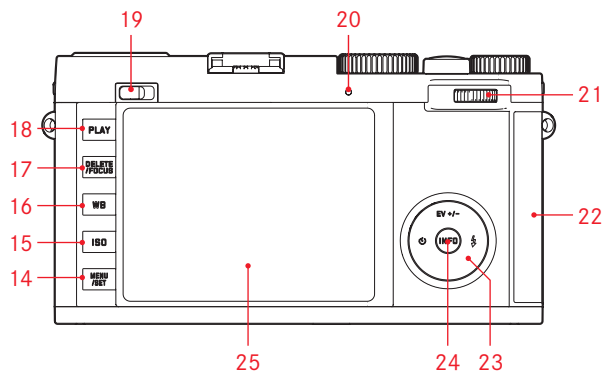
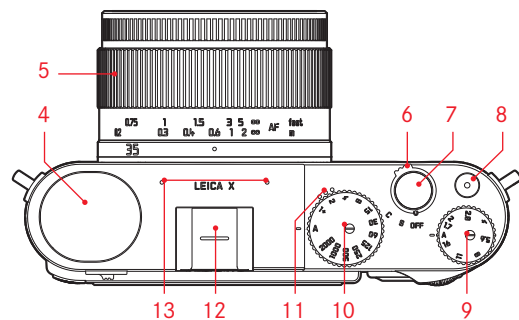
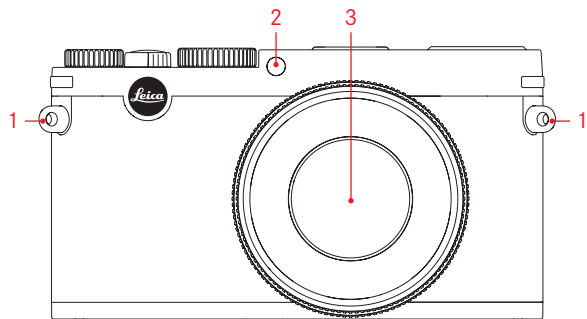
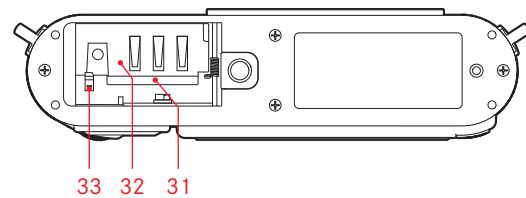
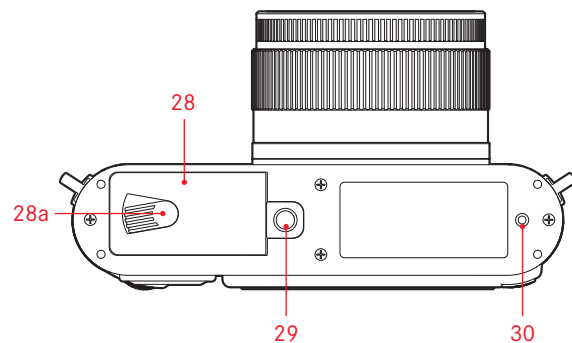
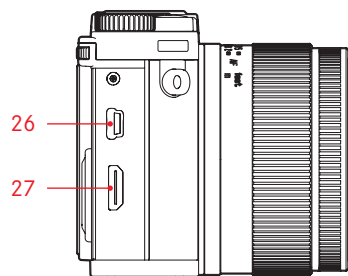




LEICA X

Anleitung | Instructions









LEICA X

Instructions

FCC Note: (U.S. only)

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 X (Typ 113)

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 X (Typ 113)

Tested To Comply
With FCC Standards

FOR HOME OR OFFICE USE

FOR CANADA ONLY:

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

You can find your camera's production date on the stickers in the Guarantee Card and on the packaging. The digits stand for YYYY/MM/DD

FOREWORD

Dear Customer,

We wish you a great deal of pleasure and success using your new Leica X. Thanks to its outstanding optical performance, the Leica Summilux 23mm f/1.7 ASPH. lens delivers exceptional picture quality.

With fully automatic program control, the Leica X provides an uncomplicated photography experience. Alternatively, you can take over picture composition yourself at any time using the manual settings.

You can select from numerous special functions to improve the picture quality even in very difficult exposure conditions.

Please read these instructions so that you can make the most of your Leica X's capabilities.

PACKAGE CONTENTS

Before using your Leica X for the first time, please check that the accessories supplied are complete.

- a. Leica BP-DC8 battery
- b. Battery protection case
- c. BC-DC8 battery charger with interchangeable plugs
- d. USB cable
- e. Leather carrying strap
- f. Lens cap
- g. Flash shoe / viewfinder socket cover

THIS PRODUCT IS LICENSED UNDER THE AVC PATENT PORTFOLIO LICENSE FOR THE PERSONAL USE OF A CONSUMER OR OTHER USES IN WHICH IT DOES NOT RECEIVE REMUNERATION TO (i) ENCODE VIDEO IN COMPLIANCE WITH THE AVC STANDARD ("AVC VIDEO") AND/OR (ii) DECODE AVC VIDEO THAT WAS ENCODED BY A CONSUMER ENGAGED IN A PERSONAL ACTIVITY AND/OR WAS OBTAINED FROM A VIDEO PROVIDER LICENSED TO PROVIDE AVC VIDEO. NO LICENSE IS GRANTED OR SHALL BE IMPLIED FOR ANY OTHER USE. ADDITIONAL INFORMATION MAY BE OBTAINED FROM MPEG LA, L.L.C. SEE [HTTP://WWW.MPEGLA.COM](http://www.MPEGLA.COM)

ANY OTHER USE INCLUDING BUT NOT LIMITED TO PROVIDING AVC VIDEO AGAINST REMUNERATION MAY REQUIRE A SEPARATE LICENSE AGREEMENT WITH MPEG LA, L.L.C. ADDITIONAL INFORMATION MAY BE OBTAINED FROM MPEG LA, L.L.C. SEE [HTTP://WWW.MPEGLA.COM](http://www.MPEGLA.COM)

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 affected, 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 any soiling and oxidation by storing your camera in a dry location with the lens cap and flash shoe / viewfinder socket cap attached.
- You should use only the recommended accessories to prevent faults, short circuits or electric shock.
- Do not attempt to remove parts of the body (covers); specialist repairs can be carried out only at authorized service centers.

LEGAL INFORMATION

- Please ensure that you 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, HDMI, and USB logos are registered trademarks.
- Other names, company or 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.

You local authority or waste disposal authority, or the shop where you bought this device, can provide you with further information on this issue.

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DESIGNATION OF PARTS

Figures in the front and rear cover pages

Front view

1. Eyes for carrying strap
2. Self-timer LED / AF auxiliary light
3. Lens

Top view

4. Flash
5. Distance setting / focusing ring
6. Main switch
7. Shutter button
8. Video shutter button
9. Aperture setting dial
10. Shutter speed dial
11. Speaker
12. Accessory shoe (cover removed)
13. Microphones

Rear view

14. **MENU/SET** button
 - For opening the menu
 - For saving menu settings and exiting submenus and menus
15. **ISO** button for opening the sensitivity menu

16. **WB** button for opening the white balance menu
17. **DELETE/FOCUS** button
 - For opening the delete menu
 - For opening the menu for the distance metering method
 - For activating the AF metering range frame
18. **PLAY** button
 - For activating (continuous) review mode
 - For returning to full 1:1 picture review
19. Flash release slider
20. Status LED
 - a. Flashing: Distance setting not possible / writing or reading picture data
 - b. Continuously lit: Distance and exposure setting completed and saved
21. Thumb wheel
 - For manual distance setting
 - For setting slow shutter speeds
 - For scrolling through menus and submenus
 - For setting a value for exposure compensation, bracketing and flash exposure compensation
 - For enlarging/reducing pictures viewed
22. Door over USB and HDMI sockets

23. Direction pad

- For scrolling through menus and submenus
- For scrolling through the picture memory
- For moving the AF metering range frame
- For opening the menus for exposure compensation, automatic bracketing and flash exposure compensation (**EV+/-**)
- For opening / making settings in the flash mode menu / opening submenus (**⚡**)
- For opening / making settings in the self timer menu / exiting menus and submenus without saving the menu settings (**⏻**)

24. **INFO** button

- For selecting monitor displays in picture and review mode
- For resetting the manually moved autofocus metering frame to the center
- for saving menu settings and exiting menus and submenus

25. Monitor

View from right (cover opened)

- 26. USB socket
- 27. HDMI socket

Bottom view

- 28. Door for battery compartment / memory card slot with
 - a. Locking lever
- 29. Tripod thread A 1/4, DIN 4503 (1/4")
- 30. Hole for hand grip guide pin (door opened)
- 31. Memory card slot
- 32. Battery compartment
- 33. Battery locking slider

QUICK GUIDE

Required parts:

- Camera
- Battery
- Charger with appropriate mains plug
- Memory card (not supplied)
-


Note:

The settings recommended here allow you to take good photographs easily, quickly and reliably when you first start to try out the Leica X. For details of the various modes/functions, refer to the corresponding sections on the specified pages.

Preparations:

1. *Attach a suitable mains plug to the charger (see p. 109)*
2. *Insert the battery in the charger to charge it (see p. 109)*
3. *Connect the charger to a mains socket*
4. *Set the main switch to **OFF** (see p. 114)*
5. *Insert the charged battery in the camera (see p. 110)*
6. *Insert the memory card (see p. 112)*
7. *Remove the lens cap*
8. *Set the main switch to **S** (see p. 114)*
9. *Set the menu language (see p. 116/120)*
10. *Set the date and time (see p. 116/120)*

Taking photographs

1. Set the adjusting dials for the shutter speed and aperture to **A**
2. Set the exposure metering method to  (see p. 116/134)
3. Set the distance setting ring to AF
4. Set the distance metering method to **11 Point** (Multi field) (see p. 132)
5. Select the required trimming
6. Press the shutter button to the first pressure point to activate distance setting and exposure metering and save the values (see p. 115)
7. Push the shutter button all the way down to take the photo

Viewing photographs:

Press the **PLAY** button

To view different pictures:

Press right or left on the direction pad

Enlarging pictures:

Turn the thumb wheel clockwise (see p. 156)

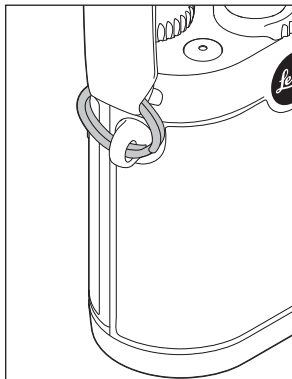
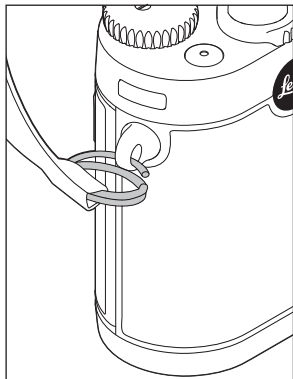
Deleting pictures:

Press the **DELETE/FOCUS** button, and select the required function in the menu that opens (see p. 158).

DETAILED GUIDE

PREPARATIONS

ATTACHING THE CARRYING STRAP



CHARGING THE BATTERY

The Leica X is powered by a lithium ion battery.

Caution:

- Only the battery types specified and described in this manual and/or specified and described by Leica Camera AG may be used in this camera.
- Using battery types not specified in these instructions can result in an explosion.
- These batteries may only be used in the units for which they are designed and may only be charged exactly as described below.
- Using the battery contrary to these instructions can result in explosion under certain circumstances.
- The batteries must not be exposed to sunlight, heat, moisture or condensation for long periods. To prevent a risk of fire or explosion, batteries must not be placed in a microwave oven or in a high pressure vessel.
- Never throw batteries into a fire as this can cause them to explode!
- Humid or wet batteries must not be charged or used in the camera under any circumstances.
- Always ensure that the battery contacts are clean and freely accessible.
- While 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.
- If the battery causes noise, is discolored, deformed or overheated, or if any fluid leaks out, it must be removed from the camera or charger immediately and replaced. Continued use of the battery can cause overheating, and a risk of fire and/or explosion.
- If liquid is leaking or you smell burning, keep the batteries away from heat sources. Leaked fluid can catch fire.
- Only the charger specified and described in these instructions, or chargers specified and described by Leica Camera AG, may be used. The use of other chargers that are not approved by Leica Camera AG can cause damage to the batteries and, in extreme cases, 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.
- Ensure that the power socket used is freely accessible.
- Heat is generated during charging. Therefore, the batteries must not be charged in small, sealed, i.e. unventilated, spaces.
- The battery and charger must not be opened. Repairs may only be carried out by authorized service centers.
- Make sure that the batteries are kept out of reach of children. Swallowing batteries can cause suffocation.
- Dispose of used batteries according to the respective information in these instructions.

First aid:

- If battery fluid comes into contact with the eyes, there is a risk of blinding. Immediately wash the eyes thoroughly with clean water. Do not rub the eyes. Seek medical attention right away.
- If leaked fluid gets onto the skin or clothing, there is a risk of injury. Wash the affected areas with clean water. Medical treatment is not required.

Notes:

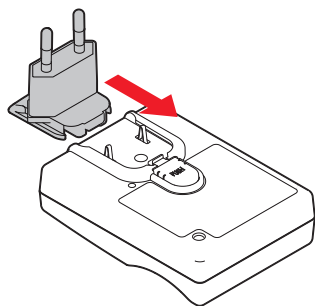
- The battery can only be charged outside the camera.
- Batteries must be charged before starting up the camera.
- For the battery to charge, it must have a temperature of between 0°C and 35°C /32° and 95°F (otherwise the charger does not turn on or off again).
- Lithium ion batteries can be charged 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.
- Lithium ion batteries should only be stored partly charged, i.e. not when fully discharged or fully charged. For very long storage periods, batteries should be charged for around 15 minutes twice a year to prevent total discharge.
- The batteries warm up during the charging process. This is normal and not a malfunction.
- A new battery only reaches its full capacity after it has been fully charged and – by use in the camera – discharged 2 or 3 times. This discharge procedure should be repeated every 25 cycles.
- Rechargeable lithium ion batteries generate power through internal chemical reactions. These reactions are also influenced by the external temperature and humidity. To maximize the life of the battery, it should not be exposed to extremely high or low temperatures (e. g. in a parked car in summer or winter) for long periods.
- Even with optimum conditions of use, every battery has a limited service life. After several hundred charging cycles, this becomes noticeable as the operating times get significantly shorter.
- In line with the applicable regulations (see p. 99) defective batteries should be sent to an appropriate collection point for proper recycling .
- The replaceable battery supplies another back-up battery that is built into the camera. This back-up battery ensures that the date and time data entered is retained for up to 2 days. If this back-up battery becomes discharged it must be recharged by inserting a charged main battery. Once the replaceable battery has been inserted, the full capacity of the back-up battery is recovered after about 60 hours. This process does not require the camera to be turned on. However, in this case the date and time have to be entered again.
- Remove the battery if you will not be using the camera for a long period of time. When doing so, turn the camera off using the main switch first. Otherwise, after several weeks the battery could become totally discharged, i.e. the voltage is significantly reduced, as the camera uses a low no-load current (to save the settings) even when it is turned off.

PREPARING THE CHARGER

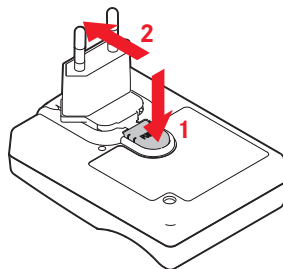
The charger must be fitted with the appropriate plug for the local sockets.

Plug

Attaching



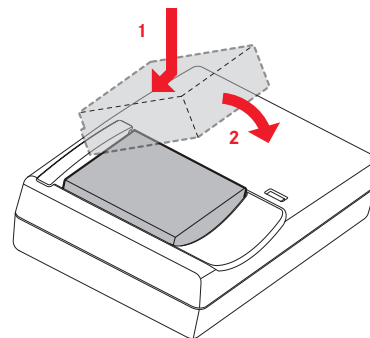
Removing



Note:

The charger automatically adjusts to the relevant mains voltage.

ATTACHING THE BATTERY TO THE CHARGER

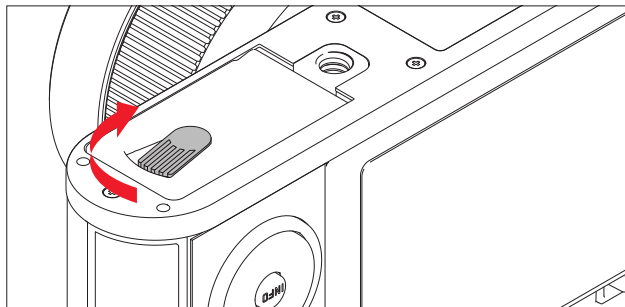
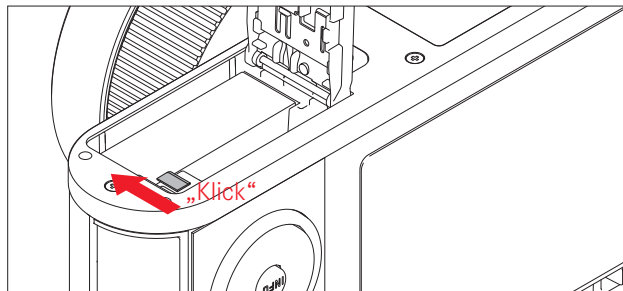
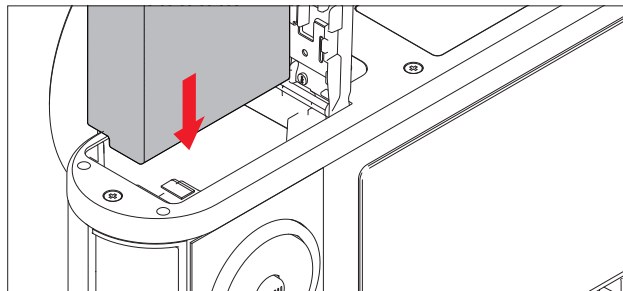


CHARGE STATUS DISPLAYS

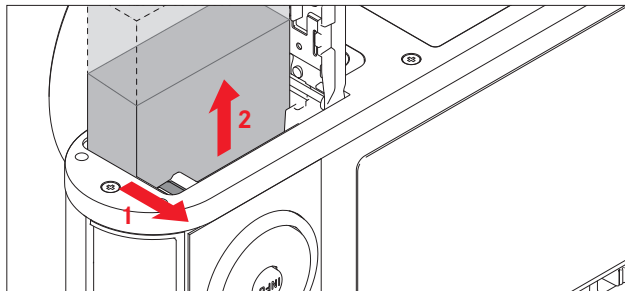
Correct charging is indicated by the red status LED. When it turns green, the battery is fully charged.

CHANGING THE BATTERY / MEMORY CARD

Turn off the camera, i.e. set the main switch to **OFF**

Opening the battery compartment / memory card slot door**Inserting the battery**

Removing the battery



Note:

Removing the battery with the camera turned on can delete the settings you have made in the menus and may damage the memory card.

Charge level displays

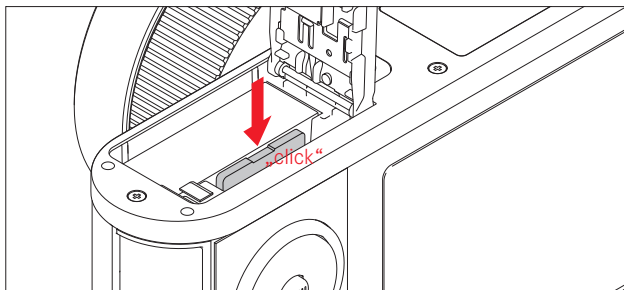
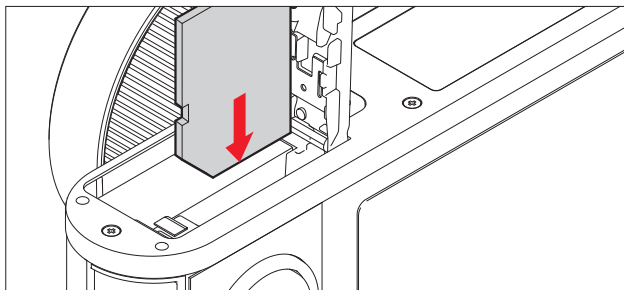
The charge level of the battery is indicated on the monitor (see p. 176).

Notes:

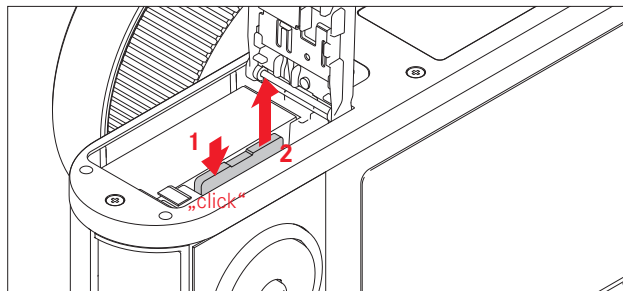
- Remove the battery if you will not be using the camera for a long period of time.
- The date and time must be reset within 2 days after the capacity of a battery in the camera has expired.

Inserting the memory card

You can use SD, SDHC or SDXC memory cards in the Leica X.

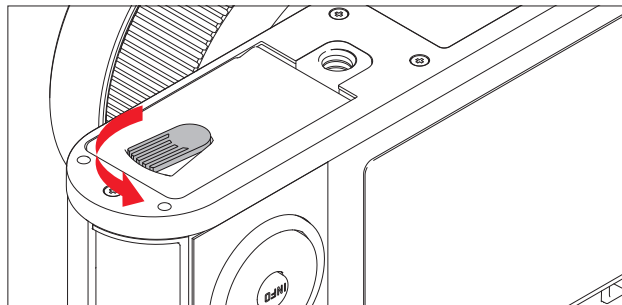


Removing the memory card



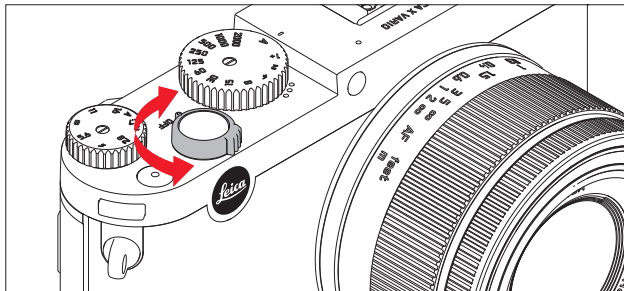
Notes:

- Do not touch the memory card contacts.
- If the memory card cannot be inserted, check that it is aligned correctly.
- 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.
- Video recordings in particular require a high write speed.
- Do not open the door and do not remove the memory card or the battery while the status LED is lit to indicate that the camera is accessing the memory. Otherwise, the data on the card may be destroyed and malfunctions can occur on the camera.
- 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.
- For the same reason, it is recommended that the card is always stored in an antistatic case.

Closing the battery compartment / memory card slot door

THE MOST IMPORTANT SETTINGS / CONTROLS

MAIN SWITCH



The Leica X is turned on and off using the main switch.

- **OFF** = Off
- **S** = Single pictures
- **C** = Continuous (picture series)

Frame Rate

Frequencies of 3 fps (**Low**) or 5 fps (**High**) are available:

*Select **Continuous Shooting** in the menu and then the required setting in the submenu*

- If the camera is turned on, the monitor image appears.

Notes:

- Picture series are not possible when using the flash. If a flash function is activated, only one picture is taken.
- If the main switch is set to **C** and the self timer is used at the same time, only a single picture is taken.
- The maximum picture frequency of 5 fps is only available with shutter speeds of $\frac{1}{60}$ s or faster ($\frac{1}{4}$ s at 3 fps).
- After a series with the maximum length of 7 pictures, the frequency with which they are taken declines slightly. This is due to the time required to transfer the data from the buffer memory to the card.
- Regardless of how many pictures are taken in a series, the last picture is always shown when they are reviewed. You can select the other pictures in the series by pressing right or left on the direction pad.

SHUTTER BUTTON

The shutter button works in two stages. Pressing it gently (to the pressure point) activates both the automatic distance setting / autofocus (if set) and the exposure metering and control systems, and saves the relevant settings/values. If the camera was previously in Standby mode, this reactivates it and the monitor image appears again.

Pressing the shutter button all the way down takes a picture.

Before pressing the shutter button all the way down, check that the distance setting / autofocus (if active) and exposure metering are complete (for details of exposure setting, **AF** and the corresponding displays on the monitor refer to p. 134, 130 and 176 respectively).

Notes:

- The menu system can be used to select or set key acknowledgment (response) tones and shutter sound and to adjust their volume.
- The shutter button should be pressed gently and not jerkily to prevent blurring.

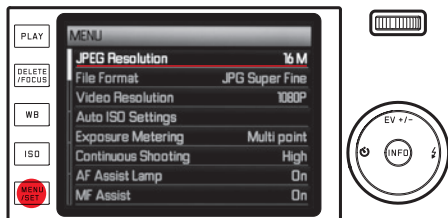
MENU CONTROL

You can navigate in the menu using the **MENU/SET** button and the direction pad. Alternatively, you can use the thumb wheel instead of the direction pad.

OPENING THE MENU:

Press the **MENU/SET** button

- The menu list appears. The active menu option is underlined in red, with its characters in white. The current setting is displayed on the right. The white field in the scrollbar on the left edge indicates which of the five pages of the menu you are currently on.



SCROLLING THROUGH THE MENUS:

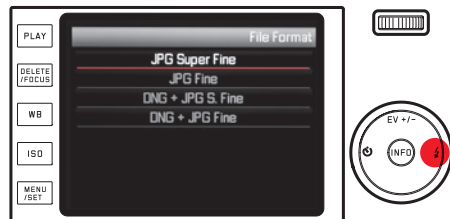
Press up / down on the direction pad or turn the thumb wheel



OPENING A SUBMENU FOR AN OPTION:

Press right on the direction pad

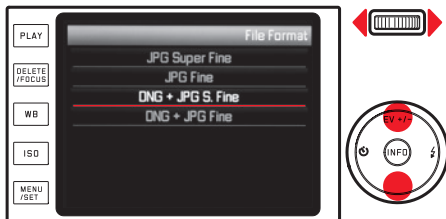
- The submenu list appears. The active option is underlined in red, with its characters in white.



Selecting a setting / value in a submenu:

Press up / down on the direction pad or turn the thumb wheel

- The currently active option changes.



Confirming a setting:

Press the MENU/SET or INFO button

- The menu list appears again, and the confirmed (new) setting is shown on the right in the active menu option line.

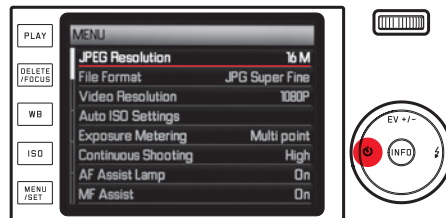


Exiting a submenu without confirming a setting:

Press left on the direction pad, or the shutter button

With the direction pad:

- The menu list appears again, and the retained (previous) setting is shown on the right in the active menu option line.



With the shutter button:

- The monitor screen for picture mode appears.

Exiting the menu:

*Press the **MENU/SET** button again*

- The monitor screen for picture mode appears.

or

Press the shutter button

- The monitor screen for picture mode appears.



or

*Press the **PLAY** button*

- The monitor screen for review mode appears.

Notes:

- Depending on the other settings, or if the external electronic viewfinder (available as accessory) is mounted, some functions may not be available. In this case, the relevant option is displayed in dark gray in the menu and cannot be selected.
- The menu is normally opened at the position of the last option set.
- For some options, there are settings in a second level of submenus. Settings in these submenus are opened and made in exactly the same way as described above.

- A range of additional functions are also controlled in the same basic way once they have been opened by pressing the corresponding buttons or the corresponding directions on the direction pad:
 - **ISO** for sensitivity
 - **WB** for white balance
 - **DELETE/FOCUS** for deleting image files / selecting the distance setting method (only in review or picture mode)
 - **EV+/-** (up on direction pad) for exposure compensation, automatic bracketing and flash exposure compensation settings
 -  (right on direction pad) for selecting the flash modes
 -  (left on direction pad) for activating the self-timer and selecting the delay time

Unlike with the menu functions, for these functions you can confirm your settings with the shutter button (by pressing to the first pressure point). Further details can be found in the relevant sections.

BASIC CAMERA SETTINGS

MENU LANGUAGE

Select **Language** in the menu, and the desired setting in the submenu

DATE / TIME

1. Select **Date / Time** in the menu
2. Select **Date** or **Time** in the first submenu
3. Select **Setting** or **Format** (for **Date**) or **Setting** or **Format** (for **Time**) in the respective second level submenus
4. Make the desired settings in the respective third level submenus

In the **Setting** submenus:

Press up / down on the direction pad or use the thumb wheel to change the figures and the month and press left / right on the direction pad to switch between the groups

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 days. However, after this time they have to be reset.

AUTOMATIC CAMERA SHUTDOWN

Select **Auto Power Off** in the menu, and the desired setting in the submenu

If this function is active, the camera switches to energy-saving standby mode after the selected time.

Note:

Even if the camera is in standby mode, it can be turned on again at any time by pressing the shutter button or by turning it off and back on with the main switch.

KEY TONES AND SHUTTER NOISE

With the Leica X, you can decide whether you want your settings and other functions to be acknowledged by an acoustic signal – two volumes are available – or whether operation of the camera and actually taking photographs should be predominantly free of noise.

For shutter noise:

Select **Shutter Volume** in the menu, and the desired setting in the submenu

For key tones and to indicate the memory card capacity limit:

Select **Acoustic Signal** in the menu, and the desired settings for the three options in the submenu

MONITOR / VIEWFINDER SETTINGS

Note:

The displays are identical regardless of whether they appear in the monitor or in an attached external electronic viewfinder (available as accessory) (see p. 167).

Changing the displays

Use the **INFO** button to select between various displays (see also p. 176)

You scroll through the different options in an endless loop and select them by pressing the button once or several times:

In picture mode

- a. Only basic exposure settings, as well as AF and exposure metering ranges
- b. With grid, plus histogram, if set
- c. With additional displays plus histogram, if set

In review mode

- a. Only basic exposure settings
- b. With additional information

Brightness and color reproduction

For optimum visibility and to adapt to different light conditions, the brightness and color reproduction of both the monitor and an external viewfinder can be changed.

Brightness settings:

Select **Monitor Brightness** or **EVF Brightness** in the menu, and the desired settings in the respective submenus

Color settings:

1. Select **Monitor Color Adjustment** or **EVF Color Adjustment** in the menu
 - An image with crosshairs appears. The ends of the cross have color markings for the possible settings - yellow, green, blue and magenta.
2. Move the cursor - which is initially in the center - to the desired position using the direction pad
 - The color reproduction in the monitor / viewfinder image changes according to your setting.

Automatic monitor shutdown

If this function is active, the monitor is turned off after a selected time. As well as saving power, this ensures that the camera is ready to use more quickly when reactivated.

Select **Auto LCD Off** in the menu, and the desired setting in the submenu

BASIC PICTURE SETTINGS

FILE FORMAT / COMPRESSION RATE

Two different JPEG compression rates are available: **JPG Fine** and **JPG Super Fine**. These two can be combined with simultaneous recording in **DNG** (raw picture data) format.

Select **File Format** in the menu, and the desired setting in the submenu

Note:

The indicated remaining number of pictures or recording time are an approximation, as the file size for compressed images can vary considerably depending on the subject of the photograph.

JPEG RESOLUTION

If one of the JPG formats is selected, pictures can be taken with 5 different resolutions (numbers of pixels). This allows you to adjust the setting precisely to the intended use or to the available memory card capacity.

Select **JPEG Resolution** in the menu, and the desired value in the submenu

Note:

Raw data (DNG format) is always stored at the maximum resolution regardless of the settings for JPEG images.

WHITE BALANCE

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




You can choose between several presets, automatic white balance, two fixed manual settings and direct setting of the color temperature. In addition, you have the option of adapting all settings precisely to the relevant photographic conditions and/or your own preferences.

Fixed presets:





1. Press the **WB** button
2. Select the required setting by pressing up / down on the direction pad or using the thumb wheel
3. Press the **MENU/SET** or **INFO** button to save the setting

The following settings are available



Page 1:

1. **Automatic**
2.  **Incandescent** (for incandescent lighting)
3.  **Daylight** (for outdoor pictures in sunlight)
4.  **Flash** (for illumination with electronic flash)



Page 2:

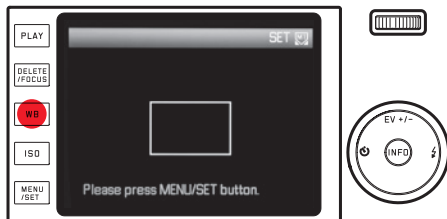
5.  **Cloudy** (for outdoor pictures with cloudy sky)
6.  **Shade** (for outdoor pictures with the main subject in shadow)
7.  **Greycard 1** (memory slot for custom measured results)
8.  **Greycard 2** (memory slot for custom measured results)

Page 3:



9. **Color temperature** (memory slot for fixed set value)
10. **SET**  **Greycard 1** (for selective metering and storage)
11. **SET**  **Greycard 2** (for selective metering and storage)
12. **Set Color temperature** (for manual color temperature entry)

Manual setting by metering:

1. Press the **WB** button
2. Select **SET**  or **SET** 
3. Press right on the direction pad
 - A yellow frame appears in the center of the monitor with an instruction below it.



4. Aim the frame at a uniform white or gray object that completely fills the frame
5. Press the **MENU/SET** button to carry out metering and store the result

The settings can then be retrieved using  or .

Direct color temperature setting:

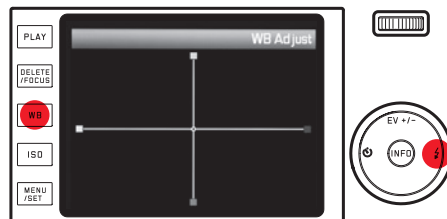
1. Press the **WB** button
2. Select **Set Color temperature**
3. Press left / right on the direction pad to select the required setting
4. Press the **MENU/SET** or **INFO** button to save the setting

The setting can then be retrieved using **Color temperature**.

Precise adjustment of white balance settings

Manual precise adjustment is available for all settings:

1. Press the **WB** button
2. Press right on the direction pad
 - An image with crosshairs appears. The ends of the cross have color markings for the possible settings - yellow, green, blue and magenta.



3. Use the direction pad to move the cursor - which is initially in the center - to the position that results in the required color reproduction in the monitor screen, i.e. towards the corresponding colored squares at the edges
 - The color reproduction in the monitor screen changes according to your setting.
4. Press the **MENU/SET** or **INFO** button to save the setting

ISO SENSITIVITY

The ISO setting specifies the possible shutter speed and aperture combinations at a particular brightness. Higher sensitivities allow faster shutter speeds and/or smaller apertures (for "freezing" rapid movements or to increase the depth of field), although this can also result in greater noise.

*Press the **ISO** button and select the desired setting in the (2 page) list (i.e. **AUTO ISO** for the automatic setting or one of the eight fixed settings)*

Within the **AUTO ISO** option, it is possible to limit the sensitivity range to be used (e.g. to control noise), and the slowest shutter speed to be used can also be specified (e.g. to prevent blurred pictures of moving subjects):

1. *Select **Auto ISO Settings** in the menu*
2. *Select **Slowest Speed** or **Max ISO** in the first submenu*
3. *Select the desired values in the respective second level submenus*

PICTURE PROPERTIES

Note:

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

Contrast, sharpness, color saturation

One of the many advantages of digital photography is that it is very easy to change critical properties of a picture, i.e. those that determine its character. With the Leica X, you can influence three of the most important picture properties before you actually take the picture:

- The contrast, i.e. the difference between light and dark sections of the image, determines whether an image has a more “flat” or “brilliant” 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 successful picture. In turn, the impression of sharpness of a picture is to a great extent determined by the edge sharpness, i.e. by how small the transition area between light and dark is at 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.

For all three picture properties, you can independently choose between five levels:

*Select **Sharpness**, **Saturation**, or **Contrast** in the menu and the desired settings in the respective submenus*

Color reproduction

In addition to the sharpness, saturation and contrast settings, you can also determine the basic color reproduction options:

*Select **Film Mode** in the menu and then the desired setting in the submenu*

You can choose between **Standard**, **Vivid** – for highly saturated colors – and **Natural** – for slightly less saturated colors and a softer contrast. There are also two black and white settings **B&W Natural** (natural) and **B&W High Contrast** (high contrast).

Notes:

- The settings for **Film Mode** can be adapted further using the options described in the previous section for the picture properties. In these cases, the color reproduction options are indicated by an additional asterisk, e.g. **Standard***.
- The settings for **Sharpness**, **Saturation**, **Contrast** and **Film Mode** only affect **JPG** files, while **RAW** files remain unchanged.

PICTURE MODE

DISTANCE SETTING

On the Leica X, the distance can be set either automatically or manually. Both modes cover a distance range of 20cm to infinity.

AUTOMATIC DISTANCE SETTING / AUTOFOCUS

1. Turn the distance setting ring - overcoming the slight resistance - to the **AF** position
2. Press the shutter button to the pressure point to have the sharpness and thus the distance automatically determined, set and stored
 - A successfully stored AF setting is indicated as follows:
 - The color of the rectangle changes to green
 - Up to 9 green rectangles appear with the 11-field metering
 - An acoustic signal is generated (if selected)

Notes:

- The setting is stored along with the exposure setting.
- In certain situations the AF system is unable to set the distance correctly, e.g. when:
 - the distance to the subject you are aiming at is outside the available range, and/or
 - the subject is not sufficiently illuminated (see next section).

Such situations and subjects are indicated by:

The color of the rectangle changing to red

- The 11-field metering display changes to a single red rectangle

Important:

The shutter button is not locked regardless of whether or not the distance setting is correct for the relevant subject.

AF AUXILIARY LIGHT

The built-in AF auxiliary light extends the operating range of the AF system to take account of poor lighting conditions. If the function is active, this light is lit under appropriate conditions as soon as the shutter button is pressed.

Select **AF Assist Lamp** in the menu, and the desired setting in the submenu

Note:

The AF auxiliary light illuminates a range of approximately 4m. Therefore, in poor lighting conditions AF mode is not available at distances beyond this limit.

AUTOFOCUS METERING METHODS

For optimum adjustment of the AF system to different subjects, situations and picture composition ideas, you can choose between four AF metering methods on the Leica X:

1. *Press the **DELETE/FOCUS** button and select the required setting in the submenu*
2. *Press the **MENU/SET** or **INFO** button to save the setting*

Spot / 1 field metering

These two metering methods only record the parts of the subject in the center of the monitor screen.

The relevant fields are indicated by a small AF frame. Thanks to the exceptionally small metering range for spot metering, it allows you to concentrate on tiny details of the subject. For portrait pictures, it is normally recommended that the eyes are reproduced completely in focus.

The slightly larger metering range for 1 field metering is less critical when aiming, making it easier to use, but still allows selective metering.

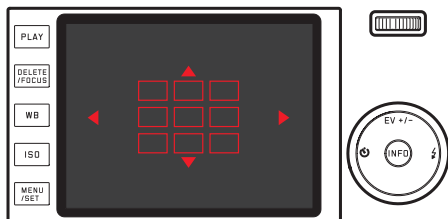
With both metering methods, you can move the AF frame to any point on the monitor screen, e.g. to make it easier to use for off-center subjects:

1. *Press the **DELETE/FOCUS** button for $\geq 1s$*
 - All displays apart from the AF frame disappear. Red triangles on all sides of the frame indicate the possible movement directions.
2. *Use the direction pad to move the AF frame to the desired position*
 - To indicate the limits of movement, the relevant triangles disappear close to the edges.

You can return the frame to the central position at any time:
*Press the **INFO** button*

11 FIELD METERING

This metering method records the subject in a total of 11 fields which are indicated by AF frames. Focusing is carried out automatically on the parts of the subject at the shortest distance, thus providing maximum reliability for snapshots. Normally, 9 of the 11 fields are used. These are positioned to cover the majority of the central part of the image.

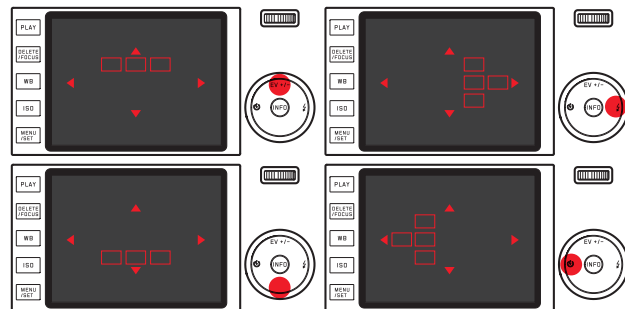


If required, you can concentrate the metering on any part of the image by selecting groups from either the three upper or lower or the four left or right AF fields:

1. Press the **DELETE/FOCUS** button for $\geq 1s$
 - All displays except for the 11 AF frames disappear. Initially only the 9 frames in the central group have red outlines. Red triangles on all sides indicate the possible settings.

2. Use the direction pad to select the desired frame group

- The selections available are indicated by the triangles.



To return to the normal monitor screen:

*Either press the **DELETE/FOCUS** button again or the shutter button*

Face detection

In this mode, the Leica X automatically detects faces in the picture and focuses on the one at the shortest distance. If no faces are detected, 11 field metering is used.

Manual distance setting

For certain subjects and situations, it can be beneficial to set the distance yourself, rather than using autofocus. For example, if you are using the same setting for several pictures and it would be more work to use exposure lock, or if you want to keep the setting at infinity for landscape pictures.

Use the corresponding ring on the lens to set the distance manually

From the **AF** position, you first have to overcome a slight resistance. The optimum setting is reached when the monitor image shows the critical part(s) of your subject as you want it to be reproduced.

ASSISTANCE FUNCTION FOR MANUAL FOCUSING

To make it easier to set the distance and to increase the accuracy of the setting, the Leica X provides you with assistance by showing an enlarged view of a central detail of the picture.

Reason: The larger details of the subject are shown in the monitor, the better you can assess their sharpness and the more accurately you can set the distance. This "magnifying glass function" enlarges a central detail of the monitor screen:

1. Select **MF Assist** in the menu, and the desired setting in the submenu
2. Determine the trimming
3. Turn the distance setting ring on the lens so that the desired parts of the subject have optimum focus
 - If the function is active, an approximately 6x enlarged detail of the image appears above the scale. It disappears approximately 5s after the last distance setting.

You can move the trimming to any position in the monitor using the direction pad, e.g. for off-center subjects or so that other parts of the image remain visible.

Note:

You can display the enlarged detail at any time by pressing the **DELETE/ FOCUS** button, e.g. to check the setting again and thus rule out any risk of it accidentally being changed.

Exposure metering methods

To adjust to the prevailing lighting conditions, the situation and your working method and compositional ideas, the Leica X provides you with three exposure metering methods:

Select **Exposure Metering** in the menu, and the desired setting in the submenu

Multiple field metering -

With this metering method, the camera automatically analyses the brightness differences in the subject and, by comparing them with programmed brightness distribution patterns, arrives at the likely position of the main subject and the corresponding best exposure. As a result, this method is particularly suitable for spontaneous, uncomplicated and yet reliable photography, even under difficult conditions, and therefore for use in conjunction with automatic program mode.

Center weighted metering -

This metering method allocates the highest weighting to the center of the image field, but also records all other areas.

Particularly when used in conjunction with metering memory lock, it allows the exposure to be selectively adjusted to particular parts of the subject, while simultaneously taking account of the entire image field.

Spot metering -

This metering method is concentrated exclusively on a tiny area in the center of the image. It allows exact measurement of small or tiny details for precise exposure – preferably in conjunction with a manual setting.

For backlit pictures, for example, you normally need to prevent the brighter surroundings causing underexposure of the main subject. The much smaller metering field with spot metering enables these subject details to be selectively evaluated.

Histogram

The histogram depicts the brightness distribution in the picture. The horizontal axis shows the tone values from black (left) through gray to white (right). The vertical axis 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.

The histogram is available in both picture and review mode.

For picture mode:

Select **Rec. Histogramm** in the menu, and the desired setting in the submenu

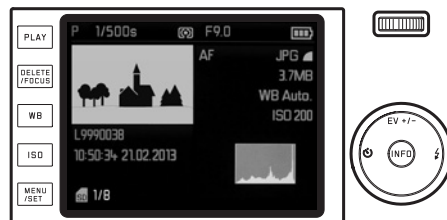
Note:

For a picture with flash, the histogram cannot represent the final exposure as the flash is fired after it is displayed.

For normal review mode (PLAY):

Select **Play Histogram** in the menu, and the desired setting in the submenu

Select an option with a clipping function if you want excessively bright parts of the pictures to be indicated.




Notes:

- In picture mode the histogram should be seen as a "tendency indicator" and not as a depiction of the exact numbers of pixels.
- The histogram is not available for simultaneous review of several reduced pictures or for enlarged pictures.
- When viewing a picture, the histogram may differ slightly from that shown when taking the picture.

EXPOSURE CONTROL

The Leica X provides four exposure modes for optimum adjustment to the relevant subject or your preferred working methods. These four modes and the manual shutter speed and aperture setting option are selected using the corresponding setting dials. They both have manual adjustment ranges with detent positions – the shutter speed dial in whole steps, the aperture setting dial in $1/3$ steps, and both have an **A** position for automatic mode.

Setting shutter speeds of 1 s and slower:

1. *Set the shutter speed dial to the 1+ position*
 - This is indicated by .
2. *Set the desired shutter speed with the thumb wheel*

Note:

Depending on the prevailing light conditions, the brightness of the monitor screen can differ from that of the actual pictures taken. Particularly for long exposures on dark subjects, the monitor screen appears considerably darker than the – correctly exposed – picture.

- To achieve the highest possible image quality, the camera automatically adjusts the shutter speed, aperture and ISO values set or calculated by the automatic functions. This is particularly important in minimizing darkening at the corners of the image, which could occur when using a shutter speed of 1/2000s in conjunction with aperture values lower than 3.5. If the exposure metering results in such settings, the camera responds as follows:
 - Automatic program mode P: The correction is made by an automatic shift.
 - In aperture priority mode A, shutter speed priority mode T, manual setting M:

The correction is made by automatically setting a maximum of 1/1000s (in T and M regardless of the manually set shutter speed). Generally,


 - the shutter speed of 1/2000s is only used with aperture values between open aperture (= 1.7) and 3.5.
 - If necessary, the ISO value is also reduced.

The corrected values are displayed in normal review mode, but not while taking the picture and in automatic review. The EXIF data also contains the values actually used.
- To enhance picture quality, the aperture setting is also corrected automatically between 2.8 and 1.7 in the close-up range, i.e. at distances of 0.2 - 1.2m to the subject.

AUTOMATIC PROGRAM MODE - P

For fast, fully automatic photography. The exposure is controlled by an automatic shutter speed and aperture setting.

Setting the mode

1. *Turn the aperture and speed setting dials to the **A** position*
2. *Press the shutter button to the pressure point*
 - The shutter speed and aperture are displayed in white. In addition, a reference to the program shift function  appears. If even a fully open or closed aperture combined with the slowest or fastest shutter speed results in under or overexposure, both values are displayed in red.

If the automatically set pair of values appears to be appropriate for the intended composition:

3. *Push the shutter button all the way down to take the photo*

If not, you can change values before taking the picture:

CHANGING THE PRESET SHUTTER SPEED / APERTURE COMBINATIONS (SHIFT)

Changing the preset values using the Shift function combines the security and speed of fully automatic exposure control with the freedom to adjust the speed/aperture combination selected by the camera to your own preferences at any time.

For faster speeds, e.g. for sports shots, turn the thumb wheel 23 to the left, for larger depth of field, e.g. for landscape shots turn it to the right (provided you are prepared to accept the slower shutter speeds that this entails)

- Shifted values are indicated by an asterisk next to the shutter speed or the aperture.

The overall exposure, i.e. the brightness of the image, remains unchanged. To guarantee correct exposure, the adjustment range is limited.

To prevent accidental use, after each picture and also if exposure metering is automatically turned off after 12s, the values revert to those set by the camera.

APERTURE PRIORITY - A

Aperture priority mode sets the exposure automatically according to the manually selected aperture. It is particularly suitable for pictures where the depth of field is the critical compositional element.

With a correspondingly low aperture value, you can reduce the depth of field range, for example to "release" a face fully in focus from an unimportant or distracting background in a portrait or, conversely, you can use a higher aperture value to increase the depth of field range so that everything from the foreground to the background is in focus in a landscape shot.

Taking a picture

1. *Turn the shutter speed setting dial to the **A** position*
 - The set aperture value is displayed in white.
2. *Set the desired aperture value with the corresponding dial*
3. *Press the shutter button to the pressure point*
 - The automatically calculated shutter speed is displayed in white. If even the slowest or fastest shutter speed combined with the set aperture results in under or overexposure, both values are displayed in red.

If the automatically set shutter speed appears to be appropriate for the intended composition:

4. *Push the shutter button all the way down to take the photo*

SHUTTER SPEED PRIORITY - T

Shutter speed priority mode sets the exposure automatically according to the manually selected shutter speed. Therefore, it is particularly suitable for pictures of moving subjects, where the sharpness of the movement depicted is the critical compositional element.

For example, with a correspondingly fast shutter speed you can avoid undesirable blurring of the movement, i.e. "freeze" your subject or, conversely, you can use a slower shutter speed to express the dynamic nature of the movement with a deliberate "wiping effect".

Taking a picture

1. *Turn the aperture setting dial to the **A** position*
 - The set shutter speed is displayed in white.
2. *Set the desired shutter speed with the corresponding dial*
3. *Press the shutter button to the pressure point*
 - The automatically calculated aperture value is displayed in white. If even the lowest or highest aperture value combined with the set shutter speed results in under or overexposure, both values are displayed in red.

If the automatically set aperture value appears to be appropriate for the intended composition:

4. *Push the shutter button all the way down to take the photo*

MANUAL SETTING - M

If, for example, you want to achieve a particular effect, which is only possible with a quite specific exposure, or if you want to ensure that several pictures with different trimming have an absolutely identical exposure, then you can set the shutter speed and aperture manually.

Taking a picture

1. *Set the desired shutter speed / aperture values using the corresponding dials*
2. *Press the shutter button to the pressure point*
 - The shutter speed and aperture are displayed in white. The light balance scale also appears. This covers a range of $\pm 3\text{EV}$ (exposure value) in $1/3\text{EV}$ increments. Settings within $\pm 3\text{EV}$ are indicated by red lines on the scale, outside $\pm 3\text{EV}$ by red - or + symbols at the ends of the scale.
3. *If necessary, adjust the settings for a correct exposure so that the central marking is displayed in red*

If the set values and/or the exposure appears to be appropriate for the intended composition:

4. *Push the shutter button all the way down to take the photo*

METERING MEMORY LOCK

For composition reasons, it can be beneficial not to have the main subject in the center of the picture. In such cases, the metering memory lock function - in **P**, **T** and **A** exposure modes, and with **AF** single field and spot metering modes - enables the main subject to be metered first and the relevant settings retained until you have determined your final trimming and take the picture.

Taking a picture

1. *Aim the relevant AF frame at the part of your subject to which you want to adjust the focus and exposure*
2. *Press the shutter button to the first pressure point to set and store the focus and exposure*
3. *Continue holding the shutter button half way and move the camera to determine the final trimming*
4. *Push the shutter button all the way down to take the photo*

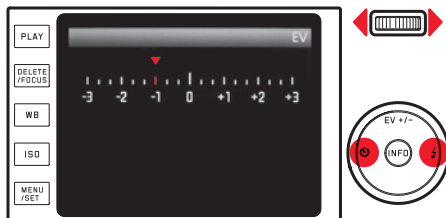
EXPOSURE COMPENSATION

Some subjects are made up of predominantly of excessively light or dark surfaces, for example large areas of snow or a full-format black steam locomotive. In **P**, **T**, and **A** exposure modes, it may be more useful in such cases to set an appropriate exposure compensation instead of using exposure lock each time. The same applies if you want to ensure an identical exposure for several pictures.

1. Press up **EV+/-** on the direction pad once
 - The corresponding scale appears.
2. Set the desired compensation value by pressing left / right on the direction pad (25) or using the thumb wheel.

Values from +3 to -3EV in $\frac{1}{3}$ EV increments are available.

- The set compensation value is displayed in red on the scale. During setting, you can observe the effect on the monitor image, which gets darker or lighter.



3. Press the **MENU/SET** button, **INFO** button or the shutter button to save the setting

- The exposure compensation symbol and the set value are displayed.

Notes:

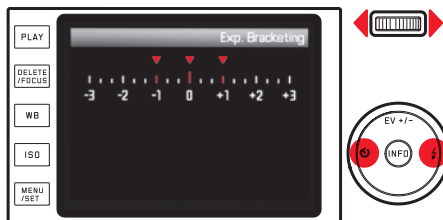
- In the case of aperture and speed priority modes (A/T) an exposure compensation can be set any time directly with the setting wheel.
- If you set the exposure manually, exposure compensation is not possible.
- Pressing up **EV+/-** on the direction pad also opens the menus for automatic bracketing and flash exposure compensation. They scroll through in an endless loop and can therefore be selected by repeatedly pressing.
- A set compensation remains active until it is reset to **±0** (see step 2), i.e. after any number of pictures and even after turning off the camera.

AUTOMATIC BRACKETING

High contrast subjects that have both very bright and very dark areas can result in very different effects depending on the exposure.

The automatic bracketing function enables you to take a series of three pictures with graduated exposure. You can then select the most adequate picture for further use.

1. Press up **EV+/-** on the direction pad twice
 - The corresponding scale appears.
2. Set the desired graduation by pressing left / right on the direction pad or using the thumb wheel/
Values from +3 to -3EV in $\frac{1}{3}$ EV increments are available.
 - The set increments are displayed in red on the scale.



3. Press the **MENU/SET** button, **INFO** button or the shutter button to save the setting
 - The bracketing symbol appears.

Notes:

- Depending on the exposure mode, the graduations are produced by changing the shutter speed (**P/A/M**) or the aperture (**T**).
- The sequence of the exposures is: correct exposure, underexposure, overexposure.
- Depending on the available shutter speed/aperture combination, the working range of the automatic bracketing function may be limited.
- Pressing up **EV+/-** on the direction pad also opens the menus for exposure compensation and flash exposure compensation. They scroll through in an endless loop and can therefore be selected by repeatedly pressing.
- An automatic bracketing setting remains active until it is reset to ± 0 (see step 2), i.e. after any number of pictures and even after turning off the camera.

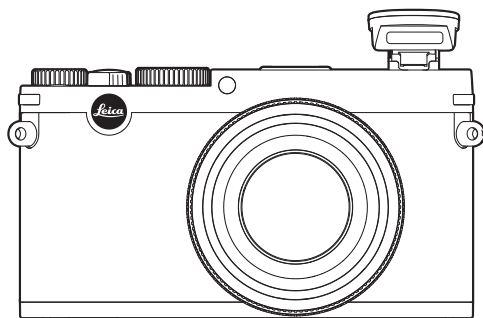
FLASH PHOTOGRAPHY

USING THE BUILT-IN FLASH UNIT

The Leica X has a built-in flash unit. When not in use, it is retracted into the camera housing and turned off. To take pictures using the flash it must be extended:

Press the release slider towards the center of the camera

The flash unit then pops up automatically into its working position and is also turned on.



Whenever you want to take pictures without flash, leave it retracted or press it down carefully until it clicks into place.


Notes:

- To determine the flash exposure a metering flash is fired immediately before taking the picture – and the main flash.
- Continuous series of pictures and automatic bracketing are not possible when using flash. In such cases, even when the flash unit is extended no flash display appears and the flash is not fired.

- The display for the set flash mode appears in white. If the flash unit is not yet fully charged and therefore is not ready, it flashes in red for a short time.

FLASH MODES

Selecting the mode:

1. *Extend the flash unit*
2. *Press right  on the direction pad*
3. *In the submenu, select the desired setting by pressing up / down / right on the direction pad or using the thumb wheel*
4. *Press the MENU/SET button, INFO button or the shutter button to save the setting*
 - The flash mode display changes accordingly.

Note:

This menu function is only available if either the built-in flash is retracted, or an external flash unit is attached and turned on.

Automatic flash activation -

This is the default mode. The flash is activated automatically when—ever longer exposure times could lead to blurred pictures in poor lighting conditions.

Automatic flash and pre-flash activation -

This function reduces the "red eye" effect when using the flash to take pictures of people. If possible, the people should not look directly at the camera. As the effect is worsened when the pupils are wide open in conditions of low lighting, when taking photographs indoors for example, you should turn on as much room lighting as possible.

The pre-flash, which is fired shortly before the main flash when you press the shutter button, narrows the pupils of people looking at the camera thereby reducing the effect.

Manual flash activation -

For backlit pictures, where your main subject does not fill the entire frame and is in shadow, or situations where you want to mitigate high contrasts (e. g. due to direct sunlight).

As long as this mode is activated, the flash unit will be activated for every whatever the prevailing lighting conditions.

The flash power is controlled according to the metered external brightness: in poor light, as in automatic flash mode, with increasing brightness at a lower power (up to a maximum of $-1\frac{2}{3}$ EV). The flash then works as a fill-in light, e.g. to light up dark shadows in the foreground or backlit subjects, in order to create more balanced overall lighting.

Manual flash and pre-flash activation -

For a combination of the situations and functions described above.

Automatic flash activation with slower shutter speeds - S

For simultaneous appropriate, i.e. brighter, reproduction of dark backgrounds and fill-in flash for the foreground. To minimize the risk of blurring, the shutter speed is not extended beyond $1/30\text{s}$ in the other modes with flash activation. For pictures where the flash is used, this means that objects in the background, which the flash cannot reach, are often badly under exposed.

To take adequate account of the available ambient light, the longer exposure times required in such situations (up to 30s) are allowed here.

Notes:

- Depending on the **Auto ISO Settings** it is possible that the camera may not support slower shutter speeds, as in such cases the increase in ISO sensitivity takes precedence.
- The maximum shutter speed can be specified using **Slowest Speed**.



Automatic flash and pre-flash activation with slower shutter speeds - S

For a combination of the situations and functions described above.

Studio mode - S

This mode is intended exclusively for wireless firing of additional flash units, e.g. studio flash units equipped with a slave function. They are fired optically by the camera flash. The function cannot be used for normal flash photography.

Note:

To prevent blurred pictures with the slower shutter speeds in S , S , and S  modes, you should hold the camera steady, i.e. rest it on something or use a tripod. Alternatively, you can select a higher sensitivity.

FLASH RANGE

The available flash range depends on the aperture and sensitivity values set manually or calculated by the camera. For sufficient illumination by the flash light, it is crucial for the main subject to be within the range of the flash. For details, refer to the technical data on p. 186.

SYNCHRONIZATION POINT

Flash photographs are illuminated by two light sources, the available ambient light and the light from the flash. The time at which the flash is fired normally determines where the parts of the subject illuminated exclusively or predominantly by the flash are shown in the image field.

The conventional flash firing point at the beginning of the exposure can lead to apparent contradictions, e.g. a vehicle being "overtaken" by the light trail from its own tail lights.

The Leica X allows you to choose between this conventional flash firing point and the end of the exposure:

Select **Flash Sync** in the menu, and the desired setting in the submenu

In the example cited, the light trail from the tail lights then follows the vehicle as expected. This flash technique gives a more natural impression of movement and dynamics.

Note:

When using the flash with faster shutter speeds, in terms of the image there is no difference, or only for rapid movements, between the two flash firing points.

FLASH EXPOSURE COMPENSATION

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 outside in the evening, to lighten the face of a person in the foreground while retaining the lighting atmosphere.

1. Press up / **EV+/-** on the direction pad three times
 - The corresponding scale appears.
2. Set the desired compensation value by pressing left / right on the direction pad or using the direction pad
Values from +3 to -3EV in $\frac{1}{3}$ EV increments are available.
 - The set compensation value is displayed in red on the scale.
3. Press the **MENU/SET** button, **INFO** button or the shutter button to save the setting
 - The set compensation value appears.

Notes:

- 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.
- Pressing up **EV+/-** on the direction pad also opens the menus for automatic bracketing and exposure compensation. They scroll through in an endless loop and can therefore be selected by repeatedly pressing.
- A set compensation remains active until it is reset to **±0** (see step 2), i.e. after any number of pictures and even after turning off the camera.

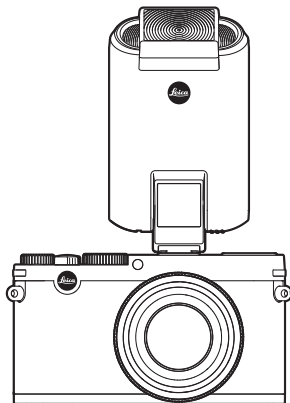
USING EXTERNAL FLASH UNITS

The ISO flash / hot shoe on the Leica X enables you to use more powerful external flash units. We particularly recommend the Leica SF 26 (see p. 167).

Attaching the flash unit:

1. Turn off the camera and flash unit
2. Remove the cover that protects the hot shoe and the socket when not in use to the rear
3. When attaching, make sure that the flash unit's foot is pushed all the way into the hot shoe and, if fitted, that it is secured against accidentally coming off using the clamping nut

This is important as changes of position in the flash shoe breaks the required contacts and may cause malfunctions.



As soon as an external flash unit is attached, the preset flash modes with pre-flash function (\cancel{A} / \cancel{S} / \cancel{S} \cancel{S}) are reset to the otherwise identical modes without pre-flash (\cancel{A} / \cancel{S} / \cancel{S}) and displayed accordingly.

When the flash unit is removed the camera is reset to the previously set mode.

Notes:

- To use external flash units, the built-in flash unit must be retracted.
- If an external flash unit is attached, it must also be turned on, i.e. ready to use, otherwise there may be incorrect exposures and error messages on the camera.
- Simultaneous use of an external electronic viewfinder is not possible.

ADDITIONAL FUNCTIONS

VIDEO RECORDINGS

You can also use the Leica X to make video recordings.

The following functions are available:

Resolution:

Select **Video Resolution** in the menu, and the desired setting in the submenu

ISO sensitivity:

All settings available in the menu

Distance setting:

All options described on pages 130-133

Exposure metering methods:

All options described on page 134

Exposure control:

Carried out completely independently of the settings from the shutter speed and aperture dial.

- Shutter speed: Depending on the selected video format, $\frac{1}{50}\text{s}$ or $\frac{1}{60}\text{s}$
- Aperture: Automatic If a correct exposure is not possible even with the maximum aperture, the ISO sensitivity is automatically increased, regardless of any manual setting.

Color space:

Video recordings are only possible with **sRGB**.

Contrast, sharpness, color saturation, color reproduction:

All options described from page 128

Image stabilization:

Select **Video Stabilization** in the menu, and the desired setting in the submenu

Starting / ending the recording

Starting:

Press the video shutter button

- A video recording in progress is indicated by a flashing red dot. The remaining recording time is also displayed.

Ending:

Press the video shutter button again

SOUND RECORDING

Sound is recorded in stereo using the built-in microphones.

To reduce any noise caused by wind during sound recording, a damping function is available:

Select **Wind noise cancellation** in the menu, and the desired setting in the submenu


Note:

Both focusing and zooming cause noises which are also recorded. In order to prevent this, you should refrain from using these functions during an ongoing recording.

SELF-TIMER

You can use the self-timer to take a picture with a delay of either 2 or 12s. This is particularly useful for group photographs, where you want to appear in the picture yourself or if you want to avoid the picture being out of focus due to camera shake when releasing the shutter. In such cases we recommend that the camera is placed on a tripod.

Setting:

1. *Press left /  on the direction pad*
 - The corresponding sub-menu appears.
2. *Set the desired delay time by pressing up / down / left on the direction pad or using the thumb wheel*
3. *Press the **MENU/SET** button, **INFO** button or the shutter button to save the setting*

Operation:

Push the shutter button all the way down to take the picture

- The countdown is indicated by the flashing self timer LED:
 - 12s delay time: Slowly at first, faster for the last 2s
 - 2s delay time: As described above for the last 2s
- The remaining time is counted down in the monitor.

Notes:

- A delay time in progress can be restarted at any time by pressing the shutter button again.
- The only way to cancel a delay time in progress is to turn off the camera or select a different exposure mode.
- It is only ever possible to take single pictures when the self timer is active, i.e. picture series and automatic bracketing cannot be combined with self timer mode.
- In self timer mode, the focus and exposure are not set when the shutter button reaches its pressure point, but immediately before the picture is taken.

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. In such cases, the **Format** submenu appears automatically.

Nevertheless, it is recommended that the memory card be reformatted occasionally, as a certain amount of residual data (information accompanying pictures) can take up memory capacity.

Select **Format** in the menu, and the desired setting in the submenu

Notes:

- When formatting the memory card, the data on it is irretrievably lost.
- You should therefore 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.
- Do not turn the camera off while the memory card is being formatted.
- 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, you should ask your dealer or the Leica Information Service (address, see p. 188) for advice.
- When formatting the memory card, even protected pictures are deleted.

SELECTING THE WORKING COLOR SPACE

The requirements in terms of color reproduction differ considerably for the various possible uses of digital picture files. Different color spaces have therefore been developed, such as the standard RGB (red/green/blue) that is perfectly adequate for simple printing. For more demanding image processing using appropriate programs, e.g. for color correction, Adobe® RGB has become established as the standard in the relevant sectors.

Select **Color Space** in the menu, and the desired setting in the submenu

Notes:

- If you want to have your prints produced by major photographic laboratories, mini labs or Internet picture services, you should always select **sRGB**.
- The **Adobe RGB** setting is only recommended for professional image processing in completely color-calibrated working environments.

CREATING NEW FOLDER NUMBERS

The Leica X saves the picture numbers in ascending order. Initially, the corresponding files are all stored in one folder. To structure the storage of pictures more clearly, you can create a new folder at any time so that subsequent pictures can be grouped together.

Select **Reset Image Numbering** in the menu and confirm or reject the reset process in the submenu

Notes:

- The file names (e. g. L1002345.jpg) are made up of two groups of numbers, **100** and **2345**. The first three figures are the number of the relevant folder, the 4th to 7th figures are the consecutive picture number within that folder. This ensures that there are no duplicate file names after using the function and transferring the data to a computer.
- To reset the folder number to 100, format the memory card or the internal memory and reset the picture number immediately afterwards. This also resets the picture number (to 0001).

USER PROFILES

On the Leica X, 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. Of course, you can also reset all menu options to the factory default settings.

Creating a profile

1. Set the desired functions in the menu
2. Select **User Profile** in the menu
3. Select **Save as profile** in the submenu
4. Select the memory slot you want to use in the second level submenu
5. Press the **MENU/SET** or **INFO** button to save the setting

Using a profile

Select **User Profile** in the menu, and the respective memory slot in the submenu

Resetting all menu settings to the factory defaults

Select **User Profile** in the menu, and **Default profile** in the submenu

Note:

When resetting to the factory default settings, your settings for the date, time and language are not reset.

PICTURE STABILIZATION

Particularly in poor lighting conditions, even with the **AUTO ISO** function activated the selected shutter speed may be too slow to produce sharp pictures. The Leica X provides a function that normally results in sharp pictures even with very slow shutter speeds: Select **Image Stabilization** in the menu, and the desired setting in the submenu

Notes:



- With this function, the camera automatically takes two pictures in succession (the shutter noise can be heard twice). It then combines the pictures into one by digital processing.
- Hold the camera steady until after the shutter is released the second time.
- As the function uses two exposures, it can only be used for static subjects.
- Image stabilization is only possible with shutter speeds in the range from 1s to $1/2000$ s and sensitivities up to ISO 6400. It is not available when using series of pictures, automatic bracketing, the self-timer, in flash mode, or with the DNG data format.

RECORDING THE LOCATION WITH GPS

The external Visoflex viewfinder (Typ 020) available as an accessory contains a GPS (Global Positioning System) receiver. If the viewfinder is attached, this enables the camera to add the location coordinates to the picture data.

Setting the function

Select GPS in the menu and the required setting in the submenu.

- The „satellite“ symbol in the monitor indicates the relevant status:
 - GPS off: No display
 - GPS on, no reception: 
 - GPS on, reception: 

Notes on the function:

- In the factory default settings, this menu option is activated.
- The prerequisite for GPS positioning is to have as clear a view as possible of at least 3 GPS satellites (out of the total of 24 satellites, up to 9 are available from every location on earth).
- Make sure that the viewfinder is not covered with your hand or any other item, particularly metal objects.

- It may not be possible to receive good signals from GPS satellites at the following locations or in the following situations. In such cases, positioning may not be possible at all, or may be incorrect.
 - In closed rooms
 - Underground
 - Under trees
 - In a moving vehicle
 - Close to high buildings or in steep valleys
 - Close to high voltage cables
 - In tunnels
 - Close to 1.5 GHz mobile telephones

Information for safe use

Make sure the GPS function is deactivated on board an aircraft before takeoff or landing, in hospitals or in other locations where there are restrictions on wireless transmissions.

Important (legal restrictions on use):

In certain countries or regions, the use of GPS and associated technologies may be restricted. Therefore, before traveling in other countries you should consult the relevant country's embassy or your travel agent.

REVIEW MODE

REVIEW MODES

You can use the **PLAY** button to switch from picture or menu mode to review mode at any time.

However, you can also review every picture automatically immediately after taking it:

1. Select **Auto Review** in the menu
2. Select **Duration** in the submenu, and enter the desired function or duration
3. Select **Histogram** in the submenu, and the desired setting

Notes:

- If you have taken pictures using the continuous series or automatic bracketing function, the last picture in the series is shown first, or the last picture saved if all pictures in the series have not yet been transferred from the camera's internal buffer memory.
- This camera stores pictures in line with the DCF standards (Design Rule for Camera File System).
- It may not be possible to view files created on another device on this camera.
- In some cases, the monitor image may not have the usual quality or the monitor will remain blank and only display the file name.

NORMAL REVIEW

To allow straightforward viewing of the pictures, in normal review mode only the information in the header appears, along with **Q** to indicate the enlarging function.



- If one of the **Histogram** modes with clipping indication was selected, excessively bright areas in the image without any detail, i.e. “blown highlights”, are marked in red.

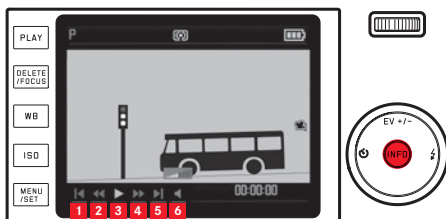
VIDEO PLAYBACK

If a video recording is selected, this is indicated by .



Playback:

1. Press the **INFO** button to open the next view.
 - The corresponding control symbols appear.



- 1** Back to the beginning
- 2** Fast rewind
- 3** Play/Pause
- 4** Fast forward
- 5** Advance to end
- 6** Volume

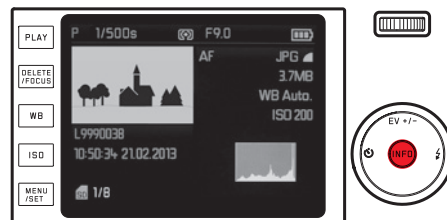
2. Select the desired function by pressing left / right on the direction pad or using the thumb wheel.
 - The currently active function symbol is white and underlined in red and white.
3. Activate the selected function using the **MENU/SET** button.
 - Playback begins in slow motion and gets faster the longer the button is held down for.

Note:

The protection menu cannot be opened from this view. To do this, switch to another view by pressing the **INFO** button.

In addition to normal review mode, for both single pictures and video recordings a further option with different additional information is available:

Press the **INFO** button (27)



The figure shows an example of this review option for a single pictures

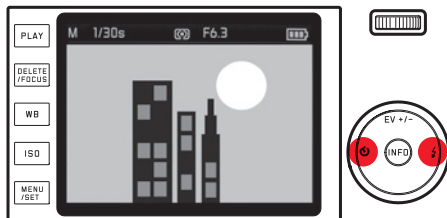
SELECTING PICTURES:

Press left / right on the direction pad

Pressing left selects pictures with lower numbers, pressing right those with higher numbers. A long press scrolls through the pictures at approx. 2s per picture.

After the highest and lowest numbers, the sequence of pictures arranged in an endless loop starts again.

- The picture and file numbers change.

**ENLARGING PICTURES / VIEWING 16 PICTURES SIMULTANEOUSLY:**

Turn the thumb wheel to the right to enlarge a detail of the picture, up to max. of 16x, e.g. to study it in more detail

Turn the thumb wheel to the left, starting from normal size, to simultaneously display 16 reduced pictures, e.g. to get an overview or to find the picture you are looking for more quickly

Opening additional views when viewing an enlarged picture

Press the INFO button

- You will see:
 - The zoom factor
 - The approximate size of the detail
 - The current thumb wheel function

In the 16-picture display, the picture you were previously viewing at normal size is indicated by a red frame.



Selecting different pictures in the 16-picture display

Press left / right on the direction pad

Pressing and holding scrolls through quickly.

Returning the selected picture to normal size

*Turn the thumb wheel to the right, or press the **MENU/SET** button*

Notes:

- When using an enlarged/reduced view, the display with additional information cannot be opened.
- The more the picture is enlarged, the more the reproduction quality deteriorates – due to the proportionately lower resolution.
- Pictures taken using other camera types cannot normally be enlarged.
- Videos cannot be enlarged.

SELECTING THE DETAIL

In an enlarged picture, you can move the enlarged detail from the center, e.g. to check the reproduction of off-center subject details:

Press the appropriate directions on the direction pad

- The approximate position of the detail in the picture is indicated.



DELETING PICTURES

Pictures on the memory card can be deleted at any time – individually as desired or all at the same time. However, they can also be protected against accidentally being deleted.

Note:

For protected pictures, the delete protection must be cancelled before they can be deleted.

Important:

Deleting pictures is irreversible. Pictures cannot subsequently be recovered.

Opening the delete function

Press the **DELETE/FOCUS** button

- The delete menu appears.

The subsequent steps depend on whether you want to delete a single picture or all pictures at once.

Deleting single pictures

1. Select **Single** in the Delete menu
2. Press the **MENU/SET** button
 - After deleting, the next picture appears. If the picture is protected, it continues to be displayed and the message **This is protected** briefly appears.

Deleting all pictures

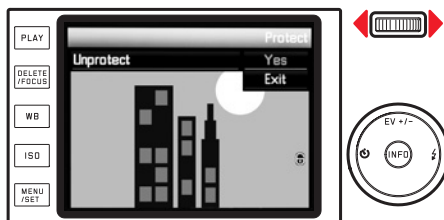
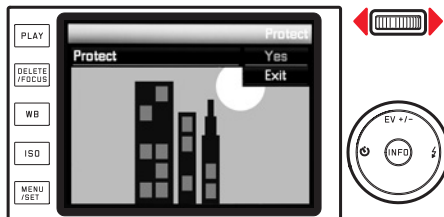
1. Select **All** in the Delete menu
2. Press the **MENU/SET** button
 - A submenu appears.
3. Select the desired option
4. Confirm with the **MENU/SET** or **INFO** button (15)
 - After deleting, the message **No valid image to play** appears, or the original picture is displayed again if the pictures could not be deleted. If some of the pictures were protected, **Protected images were not deleted** appears briefly instead. The first of these protected pictures is then displayed.


Exiting the Delete menu before deleting

Press the **DELETE/FOCUS** button again

PROTECTING PICTURES / CLEARING DELETE PROTECTION:

1. Select **Protect** in the menu
 - The previously displayed picture appears again with the menu shown.



2. Select the desired option
3. Press the **MENU/SET** or **INFO** button to confirm the setting
 - Protected pictures are indicated by . Depending on whether or not the picture is protected, it contains the options **Unprotect** or **Protect**.

Selecting different pictures in the protect / clear delete protection menu

Press left / right on the direction pad

Exiting the protect / clear delete protection menu before performing the action and returning to normal review mode

Press the **PLAY** button

Notes:

- If you attempt to delete protected pictures, warning messages appear. If you still want to delete these pictures, clear the protection as described above.
- Protection is only effective on this camera.
- Even protected pictures are deleted when formatting the memory card.
- You can prevent accidental deletion by sliding the write protection switch on the card to the position marked LOCK.

VIEWING PICTURES IN PORTRAIT FORMAT

If the camera was held horizontally when taking the picture, the picture is also displayed in this way. For portrait format pictures, i.e. taken with the camera held vertically, it may be impractical when viewing with the camera held horizontally if the monitor image is not displayed as an upright picture.

The Leica X provides a remedy for this problem:

Select **Auto Rotate Display** in the menu, and the desired setting in the submenu

- If **On** is selected, portrait format pictures are automatically displayed upright.

Notes:

- Portrait format pictures displayed upright are necessarily significantly smaller.
- This function is not available for **Auto Review**.

VIEWING WITH HDMI DEVICES

The Leica X enables you to view your pictures on a TV, projector or monitor with HDMI input and thus in an optimum picture quality. You can also choose between three resolutions: 1080i, 720p and 480p: Select **HDMI** in the menu, and the desired setting in the submenu

Connecting / viewing the pictures:

1. Insert the plugs on the HDMI cable into the HDMI sockets on the camera and the TV, monitor or projector
2. Turn on the TV, projector or monitor; if the HDMI connection is not detected automatically, select the correct input
3. Turn on the camera
4. Activate review mode by pressing the **PLAY** button

Notes:

- An HDMI cable is required to connect to a TV, monitor or projector.
Only use the model supplied by Leica for this camera (see p. 167).
- If the connected TV, monitor or projector has a lower maximum resolution than that set on the camera, it automatically switches to the maximum resolution of the connected device. For example, if you have set 1080i on the camera but the connected device only has a maximum resolution of 480p, the camera changes the setting automatically.
- For details of the required settings, refer to the instructions for the respective TV, projector or monitor.
- The image reproduced on an external display does not contain any of the information shown in the camera monitor / viewfinder.

MISCELLANEOUS

TRANSFERRING DATA TO A COMPUTER

The Leica X is compatible with the following operating systems:

Microsoft®: Windows® Vista® / 7® / 8®

Apple®Macintosh®: Mac® OS X (10.6) or later

The camera is equipped with a USB 2.0 high-speed interface for transferring data.

Via the USB cable connection and using the camera as an external drive

With Windows operating systems:

The operating system detects the camera as an external drive and assigns it a drive letter. Transfer the picture data to your computer using Windows Explorer and save it.

With Mac operating systems:

The memory card appears as a storage medium on the desktop. Transfer the picture data to your computer using the Finder and save it.

Important:

- Only use the USB cable supplied.
- While data is being transferred, the USB connection must not be interrupted as this can cause the computer and/or the camera to crash and may even cause irreparable damage to the memory card.
- While data is being transferred, the camera must not be turned off or should not shut down due to a lack of battery capacity, as this can cause the computer to crash.
- For the same reason the battery must never be removed from the camera while the connection is active. If the capacity of the battery runs low during data transfer, the **INFO** screen appears, with the battery capacity flashing. In this case, cancel the data transfer, turn off the camera and charge the battery.

USING CARD READERS

Picture data can also be transferred using card readers for SD/SDHC/SDXC memory cards (including UHS I types) on the computer itself. External card readers are also available that connect to the computer using a USB interface.

Note:

The Leica X is equipped with an integral sensor, which detects the position of the camera – horizontal or vertical (both directions) – for each picture. This information allows the pictures to be presented upright automatically when subsequently displayed on a computer running the appropriate programs.

WIRELESS DATA TRANSMISSION

The Leica X allows the use of WiFi memory cards such as the FlashAir™ card from Toshiba. These cards can operate as a WLAN hotspot and enable wireless data transmission between the camera and all WLAN compatible devices, e.g. notebooks, tablets, smart phones and other cameras, but also with social networks and cloud memory services using WiFi and an Internet browser.

Turning the function on/off:

Select **FlashAir** in the menu, and the desired setting in the submenu

Notes:

- Note that the WiFi function is powered by the camera battery because of the transmission power required to transfer the data. Always turn off the function in the menu when it is not needed.
- For further details on using WiFi cards, refer to the respective instructions.

Important:

For further details on using WiFi cards, refer to the respective instructions.

USING RAW DATA (DNG)

If you want to edit DNG format, you require appropriate software, such as the Adobe® Photoshop® Lightroom® professional raw data converter. You can use this to convert saved raw data in optimum quality, and it also provides quality-optimized algorithms for digital color processing, which combines exceptionally low noise with incredible resolution.

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

INSTALLING FIRMWARE UPDATES

Leica is constantly working on developing and optimizing its products. As digital cameras have many functions that are controlled electronically, some of these improvements and enhancements to the functions can be installed on the camera at a later date.

To do this, Leica provides firmware updates at irregular intervals, which you can conveniently download from our homepage to your camera yourself:

Once you have registered your camera, Leica will notify you of all new updates.

To identify which firmware version is installed:

Select **Firmware Version** in the menu

- The current version number is displayed.

ACCESSORIES

Important:

You should only use the accessories supplied by Leica Camera AG, which are listed and described here, with the camera.

Leica Protector X

When the camera is in the protector, you can still freely access all the controls. The camera can remain in the protector while in use.

(Order no. 18 830 [Canvas, taupe] / 18 831 [Leather, brown] / 18 780 [Leather, black] / 18 781 [Leather, cognac])

Leica Ever Ready Case X

Traditional style case in high quality genuine leather or canvas, depending on the model. The front section can be opened so that the camera can remain in the rear section of the case during use.

(Order no. 18 832 [Canvas, taupe] / 18 833 [Leather, cognac])

Leica System Case, Size S

Small system case, made of high-quality waterproof nylon (black)
Provides space for the camera and other small accessories
(Order no. 18 746)

Leica System Case, Size M

(Order no. 18 748)

Leica Wrist Strap X

Ergonomically cut

(Order no. 18 838 [Leather, black with protective clip] / 18 839 [Leather, brown] / 18 783 [Leather, cognac with protective clip])

Leica Carrying Strap X

(Order no. 18 836 [Leather, black] / 18 837 [Leather, brown] / 18 776 [Leather, black with protective clip] / 18 777 [Leather, cognac with protective clip])

Leica Hand Grip X

The hand grip allows you to hold the camera securely and carry it comfortably. It is attached to the tripod thread on the camera using the knurled screw on the underside of the hand grip.

(Order no. 18 712)

Leica Protective Case for Visoflex

Small case, made of canvas or leather depending on the model, can be practically attached to the carrying case to prevent loss. For secure storage of the Leica Visoflex electronic viewfinder.

(Order no. 18 834 [Canvas, taupe] / 18 835 [Leather, brown])

Leica Visoflex (Type 020) Electronic Viewfinder

The viewfinder provides 100% reproduction of the image field at a resolution of 2.4 megapixels. This allows easy and precise picture composition and, at the same time, comprehensive monitoring of all relevant data. The viewfinders are particularly useful when the lighting conditions impair the visibility of the monitor screen and - thanks to the pivoting eyepieces - for worm's eye view pictures. The Visoflex also contains a GPS receiver that enables the camera to add the location coordinates to the picture data. Both plug-in viewfinders are attached to the flash shoe on the camera in the same way as an external flash unit, and therefore is an alternative to a flash unit. (Order no. 18 767)

Flash units

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. (Order no. 14 622)

HDMI cable

The HDMI cable allows exceptionally fast transfer of picture data to viewing equipment with corresponding HDMI sockets. Length: Approx. 1.5 m
(Order no. 14 491 / 14 492 [Jp/Tw])

SPARE PARTS

Order no.

Lens cap, black	423-107.001-024
Lens cap, silver	423-107.002-024
Accessory shoe cover, black	423-113.001-010
Accessory shoe cover, silver	423-113.002-010
Leather carrying strap	439-612.060-000
USB cable	423-089.003-022
Leica BP-DC 8 ¹ lithium ion battery	18 706
Battery protection case	423-089.003-012
Leica BC-DC8 charger	
(inc. interchangeable plug)	423-089.003-008
EU mains plug	423-089.003-014
USA/Japan mains plug	423-089.003-016
GB/Hong Kong mains plug	423-089.003-018
China mains plug	423-089.003-020
Korea mains plug	423-089.003-028
Australia mains plug	423-089.003-030

¹ To ensure you will have sufficient power when using the camera for long periods, we recommend always carrying a spare battery.

PRECAUTIONS 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. If the camera malfunctions due to the effects of electromagnetic fields, remove the battery and then turn the camera on again. 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.
- Protect the camera from contact with insect sprays and other aggressive chemicals. Petroleum spirit (cleaning solvent), 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 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 camera and the memory card.
- 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.

Important:

You should only use the accessories specified and described in these instructions or by Leica Camera AG with the camera.

Monitor

- 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 turned on, the monitor image will initially be slightly darker than normal. As soon as the monitor warms up, it will reach its normal level of brightness.

The monitor is manufactured using a high-precision process. This ensures that, of the total of around 920,000 pixels, more than 99.995% work correctly and only 0.005% remain dark or are always light. However, this is not a malfunction and it does not impair the reproduction of the picture.

Sensor

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

Condensation

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

- Only clean the camera 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, wipe the adapter with a clean lint-free cloth. Tougher dirt in hard to reach corners of the camera body can be removed with a small brush.
- 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.

For the lens

- 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/ 104°F (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.
- The lens cap supplied also protects the lens from fingerprints and the rain.

For the battery

Rechargeable lithium ion batteries generate power through internal chemical reactions. These reactions are also influenced by the external temperature and humidity. Very high or low temperatures reduce the life of the battery.

- Always remove the battery, if you will not be using the camera for a long period of time. Otherwise, it could become totally discharged after a few weeks, i.e. its voltage will fall considerably.
- Lithium ion batteries should only be stored partly charged, i.e. not when fully discharged or fully charged (see corresponding display). For very long storage periods, the battery should be charged for around 15 minutes twice a year to prevent total 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.
- For the battery to charge, it must have a temperature of between 0°C and 35°C/32° and 95°F (otherwise the charger does not turn on or off again).
- If a battery is dropped, check the casing and the contacts immediately for any damage. Using a damaged battery can damage the camera.
- Batteries have only a limited service life.
- Take damaged batteries to a collection point for proper recycling.
- Never throw batteries into a fire as this can cause them to explode.

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/3ft 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.

For memory cards

- While a picture is being stored or the memory card is being read, it may not be removed, the camera turned off or exposed to vibrations.
- For safety, memory cards should only ever be stored in the anti-static cover 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 memory cards 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 camera 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.

Storage

- If you are not using the camera for a longer period of time, we recommend that you:
 - a. *Turn it off,*
 - b. *Remove the memory card,*
 - c. *Remove the battery (the date and time will be lost after a maximum of 3 days).*
- A lens works like a magnifying glass if bright sunlight shines on the front of the camera. The camera must therefore never be set aside in strong sunlight without protection. Use the lens cap 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 extended periods of time.
- Note down the serial number of your Leica X, as this is extremely important in case of loss.

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APPENDIX

DISPLAYS





When taking a picture

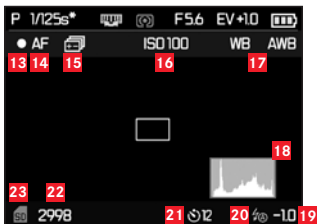


Note:

The displays appear either in the monitor or in the electronic viewfinder (available as an accessory, see p. 166), depending on whether the latter is turned on or off at the corresponding button.

- 1 Exposure mode
P: Programmed automatic exposure mode
A: Aperture priority
T: Shutter speed priority
M: Manual shutter speed and exposure setting
- 2 Shutter speed (appears immediately for manual setting, i.e. in shutter speed priority and manual modes; for automatic setting, i.e. automatic program and aperture priority modes, only after tapping the shutter button; after pressing the shutter button to the pressure point red if outside the setting range in automatic program, aperture priority or shutter speed priority modes, otherwise white)
- 3 Indicates a changed shutter speed / aperture combination (only appears with automatic program and shift)
- 4 Indicates that program shift is possible (change of shutter speed / aperture combination) / slower shutter speed setting with the thumb wheel
 (only appears for automatic program / when setting the shutter speed dial to the 1+ position)
- 5 Exposure metering method
☉: Center weighted metering
⊗: Multiple field metering
⬤: Spot metering

- 6** Aperture value (appears immediately for manual setting, i.e. in aperture priority and manual modes; for automatic setting, i.e. automatic program and shutter speed priority modes, only after tapping the shutter button; after pressing the shutter button to the pressure point red if outside the setting range in automatic program, aperture priority or shutter speed priority modes, otherwise white)
- 7** Exposure compensation set, including compensation value (not with manual shutter speed and aperture setting)
- 8** Battery charge level
: sufficient capacity
: falling capacity
: insufficient capacity
: Replacement or recharging required
- 9** Normal autofocus metering field
(alternative to **10**)
- 10** Spot autofocus metering field
(alternative to **9**)
- 11** Enlarged central detail of picture
(alternative to **9** / **10**, only appears for manual distance setting)
- 12** Light balance
(only appears with manual shutter speed and aperture settings)



In addition to **11-12**, after pressing the **INFO** button:

- 13** Video recording in progress
- 14** Automatic distance setting
- 15** Automatic bracketing activated
- 16** ISO sensitivity (only for manual exposure setting)

AUTO ISO
100
200
400
800
1600
3200
6400
12500

- 17** White balance
(symbols with additional * if precise white balance setting is selected)

Automatic

Incandescent

Daylight

Flash

Cloudy

Shade

Greycard 1

Greycard 2

Color temperature

SET M1 Greycard 1

SET M2 Greycard 2

Set Color temperature

- 18** Histogram
(RGB, only appears, if activated, in yellow with flash unit turned on and/or with slower shutter speeds than $1/250$ s, otherwise in white)
- 19** Flash exposure compensation set, including compensation value

20 Flash mode

(for built-in and external flash units, flashing red if flash is not ready, otherwise white, does not appear if bracketing is set)

⚡A: Automatic flash activation

⚡A👁: Automatic flash activation with pre-flash

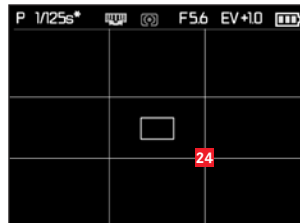
⚡: Manual flash activation

⚡👁: Manual flash activation with pre-flash

⚡S: Automatic flash activation with slower shutter speeds

⚡S👁: Automatic flash activation with pre-flash and slower shutter speeds

⚡Studio: Fixed flash power for firing flash lights using slave function



In addition to **1-12**, after pressing the **INFO** button again:

21 Self timer activated / running

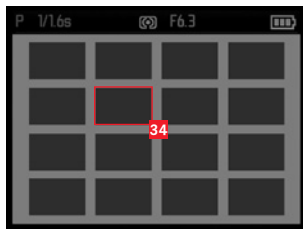
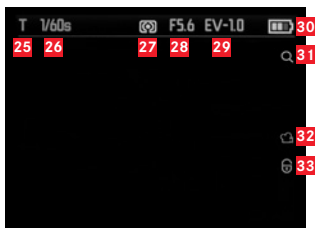
🕒₂: 2 seconds delay

🕒₁₂: 12 seconds delay

22 Picture counter (pictures remaining) / Elapsed video recording time (if there is not sufficient memory capacity, 📷 flashes as a warning)**23** Indicates memory card inserted**24** Grid lines

In review mode

(with/without clipping displays)



- 25** Exposure mode
(see **1**)
- 26** Shutter speed
(see **2**, not for video recordings)
- 27** Exposure metering method
(see **5**, not for video recordings)
- 28** Aperture value
(see **6**, not for video recordings)
- 29** Exposure compensation value
(see **7**, not for video recordings)
- 30** Battery charge level
(see **8**)
- 31** Indicates the option of enlarging a detail
(not for video recordings)
- 32** Symbol for video recording
- 33** Symbol for protected picture

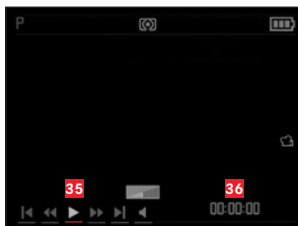
With reduced view of 16 pictures:

- 34** Selected picture

In addition to **25-33** for video recordings, after pressing the **INFO** button:

35 Video control symbols

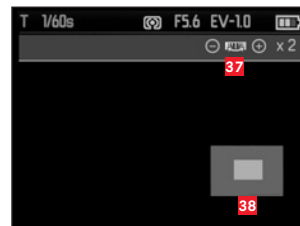
36 Elapsed playback time / progress bar



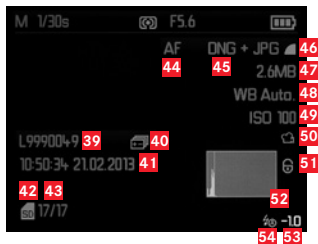
In addition to **25-33**, only for enlarged details, after pressing the **INFO** button:

37 Indicates the use of the thumb wheel for enlarging / reducing a detail, including the zoom factor











38 Display of detail size and position



In addition to **25-31**, only from 100% view, after pressing the **INFO** button:



- 39** Folder / picture number
- 40** Automatic bracketing
- 41** Date and time for picture shown
- 42** Memory card
- 43** Picture counter (picture number / total number)
- 44** Focusing mode
(see **15**)
- 45** File format / Compression rate
- 46** JPEG resolution / video recording format
- 47** File size
- 48** White balance (see **17**)
- 49** ISO sensitivity
(value used, see **16**)
- 50** Video recording

- 51** Protected picture
- 52** Histogram
(not for video recordings)
- 53** Flash exposure compensation, including compensation value
- 54** Flash mode (see **21**, appears without flash exposure compensation)
 - a. No display: Picture without flash
 - b.  **A** /  /  **S** /  **Studio**: Picture without pre-flash
 - c.  **A**  /   /  **S** : Picture with pre-flash

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TECHNICAL DATA

Camera type Leica X (Typ 113)

Sensor CMOS sensor, size APS-C (23.6 x 15.7mm) with 16.5/16.2 million pixels (total/effective), format aspect ratio 3:2

Resolution Selectable for JPEG format: **16M** - 4928 x 3274 pixels, 12.2M - 4288 x 2856 pixels, **7M** - 3264 x 2160 pixels, **3M** - 2144 x 1424 pixels, **1.8M** - 1632 x 1080 pixels, DNG: 4944 x 3274 pixels

Video recording format MP4

Video resolution/frame rate Selectable 1920 x 1080p, 30B/s oder 1280 x 720p, 30B/s

Lens Leica Summilux 23mm f/1.7 ASPH. (corresponds to 35mm in 35mm format), 10 lenses in 8 groups, 2 aspherical lens surface

Aperture range From 1.7 to 16 in $\frac{1}{3}$ EV increments

Image data file formats / Compression rates Selectable:

JPG Superfine, **JPG Fine**, **DNG + JPG S. Fine**, **DNG + JPG Fine**

Storage media SD/SDHC/SDXC memory cards, multimedia cards

Sensitivity setting Automatic, ISO 100, ISO 200, ISO 400, ISO 800, ISO 1600, ISO 3200, ISO 6400, ISO 12500

White balance Automatic, presets for daylight, cloud, halogen lighting, shade, electronic flash, 2 manual settings, manual color temperature setting, fine adjustment option for all settings

Autofocus system Contrast-based Autofocus system

Distance setting range 20cm / 1ft to infinity

Autofocus metering methods 1-field, 11-field, spot, face detection

Exposure modes Automatic program, aperture priority, shutter speed priority and manual setting

Exposure metering Multi-field, center-weighted, spot

Exposure compensation ± 3 EV in $\frac{1}{3}$ EV increments

Automatic bracketing 3 pictures in graduations up to 3 EV, adjustable in $\frac{1}{3}$ EV increments

Shutter speed range 30s to $\frac{1}{2000}$ S

Continuous picture series 3 fps or 5 fps, max. 7 pictures with constant frequency in **DNG + JPG Fine**

Flash modes auto, auto/Red-Eye, forced on, forced on/Red eye, Slow Sync, Slow Sync/Red eye, Studio

Flash exposure compensation $\pm 3\text{EV}$ in $\frac{1}{3}\text{EV}$ increments

Operating range of built-in flash unit (for ISO 100/21°) approx. 0.3 – 2.0m, guide number 5

Recovery time of built-in flash unit Approx. 5s with fully charged battery

Monitor 3" TFT LCD, approx. 920,000 pixels

Self timer Delay time 2 or 12s

Connections Mini USB 2.0, HDMI

Power supply Rechargeable lithium ion battery, rated voltage 3.7 V, capacity 1600 mAh (to CIPA standard): approx. 450 photos, charging time (after complete discharge): approx. 200 minutes, Model No. BP-DC8, Manufacturer: PT SANYO Energy Batam, Made in China

Charger Input: 100 – 240 V AC, 50/60 Hz, 0.2 A, automatic switch-over Output: 4.2 V DC, 0.65 A, Model No. BC-DC8, Operating conditions: 0 to 35°C Manufacturer: Phihong (Dongguan) Electronics Co.,Ltd, Made in China

Body Leica design, solid extremely lightweight magnesium and aluminum, two eyelets for carrying strap. ISO flash shoe with center and control contacts for connection of more powerful external flash units, e.g. the Leica SF 26, or for attaching an electronic viewfinder¹

Tripod thread A $\frac{1}{4}$ DIN 4503 ($\frac{1}{4}$ ")

Dimensions (W x H x D) Approx. 133 x 73 x 78mm / 515/64 x 27/8 x 347/64in

Weight Approx. 451/486g (without/with battery)

Subject to changes in design and production.

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.

Leica Camera AG

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LEICA CUSTOMER SERVICE

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

Customer Care

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You will find your local contact partner on the service page:

http://uk.leica-camera.com/service/service_and_repair/worldwide_network



my point of view

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