

Aborting the function

A running self-timer delay time can be aborted by turning off the camera at the main switch.

A running 12 s self-timer delay time can also be aborted during the first 10 s by pressing any of the four buttons next to the monitor.

If the self-timer is no longer to be used, it must be switched off in the menu, as even switching off the camera does not cancel the setting of this function.

Note:

If the self-timer function is set and the mirror lock-up activated (see next section) at the same time, the shutter is always actuated after the selected delay time, i.e. without the shutter button having to be pressed again.

Mirror lock-up

In order to preclude the minimal residual influences of mirror movement and closing of the lens shutter, the Leica S offers the possibility of the mirror lock-up.

Setting / performing the function

1. In the menu, under **CAMERA**, select the item **Mirror Up Mode** and
2. select **On** or **Off** in the sub-menu.
3. Press the shutter button to cause the mirror to be folded up
4. Press the shutter button again to take the picture

Procedure

When the shutter button is pressed the first time, exposure metering is performed, in autofocus mode the focus is adjusted, then the mirror is folded up and the aperture closes to the corresponding value.

The shutter procedure – and hence the taking of the picture – starts only when the shutter button is pressed a second time.

After the picture is taken, the mirror is folded down again and the aperture opens in the normal way.

Aborting the function

The mirror lock-up procedure can be aborted without a picture being taken after the shutter button is pressed the first time.

Simply switch off the camera at the main switch and the mirror is folded down again.

If the mirror lock-up is set, on the other hand, the function remains active even after turning the camera off and on again, i.e. if the next picture is to be taken without mirror lock-up, the function must be set to **Off** in the menu.

Notes:

- The picture must be taken within 2 minutes of the shutter button being pressed the first time. If this is not the case, the mirror is folded down again automatically to protect the battery capacity (without the shutter opening beforehand).
- While the mirror is folded up, the 2 minutes holding time can be restarted at any time by pressing the shutter button again.
- If the mirror lock-up is activated and the self-timer function set at the same time, the shutter is always actuated after the selected delay time, i.e. without the shutter button having to be pressed again.

Depth of field preview button

With the Leica S you can close the lens aperture to the set or automatically controlled aperture value in any exposure mode. In the factory setting, this is done with the depth of field preview button.

The correct values continue to be displayed in the monitor and top panel display, and in Live View mode also in the monitor. However, exposure metering is deactivated.

Preconditions for closure of the lens aperture are

- Exposure metering has been activated with the shutter button, and
- The shutter button has not been pressed (again).

The shutter is blocked as long as the button is held depressed.

Note:

The function of the depth of field preview button differs, depending on the operating mode:

Operating mode		Function
Photo mode	Normal, i.e. use of the viewfinder image	Close the aperture by holding the button depressed or quick access to the set menu function by pressing
	Live View, i.e. use of the viewfinder image	Activating/deactivating exposure simulation by (multiple) pressing
Video preview and recording mode		Access to setting the audio recording level and the headphone volume by holding depressed, function independent of the setting for normal photography mode and cannot be changed

ADDITIONAL FUNCTIONS

USER / APPLICATION-SPECIFIC PROFILES

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

Saving settings / Creating a profile

1. Set the desired functions in the menu
2. In the menu, under **SETUP**, select the item **User Profiles** and
3. select **Save as User Profile** in the sub-menu
 - A further sub-menu appears with four lines for the available profile slots.
4. In this sub-menu, select the desired memory slot
 - A corresponding confirmation prompt appears
5. Confirm **Yes** or cancel **No** your selection there
 - The sub-menu from step 4. appears again, and the selected memory slot is marked as occupied.

Selecting a profile

1. In the menu, under **SETUP**, select the item **User Profiles** and
 2. select **Load Profile** in the sub-menu
 - A further sub-menu appears with five lines, the first for the factory settings, the others for the four profile slots.
- Only the lines with occupied profiles can be called up.
3. In this sub-menu, select the desired profile
 - The selected profile is marked as **active**.

Note:

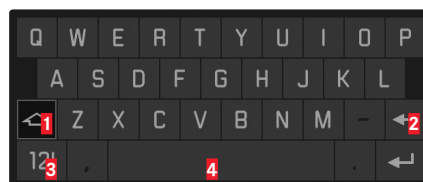
If you change one of the settings for the profile currently in use — appears instead of the name of the profile you were previously using in the initial menu list.

Renaming profiles

1. In the menu, under **SETUP**, select the item User Profiles, and
2. select **Rename User Profile** in the sub-menu
 - A further sub-menu appears with four lines for the profile slots.

Only the lines with occupied profiles can be called up.

3. Select the desired profile
 - A keyboard sub-menu is displayed.
4. First delete the existing designation in the title line there, then select the desired characters
 - Turning the rear thumbwheel or pressing the Joystick to left or right allows each character to be selected in an endless loop.
 - Pressing the Joystick up or down allows you to move between lines.
 - Pressing the rear thumbwheel or the Joystick forward copies the selected character to the title line.
 - Special "buttons":



- **1** Switch between capital and small letters
 - **2** Delete characters
 - **3** Switch between letter and number, or punctuation marks and special characters
 - **4** Spacebar
5. Confirm your inputs with the function keys marked **C** or **OK** to the top right or bottom right of the monitor
 - The sub-menu from step 2. appears again, the edited profile has the new designation.

Saving profiles to a card / transferring profiles from a card

1. In the menu, under **SETUP**, select the item **User Profile** and
2. select **Import from card** or **Export to Card** in the sub-menu.
 - A corresponding confirmation prompt appears
3. Confirm there that you really wish to import or export the profile.

Note:

When exporting, all profile slots are transferred to the card, i.e. including any empty profiles.

As a result, when importing profiles any existing profiles in the camera will be overwritten, i.e. deleted.

RESETTING ALL CUSTOM SETTINGS

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

Setting the function

1. In the menu, under **SETUP**, select the item **Reset Camera** and
2. select **No** or **Yes** in the sub-menu.

Note:

This reset also applies to the profiles that may have been created and saved with **Save as User Profile** (see left column).

FOLDER MANAGEMENT

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

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

With the Leica S you can also create new folders at any time, give them names of your choice and change the file names.

Create new folder / Assign names of your choice

1. In the menu, under **SETUP**, select the item **Image Numbering** and
2. select **New Folder** in the sub-menu
 - A keyboard sub-menu appears with the folder names in the title line (initially always "XXXLEICA").
3. First delete the existing designation in the title line there, then select the desired characters
 - The procedure corresponds exactly to step 4. under 'Renaming profiles' on p. 36.

4. Confirm your inputs with the function keys marked **OK** to the top right or bottom right of the monitor
 - A corresponding confirmation prompt appears.
5. Confirm **Yes** or cancel **No** your settings there
 - The keyboard sub-menu appears again.

Note:

If memory cards are used that were not formatted with this camera (see next section), the camera automatically creates a new folder.

Resetting picture numbers

The picture numbers can also be reset without having to create a new folder first.

1. In the menu, under **SETUP**, select the item **Image Numbering** and
2. select **Reset** in the sub-menu

The keyboard sub-menu appears.

3. Make the desired settings there

The procedure corresponds exactly to that described in the previous section under 3. - 5.

Changing file names

1. In the menu, under **SETUP**, select the item **Image Numbering** and
 2. select **Change Filename** in the sub-menu.
 - A keyboard sub-menu appears with the file names (initially always L100 001).
 3. Make the desired settings there
- The procedure corresponds exactly to that described in step 4. under 'Renaming profiles' on p. 36.
- The sub-menu from step 2. appears again, the edited file name has the new designation.

FORMATTING THE MEMORY CARDS

It is not normally necessary to format (initialize) memory cards that have already been used. If an unformatted card or a card formatted in a different device (e.g. a computer) is used for the first time, it has to be formatted.

Important:

Formatting does not necessarily and irrevocably delete all the data on the card.

It may be possible to access some of the data again using appropriate software. Only the data that is then overwritten by saving new data is actually permanently deleted.

Notes:

- Do not turn the camera off while memory cards are being formatted.
- If the memory card has been formatted in another device, such as a computer, you should reformat it in the Leica S.
- If a memory card cannot be formatted, you should ask your dealer or the Leica Product Support department for advice.
- Formatting of memory cards deletes even delete-protected pictures (see p. 50).

Setting the function

1. In the menu, under **SETUP**, select the item **Format Cards** and
2. select in the sub-menu which of the two cards you wish to format, or whether you wish to format both
 - A corresponding confirmation prompt appears on the monitor to prevent inadvertent deletion.
3. Confirm **Yes** or cancel **No** your selection there

¹ The "X" characters are placeholders

MARKING THE PICTURE FILES FOR COPYRIGHT PROTECTION

The Leica S enables you to mark your picture files by entering text or other characters. You can enter up to 17 characters under 2 headings for each picture.

1. In the menu, under **SETUP**, select the item **Copyright Information**
 - The sub-menu containing the three options **Copyright**, **Information** and **Artist** appears in the monitor. Only the **Copyright Information** line is initially activated.
2. Activate the **Copyright** function.
 - The **Information** and **Artist** lines are activated.
3. Select **Information** or **Artist**, and
 - The keyboard sub-menu appears in both cases.
4. Make the desired settings there

The procedure corresponds exactly to that described in section "Resetting picture numbers" in steps 3./5.

 - The sub-menu from step 2. appears again.

RECORDING THE LOCATION WITH GPS

The Global Positioning System enables the current position of the receiver to be determined worldwide. When the function is activated the Leica S continuously receives the corresponding signals and updates the position data. You can write this information - latitude and longitude, height above sea level - to the "EXIF" data.

Setting the function

1. In the menu, under **SETUP**, select the item **GPS** and
2. switch the function **On** or **Off**
 - The "Satellite" symbol in the top panel display indicates the status:
 -  Last position determined up to 6 minutes ago
 -  Last position determined up to 24 hours ago
 -  No position data available

Notes on the function:

- GPS positioning requires as clear a path as possible to at least 3 of the GPS satellites (of the total of 24 satellites, up to 9 are available from any point on earth). We therefore recommend holding the camera with the GPS aerial pointing vertically upwards.
- Make sure that the GPS aerial 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 mobile telephones
 - With accessories attached to the flash shoe, e.g. a flash unit

We recommend that when activating the GPS function after prolonged storage of the camera, this is always done first at a point with good "reception".

Information for safe use

The electromagnetic radiation generated by the GPS system can affect instruments and measuring equipment. Therefore, make sure the GPS function is deactivated e.g. 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.
- The use of GPS inside the People's Republic of China and Cuba and close to their borders (exceptions: Hong Kong and Macao) is prohibited by national laws.
- Violations will be prosecuted by the authorities. The GPS function is therefore deactivated automatically in these areas.

FLASH MODE

GENERAL INFORMATION ON FLASH EXPOSURE MEASUREMENT AND CONTROL

The Leica S determines the necessary flash power by firing several ranging flashes in quick succession fractions of a second before taking the actual picture. Immediately after this, at the start of exposure, the main flash is fired.

All factors that influence the exposure (e.g. filters, aperture setting, distance from the main subject, reflective ceilings, etc.) are automatically taken into consideration.

COMPATIBLE FLASH UNITS

Connection via the flash shoe

- All flash units and studio flash systems conforming to the latest ISO standard 10330 and the older DIN 19014 standard¹ (positive polarity at the X contact)

Connection via the lower LEMO® jack

- All flash units and studio flash systems that allow control via corresponding special cables

Connection via the flash connection socket

- Studio flash systems and other flash units with flash cable and standard flash plug

The following flash units allow all the functions described in this manual together with the Leica S:

- Leica system flash units
- Flash units that satisfy the technical requirements for a System 3002 System Camera Adaption (SCA), are fitted with the SCA-3502-M5^{2,3} adapter and allow guide number control.

Other commercially available attachable flash units with standard flash foot^{4,5} and positive center contact, and fired via the center contact (X contact) (without TTL flash control) can also be used.

FLASH SYNC SPEED

The flash sync speed of the Leica S with conventional flash technology, i.e. with the camera's internal focal plane shutter is $\frac{1}{125}$ s. If the central shutter of correspondingly equipped lenses is used, all the shutter speeds up to $\frac{1}{10000}$ s are available.

With system-compatible and HSS-compatible flash units, all faster shutter speeds can also be used.

Notes:

- Studio flash systems in particular often have burning times that are far longer than the above sync times. Lower speeds are recommended to make full use of light yield from these flash units.
- With all shutter speeds up to the sync time $\frac{1}{125}$ s,  lights up in the viewfinder as an indication that normal flash mode is possible with these speeds.
- If the shutter speed setting dial is set , the set exposure operating modes may be changed due to the then resulting shutter speeds, i.e. from  to , or from  to . As soon as a shutter speed is set again, the original operating modes are activated again.
- If an HSS-compatible Leica system flash unit is used and faster shutter speeds are set at the camera, i.e. $\leq \frac{1}{180}$ s with focal plane shutter, and $\leq \frac{1}{5000}$ s with central shutter, the flash unit automatically switches to HSS mode.

² When using the SCA-3502 adapter (from Version 5), the white balance can be set to **Automatic** for correct color reproduction.

³ The use of system flash units from other camera manufacturers and of SCA adapters for other camera systems is not recommended, as their different contact position and assignment can result in malfunctions or even damage.

⁴ If flash units not specially adapted to the Leica S are used, the white balance of the camera should possibly be set manually to .

⁵ The aperture and sensitivity of the lens may have to be entered manually in the flash unit.

¹ If you wish to connect a studio flash system that does not conform to the ISO standard to the Leica S, please contact the Customer Care department at Leica Camera AG or the customer service department of a Leica agency.

SELECTING THE SYNC SPEED / THE SYNC SPEED RANGE

The Leica S allows you to combine flash operation with the shutter speed generated with the automatic program and aperture priority modes to subtly change the lighting conditions for the relevant subject to suit your compositional ideas. You can choose here between one automatic and several manual settings.

Setting the function

1. In the menu under **CAMERA**, select item **Max. Flash Sync. Time**, and
2. in the sub-menu select either one of the three automatic, focal length-specific settings - **1/f**, **1/(2f)**, **1/(4f)**, or the desired slowest shutter speed

Note:

The setting of **1/f** results in the slowest shutter speeds according to the rule of thumb for blur-free pictures taken from the hand, e.g. $\frac{1}{60}$ s with the Summarit-S 1:2.5/70mm ASPH lens. The corresponding shutter speeds with **1/(2f)** and **1/(4f)** in this example would be $\frac{1}{125}$ s and $\frac{1}{250}$ s.

SELECTING THE FIRING MOMENT

The Leica S allows you to choose between the flash firing moment at the start of the exposure and the synchronisation at the end of the exposure. The function is available with all flash units, i.e. even with non-system-compatible flash units, irrespective of whether they are fitted to the flash or connected via cable, and with all camera and flash unit settings. The displays are identical in both cases.

Setting the function

1. In the menu under **SETUP**, select item **Flash Sync. Mode**, and
2. select the desired option in the sub-menu

ATTACHING THE FLASH UNIT

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

Note:

Camera and flash unit must be switched off before attaching.

SETTINGS FOR CAMERA-CONTROLLED AUTOMATIC FLASH MODE

When the flash unit used has been switched on and set to the appropriate mode for TTL mode, exposure metering must be carried out on the Leica S

1. before taking each flash picture by gently pressing the shutter release, so that the display in the viewfinder shows the shutter speed or switches to the light balance. If this stage is missed out by fully depressing the shutter release in one quick movement, the flash unit will not fire even if required.
2. the desired exposure mode and the desired shutter speed and/or aperture must be set. The shortest flash sync speed must be taken into account as this determines whether a "normal" flash is fired or an HSS flash.

TTL flash mode

The fully automatic, i.e. camera-controlled, TTL flash mode is available with the Leica S with system-compatible flash units, and with all exposure operating modes of the camera. In addition, an automatic fill flash control is available. This means that in order to ensure a balanced relationship between flash and other lighting at all times, the flash power is reduced by up to 1 2/3 EV as ambient brightness increases (fill flashes). If, however, the prevailing brightness requires a faster shutter speed than the sync speed (1/125s with focal plane shutter, 1/1000s for lenses with central shutter) or if this is set manually, a system-compatible flash unit will be automatically switched to linear flash mode (HSS, see next section) by the camera. In addition, the Leica S transfers the set sensitivity and aperture to the flash unit. If it has such displays, the flash unit can then automatically adapt its distance setting accordingly.

Notes:

- The following sections describe only those settings and functions that are available when using the Leica S with system-compatible flash units.
- An exposure compensation set at the camera influences only the measurement of the prevailing light! If you want to simultaneously use compensation of the TTL flash exposure metering in flash mode – in parallel or in the opposite direction, you must make this additional setting (on the flash unit).
- More details of flash use, in particular for other flash units not specially adapted to the Leica S and for different flash modes, can be found in the relevant manuals.

LINEAR FLASH MODE (HIGH SPEED SYNCHRONIZATION)

Fully automatic, i.e. camera controlled, linear flash operation is available with the Leica S when using system-compatible flash units (see p. 39), with all shutter speeds and in all exposure modes of the camera. It is automatically activated by the camera when the selected or calculated shutter speed is faster than the sync speed, i.e. $\leq 1/180\text{s}$ with focal plane shutter. If the flash unit is set correctly, this changeover requires no further action on the part of the photographer.

STROBOSCOPE FLASH MODE WITH SYSTEM-COMPATIBLE FLASH UNITS

This flash method in which several consecutive flashes are fired during an exposure is possible with all exposure operating modes of the camera. With the operating modes and the camera automatically sets the shutter speed necessary for the selected number and frequency of flashes. If the required shutter speed results in an overexposure due to the prevailing light, this is indicated by the light balance. With the operating modes and flashing of the time display in the viewfinder and top panel display signals that the shutter speed is too high. In such cases exposure compensation is possible by changing the number and/or frequency of the flashes and/or the aperture and/or the shutter speed (with and). For successful stroboscope photography in which e.g. several phases of a sequence of movements are recorded in one picture, the working range of the flash unit, the number of flashes, the distance and naturally the aperture are of crucial importance. Information on this can be found in the manual of the flash unit in question.

Note:

The HSS flash technology results in shorter ranges.

FLASH EXPOSURE DISPLAYS IN THE VIEWFINDER WITH SYSTEM-COMPATIBLE FLASH UNITS

In the viewfinder display of the Leica S, a flash symbol serves as a feedback and display of various operating states.

-  does not appear despite the flash unit being switched on and ready for use:

In such cases the Leica S will not fire the flash unit even though it is switched on and ready for use. (e.g. because the wrong operating mode is set on the flash unit)

-  flashes before the picture is taken:
 - The flash unit is not yet ready to use
-  is lit up before the picture is taken:
 - The flash unit is ready for use
-  continues to light up constantly after firing:
 - The flash is still ready to use.
- In the case of a flash exposure compensation set at the flash unit
 - $\pm$ appears additionally in the viewfinder as an indicator

FLASH PHOTOGRAPHY WITH THE FLASH UNIT-INTEGRATED AUTOMATIC COMPUTER

When working with the automatic exposure of system-compatible flash units, the light reflected by the subject is metered and evaluated by a sensor integrated into the flash unit, not by the camera. The exposure operating modes of the camera function essentially in the same way as without flash. If the flash sync speed drops below the set value with **P** or **A**, or a speed is set below the sync speed with **T** or **M**, the flash is not triggered.

As the operating modes, and already generate a normally exposed picture due to the ambient lighting, the flash power should be reduced, i.e. a flash exposure compensation of e.g. -1EV to -2EV should be set.

With system-compatible flash units, the aperture set at the lens is transmitted to the flash unit and automatically taken as the basis as computer aperture. For the metering, the sensitivity set at the camera and any exposure compensation set for the ambient lighting (camera) and flash (flash unit) are taken into consideration.

MANUAL FLASH PHOTOGRAPHY WITH CONSTANT FLASH POWER

If the flash unit is used in manual flash mode with full power or fixed partial power (if this can be set at the flash unit), the emitted flash light power is not controlled. The exposure operating modes of the camera function essentially in the same way as without flash.

If the flash sync speed drops below the set value with **A** or **T**, or a speed is set below the sync speed with **T** or **M**, the flash is suppressed. The lens aperture to be set is determined by the flash power, sensitivity and distance to the subject, or vice versa, the flash partial power to be set is determined by the aperture, sensitivity, focal length and distance to the subject (see flash unit manual).

FLASH PHOTOGRAPHY VIA THE X CONTACT

No information is transmitted if a non-system-compatible flash unit is connected via the accessory shoe. As the camera cannot "recognize" such a flash unit, it acts as if no flash unit were attached. The flash time must be set manually to the flash sync speed $\frac{1}{125}$ S, or $\frac{1}{1000}$ S with central shutter, or to slower speeds; an automatic changeover does not take place. The flash unit ready and indicator lamps are not active.

If the flash unit is suitable, the light control can be performed with an automatic aperture, i.e. via the sensor on the flash unit, or manually by selecting corresponding partial light power levels (see flash unit manual).

FLASH PHOTOGRAPHY VIA THE LOWER LEMO® JACK

Flash units and large studio flash systems can be connected by cable with LEMO® plug (supplied) can be connected to the lower LEMO® jack. The LEMO® jack with its automatic locking reliably prevents an inadvertent interruption in the connection. As the camera cannot "recognize" a flash unit connected in this way, it acts as if no flash unit were attached. The flash time must be set manually to the flash sync speed $\frac{1}{125}$ S, or $\frac{1}{1000}$ S with central shutter, or to slower speeds; an automatic changeover does not take place. The flash unit ready and indicator lamps are not active.

VIDEO RECORDINGS

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

Notes:

- As only part of the sensor surface is used, the effective focal length is increased in each case, i.e. the details become correspondingly smaller.
- Uninterrupted video recordings are possible up to a maximum length of 29 minutes.

The following settings are available for video recordings:

RESOLUTION / IMAGE FREQUENCY

1. In the menu, under **IMAGE**, select the item **Video Resolution** and
2. set the desired resolution in the sub-menu

The two resolutions available have a fixed relationship to different image frequencies. 1080p, for example, can be combined with three different image frequencies in order to match the reproduction to the TV system used: 25 fps for PAL, 24 and 30 fps for NTSC while the 4K resolution is only possible with 24 fps.

Note:

4k video recordings can only be stored on SD cards (see p. 25).

ISO SENSITIVITY

All variants described on p. 24, but **Maximum Auto ISO** for video recordings is set separately in the **Auto ISO Video** sub-menu.

Notes:

- The limitation described below under exposure operating modes applies.
- Vertical and horizontal lines may become visible all over the image, especially when shooting dark subjects with high ISO values containing very bright, spot light sources.

COLOR SPACE

Video recordings are only possible with sRGB (see p. 22).

Note:

This applies irrespective of a possible deviating setting for photos which remains unchanged.

CONTRAST, FOCUS, SATURATION

All variants described on page 22, but they are set separately for video recordings.

1. In the menu, under **IMAGE**, select the item **Video Settings** and
2. select **Video Contrast**, **Video Sharpness** or **Video Saturation** in the sub-menu, and
3. select the desired level/function in the sub-menu

TIME CODE

The time code is a data set that is generated and recorded parallel to the image and audio data. It allows the correct time synchronization of picture and audio signals even after cutting, or after a later separate processing.

You can choose between a continuous 'running'

Timecode – **Free Run** and a time code for the particular recording – **Rec Run**.

1. In the menu, under **IMAGE**, select the item **Video Settings** and
2. select **Timecode** in the sub-menu
3. In the **Timecode** sub-menu select **Timecode Mode** and
4. select the desired function or deactivate the function in the sub-menu

While the time code signal at camera time is always generated and recorded parallel to the video recording, with **Free Run** and **Rec Run** you can define the start yourself, i.e. how large the time offset is to be between the start of recording and the start of time code signal generation. In these two cases, the otherwise inactive second line of the **Time-code** sub-menu can therefore be selected.

5. In the **Timecode Mode** sub-menu select Starting Time and
6. set the delay in the sub-menu
 - Setting the numerical groups (**hh** [hours], **mm** [minutes], **ss** [seconds] and **frame** [frame number within the respective second]): Turn the rear thumbwheel or press the Joystick up or down
 - Switching between the numerical groups: Press the rear thumbwheel or the Joystick forwards, to the left or to the right

EXPOSURE METERING METHODS

All the variants described on page 30

EXPOSURE MODES

- Aperture priority (see p. 30-31)
- Manual control with shutter speeds of $\frac{1}{30}$ – $\frac{1}{4000}$ s.
Set slower shutter speeds are dealt with in the same way as $\frac{1}{30}$ s.

Notes:

- If a correct exposure is not possible even with the maximum aperture, the ISO sensitivity is automatically increased, regardless of any manual setting.
- The automatic exposure control takes all brightness fluctuations into consideration. If this is not desired, e.g. for landscape recordings and pans, you should set the exposure manually.

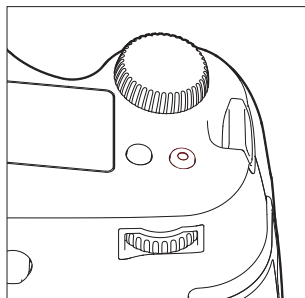
DISTANCE SETTING

All the variants described on page 29

STARTING / ENDING THE RECORDING

Starting:

Press the video record button



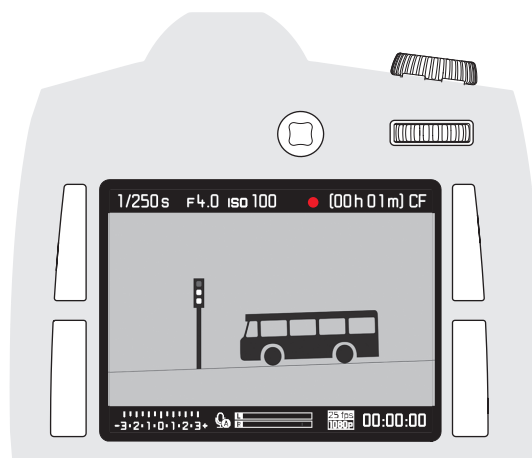
- A video recording in progress is indicated in the monitor by a flashing red dot and the elapsed recording time.
- As video recordings with the Leica S are made with different aspect ratios, depending on the selected resolution, the monitor image appears with corresponding masking.

Ending:

Press the video record button again

Single pictures during video recordings

Single pictures can be taken during a running video recording. Pressing the shutter button interrupts the video recording for the duration of the single picture. The individual pictures are taken with the relevant settings on the camera.



Sound recording

The sound can be recorded using the integral microphones or with external microphones connected using the LEMO® audio adapter supplied. The integral microphones record in stereo.

Note:

The automatic distance setting (autofocus) generates noises that are also recorded.

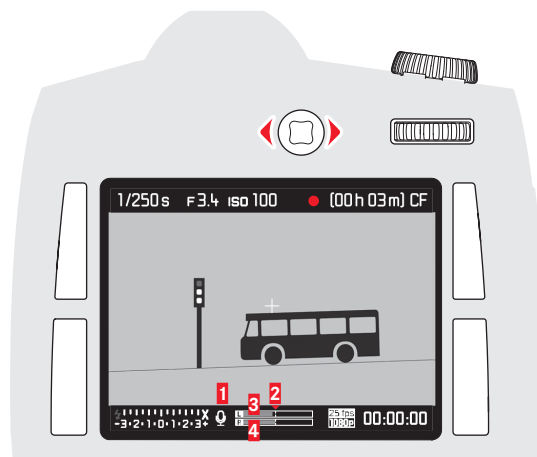
Setting the audio recording level is possible automatically or manually before or during the recording.

1. In the menu, under **IMAGE**, select the item **Video Settings**.
2. select **Audio Level** in the sub-menu, and
3. set the desired function there

Manual setting

1. Hold the depth of field preview/function button depressed, and
2. press the Joystick to the left (= decrease level) or right (= increase level)

The level should be set so that input override is avoided, i.e. such that the 'bars' do not or only seldom change from white to red (at the far right end of the scale).



- 1 Microphone (🔊 = Automatic recording level control, 🎧 = Manual recording level control, 🚫 = No sound recording)
- 2 Setting mark
- 3 Left channel level
- 4 Right channel level

Note:

The level is not controlled separately for each channel.

Deactivate sound recording

Move the setting mark completely to the left until the microphone symbol changes from 🔊 to 🚫

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

1. In the menu, under **IMAGE**, select the item **Video Settings**.
2. select **Audio Wind Elimination** in the sub-menu, and
3. activate or deactivate the function there

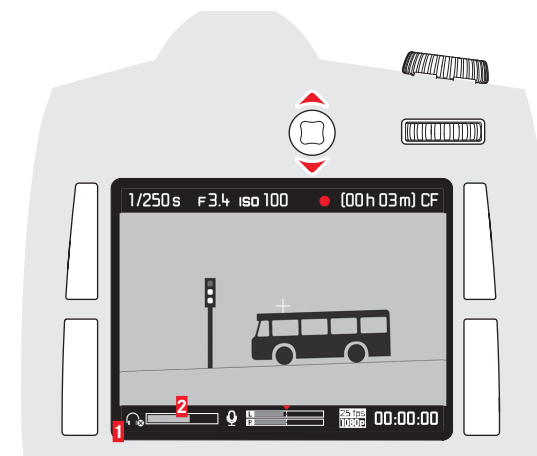
Note:

When no wind noise is to be feared, you should always select **Off** to ensure optimum sound.

Checking the sound recording

You can check your recording level even during the recording using connected headphones.

1. Connect the headphones to the camera via the LEMO® audio jack using the audio adapter S (supplied)
 - The corresponding display appears in the monitor image



- 1 Symbol for connected headphones
- 2 Volume bar

Setting headphone volume

2. Hold the depth of field preview/function button depressed, and
3. press the Joystick down (= reduce volume) or up (= increase volume)

REVIEW MODE

Note:

- Two functions are available for the review of your recordings:
- Automatic review after each recording
 - Review for unlimited time

AUTOMATIC REVIEW OF LAST

PICTURE

In **Auto Review** mode, each picture is displayed on the monitor immediately after it is taken. You can set the time for which the picture is to be displayed.

Setting the function

1. In the menu, under **SETUP**, select the item **Auto Review** and
2. select the desired function or time in the sub-menu: (**Off**, **1 s**, **3 s**, **5 s**, **Hold**)

REVIEW FOR UNLIMITED TIME

Setting the function

- Call up Review mode by briefly pressing the button to the top right of the monitor.
- The last picture taken appears in the monitor along with the corresponding displays. However, if the memory card(s) inserted do(es) not contain any image files, the following message appears when you switch to review mode: **No media file to display.**

Displays in Review mode

- For undisturbed viewing of the recordings, only the following are displayed during review for unlimited time:
- In the header some fundamental information
 - The functions of the adjacent buttons for 3 seconds in the four corners of the monitor picture when switched on: = Protect menu, = Change of display, = Delete menu and = Menu
 - Top right and for the functions of the two thumbwheels
 - Bottom right for button lock (if activated)
- If the memory card or the selected file cannot be read, a corresponding symbol appears in the right-hand margin of the black picture.

Notes:

- From **Auto Review** mode, you can switch back at any time to normal unlimited PLAY review mode.
- Even pictures that have not yet been transferred from the camera's internal buffer memory to a card – the LED at bottom right on the rear of the camera is still flashing – can be viewed immediately.
- On the other hand, the pictures on the cards are not accessible while data are being transferred.
- If the masking function was used during recording (see p. 28), the photo appears with the selected aspect ratio.
- Only picture data recorded with Leica S cameras can be reviewed with the Leica S.
- If the picture data are stored in parallel in JPEG and DNG format, the picture displayed is always based on the DNG file.
- If photographs were taken with the picture series function or automatic bracketing, the last picture in the series is shown first in both review modes.
- To select other pictures from the series, see p. 48.

VIDEO PLAYBACK

- A video recording can be recognized from the following characteristics:
- Picture format (16:9 with Full HD, approx. 17:9 with 4K)
 - Additional video-related information in a footer
 - A field with the video and audio control symbols when switching on and each time the Joystick is pressed to the left:

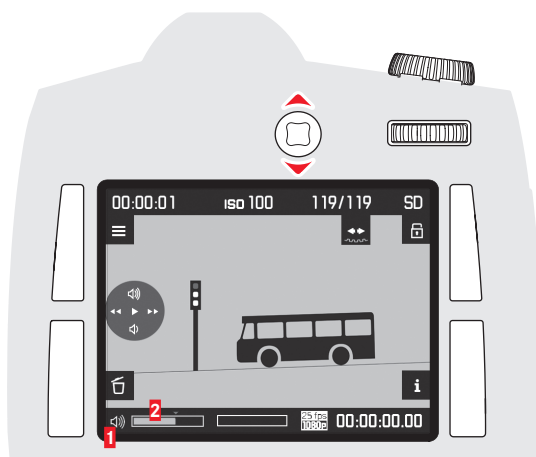
Louder	= Press up
Fast forward	= Press right
Play/Pause	= Press forward
Quieter	= Press down
Fast rewind	= Press left

Fast forward and fast rewind start in slow motion and get faster the longer the button is held down in the appropriate direction.

Turning the rear thumbwheel once to the left or right takes you directly to the beginning or end of a video.

Setting the volume

Press the Joystick down (= reduce volume) or up (= increase volume)



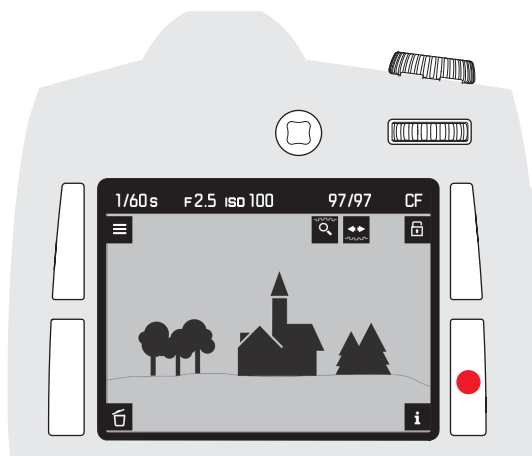
1 Symbol for camera loudspeaker/connected headphones

2 Volume bar; at the far left-hand end of the bar the audio playback is deactivated (🔇 / 🎧).

Displays in Review mode

For undisturbed viewing of the recordings, only the following are displayed during review for unlimited time:

- In the header some fundamental information
 - The functions of the adjacent buttons for 3 seconds in the four corners of the monitor picture when switched on: = Protect menu, = Change of display, = Delete menu and = Menu
 - Top right and for the functions of the two thumbwheels
- If the memory card or the selected file cannot be read, a corresponding symbol appears in the right-hand margin of the black picture.



During both the unlimited review and the video payback, various additional displays and information can be called up in turn, in addition to the displays described above, by repeatedly pressing the button bottom right next to the monitor as in Live View mode:

- Histogram and clipping indicators
- Grid lines and horizon
- Extended picture data
- Back to the normal view

The settings for grid lines, histogram and marking of clearly focused subjects are made in exactly the same way as described for Live View mode on pages 27-28.

Review with histogram and clipping indicators

- Also displayed are:
 - The histogram at top left
 - Areas that are too bright are marked in red, areas that are too dark in blue, flashing in each case, and at bottom right the clipping symbol ()

The clipping displays

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

Setting the function

1. In the menu, under **SETUP**, select the item **Capture Assistants** and
2. select **Exposure Clipping** in the sub-menu.
3. In the sub-menu select **Lower Limit** or **Upper Limit**, and
4. set the desired threshold values on the scale by turning the thumb-wheel or by pressing the Joystick to the left or right.
 - The scale shows the clipping areas relative to the overall exposure range.

Notes:

- The histogram and the clipping indicators are available both during review of the whole picture and during review of a detail, but not
- during the simultaneous review of 4 or 9 reduced pictures.
- The histogram and clipping indicators always relate to the detail of the part of the picture currently being displayed.

Marking of clearly focused subjects

- All clearly focused subjects are marked by highlighted contours.

The four available colors permit adaptation to any background.

1. In the menu, under **SETUP**, select the item **Capture Assistants** and
2. select **Focus Peaking** in the sub-menu
3. Call up the sub-menu, and
4. select the desired color there

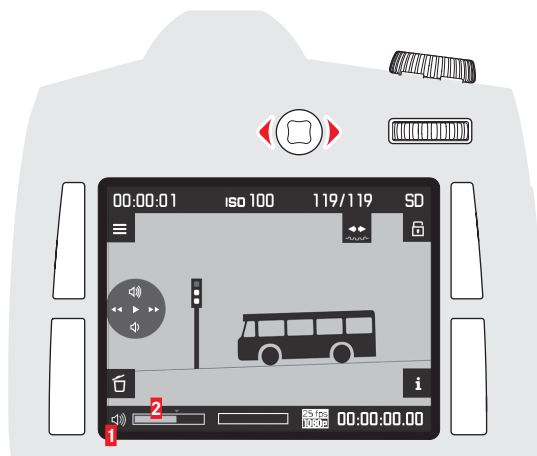
Extended picture data

- A wide variety of additional picture data is displayed.

Note:

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

VIEWING OTHER PICTURES / SCROLLING



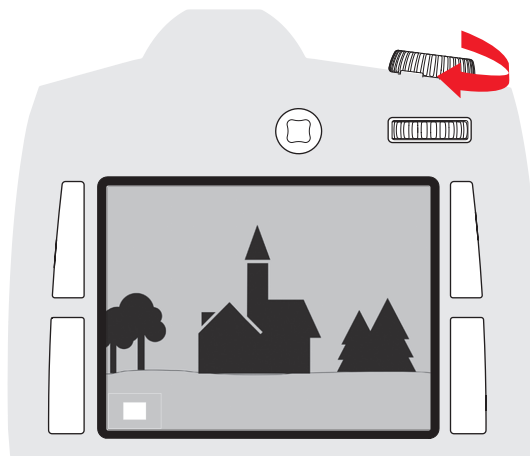
Turning the rear thumbwheel allows you to select other pictures. Turning to the left takes you to the pictures with lower numbers, turning to the right to the pictures with higher numbers. After reaching the highest and lowest numbers, the series of the pictures arranged in an endless loop starts again from the beginning so that you can reach all the pictures in both directions.

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

Note:

This is possible in all review modes, at all zoom levels, including off-center details, and during the simultaneous review of several reduced pictures.

ENLARGING THE DETAIL



You can enlarge a detail of the picture

- in steps
- or
- call up the highest possible enlargement in one step.

Enlarging in steps

The displayed detail can be enlarged by turning the shutter speed setting dial to the right. The further you turn, the greater the enlargement and the smaller the detail. Enlargement is possible in 4 steps until 1 pixel of the monitor displays 1 pixel of the picture.

- The displays in the header and the symbols for the functions of the keys and thumbwheels disappear. The rectangle inside the frame shows the size and position of the detail.

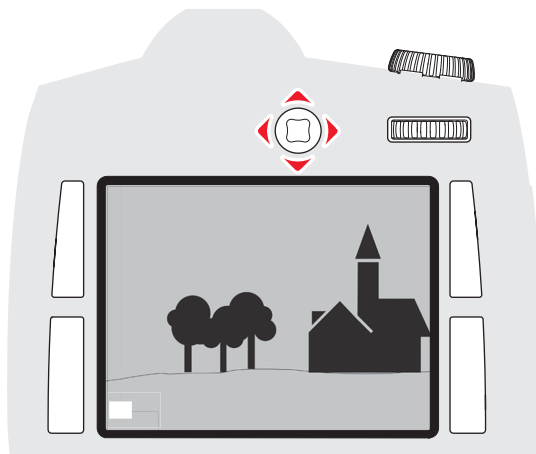
Maximum enlargement in one step

Holding the rear thumbwheel depressed (≥ 1 s) switches between the review of the whole picture and maximum enlargement.

Note:

The function is available at all zoom levels. If a detail was previously displayed, pressing the first time displays the whole picture again.

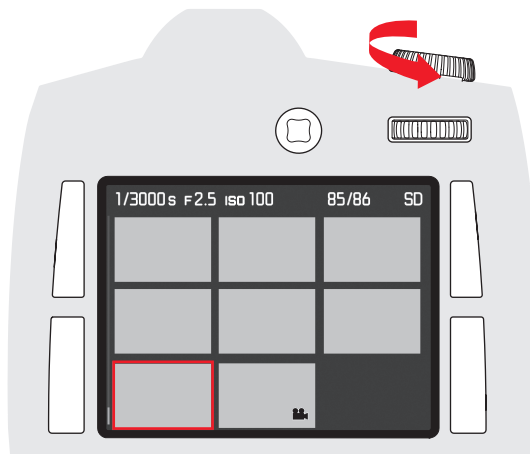
MOVING THE DETAIL



Press the Joystick in the desired direction - up, down, right or left

- The rectangle inside the frame moves in the direction the Joystick is pressed.

SIMULTANEOUS VIEWING OF SEVERAL REDUCED PICTURES

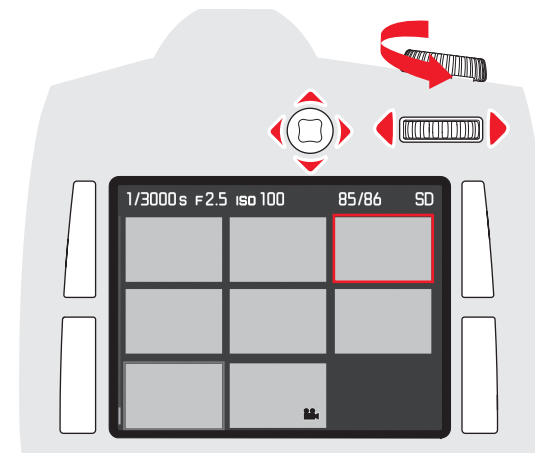


Turning the shutter speed setting dial to the left reduces possibly previously enlarged pictures, and turning beyond the review of the whole picture allows simultaneous viewing of 4 or 9 pictures.

- The red frame marks the picture previously displayed in full size during the viewing of 4 or 9 pictures.

SELECTION OF ONE OF THE REDUCED PICTURES

1. Select the desired picture by pressing the Joystick up, down, left or right
 - The frame changes to an endless loop in lines from picture to picture.
2. The framed picture can be enlarged in steps by turning the shutter speed setting dial to the right



PROTECTING PICTURES / CLEARING DELETE PROTECTION

- Press any of the button top or bottom left, or top or bottom right of the monitor
 - In the image field the button functions valid in this situation are displayed - for 4 s - alongside the corresponding buttons  (Call up menu control),  (Call up delete menu),  (Call up protect menu) and  (Change view, see p. 47)
- Press the button marked  in this case
 - The image field displays:
 - The button functions valid in this situation **ALL**, **Back**, and **OK**, and **Protect single?** in the footer
 - Possibly the symbol  for a delete-protected picture.
- With the button top left of the monitor, select whether you wish to protect only the displayed picture or all the pictures, or (if one or more pictures is/are already protected) whether you wish to cancel the delete protection for the displayed picture or all the pictures
 - The corresponding displays change: Alongside the button between **ALL** and **SINGLE**, in the footer according to the situation.

Notes:

- Even when protection or canceling of the delete protection of individual pictures is activated, you can enlarge the picture or call up other pictures.
 - Pressing the button marked **BACK** in this case (see above under 2.) returns you to the respective normal view.
- Press the **OK** button to protect the picture(s) or to cancel the delete protection.
 - The symbol  for a delete-protected picture appears or disappears in the monitor.

DELETING PICTURES

- Press any of the button top or bottom left, or top or bottom right of the monitor
 - In the image field the button functions valid in this situation are displayed - for 4 s - alongside the corresponding buttons  (Call up menu control),  (Call up delete menu),  (Call up protect menu) and  (Change view, see p. 47)
- Press the button marked  in this case
 - The image field displays
 - the button functions valid in this situation **ALL**, **BACK**, and **OK**, and **Delete single?** in the footer.
 - Possibly the symbol  for a delete-protected picture.
- With the button top left of the monitor, select whether you wish to delete only the displayed picture or all the pictures
 - The corresponding displays change: Alongside the button between **ALL** and **SINGLE**, in the footer according to the situation.

Notes:

- When deletion is activated, you can enlarge the picture or call up other pictures.
- Pressing the button marked **BACK** in this case (see above under 2.) returns you to the respective normal view.

If only one picture is to be deleted

- Press the **OK** button to delete the picture(s).
 - The next undeleted picture appears in the monitor. If this was the only picture a message is displayed: **No media file to display**

If all pictures are to be deleted

- Press the button marked **OK** in this case.
 - A safety confirmation prompt appears on the monitor: **Delete all?**

Notes:

- Pressing the button marked **i** in this case (see above under 2.) returns you to the respective normal view.
 - Protected pictures are not deleted. After deletion, the last (highest number) of the undeleted pictures appears.
- Confirm and start the deletion with the **OK** button.
 - A message appears in the monitor: **No media file to display**

ADDITIONAL FUNCTIONS

TRANSFERRING DATA TO A COMPUTER

The Leica S is equipped with a USB 3.0 interface for transferring data to a computer. This allows fast data transfer to computers with the same kind of interface. The computer used must either have a USB port (for direct connection of the Leica S), or be equipped with a card scanner for CF or SD/SDHC/SDXC cards. Furthermore, an up-to-date USB 3.0 driver must be installed

If the Leica S is connected to the computer with the LEMO® USB 3.0 cable, it is automatically recognized by the operating system. Use the Windows® Explorer to copy/save the picture data to your computer.

Note:

Apple® Mac® computers allow the transfer of video files only up to a maximum file size of 4 GB. If larger video files are copied, an error message is displayed.

Important:

- Use only the LEMO® USB cable supplied.
- While data is being transferred from the Leica S to the computer, the connection may not under any circumstances be broken by removing the USB cable, as otherwise the computer and/or the Leica S may crash, and the memory card may even be irreparably damaged.
- While data is being transferred from the Leica S to the computer, the camera must not be turned off or turn itself off due to a lack of battery capacity, as otherwise the computer can crash. For the same reason the battery must never be removed from the camera while the connection is active. If the battery capacity is about to run out during data transfer, stop the data transfer, turn off the camera (see p. 15) and charge the battery (see p. 8).

Connecting and transferring the data using card scanners

The picture data can be transferred to a computer using a commercially available card scanner for CF or SD/SDHC/SDXC memory cards. These devices, as well as further information, can be obtained in a computer accessories store.

Data structure on the memory card

The 100LEICA, 101LEICA, etc. folders can each hold up to 9999 pictures.

Leica Image Shuttle®

The exclusive Leica Image Shuttle software enables you to remotely control the camera from a computer and to directly store the image data on the computer's hard drive for "tethered shooting". All of the key camera functions can be controlled. This convenient solution provides ideal support in the studio and on location.

Leica Image Shuttle is available as a free download when you register your Leica S on the Leica Camera AG website. Further details on the download of the two programs can be found on the registration card in the camera packaging.

System requirements

Microsoft® Windows® Vista® / 7; Mac OS X 10.6 or higher. In some Windows versions it is possible that the operating system will display a warning about a missing Windows signature. Please ignore this message and continue with the installation.

Installing firmware updates

Leica is constantly working on developing and optimizing its products. As digital cameras have many functions that are purely controlled electronically, some of these improvements and enhancements to the functions can be installed on the camera at a later date. Leica provides firmware updates at irregular intervals for this purpose. Information about any resulting changes or additions to the details in this manual can be found at:

<http://www.s.leica-camera.com/downloads-overview>

You can check in the sub-menu of menu item **Camera Information** whether your camera and/or the attached lens has the latest firmware version (see also pp. 16-19 and 66).

You can easily download new firmware yourself from our website and install it on your camera.

1. Format a memory card in your Leica S
2. Switch off the camera and insert the card into a card scanner – either integrated or connected to your computer. (A scanner is required for firmware updates)
3. Download the firmware file under the link:
<https://owners.leica-camera.com/login>
4. Save the firmware file S-X_XXX.FW to the highest level of the card folder structure. X_XXX stands for the relevant version.
5. Eject the card properly from your card scanner, insert it into the camera and close the cover.
6. Turn on the camera
7. In the menu, under **SETUP**, select the item **Camera Information**
 - If the camera detects a newer firmware version than the one installed, this will be indicated in the respective line (**Camera** or **Lens**) by characters in front of and behind the firmware number.
8. Open the corresponding sub-menu
 - Apart from the two version numbers, the sub-menu contains a confirmation prompt.
9. Start the update with **Yes** or reject with **No**
 - A progress screen appears during the process.
 - The update process begins. This can take several minutes.
 - After a successful update, a corresponding message is displayed for confirmation.

Note:

If the battery is not charged sufficiently, a corresponding warning message is displayed.

WIRELESS DATA TRANSMISSION AND REMOTE CONTROL OF THE CAMERA

You can control the camera remotely using a smartphone/tablet or use the smartphone/tablet as an external storage medium. In order to do this, the Leica S app must first be installed on your smartphone. This app is available in the Apple App Store™ for iOS™ devices.

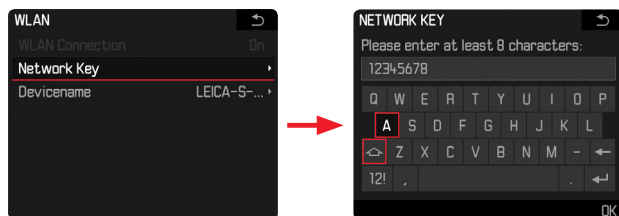
WLAN settings

1. In the menu, under **SETUP**, select the item **WLAN** and
2. activate **WLAN Connection** in the sub-menu

Create personal password

For security reasons you should change the default password for the connection to your Leica S. The data are encrypted with the WPA2 standard during the data transfer.

1. In the **WLAN** sub-menu, select **Network Key**

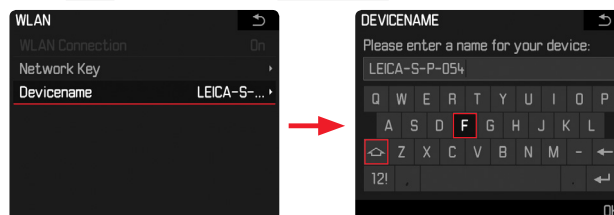


2. Enter the characters for your personalized password using the Joystick or the rear thumbwheel
3. Press the button marked **OK**

Change device name (SSID)

You can change the device name (SSID) of the camera. A name has already been assigned here at the factory (LEICA-S...).

1. In the **WLAN** sub-menu, select **Device Name**



2. Enter the characters for your personalized device name using the Joystick or the rear thumbwheel
3. Press the button marked **OK**

Create connection to the camera

(Settings are made at the smartphone/tablet)

1. Select the camera from the list of available WiFi networks
2. Enter the camera password

Data transfer and remote control

1. Start the app on your smartphone/tablet
2. Create connection to the camera
3. Execute the desired function using the app

Notes:

- When using devices or computing systems that require more reliable security than WLAN devices, appropriate measures must be taken to ensure security and protect against disruptions to the systems used.
- Leica Camera AG accepts no liability for damage arising from the use of the camera for purposes other than as a WLAN device.
- It is assumed that the WLAN function will be used in the countries where this camera is sold. If used in other countries than the one where the camera is sold, there is the risk that communications transmission conditions may be violated. Leica Camera AG assumes no responsibility for violations of this kind.
- Please also notice that data transmitted and received wirelessly may be intercepted by third parties. We highly recommend that you activate encryption in the wireless access point settings in order to ensure that the information is secure.
- Don't use the camera in places where there are magnetic fields, static electricity, or disturbances, such as near microwaves. Otherwise the wireless transmissions may not reach the camera.
- Using the camera near devices such as microwaves or cordless telephones that use the 2.4 GHz radio frequency wavelength may negatively affect the performance of both devices.
- Do not connect to wireless networks you are not authorized to use.
- When the WLAN function is activated, the device will automatically search for wireless networks. When this happens, networks that you are not authorized to use (SSID: indicates the name used to identify a network over a WLAN connection) may be displayed. Do not attempt to connect to such a network, since this would be seen as unauthorized access.

MISCELLANEOUS

LEICA SYSTEM ACCESSORIES

Interchangeable lenses

The range of interchangeable lenses in the Leica S system covers focal lengths from wide angle to telephoto, including a macro lens for close-ups. Some models may be available with the option of an integral central shutter – for flash photography with sync speeds up to 1/1000 s. All Leica S lenses are characterized by a high light intensity – in relation to the picture format, and always by maximum imaging performance.

S ADAPTER

The Leica S adapter allows the use of lenses from other manufacturers with Leica S cameras. The three purely mechanical bayonet adapters transmit no mechanical or electrical controls, signals or data between housing and lens. There is also a further Leica S adapter for use with Hasselblad HC/HCD lenses and one for the use of the Contax 645 lens on Leica S cameras that allow the use of all the functions of these lenses.

Leica S Adapter V	Order No. 16 024
(for lenses from the Hasselblad V system)	
Leica S Adapter M645.....	Order No. 16 025
(for lenses from the Mamiya 645 system)	
Leica S Adapter P67.....	Order No. 16 026
(for lenses from the Pentax 67 system)	
Leica S Adapter H	Order No. 16 030
(for lenses from the Hasselblad H system)	
Leica S Adapter C	Order No. 16 038
(for lenses from the Contax 645 system)	

Interchangeable focusing screens

Interchangeable focusing screens are available for the Leica S. They are delivered individually in a case with changing tweezers and a dust brush. Completely matt screen Order No. 16 000
(Standard, supplied with the camera)
Matt screen with microprism ring and wedge..... Order No. 16 001
Completely matt screen with grid lines Order No. 16 002

Multifunction S hand grip

The multifunction grip simplifies handling for portrait format pictures thanks to its form and appropriately positioned operating elements. It also allows the use of an additional battery to increase the capacity. Its attachment – with tripod screw – is quick and easy. (Order No. 16 028)

Grip strap S

The grip strap S is fastened to the multifunction hand grip and significantly simplifies the carrying and holding of the camera/hand grip combination. (Order No. 16 004)

Professional charger S

This charger allows you to significantly boost and safeguard the availability of your Leica S system: It can charge two batteries at the same time. (Order No. 16 011)

AC adapter S (power pack)

If the Leica S (Typ 007) is used in a fixed position and/or for a very large number of pictures over a prolonged period, and particularly when it cannot be monitored, then it is expedient to ensure a continuous power supply by using this power pack. (Order No. 16 041)

Note:

The power pack S (Order No. 16 022) cannot be used with the Leica S (Typ 007).

Flash units

The Leica SF 26 system flash unit is characterized by very simple operation. (Order No. 14 622)

Remote cord S

The electric remote cord S is highly recommended where maximum jitter-free photography is demanded. (Order No. 16 029)

HDMI cable

The HDMI cable allows exceptionally fast transfer of picture data to display equipment with corresponding HDMI sockets. Length = 1.5 m (Order No. 14 491)

Audio adapter S

The audio adapter S that is connected to the camera via LEMO plug allows the simultaneous connection of headphones and a microphone (both with 3.5 mm jack). (Order No. 16 042)

SPARE PARTS

Order No.

Camera bayonet cover S	16 021
Carrying strap S.....	16 037
Standard focusing screen.....	16 000
Viewfinder cover	16 015
Li-Ion Battery S BP-PRO1	16 039
Quick Charger S (with integrated USA mains plug and EU, UK and AUS interchangeable mains plugs, car charging cable)	16 009

PRECAUTIONS AND CARE INSTRUCTIONS

GENERAL PRECAUTIONS

Do not use your Leica S 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 Leica S 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 Leica S malfunctions due to the effects of electromagnetic fields then turn the camera off, remove the battery, and then turn the camera on again after reinserting the battery. Do not use the Leica S in the immediate vicinity of radio transmitters or high-voltage power lines.
- Their magnetic fields can also interfere with picture recordings. Protect the Leica S from contact with insect sprays and other aggressive chemicals. Petroleum spirit, thinner and alcohol may not be used for cleaning.
- Certain chemicals and liquids can damage the housing of the Leica S or the surface coating.
- As rubber and plastics sometimes emit aggressive chemicals, they should not remain in contact with the Leica S for a long time. The Leica S is protected against moisture and dust to a certain extent by a number of design measures. Ensure nevertheless that neither water, sand nor dust can get into the camera, e.g. when it is snowing or raining or on the beach.
- Sand and dust can damage the camera and memory cards. Take particular care when changing lenses and when inserting and removing the cards. If moisture does get in, it can cause malfunctions and even permanent damage to the Leica S and the memory cards. If salt water spray gets onto the Leica S, wet a soft cloth with tap water, wring it out thoroughly and wipe the camera with it. Then wipe down thoroughly with a dry cloth.

MONITOR AND TOP PANEL DISPLAY

- If the Leica S is exposed to significant temperature fluctuations, condensation can form on the displays. Wipe it off carefully with a soft dry cloth.
- If the Leica S is very cold when it is turned on, the displays may at first appear darker than usual. As soon as they warm up, they will reach their normal level of brightness. The monitor is manufactured using a high-precision process. This ensures that, of the total of around 921,600 pixels, more than 99.995% work correctly and only 0.005% remain dark or are always bright. 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 Leica S, you should turn it off and leave it to stand at room temperature for around an hour. Once the camera temperature has adjusted to room temperature, the condensation will disappear by itself.

CARE INSTRUCTIONS

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

FOR THE CAMERA

- Clean the Leica S only with a soft, dry cloth. Stubborn dirt should first of all be covered with a well-thinned cleaning agent and then wiped off with a dry cloth.
- To remove stains and fingerprints, the camera and lenses should be wiped with a clean lint-free cloth. Tougher dirt in hard to reach corners of the camera body can be removed with a small brush. Take care not to damage the shutter blades and mirror surface, e.g. with the shaft of the brush.
- All mechanically operated bearings and sliding surfaces on your Leica S 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 LENSES

- Dust on the outside of the lens should be removed only with a soft-haired brush or a soft, clean, dry microfiber cloth. This cloth is included in the scope of supply of this lens. If stains and finger have to be removed, use such a cloth and clean carefully with a circular movement starting at the center of the lens and working towards the edge. The Leica Aquadura coating allows simple cleaning. Do not apply any high pressure in order to maintain this property for as long as possible. On no account may acetone be used for cleaning.
- For optimum front lens protection in unfavorable photographic conditions (e.g. sand, salt water spray), use transparent UVa filters. However, you should bear in mind that, like all filters, they can cause unwanted reflections in certain backlight situations and with high contrasts. The generally recommended lens hood also protects the lens from unintentional fingerprints and the rain.

FOR THE BATTERY

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

- Always remove the battery if you will not be using the Leica S for a longer period of time. Otherwise after several weeks the battery could undergo deep discharge, i.e. the voltage is sharply reduced, as the Leica S still consumes a small amount of current (e.g. for saving date and time) even when it is turned off.
- Lithium ion batteries should only be stored in a partially charged condition, i.e. not completely discharged or fully charged (in the corresponding display in the top panel display). For very long storage periods, you should charge the battery for approx. 15 minutes roughly twice a year to avoid a deep discharge.
- Always ensure that the battery contacts are clean and freely accessible. Whilst lithium ion batteries are proof against short circuits, they should still be protected against contact with metal objects such as paper clips or jewelry. A short-circuited battery can get very hot and cause severe burns.
- If a battery is dropped, check the casing and the contacts immediately for any damage. Using a damaged battery can damage the Leica S.
- Batteries have a limited service life.
- Take damaged batteries to a collection point to ensure correct 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 1m 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

- Whilst a picture is being stored or the memory card is being read, it may not be removed, nor may the Leica M/M-P be 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 them and result in loss of the stored data.
- Always remove the memory cards if you will not be using the Leica S for a longer period of time.
- Do not touch the connections on the memory card and keep them free of dirt, dust and moisture.
- It is recommended that the memory cards are reformatted from time to time, as fragmentation occurs when deleting, which can block some of the memory capacity.

CLEANING THE SENSOR

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

The Leica S can be returned to Leica Camera AG Customer Service (address: see p. 67) for chargeable cleaning of the sensor; this cleaning is not covered by warranty. You can also carry out cleaning yourself, using the **Sensor Cleaning** function in the menu. This allows access to the sensor by keeping the shutter open.

Notes:

- Generally: To protect the Leica S against ingress of dust etc. into the interior of the camera, it is important always to have a lens or a cover fitted to the camera body.
- For the same reason, when changing lenses work quickly and in an environment that is as dust-free as possible.
- As plastic parts can easily pick up a static charge and then attract more dust, individual lens caps and covers should only be stored for short periods in pockets in clothing.

Setting the function

1. In the menu under **SETUP**, select **(Sensor Cleaning)**
 - The relevant sub-menu appears.
2. Confirm with **Yes**
 - The mirror is folded up and the shutter opens.
3. Carry out cleaning. Make sure you follow the instructions under "Notes" below.
4. After cleaning, the shutter is closed again by turning off the camera.
 - The message **Please stop sensor cleaning immediately** is displayed.

Notes:

- This function is only available when the battery has at least 50% of its full capacity. Otherwise a corresponding warning is displayed.
- As far as possible, both inspection and cleaning of the sensor should be performed in a dust-free environment to prevent further soiling.
- An 8x or 10x magnifying glass is very helpful during the inspection before and after cleaning.
- Lightly adhering dust can be blown off the sensor cover glass using clean and, if necessary ionized gases such as air or nitrogen. It makes sense to use a (rubber) bellows with no brush for this purpose. Special, low pressure cleaning sprays such as "Tetenal Antidust Professional" can also be used in line with their specified usage.
- If the particles cannot be removed in this way, please contact the Leica Product Support department.
- If the battery capacity falls to lower than 40% while the shutter is open, the warning message **"Attention Please stop sensor cleaning immediately"** appears in the monitor. At the same time a continuous beep tone will sound which can only be stopped by turning off the camera. Turning the camera off will cause the shutter to be closed again. Be absolutely sure in this case that the shutter window is clear, i.e. that no object can obstruct the closing movement of the shutter, otherwise damage may occur.

Important:

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

Storage

- If you will not be using the Leica S for a longer period of time, we recommend that you
 - a. Switch it off (see p. 15),
 - b. Remove the memory cards (see p. 12), and
 - c. Take out the battery (see p. 11), (the entered time and date are lost after max. 3 months, see p. 20).
- A lens acts 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. Using the lens cover and keeping the camera in the shade (or immediately putting it away in the case) help to prevent damage to the interior of the camera.
- Store the Leica S in a dry, adequately ventilated place, where neither high temperatures nor high humidity will occur. When used in humid conditions, the Leica S 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 not be kept in air-tight containers for longer than absolutely necessary. This is only recommended if a desiccant such as silica gel is placed in the container
- To prevent the formation of fungus, do not store the Leica S in a leather case for long periods of time.
- In a dry environment, store the Leica S preferably in a closed and padded container so that nothing can rub against it and it is protected from dust.
- Note the serial numbers of your Leica S and lenses, as these are extremely important in case of loss.

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TECHNICAL DATA

Camera type Leica S (Typ 007),
medium-format digital SLR camera

Lens attachment Leica S bayonet

Lens system Leica S lenses

Picture format / aspect ratio 30 x 45mm / 2:3

Image sensor / resolution Leica CMOS sensor with 6 µm pixel size,
with micro lenses, 37.5 MP

Dynamic range 13 aperture stops

Color depth 16 bits per pixel

Deep-pass filter None, maximum transfer of the focus, suppression of
Moiré by external digital image processing on sensor

Data formats Photo: DNG (raw data), DNG + JPEG fine, DNG + JPEG
standard, JPEG fine, JPEG standard.

DNG / JPEG resolution DNG: 37.5 MP, JPEG: 37.5 MP, 9.3 MP, 2.3 MP

File size DNG: approx. 42 Mbyte, JPEG: approx. 1-16 Mbyte (depend-
ing on the resolution/compression used and picture content), Video:
Uninterrupted video recordings are possible up to a maximum length of
29 minutes, maximum file size for transfer to MAC computers: 4 GB

Buffer memory 2 GB, maximum number of pictures in series (depend-
ing on memory card used): DNG: max. 14, JPEG: unlimited

Color spaces Adobe® RGB, sRGB, ECI RGB 2.0

White balance Automatic, manual by metering, 8 presets, color
temperature input

Storage medium CF cards (max. UDMA7), SD cards up to 2 GB,
SDHC cards up to 32 GB, SDXC cards, memory cards with a capacity of
less than 1 GB cannot be used, 4K video recordings can only be stored
on SD cards

Menu languages

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

Exposure control

Exposure metering Open aperture metering through the lens (TTL)

Metering methods Spot (3.5%), center-weighted, multi-field (5 fields)

Metered value storage By pressing the shutter button to the pre-
sure point, storage for 1 picture of permanently with Joystick

Exposure compensation ±3EV (exposure values), can be set in half
steps

Automatic bracketing Optionally 3 or 5 pictures, optionally ½ EV,
1 EV, 2 EV, 3 EV deviation between the individual pictures, depending on
the set operating mode, change of the exposures via aperture and/or
shutter speed

Metering range (with aperture 2.5 and ISO100), spot metering: EV2.7
– 20, center-weighted and multi-field metering: EV1.2 – 20, Warning
display in the viewfinder for values above and below the metering range
Measuring cell for prevailing light Multi-field photo diode (permanent light
metering)

Sensitivities ISO100, ISO200, ISO400, ISO800, ISO1600,
ISO 3200, ISO6400, ISO 12500, Automatic

Exposure operating modes Automatic program with shift function
(**P**), aperture priority (**A**), shutter speed priority (**T**), manual setting (**M**)

Flash exposure control

Flash unit connections Accessory shoe with center and control
contacts, LEMO® or standard flash connection socket without control of
the light yield

Synchronization Flash sync speed: $\frac{1}{125}$ s, or $\frac{1}{1000}$ s for lenses with
central shutter, slower shutter speeds can be used, either at the begin-
ning or end of the exposure; flashes also with faster shutter speeds ($\frac{1}{800}$ s
– $\frac{1}{4000}$ s) possible with correspondingly configured flash units (HSS mode)

Flash metering cell Multi-field photo diode

**Flash exposure metering / control (with system-compatible Leica
flash units attached to the camera)** Control by flash unit with TTL
pre-flash metering, with automatic transfer and allowance for sensitivity
and set/controlled lens aperture, all exposure modes can be used,
automatic matching of the flash light component to the ambient light

Linear flash mode (with system-compatible, appropriately configured
Leica flash units, linear flash mode with TTL pre-flash metering and
automatic TTL-HSS control) For flash photography with faster shutter
speeds than the sync speed by firing several flashes in quick succession,
automatic changeover to HSS flash mode if shutter speed is below sync
speed

Stroboscope flash mode (several flashes fired during one picture)
With flash operating modes **P** and **A** and system-compatible, appropri-
ately configured Leica flash units automatic adaptation of the exposure
time

Flash lighting compensation Can be set on appropriately configured
flash units

Displays during flash mode Ready status by flashing or steady light
of the flash symbol in the viewfinder

Focusing

Focus detection Using phase detection method, in Live View mode on the basis of contrast

Sensor / metering field One central cross sensor, defined by cross-hair on the matt screen, in Live View mode the metering field can be freely positioned

Operating modes Optionally AFs (single) = focus priority, AFc (continuous) = shutter release priority, MF (manual), manual override of the automatic setting possible at any time

Metered value storage By pressing the shutter button to the pressure point, storage for 1 picture of permanently with Joystick

Autofocus drive In lenses

Viewfinder system

Eyepiece High eyepoint viewfinder, diopter correction of -3 to +1 dpt possible at the viewfinder

Viewfinder field 98%

Magnification 0.87x with 70 mm lens with setting to infinity and 0 dpt.

Focusing screens Interchangeable, standard equipment: Matt screen with micropism ring and wedge

Displays

Viewfinder LCD line under viewfinder image, illuminated, displays

Top panel Self-illuminating LCD

Monitor 3" color TFT LCD monitor with 16 million colors and 921,600 pixels, approx. 100% image field, max. 170° viewing angle, anti-reflex/anti-soiling protective glass (Corning® Gorilla Glas®), color space: sRGB

Live View mode Optionally with/without exposure simulation, spot metering field can be moved in the whole image field, linked to also freely movable AF metering field, display optionally with histogram and clipping, marking of clearly focused subjects (focus peaking), grid lines and horizon indicators, picture information

Video mode

Format, resolution, frame rate, color scanning MOV (Motion JPEG), optionally Full HD (1080 x 1920) with 24, 25 or 30 fps or 4K (2160 x 4096) with 24 fps, 4:2:2

Exposure control As for photos

Sound recording In 48 kHz / 16 bit stereo, optionally with internal or external microphones, time code

Miscellaneous Display optionally with marking of clearly focused subjects (focus peaking), external playback via HDMI socket: Full HD video stream, 4K video recordings can only be stored on SD cards

Shutter and shutter release

Shutter Selected with main switch, in camera: Microprocessor-controlled, metal plate focal plane shutter with vertical movement, in appropriately configured Leica CS lenses: Central shutter

Shutter speeds Manual setting (with **T** and **M**): 6s to 1/4000s in half steps (6-1/1000s with central shutter), B for long exposures up to maximum 125s, flash synchronization up to 1/25s (1/1000s with central shutter).

Automatic setting (with **P** and **A**): Steplessly from 32s to 1/4000s (8-1/1000s with central shutter),

Linear flashes with all faster shutter speeds than 1/25s possible (with appropriately configured Leica system flash units and HSS-compatible SCA 3002 standard flash units)

Series/interval shooting Picture series: approx. 3.5 pictures/s, max. 14 pictures in series with DNG, unlimited with JPEG, interval shooting: Time until start, number of pictures and interval can be selected

Shutter button Two position: Activation of exposure and focus metering and metered value storage - shutter release

Self-times Delay time either 2 s or 12 s, indicated by flashing LED on the front of the camera and corresponding display in the monitor

Mirror lock-up 1st pressure: Mirror is folded up, lens aperture is closed to the set value, 2nd pressure: Shutter is released

Turning the camera on/off With main switch on camera top panel, optionally auto power off after approx. 2/5/10 minutes

Power supply Rechargeable Li-Ion Battery, rated voltage 7.3 V, capacity 2300 mAh, capacity display in top panel display; charge current / voltage: DC 1250 mA / 7.4 V. Model number: BP-PRO1; Manufacturer: PT. VARTA Microbattery Indonesia; Made in Indonesia, permanent power supply possible using mains power pack (available as an accessory)

Lithium-Ion Battery Charger Quick Charger S; Inputs: 100-240 V AC, 50/60Hz, 200 mA, automatic switching, or 12/24 V DC, 1A; Output: Nominal 7.4 V DC, 1250 mA / max. 8.25 V, 1265 mA Model number: 9C94270; Manufacturer: Ansmann; Made in China

GPS Optional (not available everywhere due to country-specific legislation, i.e. enforced automatic shutdown in those countries), data are written to EXIF header in picture files

WLAN (802.11n-Standard), Integrated into camera, camera control and picture monitoring possible with smartphone or tablet app

Horizon Metering with acceleration sensor, metering range: inclination (about transverse axis) and tilt (about longitudinal axis) each ±90°, measuring accuracy / display sensitivity: ≤1° at 0-40°C, display in monitor

Camera body

Material All-metal die cast magnesium body with non-slip plastic coating, top panel of magnesium, bottom cover of aluminum, bayonet of stainless steel

Tripod thread A 1/4 (1/4") DIN and A 3/8 (3/8") DIN (steel inserts) each with twist lock to DIN 4503, in metal tripod plate, under the center of the lens axis

Operating conditions 0 to +45°C, 15%-80% relative humidity

Interfaces ISO accessory shoe with additional control contacts and bore for locking pin, HDMI socket Type C, LEMO® jack for data output (USB 3.0 standard), 9-pin LEMO® jack for remote control accessory/remote flash trigger, audio out/in possible with audio adapter (available as an accessory)

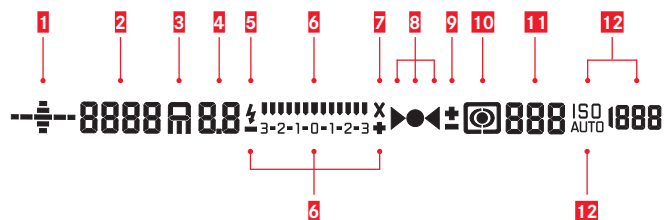
Dimensions (width x depth x height) approx. 160 x 80 x 120 mm

Weight approx. 1260 g (with battery)

Package contents Charger 100-240 V with integrated USA mains plug, and interchangeable mains plugs (Euro, GB, AUS) and car charging cable, lithium ion battery, carrying strap, bayonet cover, eyepiece cover, image processing software: can be downloaded from the Leica Camera AG website after registration of the camera

THE DISPLAYS

IN THE VIEWFINDER



1 Horizon

(Tilting about the longitudinal axis/inclination about the transverse axis; values apply as examples for inclination in clockwise direction; other directions are shown analogously)

- max. $\pm 0.5^\circ$
- $0.5\text{--}2.5^\circ$
- $2.5\text{--}5^\circ$
- $5\text{--}10^\circ$
- flashing $\geq 10^\circ$

2 Shutter speed/exposure time

- Manually set value for **m** and **t**, automatically controlled value for **A** and **P**; display in half steps, or
- **HI** (high) or **LO** (low) for overexposure or underexposure in the automatic exposure modes **A**, **P**, **t** and by flash light, or **LO** for values below the metering range.
- **bulb** **B** setting for long exposures
- **CLrd** Warning message for full memory card(s)

3 Exposure operating mode

- **P** Automatic program
- **A** Aperture priority
- **t** Shutter speed priority
- **m** Manual setting of shutter speed and aperture

4 Aperture

Manually set value for **m** and **A**, automatically controlled value for **t** and **P**; display in half steps

5 Flash display

Lit Ready
Flashing Flash charging, not ready

6 Light scale

(Marks: each $\frac{1}{2}$ EV step, last marks/figures flash at $\leq -3\text{EV}$ / $\geq +3\text{EV}$) to indicate

- Manual exposure compensation,
- Deviation of the current metering from the stored exposure setting (with metered value storage in the automatic exposure modes **A**, **P**, **t**)
- Exposure compensation

7 Flash display

Lit = Shutter speed set $\geq$ sync speed

8 Focus displays

- Appears only in manual mode or in the case of manual override of the AF: Lights up continuously if the distance is set too far
- In manual mode: Lights up continuously with correct setting
 - With **AFc**: Lights up continuously with correct setting, flashes if correct setting is not possible,
 - With **AFc**: Lights up continuously with correct setting, goes out if focusing is restarted
- Appears only in manual mode or in the case of manual override of the AF: Lights up continuously if the distance is set too short

9 Exposure compensation / flash exposure compensation set

10 Exposure metering method

- Multi-field metering
- Center weighted metering
- Spot metering

11 Picture counter

- **999** Total remaining number of pictures
- **USB** External storage
- **0** (flashing with 2 Hz) = Memory card full
- **---** (flashing with 2 Hz) = No memory card inserted
- **L** Maximum number for picture series
- **Err** Error message

12 ISO sensitivity

- **ISO** For manual setting
- **ISO AUTO** For automatic setting
- **1600** **HI 1** (ISO3200) / **HI 2** (ISO6400) / **HI 3** (ISO12500) = Currently set sensitivity

Note:

The viewfinder LCD is always lit when the camera is switched on. The brightness of this lighting is automatically adapted to the ambient brightness for optimum legibility.

THE DISPLAYS

IN THE TOP PANEL DISPLAY

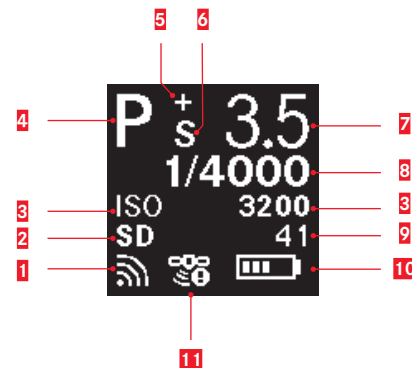
Starting view

(appears for approx. 5 s after turning on the camera)



- 1 Time
- 2 Date
- 3 Camera / memory card status
 - **READY** Ready for recording
 - **CARD SEARCH** Memory card check
 - No legible memory card detected
- 4 Battery capacity (right for battery in camera, left for battery in hand grip) or symbol  for connected AC power pack adapter S

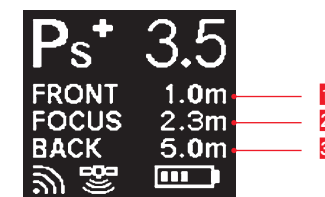
Standard view



- 1 WLAN activated
- 2 Memory card used
- 3 ISO sensitivity,  alternatively interval shooting set
- 4 Exposure operating mode
- 5 Exposure compensation set
- 6 Program shift set
- 7 Aperture
- 8 Shutter speed
- 9 Picture counter
- 10 Battery capacity (right for battery in camera, left for battery in hand grip) or symbol  for connected AC power pack adapter S
- 11 GPS
 -  Last position determined up to 6 minutes ago
 -  Last position determined up to 24 hours ago
 -  No position data available

Depth of field indicator

(for manual distance setting, press shutter button to 1st pressure point)



- 1 Front limit of the depth of field range
- 2 Set focal plane
- 3 Rear limit of the depth of field range

Display when setting the exposure operating mode

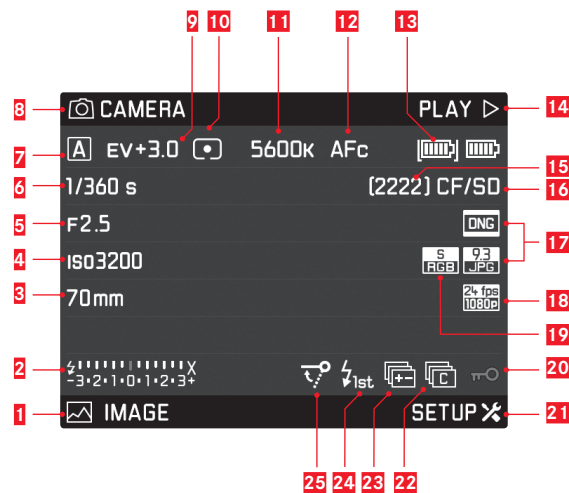
(appears only briefly after holding the rear thumbwheel depressed)



THE DISPLAYS

IN THE MONITOR

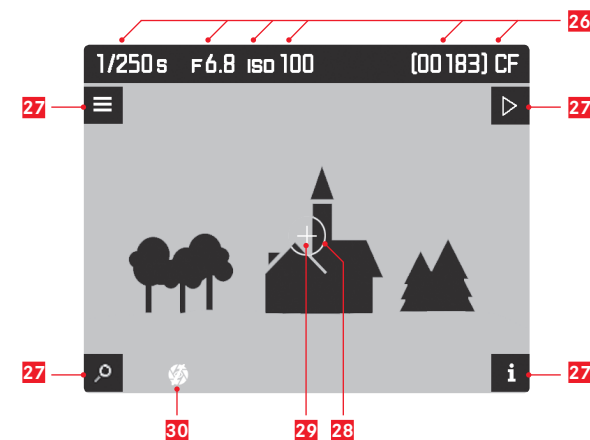
Photo recording mode



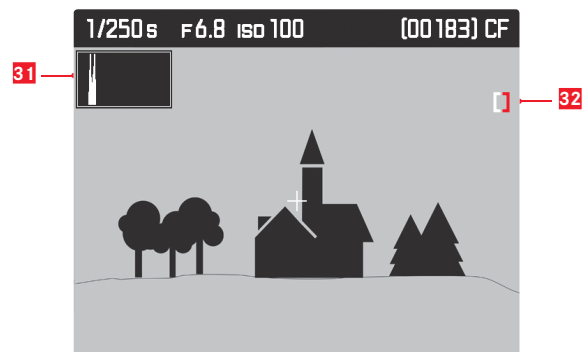
- 1 Function of the button bottom left
- 2 Flash ready indicator, light balance, flash sync speed indicator
- 3 Focal length
- 4 ISO sensitivity / setting
- 5 Aperture
- 6 Shutter speed
- 7 Exposure operating mode
- 8 Function of the button top left
- 9 Exposure compensation
- 10 Exposure metering method
- 11 White balance setting
- 12 Autofocus mode
- 13 Battery status / mains mode
- 14 Function of the button top right
- 15 Picture counter
- 16 Memory card(s) used
- 17 Photo file format / JPEG resolution
- 18 Video resolution / frame rate
- 19 Color space
- 20 Button lock activated
- 21 Function of the button bottom right
- 22 Symbol for
 - Single picture
 - Picture series
 - Interval shooting
 - Self-timer mode
- 23 Exposure bracketing activated
- 24 Flash trigger point
- 25 Mirror lock-up activated

Recording mode Live View photo

Standard view

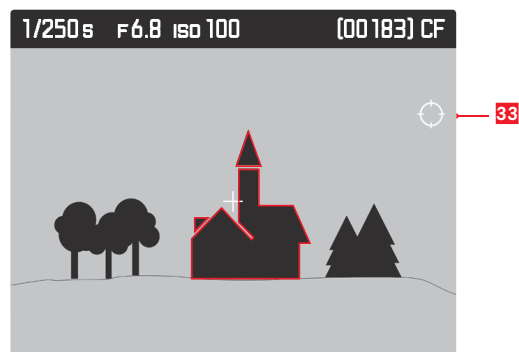


- 26 see 6, 5, 4, 15, 16
- 27 Button functions
(appear - in all Live View screens - for approx. 3 s after pressing any of the four buttons next to the monitor)
 - Magnification function
 - Menu control
 - Review mode
 - Change views
- 28 Spot exposure metering field
- 29 Autofocus metering field
- 30 Exposure simulation deactivated

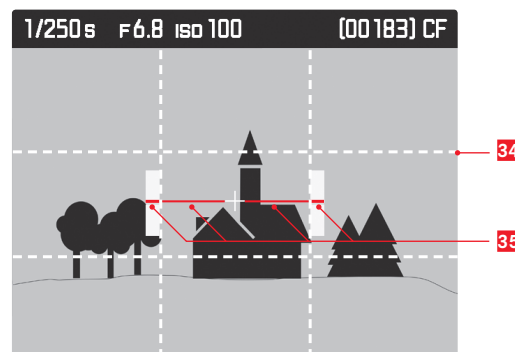
Standard view plus additional displays**A** Histogram and clipping indicators

31 Histogram

32 Clipping symbol

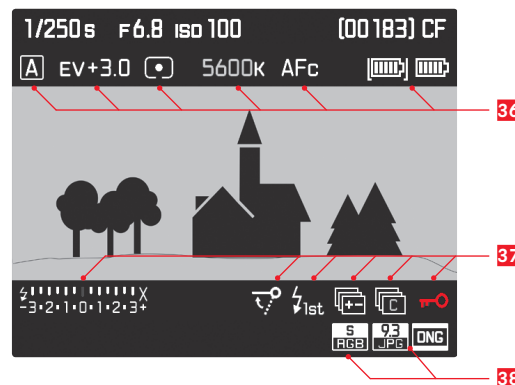
B Focus display (peaking)

33 Peaking symbol

C Grid and horizon

34 Grid lines

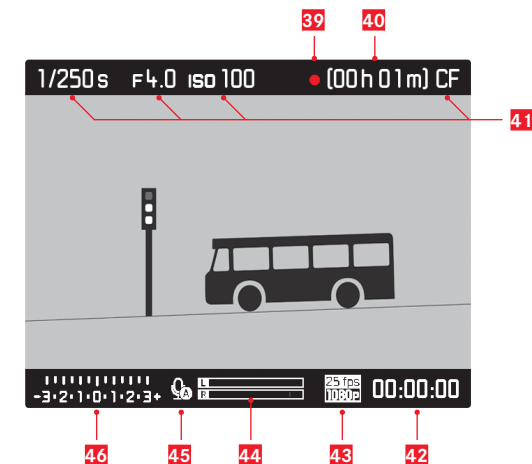
35 Horizon

D Additional picture data

36 see 7, 9, 10, 11, 12, 13

37 see 2, 25, 24, 23, 22, 20

38 see 19, 17

Video recording mode

39 Indication of a recording in progress

40 Possible recording time

41 see 6, 5, 4, 16

42 Current recording time

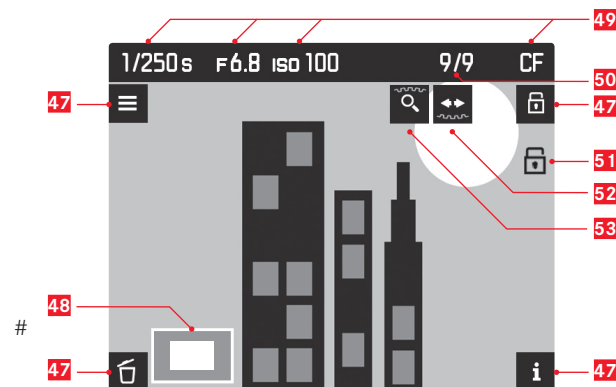
43 Video resolution / frame rate

44 Audio recording level display

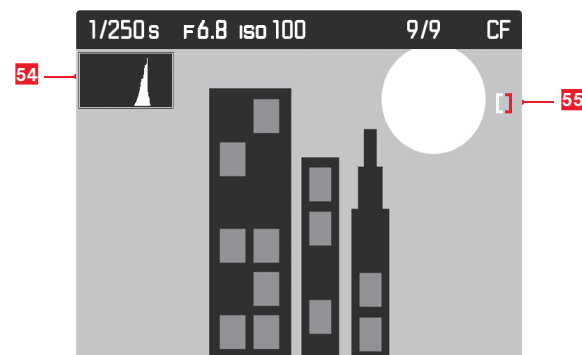
45 Sound recording mode

- Automatic recording level control
- Manual recording level control
- Sound recording deactivated

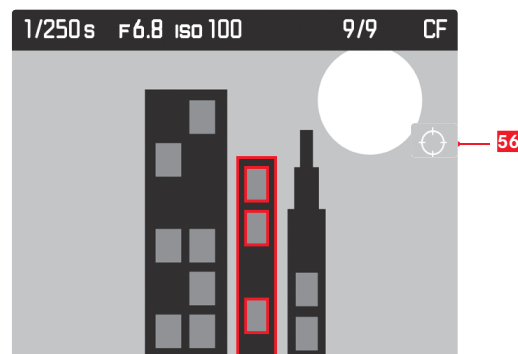
46 Light scale, or headphone volume
Volume off (mute)

Photo review mode**Standard view**

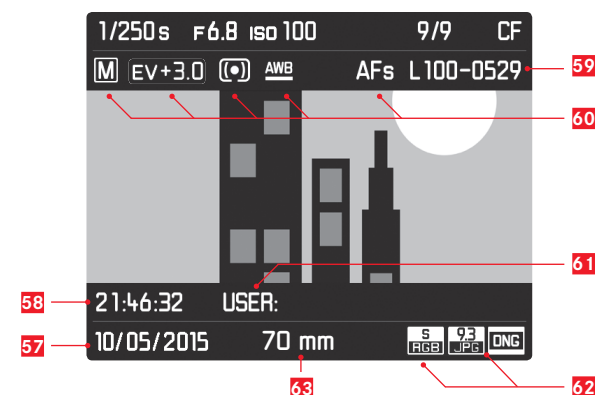
- 47** Button functions
(appear when switching on Review mode in all photo and video views or after pressing any of the four buttons next to the monitor, disappear after approx. 3 s)
- Delete menu
 - Menu control
 - Protect menu
 - Change views
- 48** Detail size and position
- 49** see **6, 5, 4, 16**
- 50** Number of picture displayed / total number of pictures
- 51** Symbol for delete-protected pictures
- 52** Operating instructions for scroll function (shutter speed setting dial)
(**52** and **53** appear / disappear together with **47**)
- 53** Operating instructions for enlargement function (rear thumbwheel)

Standard view plus additional displays**A Histogram and clipping indicator**

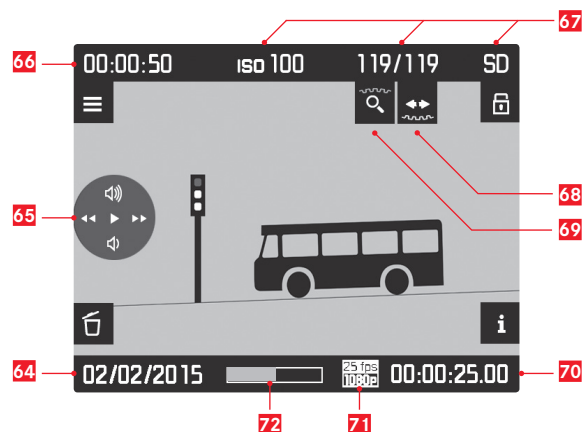
- 54** Histogram
- 55** Clipping symbol

B Focus display (peaking)

- 56** Peaking symbol

D Additional picture data

- 57** Date of picture
- 58** Time of picture
- 59** Image file number
- 60** see **7, 9, 10, 11, 12**
- 61** Profile memory slot
- 62** see **19, 17**
- 63** Employed focal length

Video review mode**Standard view**

64 Recording date and volume setting
Volume off (mute) , see also **65**

65 Video control symbols (for Joystick)

-  Playback (press forward)
-  Fast forward (press to right or hold depressed)
-  Fast rewind (press to left or hold depressed)
-  Volume: louder (press up or hold depressed)
-  Volume: quieter (press down or hold depressed)

66 Total recording time

67 see **4**, **50**, **16**

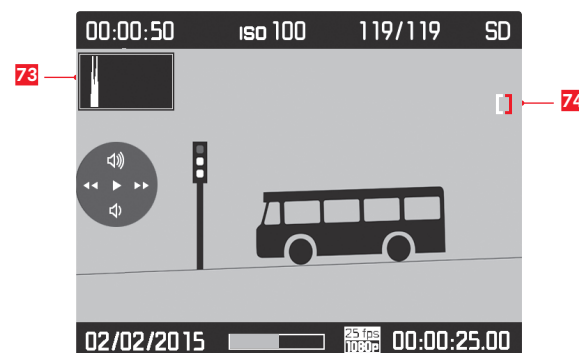
68 Operating instructions for scroll function (shutter speed setting dial)

69 Operating instructions for enlargement function (rear thumbwheel)

70 Elapsed playback time

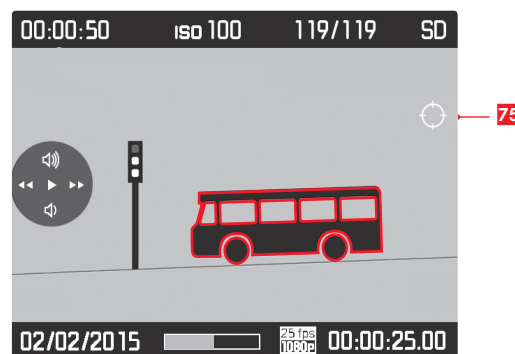
71 Video resolution / frame rate

72 Elapsed playback time bar

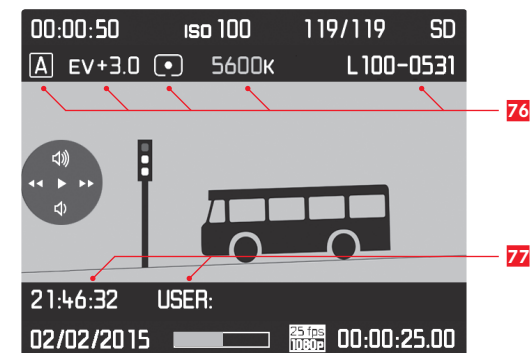
Standard view plus additional displays**A Histogram and clipping indicator**

73 Histogram

74 Clipping symbol

B Focus display (peaking)

75 Peaking symbol

C Additional picture data

76 see **7**, **9**, **10**, **11**, **59**

77 see **58**, **61**

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