Leitz WETZLAR

Symbol of Optical Precision

Read LEICA-Fotografie,
the up-to-date journal
on 35mm technique.

ERNST LEITZ GMBH WETZLAR GERMANY
Subsidiary: Ernst Leitz (Canada) Ltd., Midland, Ontario

List 110-72b/Engl.

Printed in Germany
VI/69/DY/L

INSTRUCTIONS

LEICA M 4

Leitz WETZLAR

110-72b/Engl.

You are the owner of a LEICA®

We hope that you will obtain as much enjoyment from it as all the many LEICA fans in every country of the globe.

As a LEICA man you have the benefit of a universal photographic system, which also covers the technical and scientific field. In its widest sense, it includes the well-known LEITZ enlargers and LEITZ miniature projectors. The projected image, huge, luminous, and realistic, reveals the full beauty of your colour photographs, and never fails to fascinate you and your friends. May your LEICA be a constant source of pleasure to you.

Yours sincerely
ERNST LEITZ GmbH, 633 WETZLAR
Germany

Contents

1 Automatic frame counter
2 Shutter release button
3 Rapid transport lever
4 Film rewind release
5 Selftimer
6 Shutter speed dial
7 Rangefinder window
8 Lens bayonet lock
9 Red locating knob for lens insertion
10 Accessory shoe
11 Depth-of-field scale
12 Focusing control
13 Distance scale
14 Aperture scale

15 Window illuminating the bright-line frames
16 Field-of-view selector
17 Viewfinder field window
18 Folding rewind crank
19 Carrying-strap eyelets
20 Measuring-viewfinder eyepiece
21 Baseplate lock
22 Electronic-flash synchro contact
23 Flashbulb synchro contact
24 Film indicator
25 ¼" tripod thread

How to hold the LEICA

For steady three-point support hold your camera with your right hand, your index finger resting on the release button, your thumb on the rapid-transport lever. The left hand either supports the lens from below, ready for quick refocusing, or it grasps the camera. In addition press the camera against your forehead.

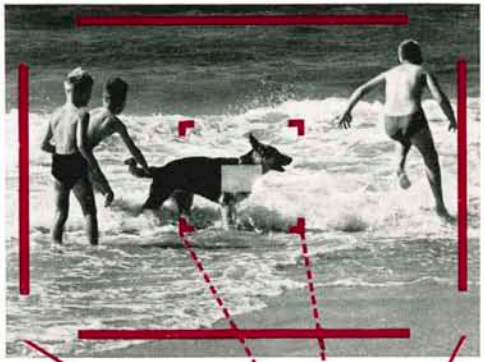
For upright views all you have to do is to rotate the camera through 90°. The position of your hands is the same as for horizontal views. You can also rotate the camera in the opposite direction, when you must use your thumb to release the shutter.

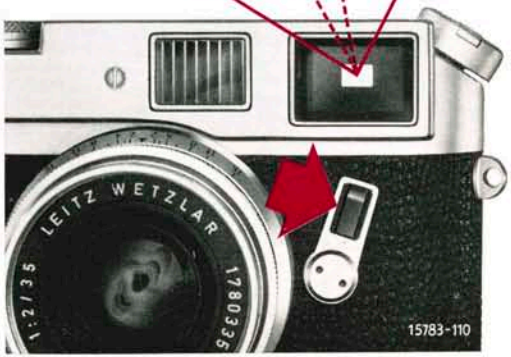
The bright-line measuring viewfinder

The bright-line measuring viewfinder of the LEICA M4 has been designed to combine the functions of a coupled rangefinder and of a viewfinder of outstanding quality. Whatever you see within the bright frame will appear on your exposed film. The bright-line frame is coupled with the rangefinder so that the parallax – the difference between the lens axis and the viewfinder axis – is automatically compensated.

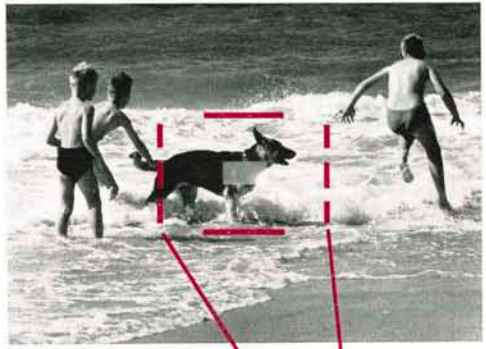
The measuring field, brighter than the surronding field, is located in the centre of the viewfinder field. All the lenses of 21–135mm focal length are coupled with the rangefinder on insertion in the LEICA. When lenses of 35, 50, 90, and 135mm focal length are inserted, the appropriate bright-line frame will automatically appear in the viewfinder image, the 35mm and 135mm frames always together.

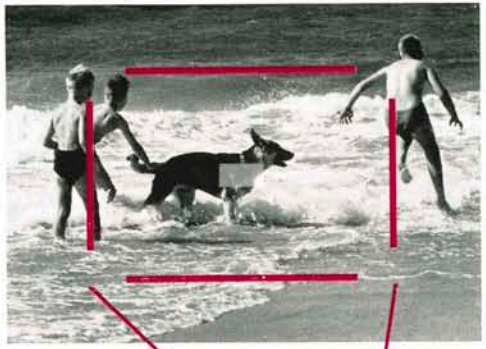
The field-of-view selector

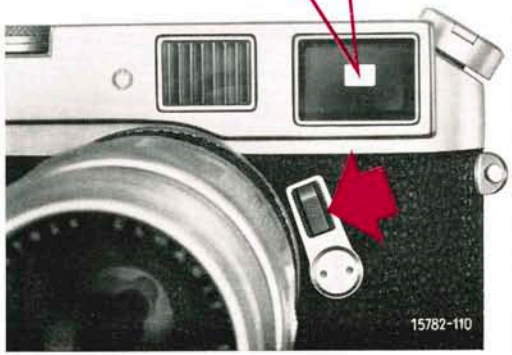


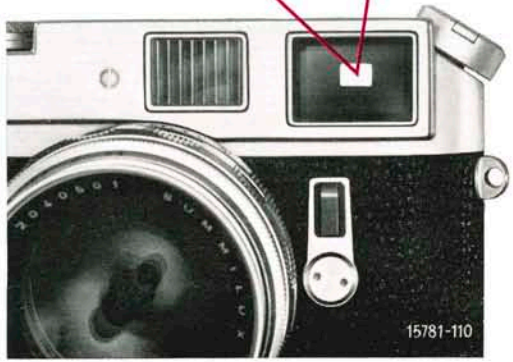


The field-of-view selector (16) functions as a universal viewfinder; it enables the LEICA owner at any time to reflect into the viewfinder field the frames outlining the fields-of-view other than that of the lens that happens to be in the camera. Lever outward: field-of-view frames for 35 and 135mm focal lengths. Lever inward: field-of-view frame for the 90mm focal length. Lever in the middle position: field of view of the 50mm focal length.









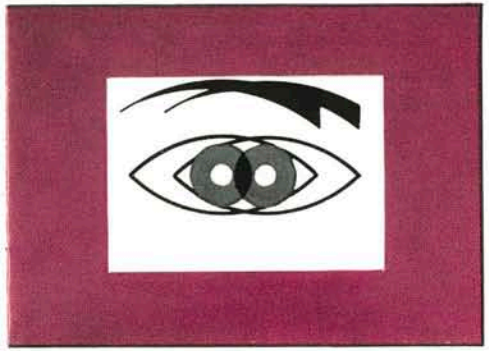
The rangefinder

The measuring field of the rangefinder appears in the centre of the viewfinder as a bright, sharply outlined oblong. If you block the large field window (17) of the viewfinder, only the reflected bright-line frame and the measuring field remain visible. Focusing can be carried out according to the coincidence or to the split-image method.

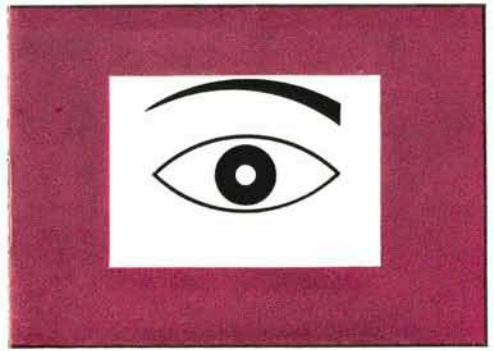
Coincidence (double image) focusing: in portraiture, for instance, focus on the highlight in the sitter's eye. Observe the subject through the viewfinder and rotate the lens* until the double contours in the measuring field coincide.

Split-image focusing: Sight an edge or any other clearcut line; if you find that this line is offset sideways as it enters the measuring field, rotate the lens* until the line becomes continuous as it passes from the viewfinder- into the measuring field and out again. This method is to be preferred because of its superior accuracy.

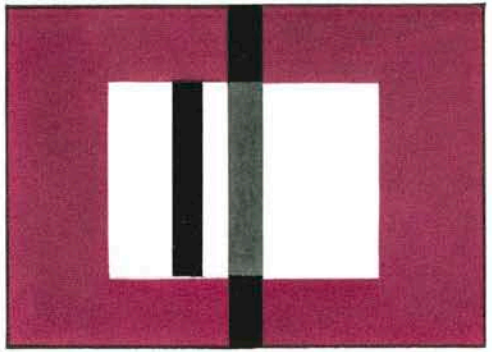
* A few short-focal-length LEICA lenses engage at the infinity setting, and the lock (12) must be depressed to permit focusing on shorter distances.
Pull out collapsible lenses and lock them in position.



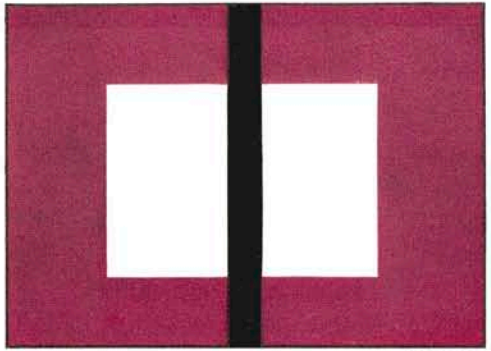
Double image = unsharp



Coincident image = sharp



Offset line = unsharp



Continuous line = sharp

25979-110

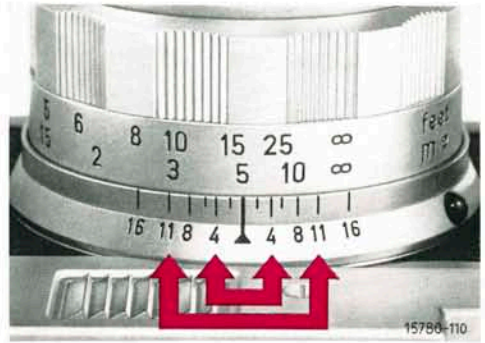
15777-110

The rapid winding lever (3) at each full lever movement transports the film through one frame, winds the shutter and advances the frame counter to the next number. The film can also be transported by several short strokes of the transport lever.

The release button (2) has a thread for a cable release (Code No. 14067). It should be pressed smoothly, without a jerk, until its soft click indicates that the shutter is released.

The shutter speed dial (6) controls the shutter speed and can be set either before or after the shutter is wound. It clicks home at every engraved speed value and except for the range between 8 and 15 any intermediate speeds can be set and are fully effective. At the "B" setting the shutter remains open as long as the release button is pressed. The dial must be set at the symbol ⚡ = $^1/_{50}$ sec. when electronic flash is used.

The LEICA lenses have a fixed ring with depth-of-field scale (11), a rotatable ring for setting the focusing distance (13) and an iris diaphragm ring (14).



15786-110

The depth-of-field scale

The lens reproduces at maximum sharpness the plane, parallel to the film, on which it is focused. This maximum sharpness falls off gradually towards the front and rear; within a certain depth, then, the subject will appear sharp. This depth of field depends on the camera distance, the focal length of the lens, and the lens stop set. Stopping down the lens increases, opening it up decreases the depth of field.

The depth-of-field scale indicates the depth-of-field zone for the object distance on which the lens is focused.
With the 50mm SUMMICRON f/2 focused on 5m (16ft, 8in), sharpness at f/4 extends from 4m to about 8m (13ft. 4in to about 26ft. 8in). However, if you stop down to f/11 at the same focusing distance, sharpness will extend from 3m to about 20m (10ft. to about 67ft.).

15790-110

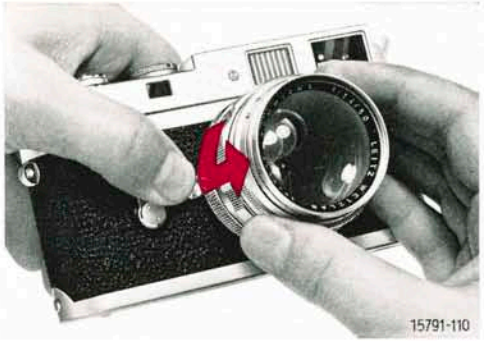
The distance scale

The distance scale (13) indicates the distance on which the lens is set, and, in connection with the depth-of-field scale (11), the extent of the depth of field. The distance is also important to the calculation of the guide number during the use of flash equipment.

The aperture scale

The aperture scale is internationally laid down; the values have been chosen so that the quantity of light reaching the film is halved every time the lens is stopped down one step. One aperture step is equivalent to one step on the shutter speed dial (6) regarding the adjustment of the light quantity to which the film is exposed.

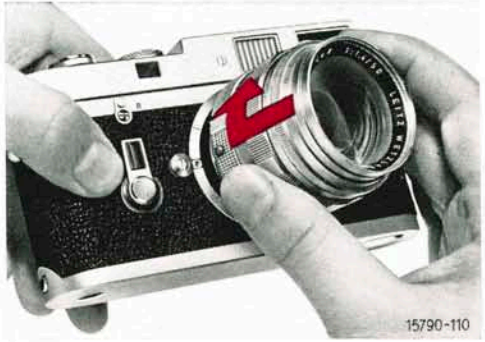
Like the shutter speed dial, the lens diaphragm ring clicks into position opposite each number (some diaphragm rings also at half values). This will enable you, after some practice, to identify the setting of the diaphragm even in the dark.



15791-110

Taking out the lens

Grip the rear, fixed ring (11) of the lens. (Lock the short-focal-length lenses in the infinity setting). Depress arresting button (8), rotate the lens to the left and take it out.

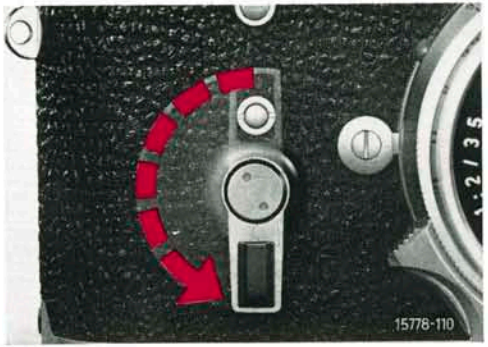


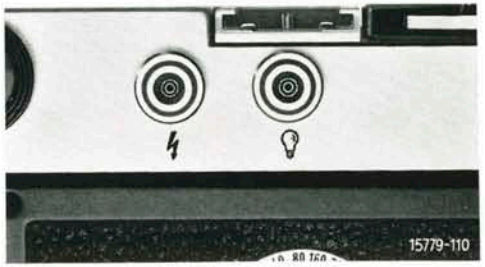
15790-110

Inserting the lens

The red knob on the lens mount (9) must face the red dot on the camera body. After a short turn to the right the lens will engage in the bayonet mount with a click. Change lenses in the shadow (e.g. of your own body).
Remove the lens cap before you take pictures.

The collapsible lenses
Some LEICA lenses can be unlocked by a short left turn and pushed into the camera body. Pull out the lens barrel fully and lock it in position by turning it as far as possible to the right before taking photographs.





Self-timer

Wind the shutter and rotate the lever of the delayed-action mechanism (5) downwards. (The shutter can also be wound after the delayed-action mechanism). The release button of the delayed-action mechanism is now exposed for operation. The delay is 8–10 sec. The shutter is released shortly before the lever returns to its initial position. The delayed-action mechanism operates with all shutter speeds.

Flash synchronization

All flash units on the market with standard flash plugs (coaxial plugs) can be used with the LEICA M4. The contact bushes, marked (23) for flashbulb and (22) for electronic flash connection, are in the rear of the camera. The table on the facing page informs you about the various possibilities. Both types of flash can be used simultaneously.

Flash table

Electronic flash			B → (= 1/50)
Flashbulbs	AG 1 Flash Cubes M 2		B → 1/30
	XM 1 PF 1		B → 1/60
	PF 5		B → 1/60
	GE 5 25		B → 1/500
	M 3		B → 1/125

= Contact for electronic flash

= Contact for flashbulbs

Inserting the film

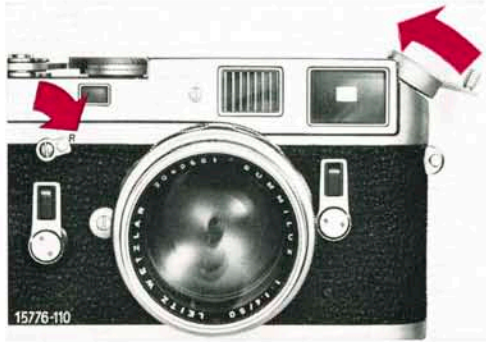
First make sure, by turning the rewind crank (18) in the direction of the arrow, that the camera is empty. If you feel any resistance, proceed as described on the following page.

Take the camera in your left hand, baseplate facing you. Pull out the toggle in the baseplate (21), turn it to the left, and remove the baseplate. The film lead must be trimmed like that of all films sold in cartridges. Take the cartridge or cassette in your right hand and insert it about halfway into the space provided for it in the camera, grip the film lead, and pull it into the take-up spool*. Push film cartridge and lead into the camera with the palm of your hand. Hinge the baseplate on to the lug at the side of the camera, close it, and lock it by means of the toggle (21). The baseplate is designed so that after it is fixed on the camera it adjusts the film in its correct position. Transport the film through two frames and release the shutter. Tension the film after the second shutter wind by rotating the rewind crank (18). The film is transported correctly if the rewind crank (18) turns against the direction of the arrow during film transport. After the third shutter wind the automatic frame counter (1) points at 1 and the camera is ready for action.

* Only at temperatures below freezing must the film be inserted in the LEICA according to the diagrammatic representation, i.e. the film lead must be caught by only one slot of the take-up spool; any portion protruding through the second slot beyond the take-up spool is liable to break off at low temperatures. In normal conditions the film lead can be threaded through the take-up spool until it touches the wall of the housing.

Removing the film

After the exposure of the last frame the rapid transport lever (3) can no longer be moved. The film must now be rewound. Move the lever (4) to "R". Unfold the rewind crank (18) and rotate it in the direction of the arrow until the film is wound back into the cassette. Open baseplate and remove the film cassette.



If the film is not securely attached to the cartridge spool, e.g. when bulk film is used, the film is liable to tear off, when it will have to be removed from the take-up spool.
Remove the baseplate of the camera in a **completely dark room.** Hold the camera with the open bottom facing downwards. Actuate the rapid transport lever slowly several times until the film protrudes from the camera far enough to be gripped by hand and taken out. If necessary, tap the camera against your hand slightly to assist this movement.

LEICA lenses act like burning glasses if the LEICA lies with the lens face upwards in full sunlight. You must therefore protect the housing and the shutter by putting on the lens cap or keeping the camera in a case, or in the shade.

The front lens mount of each lens has, in addition to its type, its "personal" serial number engraved on it. You should make a note of this number as well as of the serial number of the camera engraved on the top of the LEICA. This can be very helpful indeed in case of loss or theft.

A brownish-purple sheen characterizes the modern "coated" LEICA lenses. These surface films, which reduce reflection, increase the brightness and brilliance of the image extraordinarily. The external anti-reflection coatings are wiperesistant.

Dust should be removed with a soft sable brush, a piece of cotton cloth (e.g. a handkerchief) washed several times, or lens tissue. Special cleaning cloths, such as are used for the cleaning of spectacles, are not recommended, as they are chemically impregnated and might attack the lens surfaces (glass used for spectacles has a composition different from that of optical glass for high-quality lenses).

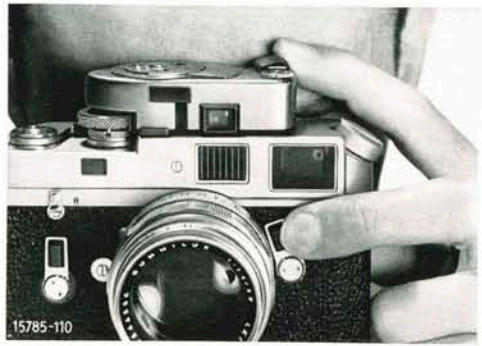
A colourless UVa filter can be left permanently on the lens, where it will protect the front element from external influences, e.g. of sand or sea water spray on the beach.

The lens hood, too, protects the lens from accidental finger marks and raindrops.

Protect your precious lenses with the appropriate lens caps.

The LEICA system

The LEICAMETER® MR exposure meter can be coupled with the LEICA M4 for



aimed exposure measurement. The clearly outlined measuring field of the LEICAMETER MR corresponds to the picture area of the 90mm LEICA lenses. Independent of the lens in the camera it can be reflected into the field of view with the field-of-view selector (16) at any time.
See also list No. 12–36.

15801-110

Interchangeable lenses

Besides the lenses of 35, 50, 90, and 135mm focal lengths the LEICA owner has a whole range of further interchangeable lenses of shorter and longer focal lengths at his command. The optical units of the 90 and 135mm lenses (except the 90mm TELE-®ELMARIT and the collapsible 90mm ELMAR®) can be unscrewed and used for groundglass screen focusing with the VISOFLEX II/III and on the Focusing Bellows II.

Detailed information about the LEICA lenses can be obtained from list 110–74.

15789-160

15787-160

VISOFLEX

The long-focal-length telephoto lenses of 200mm focal length and more, the 65mm ELMAR f/3.5, and the optical units of the 90mm and 135mm lenses are used in conjunction with the groundglass screen of the VISOFLEX® attachment. Here as in macrophotography a groundglass screen offers genuine advantages.
Further details are contained in our list 160–3.

The focusing bellows

The Focusing Bellows II permits the use of almost all the LEICA lenses. High magnifications are possible with the 35 and 50mm lenses, with the 90mm lenses the reproduction range from ∞ to 1:1 is obtained, and with the 135mm lenses the continuous focusing range from ∞ to 1:1.5.
Our list No. 160–1 contains further information.

15788-160

15614-110

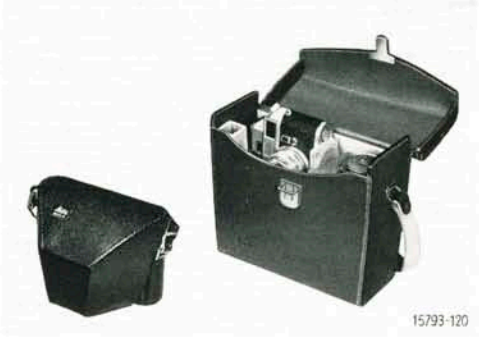
Close-up focusing devices

The LEICA near-focusing device for the 1:1, 1:1.5, 1:2, and 1:3 (left) reproduction scales is a versatile copying stand – small, handy, robust, and precise. All 50mm lenses can be used.
The so-called spider legs (right) covers quarto, octavo and postcard size, corresponding to the reproduction ratios 1:9, 1:6, and 1:4 respectively. The 50mm ELMAR f/2.8 and the lens unit of the 50mm SUMMICRON® f/2 can be used.
For further details please consult our list No. 160–5.

The TELEVIT rapid focusing device

The TELEVIT® rapid focusing device is specially designed for the use of the 400mm and 560mm TELYT® f/5.6 lenses. The lens unit of the 280mm TELYT f/4.8, too, can be used on the TELEVIT.
Please ask for our special list No. 110–69.

15786-120



15793-120

Lens hoods

Various lens hoods of functional design are available for the range of LEICA lenses. Some of them can be reversed on the lens. To the long-focal-length lenses the lens hoods are permanently attached and can be extended like a telescope. The camera should never be used without a lens hood, which offers effective protection against stray light and flare, as well as against rain drops and finger marks.

Camera cases

For the LEICA with standard lens the ever-ready case (Code No. 14534) is recommended. In addition, combination cases are available for extensive photographic outfits. For further details see List No. 11–38.

11267c-170

Enlargers

A high-quality camera such as the LEICA calls for an enlarger of matching performance if this quality is not to be wasted. For the last twenty years LEITZ have offered well-tried top-quality models with automatic focusing, the 35mm-only FOCOMAT® Ic enlarger, and the FOCOMAT IIc accommodating all film formats from 12 x 17mm to 6 x 9cm.

For detailed information please consult our Lists No. 170–2 and 170–9.

15093b-310

Projectors

A large selection of projectors is available depending on preference and purposes. They are extremely convenient to operate and can be adapted to a versatile range of uses. The most outstanding common characteristic of all LEITZ projectors is their unsurpassed optical performance coupled with traditional LEITZ precision. Please ask for descriptive literature.

Leica Information Service

If you are interested in information about technical novelties in the LEICA system, please complete the coupon on the reverse of this page, paste it on a postcard, and forward it to the LEITZ agency in your country, or direct to:

Ernst Leitz GmbH, Information Service
6330 Wetzlar · Postfach 210/211

Name ..... Surname .....

Address .....

Profession ..... Age .....

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I am the owner of LEICA M 4 No. ..... and the following lenses:

I am the owner of the following LEITZ cameras:

I have been interested in photography since .....

I use my LEICA ..... % professionally for ..... photography.

Favourite non-professional subjects

.....

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Our products are manufactured to standards of especially high quality and are checked by experienced specialists at the various stages of manufacture. They are covered by the International LEITZ Warranty for perfect quality and expert processing of the raw materials used, for accurate assembly of all components, and for the functional reliability of the design. A warranty card with the serial number of the camera is supplied with every LEICA.

LEITZ Service

If your LEICA should ever be in need of repair, please contact either your photo dealer, this company, the LEITZ agents in your country, or the nearest LEITZ authorized service centre. Please enclose the Service Card completed by your photo dealer.
A list of LEITZ agents and authorized service centres is supplied with every LEICA camera.

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