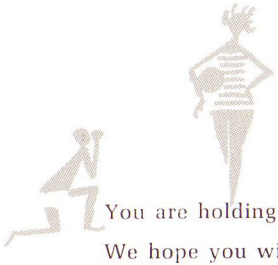
WILSONWERKS ARCHIVES

E. LEITZ, INC. 468 FOURTH AVENUE
NEW YORK 16, N. Y.

THE Leica M 2

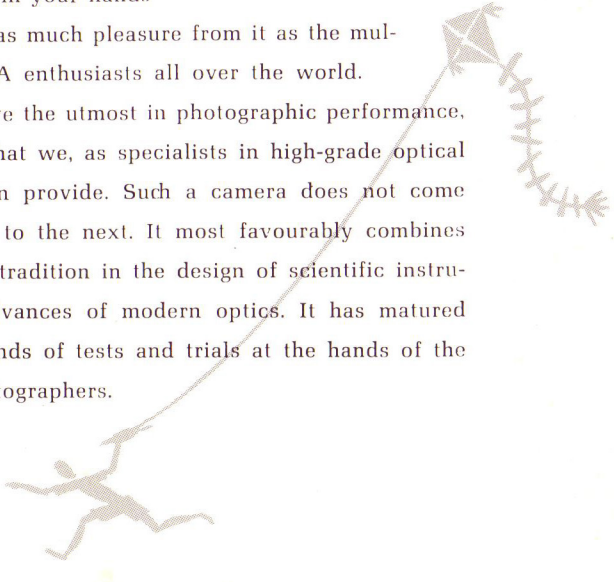
ADVANCE INSTRUCTION BOOK



You are holding a LEICA in your hands –

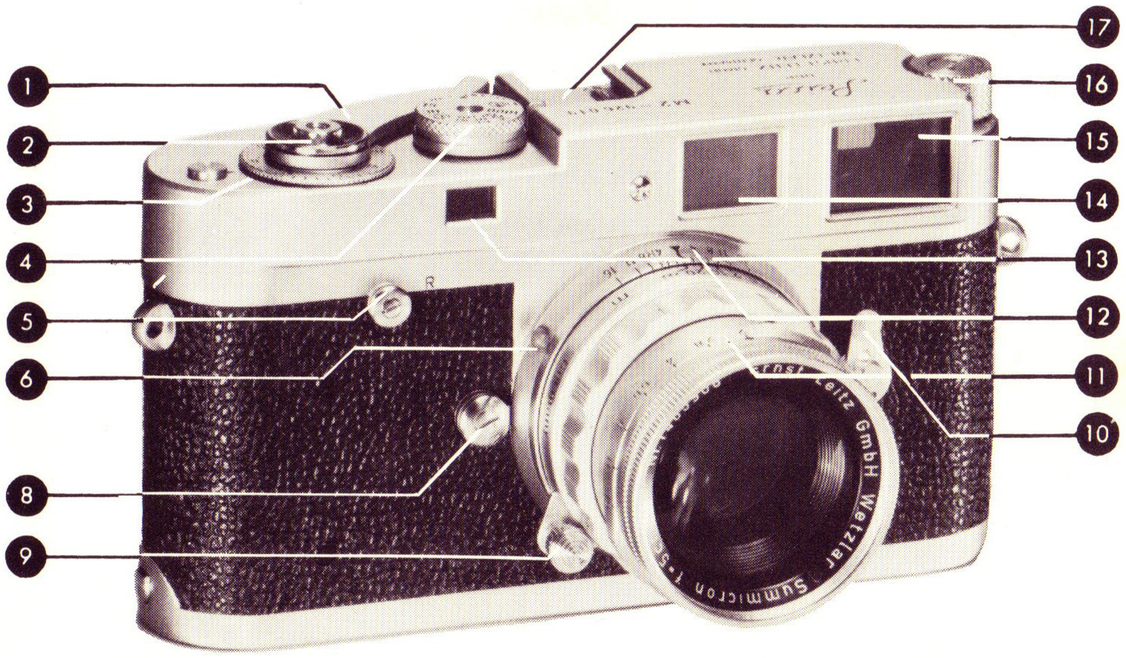
We hope you will derive as much pleasure from it as the multitude of confirmed LEICA enthusiasts all over the world.

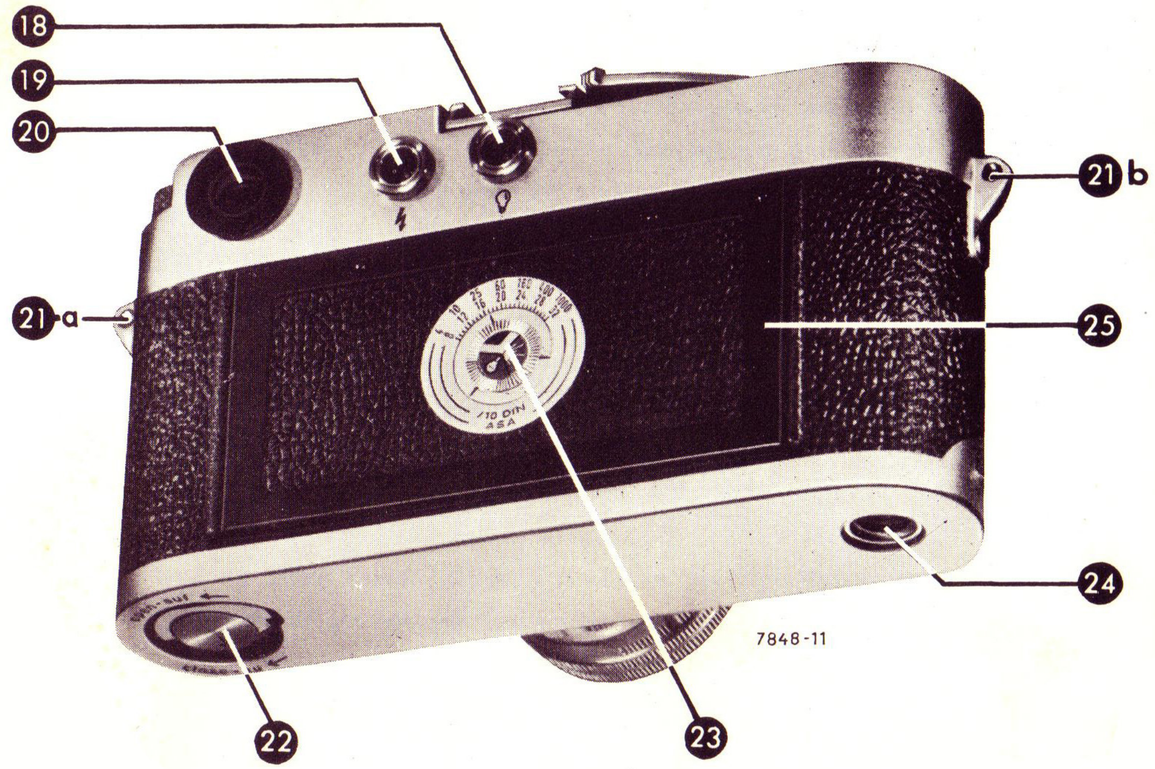
In the LEICA M 2 you have the utmost in photographic performance, speed, and convenience that we, as specialists in high-grade optical precision instruments, can provide. Such a camera does not come into being from one day to the next. It most favourably combines the experience of a long tradition in the design of scientific instruments with the latest advances of modern optics. It has matured through the many thousands of tests and trials at the hands of the elite of international photographers.



You will see for yourself the scope and precision of the LEICA, and how in many years' time it will still be as exact and reliable as it is now.

As a LEICA owner you have at your disposal a universal system of photographic equipment which covers even scientific and technical photography. In its wider sense, this system also includes the LEITZ enlargers and the LEITZ PRADO miniature projectors. And the scope of the projected picture is rarely utilized to its full extent. For your pictures, especially your colour shots, will unfold their full beauty only when you see them several feet large on a screen. We hope that your LEICA will always help you to experience afresh the thrill of their brilliant realism.





1 Film transport and shutter tensioning lever
2 Shutter release button
3 Film counter
4 Shutter speed dial
5 Release button for rewinding the film
6 Red dot on bayonet mount of lens
8 Button of bayonet lock
9 Lens focusing lever
10 Selector lever for viewfinder
11 Aperture scale of lens
12 Depth of field scale
13 Rangefinder window
14 Illuminating window for finder frames
15 Viewfinder window
16 Rewind knob
17 Accessory shoe
18 Flash socket for flash bulbs
19 Flash socket for electronic flash
20 Finder eyepiece
21 a and b: Eyelets for carrying strap
22 Base plate locking key
23 Film indicator
24 Tripod bush
25 Hinged camera back

Instructions in a Nutshell

A. Taking the Picture

1. Set aperture (11) and shutter speed (4).
2. View subject through finder eyepiece (20) and arrange it within the finder frame. Focus lens on main part of subject (9) by getting the two images visible in rangefinder (20) to fuse into one.
3. Release shutter (2).
4. Work transport lever (1) to get the LEICA ready for the next exposure.

Note: Always remove the lens cap. Remember also to extend and lock the lens if collapsible.

B. Changing Lenses

1. Depress locking button (8) of LEICA bayonet mount, rotate lens to the left, and lift out.
2. To insert alternative lens, place in position with red dot (6) opposite red dot next locking button (8), and turn to the right until lock engages audibly.

C. Inserting the Film

1. Remove base plate, swing open camera back, and withdraw take-up spool.
2. Push film leader under spring of take-up spool.
3. Insert cassette and take-up spool into camera as shown by diagram. (Note detailed instructions on pages 24-26.)
4. Check that teeth of transport sprocket properly engage film perforations, then close back, replace base plate, and lock.
5. Advance film by two frames, releasing shutter each time to bring film into position. Set exposure counter (3) to 0. The camera is then ready to shoot.
6. Set film type and speed on film indicator (23).

D. Unloading

1. *Hold down* release button (5).
2. Pull out rewind knob (16) and turn in direction of arrow until film is rewound, and—after overcoming a slight resistance—free of take-up spool.
3. Open base plate, and remove cassette.

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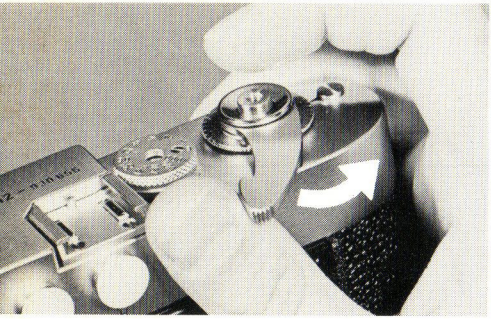
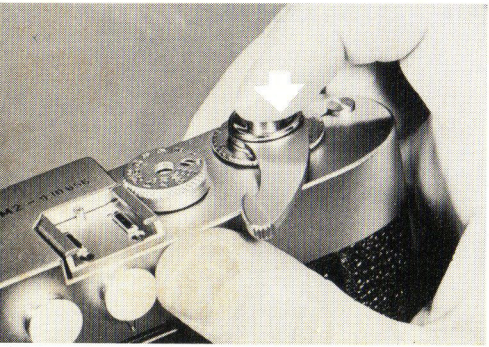
THE Leica M 2

ADVANCE INSTRUCTION BOOK

This Instruction Book

contains everything you should know about the LEICA M 2. Please devote some time to reading it carefully, and practise the simple operations – without a film, to start with. You will get the hang of it much quicker than you thought. The LEICA is an advanced high-grade camera, but nevertheless – or rather because of that – amazingly simple to handle.





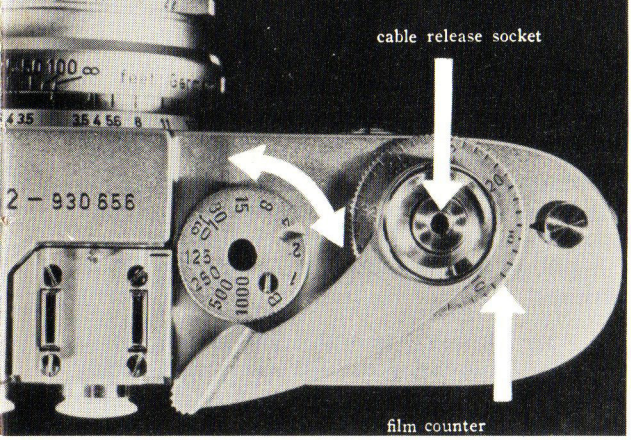
The Transport Lever

Hold the camera in both hands, and with the right thumb pull the transport lever by one long stroke to the right as far as it will go. If you wish you can operate the lever with two or more short strokes. This winds the shutter and advances the film by one frame.

The release Button

With the right index finger gently press down the release button – never jerk it! You will hear the click as the shutter runs down. A film in the camera would now have been exposed, in other words you would have taken a picture.

Let go off the release button (lift the finger off), and you can once more operate the transport lever to tension the shutter and advance the film.



For exposures with slow shutter speeds you must of course have a firm support. A tripod is ideal in conjunction with a cable release with lock. Screw in the cable release without pressing the button. The handy LEITZ table stand is very useful when travelling.

The Film Counter

is coupled with the transport lever. If the film was correctly loaded (see notes on pages 24-26), the film counter indicates the number of exposures made. Remember! The counter **must be set** to 0 by turning it clockwise after you have loaded the camera and wound the leader of the film on the take-up spool by winding and releasing **2 times.**

The Shutter Speed Dial

controls the exposure times. The engraved figures stand for fractions of a second; thus 1000 indicates $^1/_{1000}$ second, 125 is $^1/_{125}$ second, 4 is $^1/_4$ second, and 1 stands for $^1/_1$ second, i.e. 1 second. The dial engages at each position when the set shutter speed is opposite the small index line, and remains at this setting. You can therefore set or read off the speeds equally well before or after tensioning the shutter. When set to "B", the shutter remains open as long as the release button is depressed.

Intermediate shutter speeds can be set within the range of 1 to $^1/_8$ second, also between $^1/_{15}$ and $^1/_{30}$ second, and $^1/_{60}$ to $^1/_{1000}$ second (or $\frac{1}{2}$ to $^1/_{1000}$ second). The speed dial should always engage at the other settings.

The shutter speed dial can be coupled with the accessory LEICAMETER "MC", as shown on pages 20–22.

The Iris Diaphragm

Hold the lens of your LEICA up to your eye, and rotate the aperture ring. You can then see through the lens components how the iris diaphragm opens and closes. It thus works rather like the iris of your eye which also opens or closes to adapt itself to weaker or stronger light. The iris diaphragm of the lens has a similar purpose, namely to cut down very bright light by "stopping down" – i.e. the use of a smaller lens aperture. Conversely, in poor light the use of a larger aperture admits more light to the film. At the same time the depth of field changes.

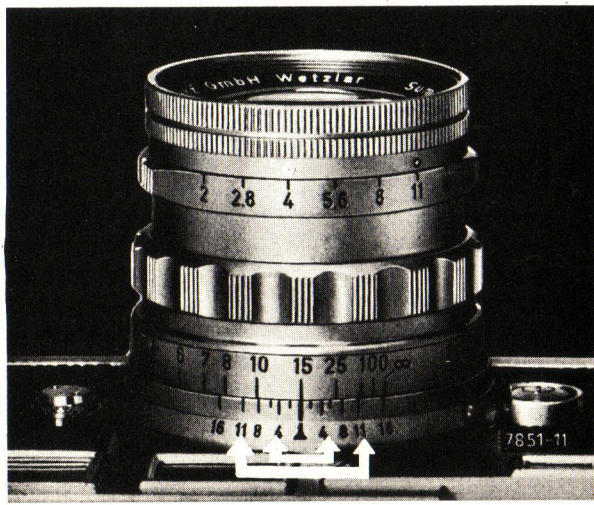
The aperture or f-numbers – 2 – 2.8 – 4 – 5.6 – 8 – 11 – 16 – 22 – 32*) are a measure of the amount of light reaching the film. They are chosen in such a way that closing down the aperture from each number to the next reduces the light by one-half. Similarly on opening up, each aperture passes twice the light of the next smaller one. So remember: a high aperture number signifies a small aperture, and vice versa.

*) The length of this scale of numbers depends on the type of lens.

The Depth of Field Scale

The picture reproduces sharpest those parts of the scene which are at the exact distance – in a plane parallel to the film – on which the lens is focused. This maximum sharpness gradually falls off in front of, and behind, that focused distance, resulting in a certain zone within which everything is still acceptably sharp. The extent of this zone of sharpness – the "depth of field" – depends on the subject distance, the focal length of the lens, and the aperture. Stopping down increases the sharp field, which is desirable for most subjects extending appreciably in depth. This also explains the importance of aperture control in photography.

To find the limits of this zone, look at the depth of field scale of your lens. The sharp zone is that enclosed between two index lines of the same aperture number. If for instance you have set your 50 mm. SUMMICRON lens to 15 feet, the available depth of field with an aperture of f/4 (see red arrows in the illustration) extends from about $12^1/_2$ to 20 feet. If, however, you stop down to f/11, the zone of sharpness covers a field from about 9 to 40 feet. (When altering the aperture, be sure to adjust the exposure time accordingly.)



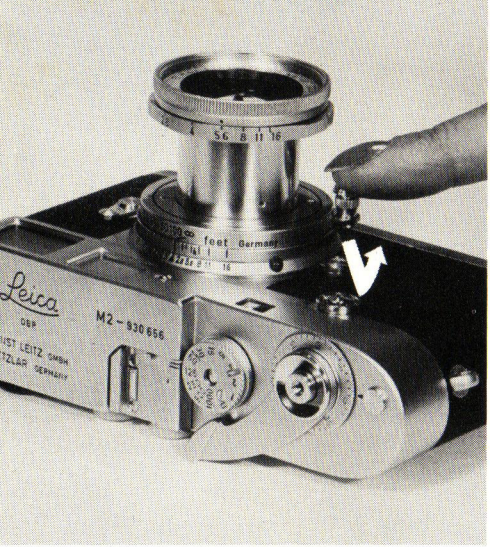
The Brilliant-frame View- and Rangefinder

of the LEICA M 2 is designed so as to act at the same time as a particularly efficient viewfinder and as a coupled rangefinder. The full area of the viewfinder is somewhat larger than the field of the 35 mm. lens, and a bright-line frame appears in the viewfinder automatically as you insert a lens. It is always the proper frame for the lens which you use, 35 mm., 50 mm., or 90 mm. Everything visible within the frame is recorded on the film with the lens in the camera. This holds true even if you are in a hurry and should happen to glance obliquely through the finder. The brilliant frames are coupled to the focusing movement and automatically shift throughout the whole focusing range. That compensates for parallax errors due to the different positions of the optical axes of the lens and the finder.

The viewfinder shows the image in slightly reduced size. The brightness of the brilliant frame is sufficient to show up the limits of the field equally clearly with dark subjects. An additional advantage is that the subject remains visible even during the exposure.

In the centre of the finder the sharp rectangular rangefinder field is visible. This appears brighter than the surrounding viewfinder area. The rangefinder field disappears if you cover the small rangefinder window with your finger – useful when you want to observe the effect of the viewfinder image only.

This is how the subject appears in the brilliant-frame view- and rangefinder with a 35 mm. lens in position.

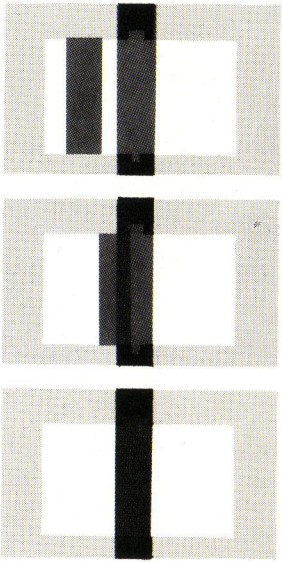


The Distance

can be set on the distance scale engraved on every lens, or with the aid of the rangefinder image visible in the finder. Some lenses lock in the infinity position; for focusing on nearer distances this lock must be released by depressing the infinity catch.

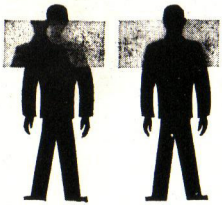
Always remember to extend and lock the barrel of collapsible lenses (see also page 16). If you now rotate the focusing lever or mount of the lens, scale numbers move past the fixed focusing index and indicate the distance in feet or metres, according to the calibration. This old way of focusing is less important, as you can set the distance much more accurately with the aid of the built-in rangefinder, but it is useful for reading off the depth of field available and for special subjects where the rangefinder cannot be used.

Practice in using the rangefinder is important for developing an efficient focusing technique, and is also great fun. Set the lens to infinity, and observe, say, a window a few yards away through the rangefinder. You will see a bright sharp rectangle in the centre of the finder area. Hold the LEICA in such a way that the vertical window bar cuts throug this rectangular rangefinder field. Inside the rangefinder field you will see a double image; i.e. the window bar appears as a second image to the left of the main one. This indicates that the lens is not correctly focused on the frame. Now adjust the



lens while still looking through the finder: the second image moves to the right until it co-incides with the stationary outline in the rangefinder field. You have now measured the distance by what is known as the **co-incidence method.**

Whenever vertical lines cut through the rangefinder field, you can also measure the distance by the **split-image method.** This is made particularly easy by the sharp boundary of the rangefinder field. The part of the subject that is displaced sideways in this field moves across during focusing until the image becomes continuous across the boundary of the frame. In measuring the distance you have at the same time set the lens exactly to this distance.



Automatic Finder Adjustment for 50 mm. and 90 mm. Lenses

Field of view with 50 mm. lenses.

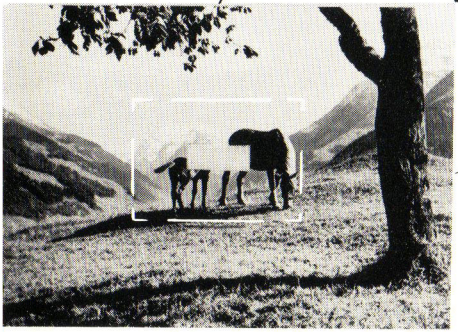
50 mm. Lens

Fit a 50 mm. lens in your Leica M 2, lock it in position, and again look through the view- and rangefinder. You will now see a bright finder frame which indicates the field of view covered by the 50 mm. lenses. An important point is that the surrounding subject area remains visible in the finder, so that you can easily follow even moving subjects and bring them within the 50 mm. finder field. In the same way the finder automatically indicates the view of the 90 mm. lens when you fit one on the camera. In addition, the parallax error is automatically compensated during focusing—for all lenses—

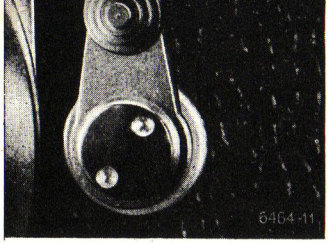
over the whole focusing range. The image frames visible in the finder also allow for the reduction of the field of view due to the fact that the angle covered by the lens decreases at nearer distances. The image frames are designed so as to include the full field taken in by the film even at the shortest subject distances that can be set on the coupled LEICA lenses. At greater subject distances the lens there-

90 mm. Lens.

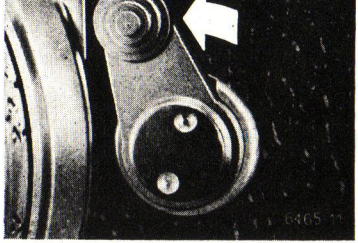
fore covers a slightly larger angle of view than shown in the finder.



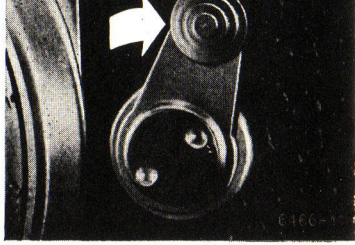
Field of view with the 90 mm. lens.



Lever in center position:
field of view for 50 mm. lens



Lever pointing inwards:
field of view for 90 mm. lens



Lever pointing outwards:
field of view for 35 mm. lens

The Finder Frame Selector

With the small lever on the front of the body you can make the 35 mm. or 90 mm. finder frames visible in the viewfinder even when, for example, the 50 mm. lens is fitted in the camera. You instantly see then whether any given subject is better taken with a lens of different focal length. If you release the lever, it returns to its original position, and the proper frame for the lens on the camera reappears.

When no lens is mounted in the camera, the finder frame for the 35 mm. lens appears.

Holding the Camera

A good camera grip is the best safeguard against camera shake. Hold the LEICA M 2 so that the base rests in the palms of both hands, with the thumb against the transport lever, and the index finger resting lightly on the release button. Use the left hand to operate the lens focusing lever. Keep the right eye close to the view- and rangefinder eyepiece so that the left eye, when open, can survey the whole view. Practise holding

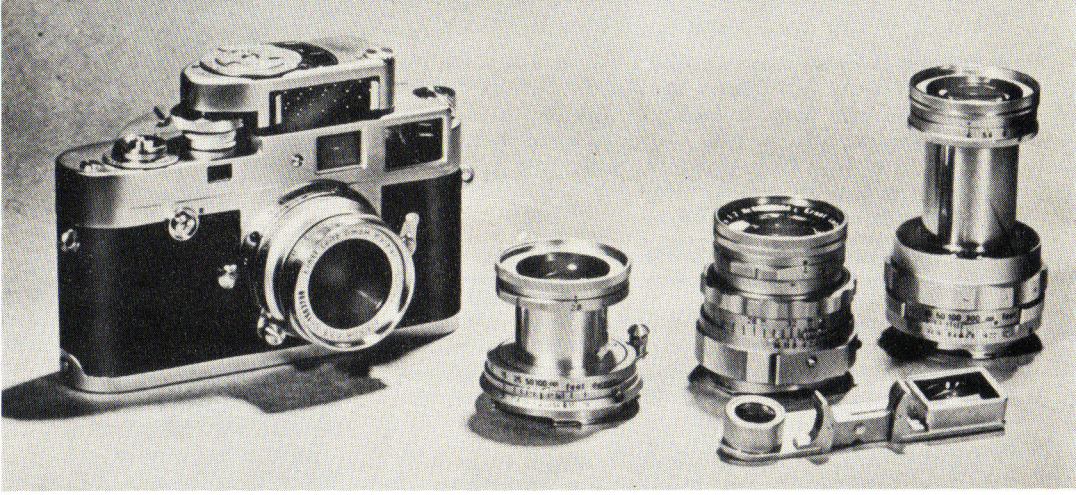
the camera so that it is supported as much as possible against the face; the camera, head, and hands should be as one unit. The purpose of it all is to ensure a really steady camera position. This will prevent camera shake, and give you that high standard of definition in your negatives which has always been the hall-mark of the highly corrected LEICA lenses.

Press the release button smoothly and gently, never jerk it. Move only the index finger, not the whole hand.

At first try exposing with shutter speeds of $^1/_{60}$ second or faster; after some practice you will eventually be able to expose even slower shots without camera shake. If you find it more convenient, the left eye is just as suitable for viewing as the right one.

When you want to change from horizontal to vertical shots, turn the LEICA upright about the optical axis of the view- and rangefinder. The camera hold does not change much. Grip the LEICA in the same way as for horizontal views.

Alternatively, you can also bring the right hand down for upright pictures, and release with the thumb. Grip the camera so that the tip of the thumb rests against the release button, and the fingers exert a counter-pressure on the base plate. Focus the lens with the left hand, and support the upper part of the camera against your forehead. This hold makes for particularly smooth releasing. Whether you take upright or horizontal shots, you never have to take the eye from the camera, even for picture sequences.



The Interchangeable Lenses of the LEICA M 2

You have a choice of focal lengths from 28 to 400 mm., and have at your disposal even a lens with the exceptional aperture of f/1.5. With this range you can choose your viewpoint at will, and have complete control over the field of view and perspective. You can exhaust all pictorial possibilities.

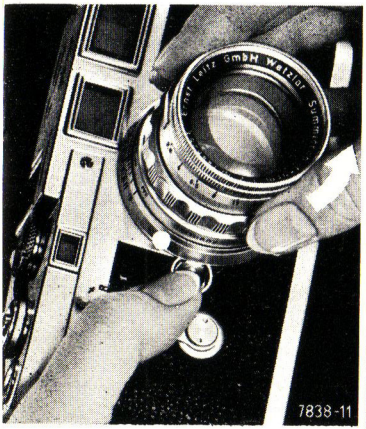
28 and 35 mm. SUMMARON – 50 mm. ELMAR f/2.8 and f/3.5 – 50 mm. SUMMICRON f/2 – 50 mm. SUMMARIT f/1.5 – 90 mm. SUMMICRON f/2 and 90 mm. ELMAR f/4 – 125 mm. HEKTOR f/2.5 – 135 mm. HEKTOR f/4.5 – 200 mm. TELYT f/4.5 – 400 mm. TELYT f/5.

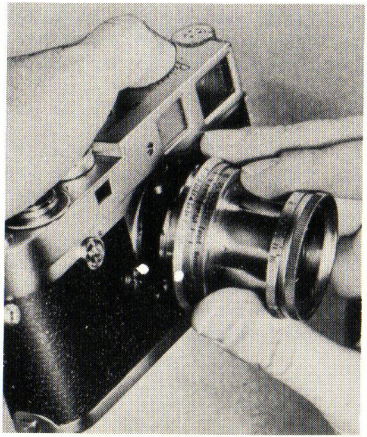
Changing Lenses

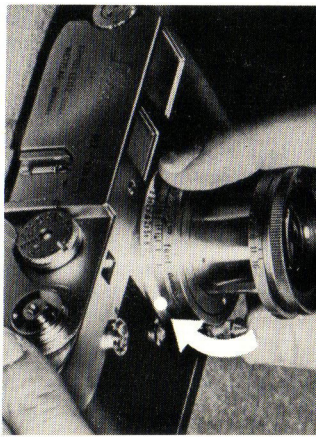
To remove the lens, hold the camera in the left hand, pressing the button of the bayonet lock with the thumb. Grip the lens by the focusing ring with the right hand, as close as possible to the camera body, and turn anti-clockwise to release the lens. This can now be lifted out of the mount. Lenses fitted with an infinity lock should be locked at infinity during changing.

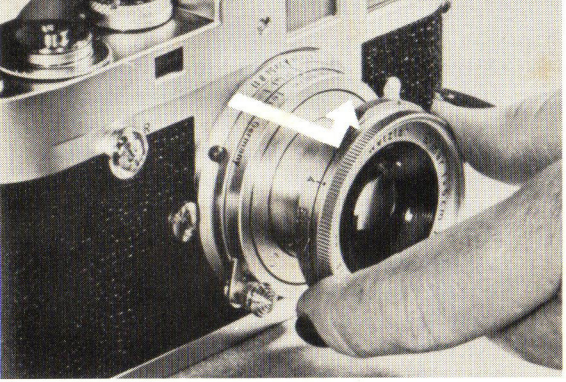
A red dot is visible next to the bayonet lock button. When an alternative lens is to be inserted, place it in position with the red dot on the lens mount opposite the red dot on the camera body. Then secure the lens by turning it clockwise until the bayonet lock engages with an audible click.

Avoid changing lenses in strong direct light. Turn your back to the sun, and hold the camera opening towards your body. If you keep the camera and lens separately use a protective cap for each.









The Collapsible Lenses

When not in use, certain LEICA lenses (for instance the 50 mm. ELMAR and the 90 mm. ELMAR f/4) can be unlocked by slightly turning the front anti-clockwise and pushed into the camera body. For use, fully pull out the lens, and lock by turning to the right. (The collapsible 90 mm. ELMAR f/4 can only be focused when it is properly extended and locked.) With any lens, always remember to take off the lens cap.

Lens Coating

The modern coated LEICA lenses show a purple sheen on the surface, due to an anti-reflection layer which appreciably increases the brilliance and crispness of the image. The outer surfaces are hard coated and will therefore stand up to normal cleaning.

In addition to its name, every LEICA lens also carries its own "personal" serial number engraved on the front mount. Make a note of this number, as of the serial number of your LEICA; it may prove to be of great help in case of loss.

Care of the Lenses

Any high-class lens can yield its best performance only if the two outside glass surfaces are in perfect condition. And it is much better to keep them clean than to keep cleaning them. A light yellow filter (with black-and-white film) or a colourless ultra-violet filter (for colour shots), left permanently on the lens, will protect the surface against outside influences (e.g. fine sand at the seaside). The lens hood, too, guards the lens against accidental contact with your fingers, and against splashes of water in rainy weather. To remove dust from the lens surface use a soft camel hair brush, or in an emergency a clean linen rag previously washed with pure soap. (Other washing or cleaning agents may leave harmful chemical residues.)

The 50 mm. Near-range SUMMICRON

This version of the 50 mm. SUMMICRON lens has two focusing ranges: 1. The normal range from infinity to $3^1/_2$ feet (1 metre); 2. The close-up range from about 35 to 19 inches (88 to 48 cm.).

An optical finder attachment fits onto the top of the lens mount for use within the near range. This adapts the coupled view- and rangefinder for close-up focusing. The lens thus acts at the same time as a close-up focusing mount with parallax compensation.

The lens is inserted into the LEICA M 2 – without the finder attachment – in the usual way by placing the red dots on mount and body opposite each other, and turning clockwise to lock.

Focusing between infinity and $3^1/_2$ feet (1 metre). Over this range the lens is used like any other LEICA lens. At $3^1/_2$ feet (1 metre) the focusing movement is limited by a stop.

Focusing between 35 and 19 inches (88 and 48 cm.). The distances are measured from the back of the camera to the subject. Set the focusing mount of the lens to its near limit of $3^1/_2$ feet (1 metre), as shown in Fig. 1, pull outwards, and move it across the stop into the 35 inch (88 cm.) position (Fig. 2). The lens remains locked in this position until the optical finder attachment is fully pushed home in its special fitting, thus releasing the focusing movement for the close-up range (Fig. 3).

Fig. 1

Fig. 2

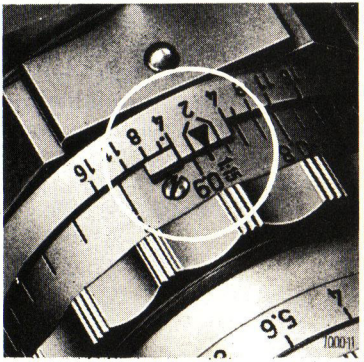
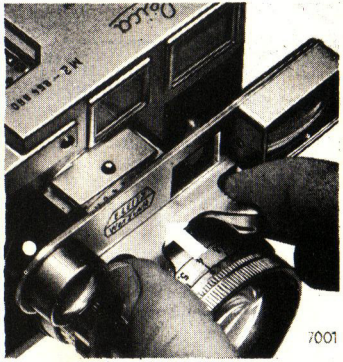
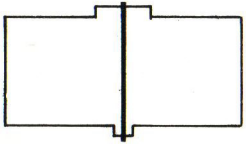


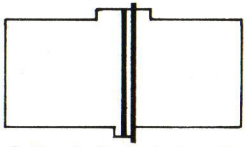
Fig. 3



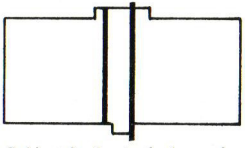
The apertures mentioned are for 50mm lenses. Focus target represents a strong vertical line in the subject. Secondary image is at left in illustrations.



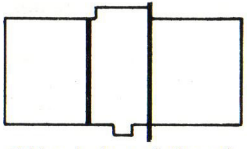
Subject in plane of focus. Both images coincide.



Subject in front of plane of focus but *within* depth of field limits at both f/16 and f/5.6



Subject in front of plane of focus and *out of* depth of field limits at f/5.6 but *within* depth of field at f/16



Subject in front of plane of focus *and outside* depth of field at *both* f/5.6 and f/16

The pictures can be taken with the camera held in the hand or mounted on a tripod, the image being focused automatically with the coupled rangefinder. As the depth of field is greatly reduced at such close distances, the lens should be stopped down to at least f/8 or f/11.

The Optical Depth-of-Field Indicator in the Rangefinder

You can also check in the rangefinder of the Leica M 2 whether a subject in front of, or behind, the sharply focused point will still be acceptably sharp. For this you use the special marks at the top and bottom edges of the rangefinder field. With the standard 50 mm. lens, use the lower (narrow) mark for the all-round aperture of f/5.6, and the upper (wide) mark for f/16. To check depth of field, view the subject area to be checked through the appropriate marker. You will see a double outline if the area is in front of or behind the plane of focus. If the edges of this double image are within the width of the marker, the area is within the depth of field.

In its Ever-ready Case

the LEICA M 2 is protected against the weather and minor knocks, yet is always ready for action.

The lid of the ever-ready case is pivoted so that it is well out of the way even for upright shots, and cannot obstruct the lens.

Filters

improve the tone rendering in black-and-white pictures. The yellow and orange filters in particular bring out pictorial cloud effects. The new LEITZ polarizing filters subdue disturbing reflections from glass, water, and polished surfaces (other than metal ones) and increase the contrast of clouds against the sky. They are also useful in colour photography.

All filters for the LEICA M 2 screw into the front mount of the camera lens. For special purposes two filters can even be used together (though with some risk of vignetting).

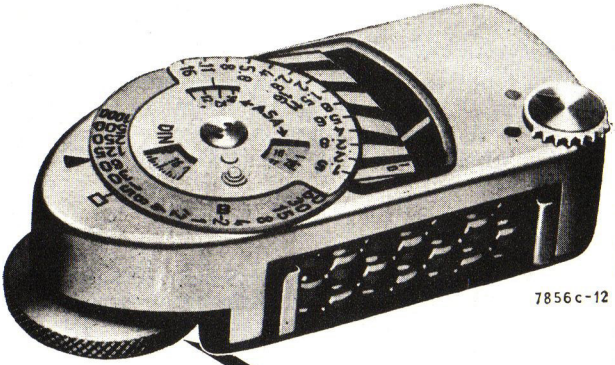
Lens Hoods

protect the lens against direct rays of strong light sources that might give rise to flare, and also against rain and snow.

Hold the lens hood so as to press in the two spring clips, place it over the lens, and let it engage.

Lens hood and filter can be combined; provided the correct hood is used for the lens, it will not cause vignetting (shading of the corners of the negative).

If you use the ever-ready case for the LEICA M 2, the lens hood can always be kept in the case; simply invert it over the lens (this is not possible with the 50 mm. SUMMARIT f/1.5 lens).



7856c-12

Before fitting the LEICAMETER "MC", set the shutter speed dial of the LEICA M 2 to "B". Then rotate the milled setting ring of the exposure meter in the direction of the arrow as far as it will go. The index line on the ring should co-incide with the index line on the meter housing, as shown clearly in the illustration at the bottom of page 21. Now lift up the ring and continue turning in the direction of the arrow. The triangular index mark on top of the meter will then be opposite one of the figures between 4 and 120.

The LEICAMETER "MC"

is a novel type of accessory exposure meter which couples with the focal plane shutter of the LEICA M 2. You therefore have the choice of using your LEICA camera either with the coupled exposure meter to ensure correct exposures every time, or without the meter in the usual way. Full details of the many applications of the LEICAMETER "MC" are given in the special instructions issued by the manufacturers, Metrawatt AG. of Nuremberg.

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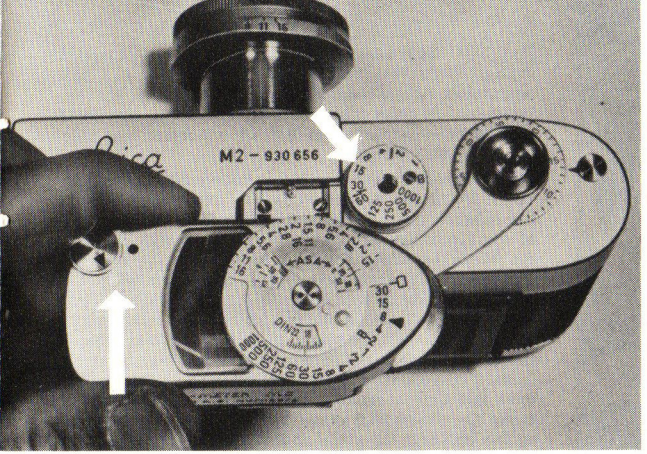
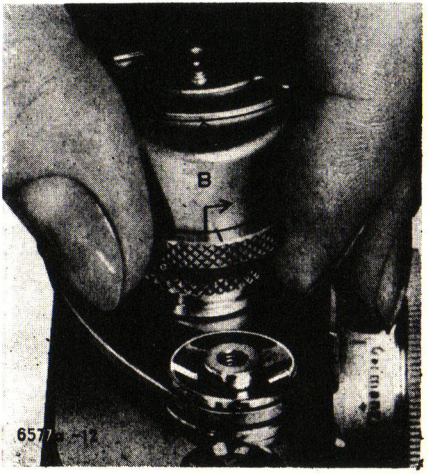


The exposure meter helps you a great deal in avoiding incorrect exposures, especially with colour film which needs very accurate exposure. But the instrument is equally valuable for black-and-white emulsions, for it ensures perfect negatives of uniform quality that are easy to enlarge.

Next push the LEICAMETER "MC" into the accessory shoe of the camera as far as it will go. Turn the milled setting ring of the exposure meter backwards again **against the direction of the arrow** until it audibly engages in the shutter speed dial of the camera. The camera is now coupled with the exposure meter. To remove the LEICAMETER "MC", uncouple the milled setting ring from the shutter speed dial by setting it to "B", lifting up, and turning in the direction of the arrow (see illustration on the right) until the triangular index mark is opposite one of the figures between 4 and 120.

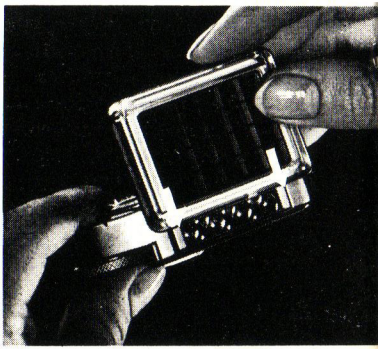


The LEICAMETER "MC" must be set to the speed rating of the film loaded in the LEICA. It has two measuring ranges which are set directly on the instrument. A third range – for extremely dim light conditions – requires the use of a booster cell (see special instructions).

With bright subjects you can take a reading straightaway. Point the camera with the exposure meter at the subject. Turn the milled setting ring to bring one of the black aperture numbers from 1.5 to 16 opposite the black or white sector indicated by the pointer. Whichever aperture you bring into line with the pointer reading in this way, you automatically set the corresponding correct shutter speed on the camera. You can read off the speed in use opposite the black triangular index mark. Before exposing you only have to set the selected aperture on the lens. If the pointer does not give a reading with dark subjects, set the meter for the second range by turning the range knob to the red dot. Take the reading in the same way as before, but using the red aperture numbers for aligning with the pointer.

The diffusing disc for incident light readings fits in front of the meter cell and shows its presence by a protruding tongue (see special instruction booklet for the LEICAMETER "MC").

For exposure times from 2 to 120 seconds set the LEICA shutter to "B" with the milled setting ring of the exposure meter (as read off on the meter scale). Lift the ring to uncouple it, and turn in the direction of the arrow. Then complete taking the reading as described above. The exposure time is read off opposite the small triangular index, but the release button of the camerr must be kept depressed for the time indicated. When taking readings with the supplementary booster cell, read off the exposure time against the small square symbol. The times are then four times as long as those obtained with the red scale of aperture numbers ($^1/_{60}$ second in the illustration above).



Miniature Films

Perforated 35 mm. film, as used in the LEICA, is supplied by film manufacturers all over the world. It is available in several packings and a wide range of emulsion types for various purposes.

Daylight cassettes consist of a light-tight shell containing a length of film sufficient for 36 or 20 exposures of 24×36 mm. These cassettes are designed for loading into, or unloading from, the LEICA by daylight (no darkroom required).

Daylight refills contain the same length of film wound up on a spool and protected against the light by a paper leader. They are intended for loading into empty LEICA cassettes by daylight, and are then handled like daylight cassettes.

Darkroom refills contain a suitably trimmed length of film for spooling onto the centre spool of the LEICA cassette in the darkroom.

35 mm. bulk film is available in lengths of 5 metres and upwards in light-tight tins. It is designed for cutting and loading into cassettes in the darkroom – see instructions for the LEICA cassette.

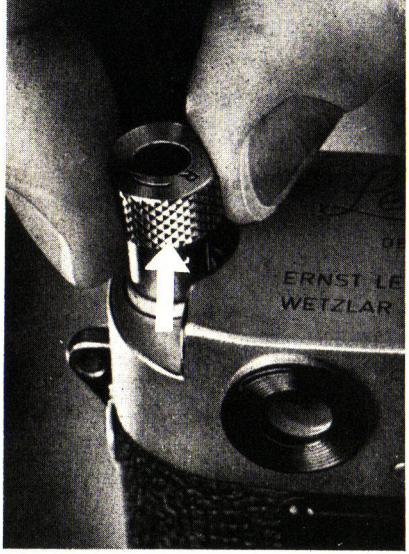
Black-and-white films are available in all these packings, positive film and other special emulsions only as bulk film, and colour films usually only in daylight cassettes.

Of the various film characteristics we shall mention only the speed, as this is important for correct exposure.

Medium speed emulsions of about 16 to 18/10° DIN are ideal as all-round material for most purposes. They yield brilliant images, fine grain, and high resolution, with appreciable exposure latitude. The negatives will produce first-class enlargements.

High-speed emulsions of about 21 to 25/10° DIN are special films for exposures in poor light (interiors, theatre, and night shots), as well as for the fastest shutter speeds (e. g. in sports photography). Fineness of grain and resolving power are limited.

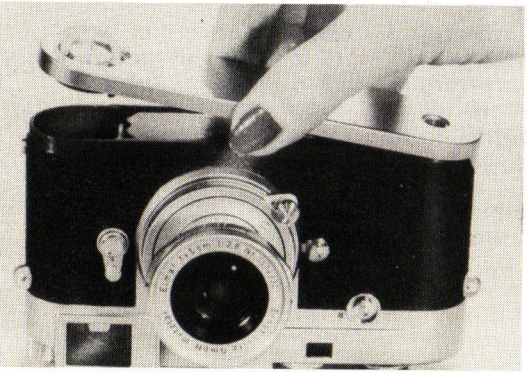
Slow emulsions of about 10 to 14/10° DIN are special films yielding the finest grain and highest resolution for the reproduction of minute detail. They are suitable even for copying, as well as architectural and technical subjects.

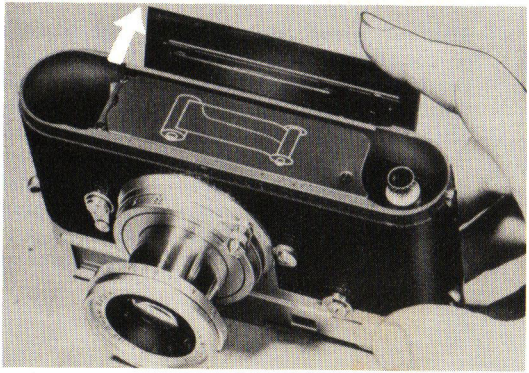


Loading the LEICA

Daylight cartridges and properly closed film magazines are reasonably lightproof. Nevertheless, avoid direct sunlight or strong artificial light when loading or unloading the camera. Outdoors, load and unload in the shadow of your body. Cartridges or magazines containing sensitive film should never be kept without protection against light for any length of time. Storage in a container is strongly recommended.

Before opening the camera, make sure that it does not already contain a film. To do that, pull out the rewind knob and turn it in the direction of the arrow. If you feel a resistance, first rewind the film fully, and un-

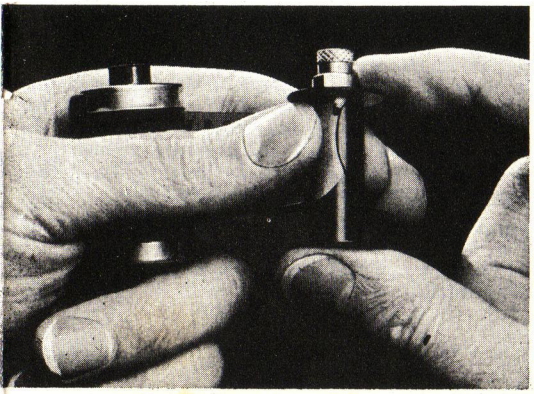


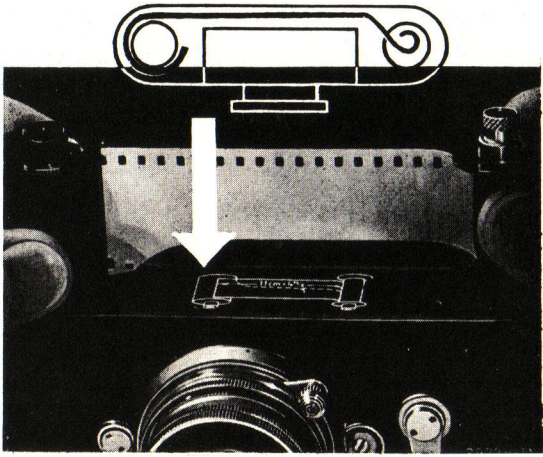


load the camera as described on page 27. Turn the key in the base plate in the direction marked "auf – open", and lift off the base plate. The special LEICA cassette (see page 28) and the take-up spool are now easily withdrawn. Open the hinged camera back, and place the camera in front of you on the table with the open base upwards, and the lens facing you.

Hold the take-up spool in the right hand, and the cassette in the left, both with the spool knobs pointing up. Now push the beginning of the film under the clamping spring of the take-up spool as far as it will go. The perforated film edge must lie close against the spool flange, as shown in the illustration below.

Next, draw out just enough of the film leader from the cassette to enable you to insert the two parts – the cassette and the take-up spool – into the camera. The milled spool knobs should still point upwards and remain visible while the film slides into the film slot in front of the open camera back.





The film cassette and the take-up spool must be fully pushed home to ensure that the film lies properly between the guides.

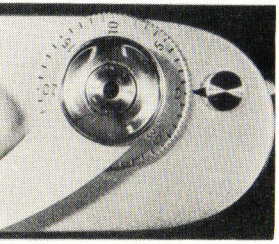
Check that the position of the film corresponds to that shown in the diagram. The matt emulsion side must face the lens and the focal plane shutter; the take-up spool winds up the film with the emulsion side out.

The teeth of the transport sprocket should engage the perforations of the film (if necessary, slowly work the transport lever until the teeth engage).

Close the camera back, replace the base plate, and lock it, thus closing the camera light-tight.

To tighten the film for proper transport, pull out the rewind knob and turn it gently in the direction of the arrow until you feel a resistance.

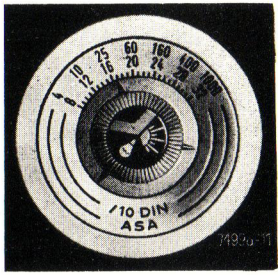
Remember: the visible strip of film between take-up spool and cartridge has been exposed to light. It is, of course, spoiled. Therefore, this short length is no longer useable for pictures and must be moved out of the way within the closed camera to place an unexposed length of film in position. To do this, transport the film by winding and releasing the shutter. Repeat this and set the exposure counter (3) at 0. After you wind the shutter once more, the exposure counter will point at 1 and the Leica is ready for the first exposure. When you wind the shutter, always watch the rewind knob.



It must rotate against the direction of the arrow when you wind the film. If it does not, it will be an indication that the film does not feed properly and you should check to see if the camera is properly loaded.

To Set the Film Indicator

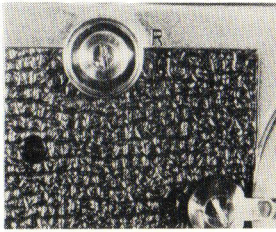
in the camera back, press one finger lightly against the centre, and turn it to the type and speed of the film loaded in the camera. One of the three pointers next to the appropriate symbol (black-and-white chevron for black-and-white film, sun on red background for daylight type colour film, or lamp on red background for artificial light type colour film) should point to the required film speed in ASA or DIN. This then shows at a glance what film is loaded in the camera, even with long intervals between exposures.



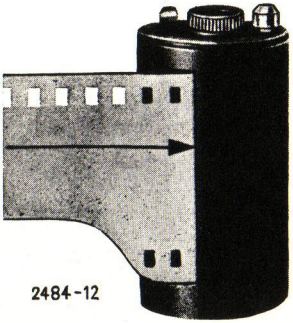
Unloading the Film

When you have exposed the whole film, the transport lever can no longer be moved; a sign that the film must be rewound into its cassette. Pull out rewind knob (16) (page 24), depress release button (5) and turn rewind knob in the direction of the arrow to rewind film. At the end of the film you will feel a resistance. Pass this resistance and turn the rewind knob once more. The film will now have come off the take-up spool, but a short piece should still protrude from the cassette. You can then open the camera (see page 24), and remove the cassette with the exposed film. It is not advisable to rewind the film end fully into the cassette, because the protruding piece makes the cassette more light-tight. Make a note, however, on this piece that the film is exposed.

Make sure that you hold the release button (5) down all the time when you rewind.



You can also expose a part only of the film, say the first ten frames, rewind it, and change to another film (e.g. colour). When reloading the first film proceed as with unexposed film, and then keep releasing the shutter and advancing the film (with a lens cap over the lens), until the film counter indicates No. 12.



Cassettes for the LEICA M 2

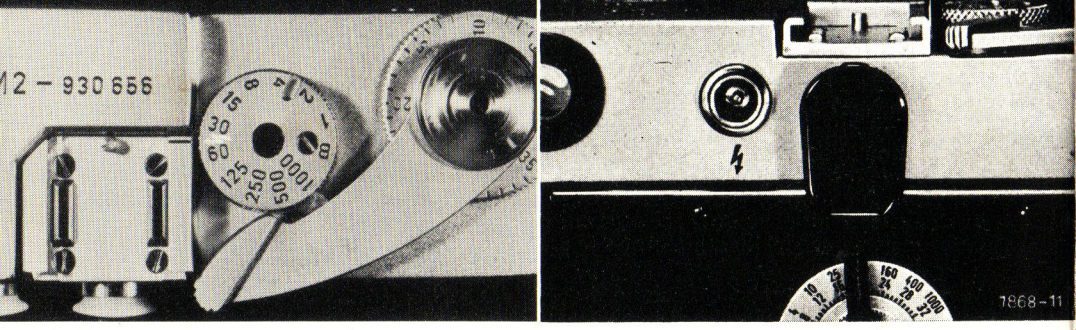
In these instructions we show the loading of the camera with a commercially available daylight cassette. These cassettes are very convenient, but advanced photographers will prefer to buy their film in bulk lengths and load it themselves in the special LEITZ cassettes. Such a cassette has the advantage that it is absolutely light-tight, easily cleaned, and never scratches the film, as it automatically opens inside the camera. The best course is to keep the special cassette safely put away until you get to the stage of loading it yourself. This is described in a special instruction booklet.

The LEICA M 2 *will not take* the type B cassettes of the other LEICA models, but only the current type N cassette with the bright button. This type N cassette will, incidentally, fit all LEICA models.

Using Flash

All electronic flash units and most types of flash bulb are easily synchronized with the LEICA M 2. "Synchronization" means that the firing of the flash is timed so that it lights up at the exact instant when the shutter is open. All usable types of flash unit can be fitted on the hinged flash bracket which attaches to the LEICA.

Two flash sockets in the back of the LEICA M 2 are available to take the flash plug of the cable from the flash unit (see illustration on page 30).



The left-hand socket, marked by a symbol of a lightning flash, is intended for electronic flash and type F flash bulbs. With electronic flash you can set any shutter speed between 1 second and the red ½ arrow which stands for $^1/_{50}$ second. The effective exposure time is, however, governed by the flash duration of the electronic tube.

The right-hand socket, marked by a symbol of a flash bulb, is used for synchronizing type M flash bulbs. With suitable bulbs the fastest shutter speeds can be used.

Furthermore, both electronic flash units and flash bulbs can be connected at the same time.

Protective plugs are available to cover the two flash sockets on the back of the camera. A helpful hint: only leave the socket in use uncovered at any time. Connection to the wrong flash socket is a frequent cause of failures in flash pictures.

Details about flash bulbs, guide numbers, and suitable shutter speeds are given on the enclosed flash table for the LEICA M 2.

A Few Practical Points

should be useful. The LEITZ flash guns with folding reflector spread the light very evenly over the subject area. You will find this a special advantage when photographing with the wide angle lenses.

Note that the guide numbers are only meant to be an approximate guide. They assume the use of a LEITZ folding reflector, and subjects of average brightness, with allowance for some light being reflected from the walls and ceiling indoors. For greatly different subject conditions adjust the aperture accordingly. Negatives exposed in this way can be developed normally, i. e. together with daylight shots on the same film. Normal development of flash exposures also has the advantage that the flash appears to cover the depth of the subject better than when used with a higher guide number coupled with overdevelopment. The latter procedure has been recommended at times, but is capably only of bringing up the more intensely lit portions of the foreground.

Watch these points with colour film:

With daylight type reversal colour film use only electronic flash or blue coated flash bulbs.

With artificial light type reversal colour film use yellow coated flash bulbs.

With type F reversal colour film use clear flash bulbs.

With negative colour film either clear flash bulbs or electronic flash can be used, as colour correction is possible at the printing stage. Only blue coated flash bulbs or electronic flash are however suitable as fill-in lighting for pictures taken by daylight.

The possible shutter speeds for flash bulbs of the same type are of course independent of the colour of the bulb. The filter effect of the coloured coating will, however, lower the guide number.

The wide range of colour films available and the need for exact exposures makes it impossible to give specific guide numbers. We therefore suggest that you should first make some trial exposures with the chosen flash and film combination. Here is an approximate guide to colour exposures with blue flash bulbs. First work out from the table the aperture corresponding to the guide number for the same flash bulb with clear glass envelope, and then increase the aperture as follows:

(a) with daylight reversal films of 32 ASA or 17/10° DIN (e.g. Agfacolor CUT, Anscochrome, Ektachrome, etc.) open up by one stop;

(b) with daylight reversal films of 15/10° DIN (e.g. Agfacolor L-UT) open up by two stops;

(c) with daylight reversal films of 10 ASA (e.g. Kodachrome K 135) open up by at least two-and-a-half stops.

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