performed in a dust-free environment to prevent further soiling.
- Lightly adhering dust can be blown off the sensor cover glass using clean and, if necessary ionized gases such as air or nitrogen. It makes sense to use a (rubber) bellows with no brush for this purpose. Special, low pressure cleaning sprays such as "Tetenal Antidust Professional" can also be used in line with their specified usage.
- If the particles cannot be removed from the sensor in this way, please refer the matter to your Leica Information Service.
- If the battery capacity falls to lower than 40% while the shutter is open, the warning message **Please stop sensor cleaning immediately** appears in the monitor. Turning the camera off will cause the shutter to be closed again.
- Be absolutely sure in this case that the shutter window is clear, i.e. that no object can obstruct the closing movement of the shutter, otherwise damage may occur.

Important:

- Leica Camera AG accepts no liability for damage caused by the user when cleaning the sensor.
- Do not attempt to blow dust particles off the sensor cover glass using your mouth; even tiny droplets of saliva can cause marks that are difficult to remove.
- Compressed air cleaners with high gas pressure may not be used as they can also cause damage.
- Take care to avoid touching the sensor surface with any hard objects during inspection and cleaning.

STORAGE

- If you are not using the camera for a longer period of time, we recommend that you:
 - a. remove the memory card (see p. 120), and
 - b. remove the battery (see p. 118), (after 2 months at the latest the date and time that were entered will be lost).
- A lens works like a magnifying glass if bright sunlight shines on the front of the camera. The camera must always be protected from strong sunlight. Use the lens cover and keep the camera in the shade (or immediately put it away in the case) help to prevent damage to the interior of the camera.
- You should preferably store the camera in a closed and padded container so that nothing can damage it and it is protected from dust.
- Store the camera in a dry, adequately ventilated place, where neither high temperatures nor high humidity will occur. When used in humid conditions, the camera should be completely free of all moisture before being stored away.
- Photo cases that became wet during use should be emptied to prevent damage to your equipment caused by moisture and any leather-tanning residue released.
- To prevent fungal growth during use in hot, humid tropical climates, the camera equipment should be exposed to the sun and air as much as possible. Storage in airtight containers or cases is recommended only if a desiccant such as silica gel is placed in the container.
- To prevent the formation of fungus, do not store the camera in a leather case for long periods of time.
- Note the serial numbers of your camera (engraved on the accessory shoe) and lenses, as these are extremely important in case of loss.

TROUBLESHOOTING

THE CAMERA DOES NOT RESPOND WHEN I TURN IT ON.

- Has the battery been correctly inserted?
- Does the battery have sufficient charge?
Use a charged battery.
- Has the bottom cover been correctly fitted?

THE CAMERA TURNS ITSELF OFF AGAIN AS SOON AS I TURN IT ON.

- Does the battery have sufficient charge to operate the camera?
Charge the battery or insert a charged battery.
- Is there any condensation?
This occurs if the camera is moved from a cold place to a hot place. In this case, wait until the condensation has evaporated.

THE CAMERA SHUTTER REFUSES TO TRIP.

- Picture data is currently being transferred to the memory card and the back-up memory is full.
- The capacity of the memory card is exhausted and the back-up memory is full.

Delete pictures you no longer require before taking new ones.

- No memory card has been inserted and the back-up memory is full.

I CANNOT SAVE THE PICTURE.

- Is a memory card inserted?
- If no memory card has been inserted, the display Sd appears in the viewfinder.
- The capacity of the memory card is full.

Delete pictures you no longer require before taking new ones.

THE MONITOR IS TOO DARK OR TOO BRIGHT.

- When viewing the monitor image from wide angles it is always more difficult to see.

If it is too light or too dark although you are looking at the monitor full on: If possible, select a different brightness.

THE PICTURE I HAVE JUST TAKEN IS NOT SHOWN IN THE MONITOR

- Is the **Auto Review** function turned on (when the camera is set to a picture mode)?

I CANNOT DISPLAY THE PICTURE.

- Is a memory card inserted?
- The memory card does not contain any data.

THE DATE AND TIME DISPLAYS SHOW INCORRECT VALUES OR ARE BLANK.

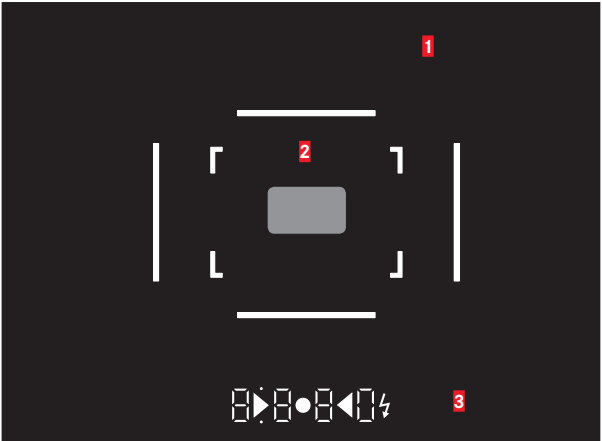
- The camera has not been used for a long period, particularly if the battery has been removed.

Insert a fully charged battery.

Set the date and time.

APPENDIX

VIEWFINDER DISPLAYS



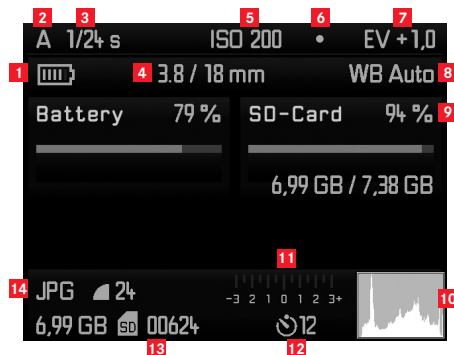
- 1 Bright line frame for 50mm and 75mm¹ (example)
- 2 Metering field for distance setting
- 3 LEDs¹ (Light Emitting Diodes) for:
 - a. Four-digit digital display with dots above and below
 Digital display:
 - Display of the automatically determined shutter speed for aperture priority A, or for counting down shutter speeds slower than 1s.
 - Warning that the metering or setting ranges are overshoot or undershot using aperture priority A
 - Displays the exposure compensation value (briefly during adjustment, or for about 0.5s when exposure metering is activated by tapping the shutter release)
 - Indicates that the back-up memory is (temporarily) full
 - Indicates that no memory card is loaded (Sd)
 - Indicates that the memory card is full (Full)
 - b. • Dot above:
 - Indication (when lit) that saved metering values are being used
 - c. • Dot below:
 - Indicates (flashing) that exposure compensation is being used
 - d. ▶ • ◀ Two triangular and one circular LED:
 - For manual exposure setting: Together as a light balance for exposure compensation. The triangular LEDs give the direction of rotation of the aperture setting ring and shutter speed setting dial to adjust the exposure.
 - Warning of values below the metering range
 - e. ⚡ Flash symbol:
 - Flash ready to use
 - Details of flash exposure before and after the picture

¹ With automatic brightness control adjusted to the ambient brightness. This automatic control is not available for Leica M lenses with viewfinder attachments, since they cover the brightness sensor 5 which supplies the information required for their operation. In such cases the frame and displays always maintain a constant brightness.

MONITOR DISPLAYS

WHEN TAKING A PICTURE

(by pressing the **INFO** button)



- 1** Battery capacity
- 2** Exposure mode
- 3** Shutter speed
- 4** Light intensity / focal length / lens type
- 5** ISO sensitivity
- 6** Exposure lock
- 7** Exposure compensation value
- 8** White balance setting
- 9** Memory card capacity
- 10** Histogram
- 11** Light balance
- 12** Self-timer status / delay time
- 13** Total remaining memory capacity/number of pictures
- 14** File format / compression / JPEG resolution

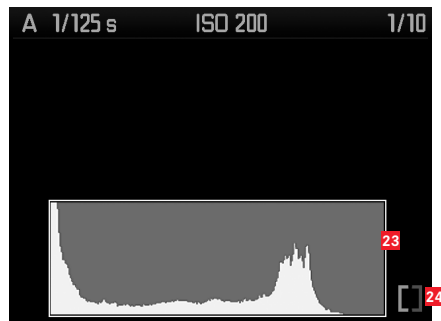
IN REVIEW MODE



- 15** Exposure mode
- 16** Shutter speed
- 17** ISO sensitivity
- 18** Number of picture displayed / total number of pictures on memory card
- 19** Symbol for scroll / zoom function (only one)
- 20** Display of trimming size and position (trimming only, not shown here)
- 21** Symbol for delete protected pictures
- 22** Selected picture (reduced viewing of 4/9/36 pictures only, not shown here)

With histogram/clipping indicators

(by pressing the **INFO** button (several times) (27))



- 23 Histogram
- 24 clipping symbol (in addition, picture areas without marking flash red/blue)

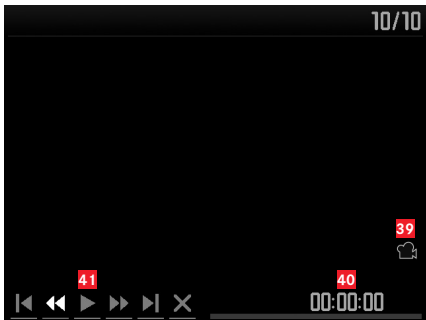
With additional information

(by pressing the **INFO** button (several times) (27))



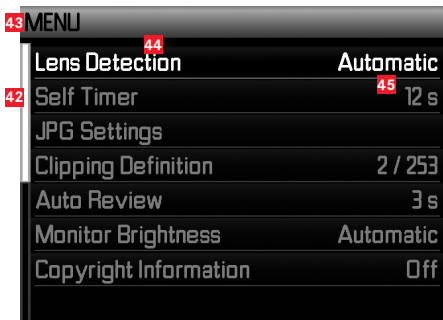
- 25 User profile number/name
- 26 Color space
- 27 Date
- 28 Time
- 29 Folder number / file name
- 30 Exposure series
- 31 File format/compression/JPEG resolution
- 32 Exposure compensation value
- 33 White balance setting
- 34 Light intensity / focal length / lens type
- 35 Length of the video recording
- 36 Symbol for video recording
- 37 Symbol for delete protected pictures (only appears if pictures are selected)
- 38 Symbol for flash picture

For video recordings



- 39 Symbol for video recording
- 40 Video control symbols
- 41 Elapsed playback time / progress bar

For menu control



- 42 Progress bar with page indication (main menu only)
- 43 Specification of menu, **MENU** = main menu / **SET** = picture parameters menu
- 44 Menu option
- 45 Menu option setting

MENU OPTIONS

MAIN MENU (MENU button)

Lens Detection	see p. 136
Self Timer	see p. 160
JPG Settings	see p. 142
Clipping Definition	see p. 167
Auto Review	see p. 165
Monitor Brightness	see p. 135
Copyright Information	see p. 163

Image Numbering	see p. 174
Sensor Cleaning	see p. 188
Auto Power Off	see p. 134
Date / Time	see p. 132
Language	see p. 132
Reset	see p. 163
Format SD Card	see p. 176
Firmware	see p. 179

PICTURE PARAMETERS MENU (SET button)

ISO	see p. 140
White Balance	see p. 138
File Format	see p. 137
File Format	see p. 137
Exposure Bracketing	see p. 150
Exposure Compensation	see p. 148
Flash settings	see p. 157/158/159
User Profile	see p. 162

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TECHNICAL DATA

Camera type

Leica M (Typ 262), compact digital view and range finder system camera

Lens attachment

Leica M bayonet with additional sensor for 6-bit coding

Lens system

Leica M lenses from 16 – 135mm

Picture format / image sensor

CMOS chip, active area approx. 23.9 x 35.8mm (corresponds to usable format of analog Leica M models)

Resolution

DNG™: 5976 x 3992 pixels (24MP),

JPEG: 5952 x 3968 pixels (24MP), 4256 x 2832 pixels (12MP),

2976 x 1984 pixels (6MP), 1600 x 1072 pixels (1.7MP)

Data formats

DNG™ (raw data), compressed loss-free, JPEG

File size

DNG™: 20-30 MB,

JPEG: Depending on resolution and picture content

Buffer memory

1GB / 8 pictures in series

Color space

sRGB

White balance

Automatic, manual, 7 presets, color temperature input

Storage medium

SD cards up to 2GB / SDHC cards up to 32GB / SDXC cards

Menu languages

German, English, French, Spanish, Italian, Japanese, Traditional Chinese, Simplified Chinese, Russian, Korean

Compatibility

Windows® 7® / 8®; Mac® OS X (10.5 or higher)

Exposure metering

Through the Lens (TTL) metering, with variable aperture, center-weighted TTL metering for flash exposure with system-compliant flash units

Metering principle / method

By measuring the light reflected by the light blades of the 1st shutter curtain onto a measuring cell: strongly center-weighted

Metering range

(with ISO 200/24) At room temperature and normal humidity, corresponds to ISO 200 at aperture 1.0 EV0 to EV20 at aperture 32. Flashing of the left triangular LED in the viewfinder indicates values below the metering range

Sensitivity range

ISO 200 to ISO 6400, adjustable in $1/3$ ISO increments, choice of automatic control or manual setting, PULL 100

Exposure modes

Choice of automatic shutter speed control with manual aperture preselection - aperture priority **A**, or manual shutter speed and aperture setting

Flash exposure control**Flash unit attachment**

Using accessory shoe with center and control contacts

Synchronization

Optionally triggered at the 1st or 2nd shutter curtain

Flash sync time

⚡ = $1/180$ S; slower shutter speeds can be used, if working below sync speed: Automatic changeover to TTL linear flash mode with HSS-compatible and system-compatible flash units

Flash exposure metering

(with system-compatible flash units, e.g. Leica SF 26) Control with center-weighted TTL pre-flash metering

Flash measurement cell

2 silicon photo diodes with collection lens on the camera base

Flash exposure compensation

$\pm 3 1/3$ EV in $1/3$ EV steps can be set (only with system-compatible flash units that do not have their own setting possibility)

Displays in flash mode (in viewfinder only)

Ready: Constant illumination of flash symbol LED in viewfinder, Function check: Continued illumination or brief rapid flashing of LED after exposure, underexposure indicator: LED temporarily goes out.

Viewfinder**Viewfinder principle**

Large, bright line frame viewfinder with automatic parallax compensation.

Eyepiece

Calibrated to -0.5 dpt.; corrective lenses from -3 to +3 diopter available.

Image field limiter

By activating two bright lines each: For 35 and 135mm, or for 28 and 90mm, or for 50 and 75mm; automatic switching when lens is attached.

Parallax compensation

The horizontal and vertical difference between the viewfinder and the lens is automatically compensated according to the relevant distance setting, i.e. the viewfinder bright-line automatically aligns with the subject detail recorded by the lens.

Matching viewfinder and actual image

At a range setting of 2m, the bright-line frame size corresponds exactly to the sensor size of approx. 23.9 x 35.8mm; at infinity setting, depending on the focal length, approx. 7.3% (28mm) to 18% (135mm) more is recorded by the sensor than indicated by the corresponding bright line frame and slightly less for shorter distance settings than 2m

Magnification (For all lenses)

0.68 x

Large-base range finder

Split or superimposed image range finder shown as a bright rectangular field in the center of the viewfinder image

Effective metering basis

47.1mm (mechanical measurement basis 69.25mm x viewfinder magnification 0.68x)

Displays**In the viewfinder**

Four-digit digital display with dots above and below, displays, see p. 192

On back

3" color TFT LCD monitor with 16m colors and 921,600 pixels, approx. 100% image field, max. 170° viewing angle

Shutter and shutter release**Shutter**

Metal blade focal plane shutter with vertical movement

Shutter speeds

For aperture priority: **(A)** continuously from 60s (ISO-dependent) to $\frac{1}{4000}$ s. For manual adjustment: 8s bis $\frac{1}{4000}$ s in half steps, **(B)**: For long exposures up to max. 60s (together with self-timer: T function, i.e. 1st press = Shutter opens, 2nd press = Shutter closes),  ($\frac{1}{180}$ s): Fastest shutter speed for flash synchronization, HSS linear flash mode possible with all shutter speeds faster than $\frac{1}{180}$ s with HSS-compatible Leica system flash units)

Activation of shutter release button

By integrated motor, low noise operation

Picture series

approx. ≤12 pictures in series with 3 pictures/s, then slower

Shutter release button

Two-stage, 1. Activation of exposure metering and exposure lock (in aperture priority mode), 2. Shutter release; standard thread for cable release integrated.

Self-timer

Delay optionally 2s (aperture priority and manual exposure setting) or 12s, set in menu, indicated by flashing LED on front of camera and corresponding display in monitor.

Turning the camera on/off

Using main switch on top of camera; optional automatic shutdown of camera electronics after approx. 2/5/10 minutes; reactivated by tapping the shutter release

Power supply

1 Akku Leica BP-SCL2 lithium ion battery, rated voltage 7.4V, capacity 1800mAh, capacity indicated in top panel display, when shutter held open (for sensor cleaning) additional acoustic warning of low capacity, maximum charging current/voltage: DC, 1000mA, 7.4V; manufacturer: VARTA Microbattery, Made in Indonesia

Charger

Leica BC-SCL2, inputs: 100-240V AC, 50/60Hz, 300mA, automatic switching, or 12V DC, 1.3A; Output: DC, max. 8.25 V, 1100 mA; manufacturer: Guangdong PISEN Electronics Co., Ltd., Made in China

Camera body**Material**

All-metal die cast magnesium body, synthetic leather covering, aluminum top panel, black anodized finish

Tripod thread

A ¼ (¼") DIN stainless steel in bottom

Operating conditions

0-40°C

Interfaces

ISO flash shoe

Dimensions

(Width x Depth x Height) Approx. 138.6 x 42 x 80mm

Weight

Approx. 600g (with battery)

Package contents

Charger 100-240V with 2 mains cables (Euro, USA, varies in some export markets) and 1 car charging cable, lithium ion battery, carrying strap, cover for accessory shoe

LEICA PRODUCT SUPPORT

The Product Support Department at Leica AG can provide you with an answer to any technical questions relating to Leica products, including software supplied, either in writing, on the telephone or by e-mail.

They are also the contact point for purchasing advice and to order instruction manuals. Alternatively, you can send us your questions using the contact form on the Leica Camera AG homepage.

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LEICA CUSTOMER CARE

For servicing your Leica equipment or in the event of damage, the Leica Camera AG Customer Care department or the repair service provided by authorized Leica agents in your country are available (see the warranty card for a list of addresses).

Leica Camera AG

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