

*Leica*

**Instructions**

**LEICA M6**

Contents	Page		
Brief description .....	2	General notes on exposure metering .....	26
Carrying strap .....	4	Tips for exposure metering .....	28
Mounting the lens .....	5	Flash synchronisation .....	34
Removing the lens .....	5	Use of older LEICA-M lenses .....	35
Rapid-wind lever .....	6	Lens design .....	35
Shutter release .....	6	Focusing ring .....	35
Film insertion .....	6	Aperture ring .....	35
Film rewinding .....	8	Depth-of-field scale .....	36
Holding the camera .....	9	Lens hoods .....	37
Viewfinder .....	10	Bags and cases .....	37
Bright-line frame selector .....	12	Filters .....	38
Rangefinder .....	14	Eyesight correction lenses .....	38
Batteries .....	16	LEICA WINDER M	
Film speed .....	18	Care of the LEICA M6 and lenses .....	39
Shutter speed dial .....	18	Alphabetical index .....	40
Exposure metering .....	19	Technical data .....	42
Switching on the meter .....	20	LEICA M lenses .....	44
Setting the correct shutter speed/aperture combination .....	20	Enlarger .....	44
Meter sensitivity .....	21	Projectors .....	44
Switching off the meter .....	21	Binoculars .....	44
Low light levels .....	21	Customer Service .....	44
Metering spot .....	22		
Metering diagram .....	24		



## The LEICA M 6

- |   |  |
|---|--|
| 1 Battery compartment                                     | 7 Single-stroke rapid advance lever<br>(can also be multi-stroked) |
| 2 Bayonet lens mount release button                       | 8 Rangefinder window   |
| 3 Red spot for lens alignment                             | 9 Shutter speed dial   |
| 4 Film rewind lever                                       | 10 Hotshoe   |
| 5 Automatic frame counter                                 | 11 Bright-line frame illumination window                           |
| 6 Shutter release button with thread for<br>cable release | 12 Rewind lever  |



- 13 Viewfinder window with mirrored strip for LED visibility in bright light
- 14 Eyelets for carrying strap
- 15 Depth-of-field scale
- 16 Distance scale
- 17 Aperture ring
- 18 Frame preselector level

- 19 Base plate catch
- 20 Range-viewfinder eyepiece
- 21 Synchronisation socket for flash units with cable
- 22 ISO film speed dial
- 23 Tripod bushing, 1/4"



### Carrying strap

The strap is supplied with its steel connection hooks locked. To attach, first pull back the plastic locking slide, and remove the connector entirely.

Mount connector onto the camera eyelet (14) and reinsert strap into **upper halfcircle**. **Make sure that the hooks are the right way round (see diagram).**

Now push slide back to lock connector.





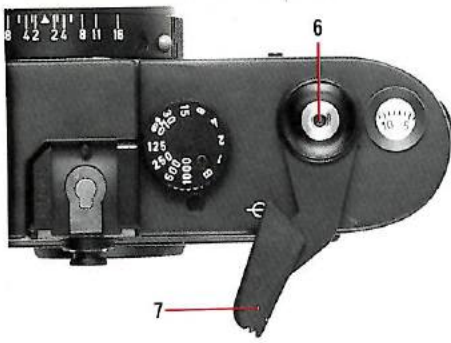
#### **Mounting the lens**

Grasp lens near base, align red dot on lens (3) with red dot on camera bayonet (2), insert, and lock by turning to the right until an audible click is heard.



#### **Removing the lens**

Grasp lens by fixed ring near base, hold down release button (2), rotate lens to the left, and remove. Avoid direct sunlight in open camera lens mount, using the shade of your body.



### Rapid-wind lever

The rapid-wind lever (7) has a 30° ready position, and can be operated without taking the LEICA from your eye. Instead of using a single stroke, some LEICA experts prefer to give two or three short strokes.

☉ exactly locates the focal plane.

### Shutter release

The shutter release button (6) is threaded to accept standard cable releases.

### Film loading

The LEICA M 6 has one of the fastest and easiest film-loading systems ever developed, but please read through these instructions before loading film.

**Always start by making sure that there is no film in the camera, by turning the rewind crank (6) gently. Any resistance indicates film in the camera; see rewinding instructions on page 10!**

Begin by stroking the wind lever and pressing the release button. Now invert camera, lift up baseplate latch (19), remove baseplate, and open hinged back, as shown above.



Hold the film cartridge in the left hand and insert it part way into the empty chamber, at the same time pulling out just enough film leader to reach the three pointed posts of the take-up chamber, as shown by the camera diagram. Under ordinary conditions it does not matter if the film end extends through this three-post assembly, but in extremely cold, dry weather the end might break off, and it is best to follow the drawing exactly.

Finally, push the film cartridge into the camera, press the leader level with the posts, and replace the baseplate by hooking the end with protruding tab over the external mounting post on the camera body. Only after replacing



the baseplate, test for correct loading by gently tensing the rewind crank, and slowly stroking the advance lever. Backward turning of the rewind is proof of proper film transport. Wind on, and fire twice to bring the frame counter to number 1.

**Tip!** Don't be too fussy in loading your LEICA M 6, and don't waste time trying to align the leader perfectly. The inner wheel on the baseplate will do this for you, and after a bit of practice you will find loading safe and simple.

**Note:** The open camera back will reveal two sets of gold-plated electrical contacts which are part of the light meter circuit. These are corrosion-free, and relatively insensitive to dirt and dust. Even so, treat them with respect, don't touch them, and keep them clean and dry.

#### **Film rewinding**

Turn rewind lever (4) to "R", unfold rewind crank, and turn clockwise, in arrow direction, until resistance of pulling film end from take-up posts is felt and overcome. (Alternatively, some LEICA photographers prefer to rewind the film end completely into the cartridge, to prevent accidental reloading of an exposed film.)

**Note:** Some brands of film are not taped to the cartridge core, and may be separated from the core by stroking the advance lever forcefully after the last frame has been exposed. To rescue such film, go to a photographic darkroom (or use a lighttight black cloth film-changing bag), and remove the M 6 baseplate. Hold the camera with the open bottom facing down, and slowly stroke the advance lever and release the shutter a number of times. The film, which is completely wound around the three-post as-



sembly, will slowly spiral downward until it can be grasped with two fingers, and pulled free. This is a seldom encountered problem today, because most films are firmly taped to the cartridge core, but should it happen to you, the remedy is remarkable simple.



### **Holding the LEICA**

The two pictures above show what our LEICA School believes is the best way to hold the LEICA in order to ensure firm support. The right hand holds the camera body, with index finger on the release button, and thumb up against the plastic end of the advance lever (in its working, stand-off position). The left hand supports the lens from below, always ready for quick refocusing, and presses the camera against the forehead.

An important advantage of this holding method is that vertical pictures can be made merely rotating the camera – without changing the position of either hand.

**Note:** For sake of clarity, we have shown the LEICA without a lenshood. Properly designed lenshoods are provided for all of the LEICA lenses, (except those with built-in hoods). These prevent stray light from entering the lens, and are especially valuable with strong side- or back-lighting.

### **LEICA M 6 range-viewfinder**

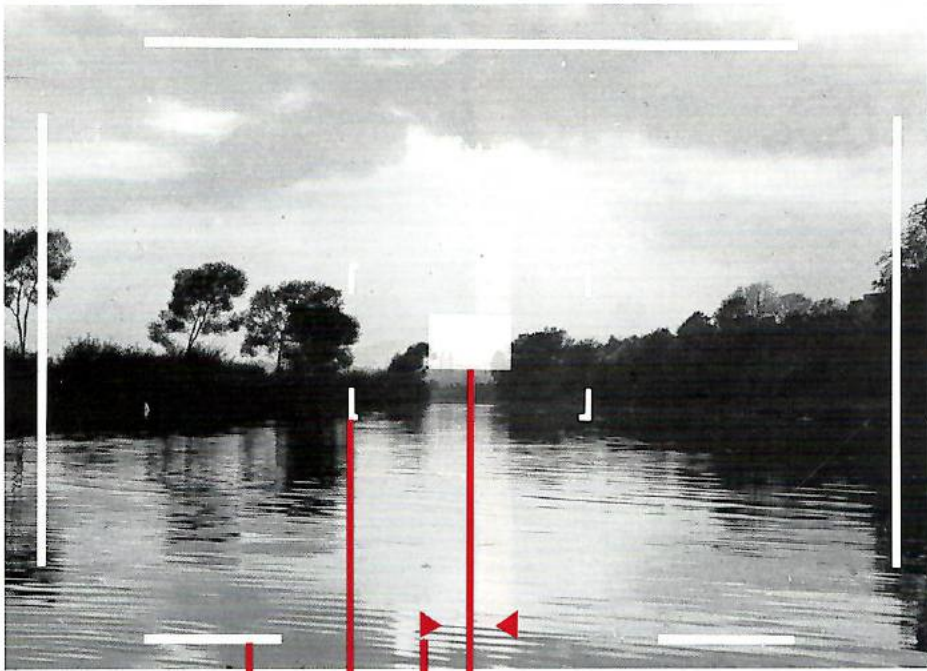
The LEICA M 6 range-viewfinder is a highly accurate lens-coupled rangefinder with lens-actuated bright-line frames for six different focal lengths, from 28- to 135 mm. Everything within the frame will be recorded on the film. These frames correspond to an image field of 23 x 35 mm (slide mount format) at the closest focusing distance for each lens. At longer distances the image will contain a somewhat larger subject field than that shown within the bright-line frames.

The bayonet of each lensmount automatically actuates the correct frame for its focal length, and these frames are coupled to the focusing mechanism so that parallax (the framing difference caused by the displacement of the camera lens and the viewfinder) is automatically compensated for as the lens is focused,

and the bright-line frame corresponds to the film image. In the center of the viewfinder is a somewhat paler rectangle: this is the LEICA rangefinder which permits both coincidence (the merging of two images of the same object) or split-image (the connecting of a broken subject line that runs through the rangefinder patch) focusing methods.

All LEICA-M lenses with focal lengths from 21 to 135 mm couple to the rangefinder. Lenses from 28 to 135 mm automatically actuate the appropriate combination of bright line frames: (28 + 90 mm), (35 + 135 mm), (50 + 75 mm).

Through-the-lens (TTL) light metering is indicated by triangular LEDs which appear when the meter is turned on by light finger pressure on the release button.

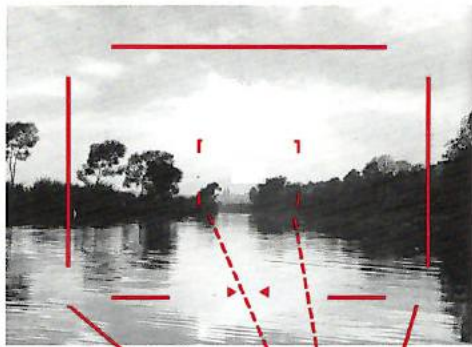


35 mm  
bright-line  
frame

135 mm  
bright-line  
frame

Rangefinder  
field

Exposure  
meter  
LED



35 mm + 135 mm

#### Frame preselector lever

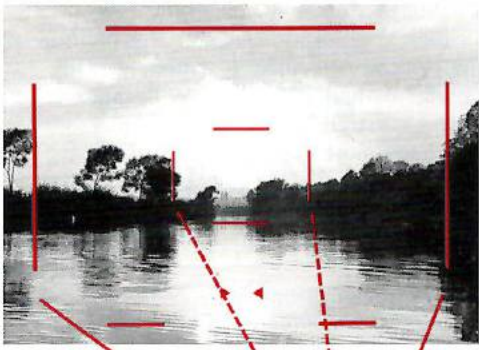
LEICA-M lenses automatically actuate their own bright-line viewfinder frames, but this is not always the right lens for the picture at hand. The frame preselector lever (18) lets you test the composition for the other focal lengths. The three preselector positions are:

Lever outside – 35 + 135 mm frames

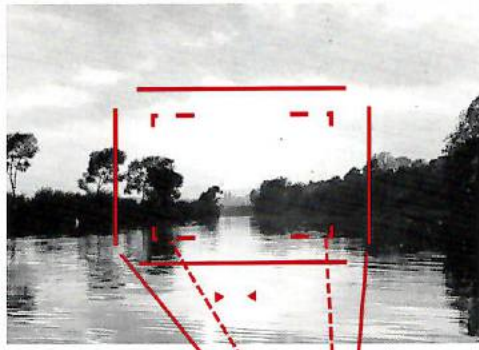
Lever centered – 50 + 75 mm frames

Lever inward – 28 + 90 mm frames

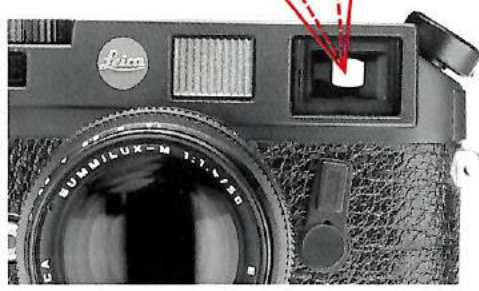
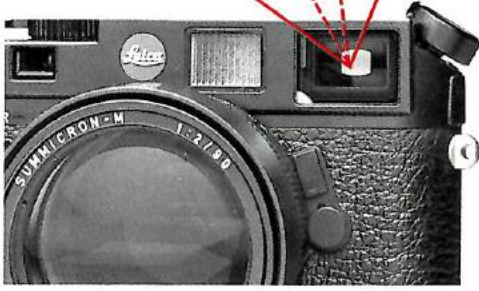




28 mm + 90 mm



50 mm + 75 mm



### **Rangefinder**

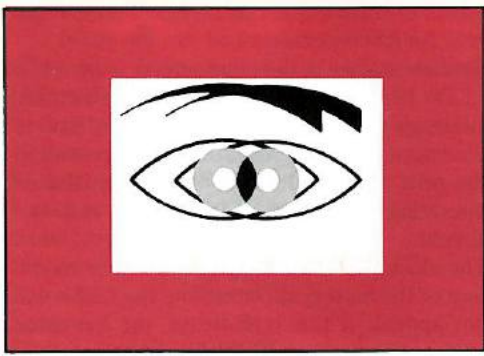
The rangefinder field is the pale rectangle in the center of the viewfinder field. If the viewfinder window (13) is covered, only the bright-line frames and the rangefinder patch remain visible. The bright, sharply masked rangefinder patch permits the use of either **coincidence** or **split-image** rangefinder focusing.

### **Coincidence (double image) focusing**

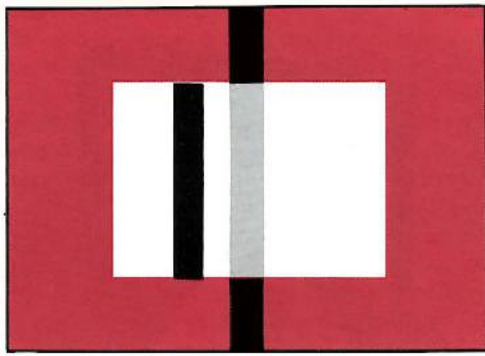
In most cases, and particularly for pictures of people, the coincidence or double-image focusing method is preferable because it requires no straight lines in the subject. Simply cover the most important part of the subject with the rangefinder patch, turn the lens until the double image appears as one, and recompose (if necessary) to make the exposure.

### **Split-image focusing**

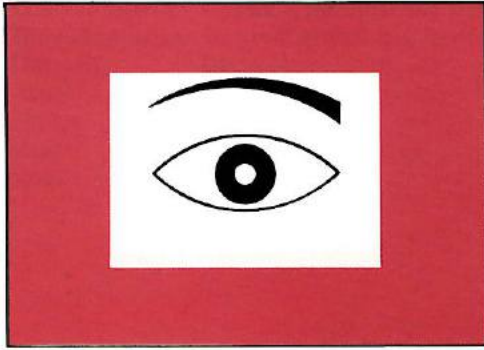
For pictures of buildings or other subjects containing straight vertical lines, place the rangefinder patch so that some line runs right through it. Now turn the lens to make the line continuous. On theoretical grounds, split-image focusing gives the greatest accuracy, and this is an important focusing option for the LEICA M 6.



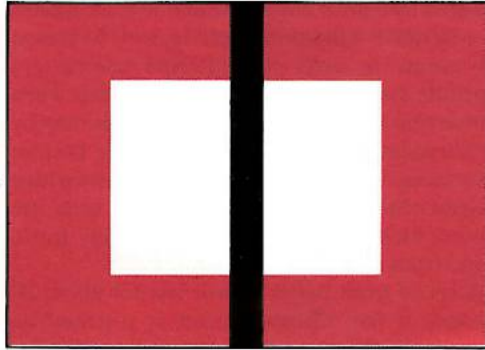
Double image = out of focus



Broken line = out of focus



Coincident image = in focus



Continuous line = in focus



### **Batteries**

The LEICA M 6 exposure meter can be powered by two 1.55-volt silveroxide button cells, or by one 3-volt lithium cell.

Unscrew the cover plate (1), and note battery profile symbols and "+" marking at top when inserting the cell or cells. Handle cells only by their sides, never touching the top or bottom surfaces. When in doubt, wipe carefully with a clean cloth. When two silveroxide cells are used, make sure that both are equally fresh, and from the same batch.

A set of fresh batteries will last for about 20 hours, if the exposure meter is switched on continuously. Assuming 15-second measure-

ments in normal use, this means sufficient energy for 4,800 exposures.

Batteries should be exchanged when the LEDs begin to appear weaker than normal, although the exposure meter will continue to read accurately as long as they light up at all. If the cells are unable to supply the minimum operating voltage, the LED display will not appear.

The electrical circuit can be broken by oxidation of the battery surfaces, and the LEDs will not appear. If this is the case, the batteries, camera contacts, and cap, should be carefully rubbed with a clean cloth. Avoid using any chemically impregnated cloth; a clean but not new handkerchief is ideal.

**Silver oxide cells**

The following can be used in the LEICA M6:  
(Type No., and principal area of application).

Duracell	D 357 (10 L14)
Eveready	EPX 76
Kodak	KS 76
Maxell	SR 44
National	SR 44
Panasonic	SR 44
Philips	357
Ray-o-vac	Panas 357
Sony	SR 44
Ucar	EPX 76
Varta	V 76 PX

**Lithium batteries**

The following can be used in the LEICA M6:

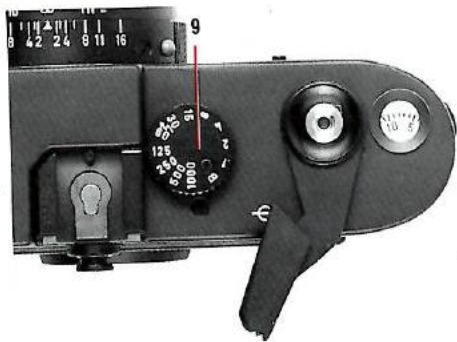
Duracell	DL 1/3 N
Kodak	K 58 L
Philips	CR 1/3 N
Ucar	2 L 76
Varta	CR 1/3 N

**Battery care and use**

Store batteries in a cool, dry place. New and used batteries – or batteries of different makes – should not be used together. Because battery shelf life is often similar to inuse life, a spare set should be purchased at least some months later. The batteries listed here are not rechargeable. Batteries can be tested only with a proper professional test instrument having the correct (adjustable) load characteristic. Dispose of batteries carefully – never in a fire. If battery disposal depots exist where you live, we recommend that you use them.

**Note:**

**If the camera is to be stored away for a long period of time, always remove the batteries.**



### Shutter speed dial

Shutter speeds from 1 to  $1/1000$  sec are on the speed selector dial (9), which is firmly click-stopped at all of the engraved speeds. Intermediate speeds can not be set. **When the dial is set to "B"**, the shutter remains open as long as the release button is pressed, and **the light meter is switched off**. The symbol "⚡" (= 1/50 sec) is the synchronizing speed for electronic flash units. (Longer exposure times can also be used when special effects are wanted).

### Film speed

The ISO film speed dial of the LEICA M 6 (22) is calibrated in DIN degrees (above) and ASA indexes (below). In current ISO practice,

the film speed setting shown in the illustration above is either ISO 100/21°, or simply ISO 100. To set the index for the film being used, press the spoked center of the setting disc, and rotate to align either of the two arrows. Upon release, the disc will spring back to the same level as the surrounding ring, if it has been properly set. Film speeds from ISO 6/9° to ISO 6400/39° can be set; see table of intermediate values at right. ISO is the international standards organization.

### The following settings are possible:

Scale	Sensitivity ISO (ASA/DIN)	Scale	Sensitivity ISO (ASA/DIN)
6/ 9°	6/ 9°	200/24°	200/24°
-	8/10°	-	250/25°
-	10/11°	-	320/26°
12/12°	12/12°	400/27°	400/27°
-	16/13°	-	500/28°
-	20/14°	-	640/29°
25/15°	25/15°	800/30°	800/30°
-	32/16°	-	1000/31°
-	40/17°	-	1250/32°
50/18°	50/18°	1600/33°	1600/33°
-	64/19°	-	2000/34°
-	80/20°	-	2500/35°
100/21°	100/21°	3200/36°	3200/36°
-	125/22°	-	4000/37°
-	160/23°	-	5000/38°
		6400/39°	6400/39°



### Exposure metering

Exposures are metered through the lens, at the working aperture. The reading is selective, by light reflected from a white spot on the center of the focal plane shutter (when tensioned). The unevenness of the white coating does not mean that the manufacture has been at fault, but, rather, that a thick, complete coating cannot be applied to the rubberized cloth shutter curtain without the shutter performance being influenced. The irregular structure of the metering spot in no way affects the meter reading.

Light from this spot is reflected to a photo diode (arrow) with a collecting lens which can be seen at about 11 o'clock inside the open mount. The lens f-stop and shutter speed for correct exposure are indicated by the appearance of two triangular LEDs (▶◀) which appear in the viewfinder, **with equal brightness**. If the shutter speed is set first, it is easy to adjust correct exposure with the lens aperture ring, as the arrows also indicate the direction of needed rotation.



#### **Switching on the exposure meter**

The exposure meter is switched on by light pressure on the shutter release button (6), providing that the shutter is tensioned (and is not set to "B"). After finger pressure has been removed, the exposure meter remains on for about (12) seconds. When the shutter is released, the meter is switched off and the LEDs go out. If the film is immediately wound on, as when using the LEICA WINDER, the exposure meter is reactivated and the LEDs light up again.

If even one of the two LEDs light up, this indicates that the light meter is operational.

When the shutter is released, or set to "B", the meter is switched off.

At very low light levels (or with very small lens apertures), at the threshold of the light metering range, the LEDs may take about one full second to light up.

#### **Setting shutter speed/lens aperture combinations for correct exposure**

For correct exposure metering the shutter speed dial must be set at a marked speed. Intermediate settings will cause the LEDs to light up, but exposure readings may not be correct.

After a speed has been set, touch the release button rightly, and rotate the lens aperture ring until both LEDs light up equally brightly. When only one LED appears, turn the lens aperture ring in the direction indicated.

The triangular LEDs indicate over- or under-exposure, as well as the direction of rotation of the lens aperture ring needed for correct exposure:

- ▶ Under-exposure of at least one f-stop.  
Turn lens aperture ring to the right.
- ▶◀ Under-exposure of  $1/2$  stop.  
Turn lens aperture ring to the right.
- ◀▶ Correct exposure.
- ▶◀ Over-exposure of  $1/2$  stop.  
Turn lens aperture ring to the left.
- ◀ Over-exposure of at least one f-stop.  
Turn lens aperture ring to the left.

#### **Leica M6 meter sensitivity**

The light metering range begins at  $0,063 \text{ cd/m}^2$ .

The working range at ISO 100/21° is from Ev -1 to Ev 20, or 2 sec (shutter speed dial position „B“) at  $f/1$  to  $1/1000$  sec at  $f/32$ . (Refer to diagram page 26).

#### **Very low light levels**

If the light level is below the threshold of the exposure meter, the LEDs will flash.

Since exposure metering occurs at working aperture, the LEDs may also flash when stopping down. In spite of a light level below the threshold sensitivity, the exposure meter remains switched on as usual, that is, for 12 seconds after finger pressure has been removed from the release button. If the light level improves during this time (e.g. if the picture framing is changed or the aperture opened), the LEDs change from flashing to uninterrupted display.

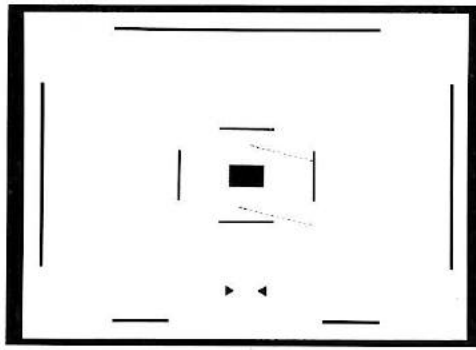
#### **Switching off the Exposure Meter**

If the camera is stored in a bag or left unused for a while, the shutter speed setting ring should be set to „B“. The exposure meter is now switched off.

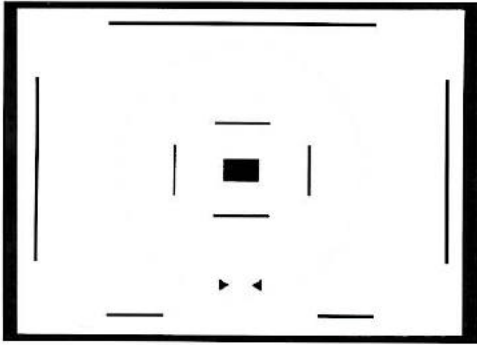
### LEICA M 6 metering fields

The metering field covers approximately 23% of the viewfinder field corresponding to the lens being used. Metering fields for the seven focal lengths have not been marked, in order to preserve an uncluttered viewfinder. The following reference value applies for all lens focal lengths:

The diameter of the circular measuring field is approximately  $\frac{2}{3}$  of the short side of the appropriate bright-line frame. This also applies to lenses with integral viewfinder attachments, such as the ELMARIT-M 135 mm f/2.8.

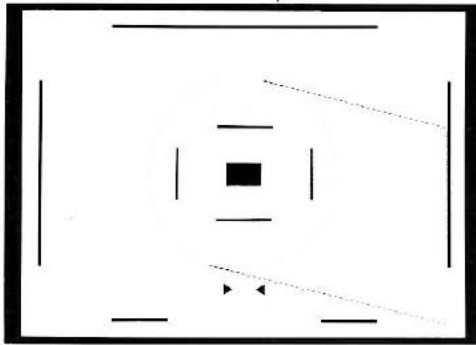


90 mm

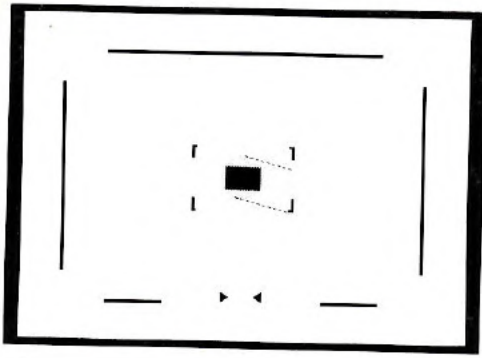


21 mm

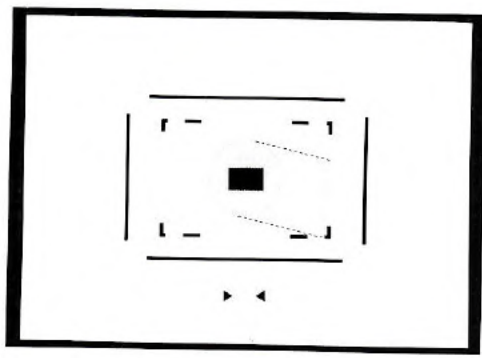
22



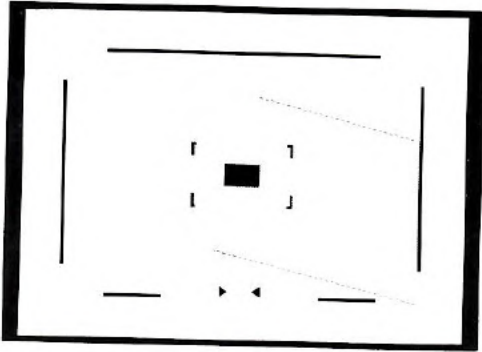
28 mm



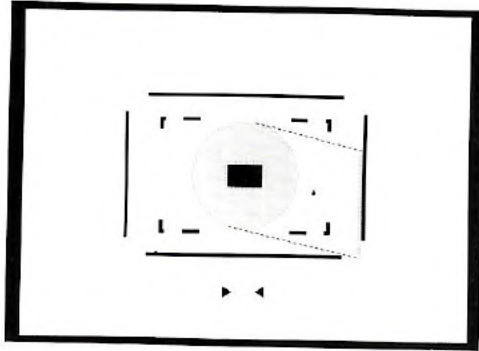
135 mm



75 mm

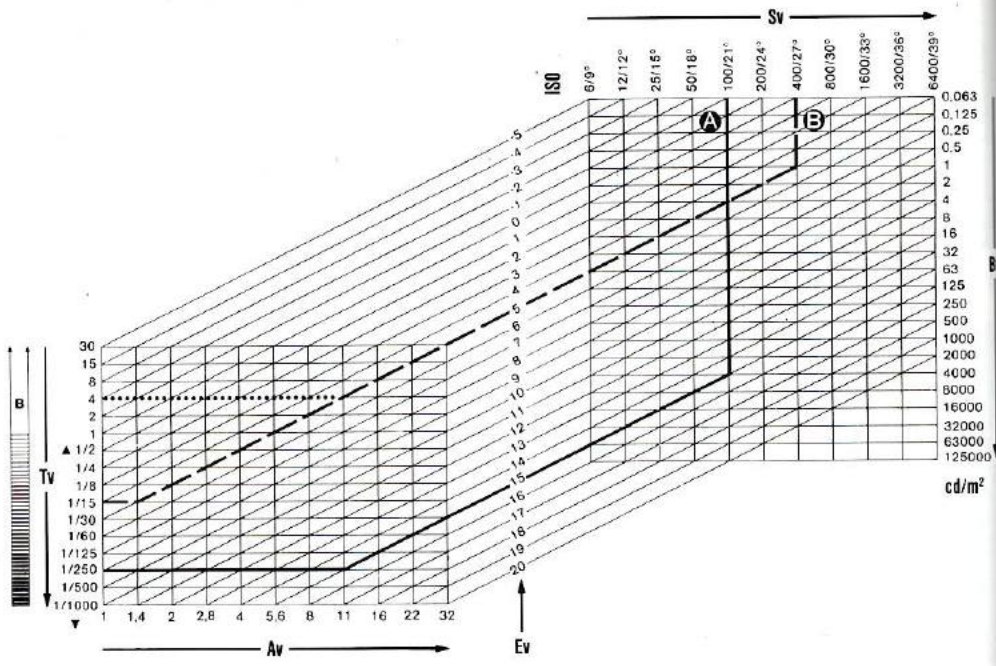


35 mm



50 mm

# Metering diagram



The light measuring range is shown on the right-hand side of the diagram, in  $\text{cd/m}^2$  (candela-per-square meter, aka NIT).

Shutter speeds and f-stops are shown at the left, as Tv (time values) and Av (aperture values).

ISO speed indexes (in ASA and DIN) are shown on the horizontal scale at the top as Sv (speed values), and the vertical scale in the center gives EV (exposure value) numbers.

The working range of the LEICA M 6 shutter is indicated schematically by the hatched vertical scale at the extreme left-hand side of the drawing, with the empty "B" space representing the range of exposures longer than one second.

Example A shows the correlation between a film speed of ISO 100/21°, a typical daytime brightness of  $4,000 \text{ cd/m}^2$ , a lens aperture of  $f/11$ , and a shutter speed of  $1/250 \text{ sec}$ . The exposure value of EV 15 can be read at the intersection of the A-diagonal with the central EV scale.

Example B indicates that in case of candle light and a speed of film of ISO 400/27° ( $1 \text{ cd/m}^2$ ), one should take photos with a diaphragm of 1,4 and  $1/15 \text{ s}$ . In case the lens is used, i.e. with diaphragm 11, the appropriate exposure time of 4 s cannot be adjusted any more when using the time adjusting knob. As the maximum exposure time that can be adjusted with this knob is 1 s only, without causing the LED's to flash, an exact measuring is not possible any more either. Therefore, in order to obtain the exact exposure time, one can only convert or use this diagramme.

### General notes on exposure metering

Most scenes contain an even distribution of bright and dark subject details, and the majority of sunlit subjects have an average reflectance of 18%. This means that 18% of the light that falls upon these subjects will be reflected toward the camera lens, and this 18% reflectance corresponds to an average gray tone for which exposure meters are calibrated. Subjects that are themselves very bright, or which have very bright background areas (such as snow, sand, or water), reflect more light toward the exposure meter, which will tend to indicate **underexposures**.

Dark subjects such as black fur, slate roofs, and navy-blue uniforms, reflect much less light, and meters tend to indicate **overexposures**.

For such special cases, the exposure is best measured selectively, by including only a portion containing a representative sampling of the most important subject details. For example, the bride's face should be measured, and not the whiteness of her gown. And a landscape made with a wideangle lens should be metered pointing downward to exclude a good part of the bright sky.

When no such metering alternative is available – or the photographer simply has no time to

make specialized readings – a compensation factor of 2x or 4x can be used, opening or closing the lens aperture by one or two f-stops, or increasing or decreasing the exposure time. White snow under a clear sky with bright sunlight often calls for an exposure **increase** of 4x (or **plus two f-stops**) if subjects of normal reflectance are to be properly exposed. Similarly, a “normal” subject against a dark forest background may call for **decreasing** the exposure to prevent the effect of reading mainly the dark background, and thereby overexposing the important subject.

Positive color slide film possess far less exposure latitude, and their brightness recording ranges are much shorter than those of either b&w or color negative films.

Three golden rules are:

- 1) Expose color slide films for the highlights, and let the shadows fall where they may.
- 2) Expose color negative films for important middle-tone areas, and never fear overexposure.
- 3) Expose b&w films for the shadows, and develop for the highlights.





### Exposure metering tips

The two pictures above are very different, but they share a common problem: very bright backgrounds that might have led the meter to underexpose their important foreground areas. For the landscape, the solution was to aim the LEICA M 6 selective meter downward, so as to measure practically only the foreground area.

The portrait was metered by moving very close to the child, in order to take a reading from the face alone, then using this exposure for subsequent pictures made from a greater distance. Incidentally, you can take accurate LEICA M

6 meter readings from distances closer than the lens can focus.

In the Bavarian beer tent at right, bare light bulbs could easily have led to underexposure – even a silhouette – of the Kapellmeister. To avoid this, the lens was pointed toward the lower left-hand corner of this picture to obtain an accurate meter reading for the bandstand area.

This is the advantage of selective light-metering with the LEICA M 6: you measure what you want, and know what you're measuring.





When looking for the ideal picture area, the camera is usually panned, even for quick snapshots. At the same time, this helps the photographer to determine if there is sufficiently even distribution of dark and light details. A striking detail in the subject is also necessary for focusing. If this does not happen to be in the centre of an interesting picture area, the camera again has to be panned, whereby dark/light distribution can be checked at the same time. The two pictures above were taken in this way.

Left: Focusing and exposure measurement on the boy on the right in the left window – pan the camera back to desired picture area – no

change in exposure value – shoot. Right: Focusing and exposure measurement on the young lady in the left of the picture – pan back to the desired picture area – considerable change in exposure value, as now predominantly white details are being registered from the measuring field of the exposure meter – therefore exposure measurement is carried out again by pointing the camera downwards to the far left (part of the measuring field is even underneath the picture section) – back to correct picture area – shoot. On the bright beach of Acapulco the exposure value was determined by panning the camera to the right, and measuring outside the range of the subject



area. In this area there were reed huts, palm trees, deckchairs and people, i.e. an even distribution of light and dark details. If such substitute measurements are not possible, exposure measurement should be carried out on the light details, for example, the light sand on the beach or in the desert, the whitewashed walls in a Greek village or the snow on the run of a ski slope, and the value then corrected accordingly. Opening up the diaphragm by two stops corrects the exposure value for purely white details, i.e. multiplying the shutter speed by 4 (e.g.  $1/125$  sec. instead of  $1/500$  sec). For light-coloured details such as sand, one stop is sufficient or twice the shutter speed.



In sunny snowscapes the correct exposure for the areas of sunlight can be determined by measuring the shade. In this case no correction must be made.

For photos of spotlighted subjects, when many details of the subject are in the shadows, or for predominantly dark subjects, such as steam engines or black fields of lava, there are usually small portions of the picture area with a good distribution of light and dark details which can be measured using spot metering. In this picture taken at the ballet, the area for measurement was at the far right, partly outside the picture area. If there are no suitable areas, exposure measurement must be carried out on



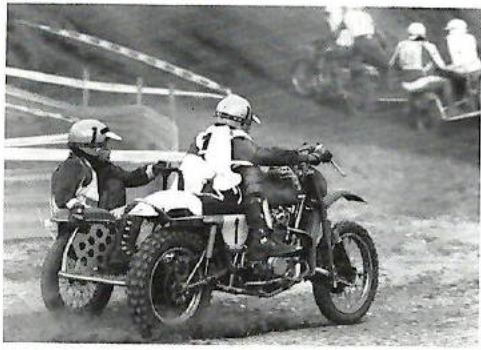
the dark details and a correction made, resulting in a shorter shutter speed. Stopping down by half a stop (in extreme cases a whole stop) is enough.

If there is a very great contrast between light and dark parts of the image, the exposure range of the films is not sufficient to register all the nuances in brightness of the subject, either in the "light" or in the "shade". The photographer can decide for himself where he wants the more detail. For example, a person can appear as a black silhouette (under-exposed) in front of a correctly exposed landscape, or correctly exposed in front of a "bleached" background (over-exposed). Measurement of

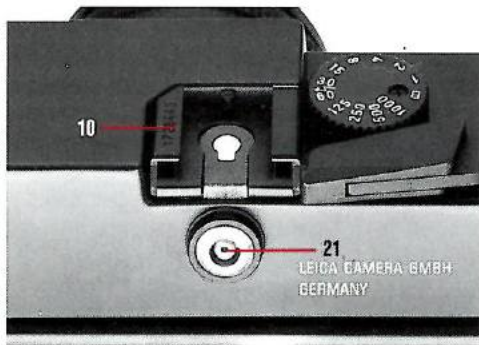


"light" and "shade" and the consequent exposure value usually leads to unsatisfactory results, because delicate differences in brightness are lost both in the light and the dark areas. The landscape photo was taken after measuring in the lower right part of the picture (shadow of the tree on the grass and the horse). For fast-moving subjects, there is often no time for exposure measurement. In such cases, exposure measurement is carried out beforehand. In this example, measurement was done in the top left-hand corner, as the tapes bordering the racetrack provided light and dark details.

Deliberate over- or under-exposure often en-



hances the character of a picture and can used as a good compositional aid. In this landscape photo, exposure measurement was done on the fir trees and mountain ridges on the left of the picture (without the sky) and the value was then reduced by two stops.



#### Use of older LEICA-M lenses

All LEICA-M lenses can be used without restriction. However, the exposure metering system does not function with the following:

HOLOGON 15 mm f8  
SUPER-ANGULON-M 21 mm f 4  
SUPER ANGULON-M 21 mm f 3.4  
ELMARIT-M 28 mm f 2.8  
up to Serial No. 2314921.

#### Flash synchronization

All currently available flash units can be connected to the LEICA M 6 via the internationally standardized "hot shoe" (10), and a "PC" cord socket (21). We recommend the use of modern thyristor-controlled electronic flash-units.

Electronic-flash units can be synchronized at "⚡" (1/50 sec.), or at all longer exposure times down to "B", when special effects are wanted. Two flash units can be connected by using both the PC socket and hotshoe.

Electronic flash		1 - ⚡ (1/50), B
Flashbulbs	<b>AG 3 B</b> Flashcubes <b>PF 1 B</b> <b>XM 1 B</b> <b>M 3</b> <b>PFC 4</b>	1 → 1/30, B

### Lens design

LEICA lenses all have a fixed ring with depth-of-field scale (15), a rotatable focusing ring (16) and an aperture-setting ring (17).



### Focusing ring

The focus ring (16) shows the distance set and, in combination with the scale (15), the depth-of-field range.

### Aperture ring

The aperture figures are internationally fixed. They are so designed that the amount of light reaching the film is always halved when one stops down from aperture to aperture. One stop corresponds to one setting on the shutter speed dial (9).

The aperture ring is click-stopped at each full stop (for most lenses also half stops) in a similar fashion to the shutter speed dial. After a

little practice, the apertures can also be set in the dark.



### Depth-of-field scale

The plane which is reproduced the sharpest is that on which the lens is focused. This greatest sharpness decreases gradually in front of and behind this plane so that a certain range exists within which the image is, to the eye, reproduced sharply. The depth-of-field is dependent upon the focus setting, the focal length of the lens and the aperture. Stopping down increases depth-of-field, widening the aperture decreases it. The depth-of-field scale indicates the range of sharpness at the set focus distance.

For example, using the SUMMILUX<sup>®</sup>-M 50 mm f 1.4 lens focused on 5 metres, the depth-

of-field at f 4 ranges from 4–8 metres approximately. Stopping down to f11, however, increases the range to 3–20 metres.



### **Lens hoods**

Each LEICA lens is supplied with an individually-designed lens hood. Some of them can be attached in the reversed position. Telephoto lenses have built-in hoods which pull out telescopically.

The lens hoods should always be used as they provide, on the one hand, shade from side lighting or glare, and, on the other, protection against rain drops or finger marks.



### **Bags and cases**

The ever-ready case (Order No. 14 505) is recommended for use of the LEICA M 6 with one lens from 21–50 mm (apart from the 50 mm f 1). The front part is removable if the button on the rear is pushed upwards. In addition, the Combi Bag (Order No. 14 840) is available for a camera plus up to three lenses, whilst the Universal Bag (Order No. 14 827) accommodates a camera with up to five lenses.

### Filters

All LEICA M lenses have standard-size filter threads. The exception is the SUMMILUX-M 35 mm f 1.4 which accepts Series 7 filters inserted into the unscrewable lens hood.

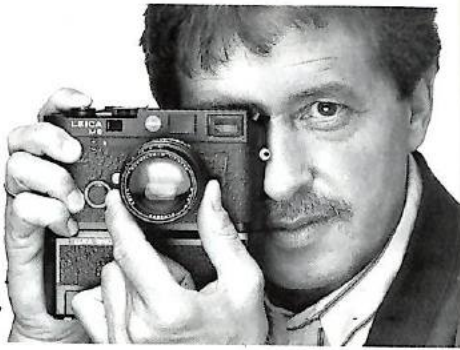
When metering the exposure through the lens, any reduction in light caused by a filter is automatically taken into account. However, films have different sensitivities in the individual spectral regions, meaning that the more extreme filters could cause deviations from the correct exposure. For example, orange filters generally need one stop more exposure; red, on average, two stops more. A universally valid correction factor is not possible as the red sensitivity of black-and-white films varies considerably.

### Eyesight correction lenses

For optimal matching of the viewfinder to the eye, correction lenses in the following strengths are available (dioptries, spherical):

+ 0.5, + 1, + 1.5, + 2, + 3

- 0.5, - 1, - 1.5, - 2, - 3



### LEICA WINDER M

Either of the LEICA WINDER M 4-P or M 4-2 (from Serial No. 10350) can be attached to the LEICA M 6 for automatic film transport and resetting of the shutter, for single exposures and series up to three frames per second. The winder is mounted on the camera in place of the base plate, and is suitable for all shutter speeds from 1 to  $\frac{1}{1000}$  sec., including B. When the winder is switched off or if the batteries are dead, the film can still be wound on manually as normal. Remote release is possible via the cable release connection.

#### Care of the LEICA M 6 and lenses

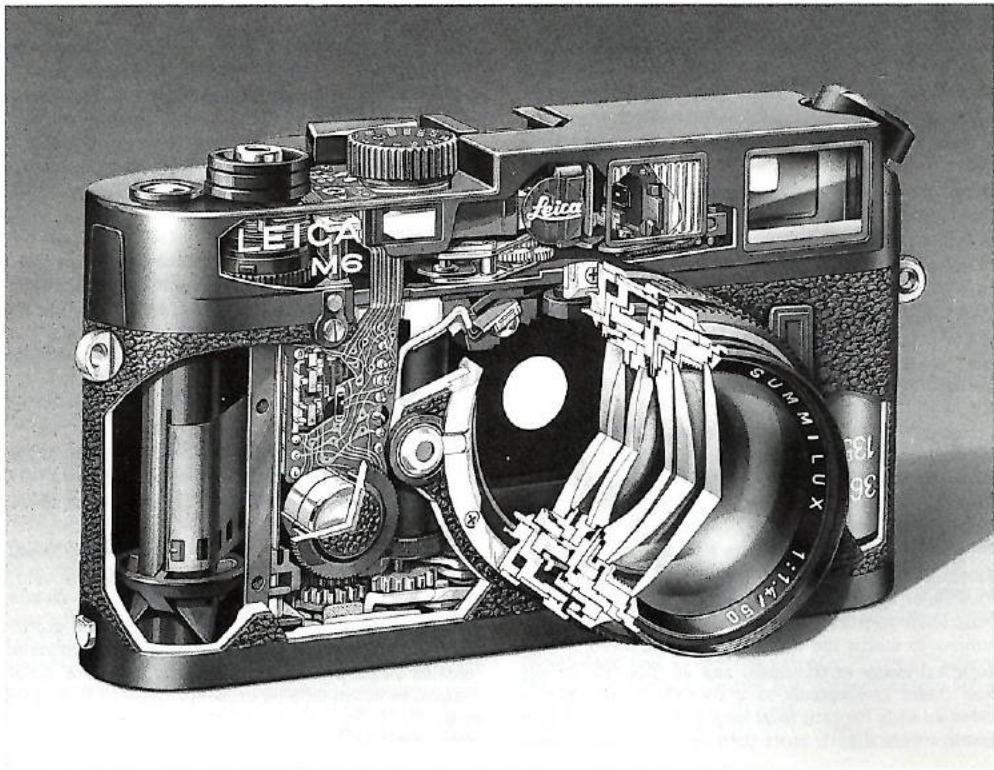
A lens works as a burning glass when it is aimed at the sun. I. e. if the sun shines directly through the lens onto the shutter it burns a hole into the shutter curtain. The camera inside must, therefore, be protected by using the lens cap, keeping the camera in its case, and leaving it in the shade. Every lens has, in addition to its name, a "personal" serial number. This, as well as the camera number which is engraved on the hotshoe of the LEICA M 6, should be noted down in case the camera is lost or stolen.

Dust should be removed from the outer lens elements using a soft-haired brush or, with care, a soft, clean, dry cotton cloth. The special cleaning cloths for spectacles are not recommended, as they are impregnated with chemicals which could attack optical glass (optical glass for high-performance lenses has a different composition to glass for spectacles).

In poor condition, e. g. at the seaside, in tropical regions etc., a colourless UVa filter can be used to protect the front lens element against salt water spray, sand and similar. However, any additional glass surface placed before the lens (i. e. a filter) can cause undesirable flare or reflections, in particular when shooting

against the light or in situations with great contrast. The lens hood is equally good protection against fingermarks and rain.

Alphabetical Index	Page		Page
Aperture setting ring .....	35	Filter .....	38
Bags and cases .....	37	Flash synchronisation .....	34
Battery .....	16	Focusing .....	35
Bright-line frame selector lever .....	12	Holding the camera .....	9
Carrying strap .....	4	Lens hoods .....	37
Correction lenses .....	38	Metering fields .....	22
Customer Service .....	44	Metering diagram .....	24
Depth-of-field scale .....	36	M-Lenses .....	35
Exposure metering .....	19	- construction .....	35
- general hints on exposure		- interchangeable lenses .....	44
metering .....	26	- use of existing lenses .....	34
- meter sensitivity .....	21	Rangefinder .....	14
- switching on the exposure meter ..	20	Range-viewfinder .....	10
- switching off the exposure meter ..	21	Rapid-wind lever .....	6
- tips .....	28	Shutter release .....	6
- very low light levels .....	21	Shutter-speed/aperture combination .....	20
Film .....	6	Shutter-speed dial .....	18
- inserting the film .....	6	Technical data .....	42
- rewinding and removing .....	8	Tips on the care of camera and lenses ..	39
- setting film speed .....	18	Winder M .....	38



## Technical data

**Camera type:** 35 mm rangefinder camera with mechanical shutter and selective through-the-lens exposure metering.

**Lens attachment:** LEICA M bayonet.

**Lenses:** 12 LEICA M lenses with focal lengths from 21 mm to 135 mm.

**Bright-line frame viewfinder:** The subject is not viewed through the camera lens.

**Viewfinder magnification:** 0.72 x for all lenses.

**Viewfinder eyepiece:** Adjusted for -0.5 diopters, provision for screw-in correction lenses.

**Viewfinder** with six bright-line frames for various focal lengths, projected into the image in pairs. Rangefinding scale in centre of viewfinder image. When the exposure meter is switched on, two red triangular LEDs indicate the shutter/aperture balance.

**Framing** by projection of pairs of bright-line frames into viewfinder: 28 mm and 90 mm, 35 mm and 135 mm, 50 mm and 75 mm. Automatic selection of correct frame for lens in use.

**Manual frame selection** (in pairs) without change of lens by three-position lever next to the lens attachment.

**Parallax compensation:** Automatic compensation of viewfinder/lens parallax, coupled to focusing drive; the bright-line viewfinder frame automatically frames the subject to match the image in the lens.

**Identical image in viewfinder and on film:** The bright-line frame corresponds to a framed 35 mm x 23 mm close-up slide for each focal length. At infinity, the film frame covers slightly more than the bright-line frame.

**Wide-base rangefinder:** Bright-field split-image and double-image rangefinder in centre of viewfinder image.

**49.9 mm effective measuring base:** Mechanical measuring base 69.25 mm x 0.72 x viewfinder magnification.

**Partly silvered viewfinder window:** To improve visibility of the LEDs against a bright subject background, the lower edge of the viewfinder window is silvered.

**Exposure metering method:** Selective through-the-lens metering at working aperture.

**Exposure-meter principle:** Measurement of light reflected by 12 mm diameter white circular dot in centre of front shutter blind; area about 13 % of negative size.

**Orientation of exposure-meter dot in viewfinder:** Dot diameter about  $\frac{2}{3}$  length of shorter side of viewfinder frame.

**Photocell:** Silicon photodiode behind condenser lens at top left behind bayonet fitting of camera.

**Spectral range:** Modified by filter in front of photocell to match typical spectral range of human eye.

**Sensitivity of exposure range:** 0.125 cd/m<sup>2</sup> to 125 000 cd/m<sup>2</sup> at f/1.

**Low-light warning:** Viewfinder LEDs are extinguished.

**Working range:** At ISO ISO 100/21<sup>o</sup>, exposure value EV 0 to EV 20, i. e. 1 s at f/1 to  $\frac{1}{1000}$  at f/32.

**Switch on exposure meter** by light touch on shutter release when shutter is cocked. Release; exposure meter remains switched on for about 10 s. Exposure meter remains switched off after exposure and with shutter set to B.

**Exposure-meter display** by shutter/aperture balance in viewfinder. When shutter and aperture match the exposure meter, e. e. when selected exposure is correct, two red triangular LEDs light simultaneously and equally brightly.

**Aperture settings** by ring at front of lens, click-stops at full and half-stop settings.

**Shutter settings:** Setting knob on top cover of camera. Click-stop settings, read from above: B, 1s,  $\frac{1}{2}$ s,  $\frac{1}{4}$ s,  $\frac{1}{8}$ s,  $\frac{1}{15}$ s,  $\frac{1}{30}$ s,  $\frac{1}{60}$ s,  $\frac{1}{120}$ s,  $\frac{1}{250}$ s,  $\frac{1}{500}$ s,  $\frac{1}{1000}$ s ( $\frac{1}{50}$ s for electronic flash synchronization); intermediate settings not permissible.

**Setting to correct shutter/aperture combination:** Switch on exposure meter. Turn shutter knob and/or aperture ring until both LEDs in viewfinder light with equal brightness. If only one triangular LED of shutter/aperture balance lights, this indicates over- or underexposure and the direction in which to turn the aperture ring for correct exposure.

**Film-speed range:** ISO 6/9° to ISO 6400/39°.

**Power supply to exposure meter:** Two silver oxide button cells, IEC type SR44 (11.6 mm OD, height 5.4 mm) or  $\frac{1}{3}$ N lithium battery (11.6 mm OD, height 10.8 mm).

**Battery check:** If battery voltages is inadequate for accurate exposure metering, the two LEDs do not light.

**Battery life:** With camera continually switched on, i. e. when shutter release is pressed, a set of fresh batteries lasts about 20 hours; at 15 s per reading, this suffices for about 4800 exposures (about 130 films of 36 exposures).

**Shutter:** Rubberized-cloth horizontal focal-plane shutter. Mechanically controlled speeds from 1s to  $\frac{1}{1000}$ s, B for time exposures of any duration. Practically inaudible.

**Electronic flash synchronization:** Standard X contact socket for bulb and electronic flash units at rear of camera. Central X hot-shoe contact. Both contacts can be used simultaneously.

**Shutter release:** Release button with standard thread for cable release. Two-stage, switches on exposure meter (shutter/aperture balance lights in viewfinder) and releases shutter.

**Film transport:** Angled quick-wind lever with movable handle. 120° movement transports film and cocks shutter, interval movement possible. "Ready" position also suitable for left-eye viewing. Motorized film transport with add-on LEICA M Winder.

**Exposure counter** with magnifying display in top panel of camera. Counts forward from -2 to 40, resets automatically on removal of base panel.

**Rewind lever:** Release lever in front, sloped hinge-out rewind lever at top left of camera.

**Film-plane mark** on top panel.

**Camera body:** Closed camera body of die-cast aluminium, hinged back. Top panel 0.8 mm die-cast zinc, bottom panel 0.8 mm brass. Frame selector next to lens mount. Eyelets at sides for carrying strap.  $\frac{1}{4}$ " A thread for tripod screw. Mechanical contact for LEICA M Winder. Black or silver chromium and titanium finish. LEICA M6 in titanium finish: Cover plate made of 0.8 mm brass. Housing covered with genuine leather (Emu-structure).

**Dimensions and weight (excl. lens):** 77 mm (3") high, 138 mm (5 $\frac{1}{2}$ ") long, 38 mm (1 $\frac{1}{2}$ ") deep; weight 560 g (1 lb 4 oz).

**LEICA M lenses**

The LEICA M system offers a basis for rapid, inconspicuous photography, in poor light such as in church or at concerts. The lens range reaches from 21 to 135 mm with maximum apertures of f 1.4 and even f 1.

**Enlargers**

When you use a superb camera like the LEICA M 6, the reproduction equipment should match the camera's quality and performance. The LEICA FOCOMAT® V 35 autofocus enlarger is the perfect complement to your LEICA M 6.

**Projectors**

For your LEICA M6 slides there is a comprehensive range of versatile, easy-to-use projectors, with a large choice of options. The PRADOVIT P 2002 and the LEICA P 150, LEICA P 155, and LEICA P 255 offer total user convenience and a versatile range of optional modules.

Superb optical performance in combination with traditional Leica precision mechanics are the common denominator of all LEICA projectors.

**Binoculars**

Superb optics are the most outstanding single feature of all LEICA binoculars. They are made of the same high-grade optical glass as the world-famous LEICA lenses. Their brilliant optical performance and exceptional resolution ensure that you obtain a vivid three-dimensional image even in poor light.

**Customer Service**

For the maintenance and, in the unlikely case of damage, repairs to your lens, please consult the Customer Service of Leica Camera GmbH or the Customer Service of any national Leica Camera agency (see warranty card for address list). Ask your authorized dealer or specialist for advice.

® = Registered Trademark  
Illustrations, descriptions, and technical data are not binding and may be changed without notice.



Trademark of  
The Leica Camera Group

Leica Camera GmbH, Oskar-Barnack-Straße 11, D-35606 Solms  
Telefon 06442/208-0, Telefax 06442/208-333, Telex 482 610 leica d  
engl. 930 275/dt. 930 274/frz. 930 276 Printed in Germany 1/94/AX/L