FULL INSTRUCTIONS

LEITZ Leica M2

This Instruction Book

contains everything you should know about the LEICA M 2. At first practise handling the camera without a film. Carry on until you know all the steps by heart without looking at this booklet. You will get the hang of it quicker than you thought handling the LEICA is much simpler than reading about it.

ERNSTLEITZ GMBH WETZLAR





Hold the

First of all get used to holding the camera correctly. This is most important for quick and reliable shooting, and for high quality, pinsharp, pictures.

Grip the camera so that it rests in the palms of both hands. The right thumb rests lightly against the transport lever (2), while the right index finger just touches the release button. Use the left hand to set the distance on the lens (9). Keep the right eye as close as you can to the finder eyepiece (18). Support the camera firmly against the forehead: the camera, your head, and your hands should form a rigid unit. The purpose of all this is to give the LEICA a solid support during exposure. This will avoid camera shake and yield negatives with that pinsharp definition characteristic of LEICA pictures.

Camera Correctly

Try exposing at first with shutter speed of 1/60 second or faster. After some practice even slower speeds will become quite easy later on without shaking the camera. If you find it more convenient, you can of course equally well use your left eye for viewing through the finder.

To switsch from horizontal to vertical pictures, turn the LEICA upright. The grip of the hands does not change appreciably: hold the camera in much the same way as for horizontal shots. Alternatively, you can bring the right hand down for vertical shots, and release the shutter with the thumb. In that case hold the camera so that the tip of the thumb lies against the release button, and the fingers can press against the camera from the bottom. Use the left hand to focus the lens. Rest the upper part of the camera against your forehead. With this hold you can release really smoothly.

Whether you take vertical or horizontal shots, you do not have to take the eye from the finder — a useful point with picture sequences, for the LEICA controls are all ideally at hand.



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The Film Transport Lever (2)

Pull the transport lever fully to the right with your right thumb. Alternatively, work it with a number of short strokes until it locks. Either way, this movement tensions the focal plane shutter of the LEICA and advances the film by one frame

You cannot accidentally advance more than one frame you cannot make an exposure until the film has been fully advanced.

The Release Button (3)

Gently press down the release button with the right index finger. Never jerk it! You will hear the click as the shutter runs down. This exposes the film in the camera.

Let go of the release button (lift off the finger) and you can once more operate the transport lever.

Setting the Shutter Speed (3)

The numbers on the shutter speed dial indicate fractions of a second. For example, 1000 is ¹/1000 second, 125 is ¹/125 second, 4 is ¹/4 second, and 1 is ¹/1, in other words one full second. The dial engages at each speed; you read off the setting next to the small index line on the accessory shoe. When set to B, the shutter remains open as long as the release button is depressed. The red symbol of a lightning flash indicates a shutter speed of ¹/so second for electronic flash.

Intermediate shutter speeds can also be set within the range of 1 to 1/6 second, between 1/15 and 1/30 second, and between 1/60 and 1/1000 sec. The shutter release button will take a standard screw-in cable release for time exposures. Use a tripod for these.

The shutter speed dial can be coupled with LEICAMETER MC exposure meter (see page 20).



The Film Counter (17)

automatically indicates the number of frames exposed. When loading a new film set the counter disc to No. 0 (see also page 27.)

The Lens Aperture (11)

Moving the lens aperture scale opens or closes the built-in iris diaphragm. You can easily observe this by looking through the front of the lens. 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" — in other words the use of a smaller lens aperture. In poor light, on the other hand, a larger aperture admits more light to the film.

The aperture or f-numbers (stops $-2 - 2.8 - 4 - 5.6 - 8 - 11 - 16 - 22 - 32^*$) follow an internationally agreed scale. They are chosen in such a way that when you close down the aperture from one number to the next you cut down the light passing through the lens to one-half.



One aperture interval on the lens corresponds to one shutter speed interval on the shutter speed dial.

Remember: the larger the f-number, the smaller the aperture.

To keep the LEICA ready for action all the time, pre-set the lens to a medium stop of f/5.6. This is a useful stand-by setting for outdoor shots.

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

The Depth of Field Scale (8)

The sharpest parts of the image correspond to objects 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. There is however, a certain zone of acceptable sharpness, known as the "depth of field". Its extent depends on the subject distance, the focal length of the lens, and on the lens stop used. Stopping down increases the zone of sharpness, while the full aperture of high-speed lenses yields only a limited depth of field.

The depth-of-field scale of every lens shows what depth you have available. At any aperture two index lines of the same aperture number indicate the limits of the sharp zone. If for

instance (see illustration) you have set the 50 mm. Summicron f/2 lens to 15 feet, the available depth of field with an aperture of f/4 extends from about $12^{1}/_{2}$ to 20 feet. If, however, you stop to f/11, the depth ranges from about 9 to 40 feet.

The depth of field can also be estimated with the rangefinder (see page 13).



The Brilliant-frame View- and Rangefinder

of the LEICA M 2 automatically frames the image covered by the lens in use. The frames correspond to focal lengths of 35 mm., 50 mm., and 90 mm. As the LEICA has an optical direct-vision finder, you see the subject all the time — even at the instant of exposure. The film records everything within the bright line-frame — even if you look obliquely through the finder in a hurry.

The brilliant frame is coupled to the focusing movement, and automatically shifts to compensate for parallax errors over the entire focusing range. Shots with "cut-off" heads or feet are therefore a thing of the past!

> This is what you see through the Brilliant – frame View – and Rangefinder when a 50 mm. lens is fitted



The Automatic **Finder Adjustment** and 90 mm. lenses

Fit a 90 mm. lens in the camera, lock it in position, and again look through the finder. You will now see a bright finder frame outlining the field of for 35 mm., 50 mm., view of the 90 mm. lens. With this lens that view fills the negative. The surounding subject field remains visible in the finder, so that you can easily capture even fast moving objects within the image frame.

> In the same way the wide-angle image frame - again free from parallax - appears automatically in the finder when you fit the wide-angle lens in the camera.

Vertical lever position : Field of view for 50 mm. lenses



The Finder Frame Selector (10)

With this small lever you can at any time switch from the finder frame of the lens in the camera to either of the two other frames. You can therefore judge in advance which lens will produce the best result, without having to change the lens itself. Then, when you have made up your mind, it only takes a few seconds to fit the required lens.



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





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





The Distance

can be set directly on the distance scale of the lens, or with the aid of the rangefinder.

Some lenses lock in the infinity position. Depress the infinity catch to release this lock for focusing at closer distances. Remember also to extend and lock the barrel of collapsible lenses (see also page 15). The old way of focusing by scale is, however, less important with the LEICA, as you set the distance much more rapidly and accurately with the built-in rangefinder.

This is the most efficient focusing technique. It needs just a little practice to master, but is also gerat fun.

First of all set the lens to infinity. Now observe, say, a window a few yards away through the rangefinder. Watch the bright sharp rectangle in the centre of the finder area: this is the rangefinder field. Hold the LEICA so that the vertical window bar cuts through the rangefinder field. Inside that field you will see a double image, in other words a second image of the window bar or edge appears to the left of the main one. This indicates that the lens is not correctly focused on the window. Now adjust the focus while still looking through the finder: the second image in the rangefinder field moves to the right, until it co-incides with the stationary outline. You have now accurately set the distance by what is known as the **co-incidence method**.







With vertical lines it is often easier to set the distance by the **split-image method.** Here you watch the displaced section of the vertical line in the rangefinder field. That section moves along the horizontal boundaries of the field

as you adjust the lens, until the image becomes continuous down the whole finder area. At this point the lens is again set axactly to the correct distance.



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. The subject is still within the depth of field zone if the separation of the double outlines does not exceed the width of the appropriate mark.

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Changing Lenses

To remove the lens, press the catch (14), turn the lens to the left, and lift it out of the bayonet fitting. Get hold of the lens close to the camera body.

When you insert the lens align the red dot on the lens mount opposite the red dot on the camera body. Turn the lens to the right until the bayonet lock engages with an audible click.

The Interchangeable Lenses of the LEICA M 2

You have a choice of focal lengths from 28 mm. to 400 mm., and have at your disposal even a lens with the exceptional aperture of f/1.4. With this range of focal lengths you can shoot from any viewpoint, and have complete control over the field of view and perspective.

In a nutshell: with the LEICA M 2 you cover all pictorial possibilities.

Avoid changing lenses in strong direct light. Turn your back to the sun, and hold the camera opening towards your body. If you store the camera and lens separately, fit the appropriate protective caps on each.

The Collapsible Lenses

Some of the LEICA lenses (e.g. the 50 mm. Elmar and the collapsible 90 mm. Elmar) can be unlocked when not in use by turning to the left and pushing the barrel into the camera body. For picture taking fully pull out the lens barrel and lock by turning to the right — again as far as it will go. (The 90 mm. Elmar lens can only be focused when it is properly extended and locked.) Always remember to take off the lens cap before shooting.







The 50 mm. Double-range Summicron

This version of the 50 mm. Summicron has two focusing ranges: 1. The normal range from infinity to 3¹/₂ feet (1 metre);

2. The close-up range from about 35 to 19 inches (88 to 48 cm.). This is measured from the film plane to the subject.

Focusing in the Near Range

Set the lens to 3¹/₂ feet (1 metre) as shown in illustration 1. Pull the focusing mount forward, and turn it past the end stop into the 35 inch (88 cm.) position (illustration 2). The lens remains locked in this position until the optical finder attachment is pushed home in its special fitting. This releases the focusing movement for the close-up range (illustration 3). You can shoot with the camera held in the hand or mounted on the tripod. You focus the lens automatically with the coupled rangefinder. The finder image frame is still coupled with the focusing movement in the near range for parallax-free viewing.

As the depth of field decreases rapidly at close subject distances, it is advisable to work with a small stop, say f/16. See page 13 for depth-of-field marks in the rangefinder.



Coated Lenses

Take Care of your Lenses

The modern coated LEICA lenses show a purple sheen on the surface. 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 serial number engraved on the front mount. Make a note of this number, as well as of the serial number of your LEICA; it may prove to be of great help in case of loss.

Always protect the front surface of the lenses against dirt of any kind. 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. against sand or salt water spray at the seaside). The lens hood, too, guards the lens against accidental contact with your fingers and against rain. Remove dust from the lens surface with a soft camel hair brush; if nothing else is available, use a clean, dry, and soft linen rag.



Lens Hoods

protect the lens against stray light (which might cause 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.

Filters

screw over the front of the lens. In special cases even two filters can be mounted on top of each other. Please ask for our detailed special filter leaflet.

The Ever-ready Case

protects the LEICA M 2 yet keeps it ready to shoot all the time. The lid of the ever-ready case is pivoted so that it hangs down out of the way even for vertical shots.





The LEICAMETER MC

helps you avoid wrong exposures, especially with colour films which require very accurate exposure. The meter ensures consistently exposed pictures under the most varied lighting conditions.



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 in the illustration opposite. Now lift up the ring and continue turning in the direction of the arrow. The triangular index mark on the meter body will then be opposite one of the figures between 4 and 120 on the setting ring.

Next push the LEICAMETER MC fully home into the accessory shoe of the camera. Turn the milled setting ring of the exposure meter backwards again **against the direction of the arrow** until you hear it engage with a click 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 until the triangular index mark is opposite one of the figures between 4 and 120.





Remember to set the LEICAMETER MC to the speed rating of the film in use. Your LEICA-METER MC has two measuring ranges — red and black — which are set directly on the instrument. A third range — for extremely dim light conditions — requires the use of a booster cell. With normal subjects take a reading by pointing the camera and exposure meter at the subject. Turn the milled setting ring to bring one of the black aperture numbers from 1.4 to 16

opposite the black or white

sector indicated by the pointer. As you bring your chosen aperture into line with the pointer reading, you automatically set the corresponding correct shutter speed on the camera. You can read off the speed in use opposite the black triangular mark on the meter. 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 use the red aperture numbers for aligning with the pointer.

To keep the LEICA instantly ready for action it is a good



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idea to set the lens aperture to f/5.6 - a sort of ever-ready stop. Then you only have to set the black aperture figure 5.6 to the pointer position of the LEICAMETER MC. See also page 6.

For exposure times between 2 and 120 seconds set the milled ring of the exposure meter to B. Lift it to **uncouple**, and turn in the direction of the arrow. Complete taking the reading as described above. The exposure time is read off opposite the small triangular index on the meter. Expose for the appropriate time, preferably with a cable release.

When taking readings with the supplementary booster cell, read off the exposure time against the small square symbol. These exposures are four times as long as obtained with the red scale of aperture numbers.

The diffusing screen for incident light readings fits in front of the meter cell. From behind the camera you see a protruding tongue when the screen is there. (See special instruction booklet for the LEICAMETER MC).







Loading the Camera

Although daylight cassettes are light-tight, avoid loading or unloading the camera is brilliant light. Out of doors the shade of your own body will provide reasonable protection. Also, do not leave exposed or unexposed cassettes of film lying about. Keep them safely in a cassette tin, or wrapped in black paper, until you are ready to develop them.



Before opening the camera, make sure that it does not contain a film already. To do that, pull out the rewind knob (15) and turn it in the direction of the arrow. If you feel a resistance, there is a film in the camera. Fully rewind that film and unload as described on page 28. Turn the key in the base plate in the direction marked "auf—open", and lift off the base plate. The film cassette 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.

Next, draw out just enough of the film leader from the cassette so that you can 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 outwards. The edge of the film must be parallel to the light-coloured guide line of the film guide. Gently pull the transport lever to engage the teeth of the transport sprocket in the perforations of the film. Now close the camera back, replace the base plate, and lock it.

The length of film between the cassette and the take-up spool is of course already fogged and useless for taking pic-

tures. It must therefore be wound on once the camera is closed to bring a fresh unexposed portion of the film into position in the film aperture. Work the film transport lever, and release the shutter. Repeat this. Then set the film counter to No. 0. Pull the film transport lever once more as far as it will go: the film counter now indicates No. 1, and the LEICA is ready for the first exposure.

Check that the film advances properly. The red dots on the shaft of the rewind knob must rotate while the film is being wound on.





Unloading the Camera

When you have exposed the whole film, the transport lever can no longer be moved. This indicates that the film must be rewound into its cassette. Depress the reversing button (15) and keep it depressed while you pull up the rewind knob (6) as shown on the illustration on page 24. Turn the rewind knob, with the button (15) still depressed, in the direction of the arrow until you feel a definite resistance. Wind past this resistance, and give the rewind knob a few more turns. Then you can open the camera and remove the exposed film cassette.

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). If you intend to do that, be careful when rewinding. Give the rewind knob only one more turn after winding past the resistance as the film comes off the take-up spool. This leaves a short piece of film protruding from the cassette, which permits reloading later on. When you insert the partly exposed film again, proceed as with an unexposed film (page 24). **Cover the lens with the lens cap**, and then keep releasing the shutter and advancing the film until the film counter indicates one frame more than the number of pictures you had exposed before.

35 mm. Films

Film manufacturers all over the world pack 35 mm. miniature films in cassettes ready for loading into the camera. There is a wide variety of films on the market for many different purposes. We will mention here only the speed of the film, since this is important for correct exposure.

Medium Speed Films

of about 32 to 50 ASA or 16° to 18° DIN are standard all-round emulsions. Their good gradation, fine grain, high resolving power, and wide exposure latitude yield negatives suitable for first class enlargements.

High Speed Films

of about 100 to 250 ASA or 21° to 25° DIN are special emulsions for exposure by poor light without the use of flash (interiors, theatre and night shots), or where fastest shutter speeds are essential (e. g. sports subjects). Their grain is coarser and resolving power limited.

Slow Films

of about 8 to 20 ASA or 10° to 14° DIN are also special materials, but of the finest grain and maximum resolving power for reproducing accurate detail. They are suitable for copying, architectural shots, and technical subjects.

To Set the Film Indicator (24)

in the camera back, press one finger lightly against the centre, and turn the disc to mark the type and speed of the film loaded in the camera. Symbols indicate black-and white film, daylight colour film (sun on a red background) or artificial light colour film (lamp on a red background). One of the three pointers, next to the appropriate symbol, should point to the film speed in ASA or DIN.



Using Flash

All electronic flash units and most types of flash bulbs can by synchronized with the LEICA M 2. "Synchronization" means that the flash lights up at the exact instant when the shutter opens. A flash gun bracket can be attached to the base plate of the LEICA.

Two flash outlets at the back of the LEICA take the flash plug of the cable from the flash unit.

The left hand outlet, marked by a symbol of a lightning flash is intended for electronic flash and type F flash bulbs. With electronic flash you set any shutter speed between 1 second and the red arrow which stands for 1/50 second. The effective exposure time is, of course, governed by the flash duration of the electronic tube.



The right hand outlet, marked by a symbol of a flash bulb, is used for synchronizing type M flash bulbs. With suitable bulbs you can use fastest shutter speeds.

Both electronic flash units and flash bulbs can be connected at the same time.

Protective plugs are available to cover the two flash outlets. To keep out dirt, uncover only the outlet you need at any time.

Exact details about flash bulbs, guide numbers, and suitable shutter speeds are given in the flash table for the LEICA M 2.

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