This manual is for reference and historical purposes, all rights reserved.

This page is copyright© by M. Butkus, NJ.

This page may not be sold or distributed without the expressed permission of the producer

I have no connection with any camera company

On-line camera manual library

This is the full text and images from the manual. This may take 3 full minutes for the PDF file to download.

If you find this manual useful, how about a donation of \$3 to: M. Butkus, 29 Lake Ave., High Bridge, NJ 08829-1701 and send your e-mail address so I can thank you. Most other places would charge you \$7.50 for a electronic copy or \$18.00 for a hard to read Xerox copy.

This will allow me to continue to buy new manuals and pay their shipping costs.

It'll make you feel better, won't it?

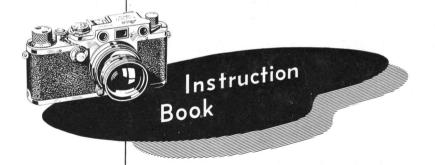
If you use Pay Pal or wish to use your credit card,

click on the secure site on my main page.



www.orphancameras.com





ERNST LEITZ . GMBH . WETZLAR

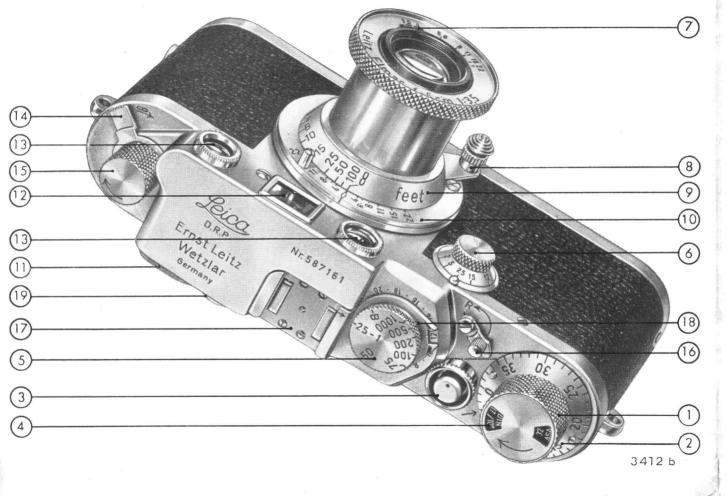
A LEICA III f with a 135 mm HEKTOR lens and a universal focusing bellows was used for all photographs contained in this booklet. Exceptions are the illustrations on pages 5 and 17, which were made with a 50 mm ELMAR lens.

#### www.orphancameras.com

	www.orphanoameras.co			
0	TWIN EYEPIECE of viewfinder and rangefinder		page	16
Ø	VIEWFINDER WINDOW		page	17
B	RANGEFINDER WINDOWS (two)		page	18
1	RANGEFINDER EYEPIECE ADJUSTMENT		page	19
Œ	REWINDING KNOB	pages	27 and	33
16	REVERSING LEVER $A = Film$ ADVANCE position $R = Film$ REVERSE position		page	33
Ø	ACCESSORY SHOE for special viewfinders etc.		page	16
18	ADJUSTABLE FLASH CONTACT SCALE with red contact numbers		page	34
Ø	FLASH PLUG SOCKET	1 .	page	35

You are now ready to practice with the unloaded camera. Continue until you are thoroughly familiar with the instructions given in the following pages and can even operate your LEICA in the dark.

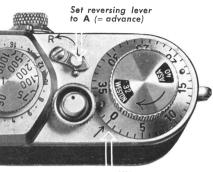




These two pages indicate the various parts and controls of the LEICA. Compare the illustration on the left with your camera but do not yet operate any knob, button or lever.

0	WINDING KNOB advances the film and winds shutter in one operation	page	4
_	au a	page	·
2	AUTOMATIC EXPOSURE COUNTER	page	4
3	SHUTTER RELEASE	page	4
4	FILM TYPE INDICATOR	page	5
6	FAST SHUTTER-SPEED DIAL for speeds from 1/25 sec. to 1/1000 sec. and "Bulb"	page	6
6	SLOW SHUTTER-SPEED DIAL for speeds from 1/25 sec. to 1 sec. and "Time"	, page	7
Ø	IRIS DIAPHRAGM ADJUSTMENT	page	11
8	FOCUSING LEVER WITH INFINITY CATCH	page	12
9	DISTANCE SCALE	page	12
O	DEPTH OF FIELD SCALE	page	15

www.orphancameras.com



After loading with film 3380 set exposure counter to 0



## 1 TURN WINDING KNOB

in the direction indicated by the arrow until it comes to a stop. This operation simultaneously winds the shutter and advances the film for the next exposure. Double exposures are thus prevented.

## 2 THE EXPOSURE COUNTER

automatically registers the number of exposures made, provided it was set to 0 when the new film was inserted. Note: the dial may be turned in an anti-clockwise direction, independently of the knob.

## 3 SHUTTER RELEASE

Press the button gently and firmly, avoiding any jerking movement. Use the index finger of the right hand when the camera is held horizontally, or the right thumb when a vertical picture is being made. A cable release may be screwed over the release button when required.

Routine Practice: Set exposure counter to 0, wind and release shutter repeatedly, noting the action of the counter.

While the shutter is operating the main speed dial revolves. Avoid touching it when pressing the button.

#### www.orphancameras.com

## 4 THE FILM TYPE INDICATOR

on the winding knob is set to the type and speed of film used and a new adjustment made whenever the camera is loaded with different negative material. Film speeds are shown in ASA and Weston Exposure Index Numbers.

To set the film type indicator, lift the milled edge of the winding knob. For black-and-



white film turn it in the direction of the engraved arrow and let it drop into place at the correct setting. The lettering will then be in white on black. For colour film lift the milled edge and turn as far as required against the direction of the arrow. The letters ASA and Weston are then in white on red, which shows that the camera is loaded with colour film. The speed figure itself is always white on black.

The winding knob is also available with a film type indicator for DIN and ASA speed values.

## SETTING THE SPEED DIALS



The old fashioned invitation by the portrait photographer to "watch the birdie" has given place to the quiet click of the LEICA shutter.

Modern lenses and emulsions have reduced exposure times from minutes to fractions of a second.

The LEICA Model IIIf has two shutter speed dials: the main dial on the top and the slowspeed dial on the front of the camera.

After winding shutter, lift main speed dial, turn it until the desired speed is opposite the arrow and allow the dial to drop into its catch. At 1/1000 sec. the dial will not drop back auite so deeply.

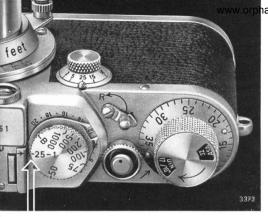


## 5 FAST SHUTTER-SPEED DIAL

The engraved figures are the denominators of the fractions of a second they represent, e. g. 50 indicates 1/50 sec., 1C00 signifies 1/1000 sec. and so on. The speed is set after winding the shutter by raising the dial and turning it until the desired figure falls opposite the arrow. It is then allowed to spring back into its seating. When set to "B" (bulb or brief time) the shutter remains open as long as pressure on the release button is maintained. When the shutter is rewound the dial returns to the position occupied before release. The dial need not, therefore, be adjusted unless a different speed is required.

When exposures longer than 1/25 sec. are required the slow shutter-speed dial is brought into play as indicated overleaf.





#### IMPORTANT RUIF.

For exposures of ½5 sec. and faster the shutter-speed dial on the top of the camera is set to the desired speed, but the slow-speed dial must be first set to red figure 25. To make exposures longer than ½5 sec., first set the top dial to red mark 25-1. Thus, when working at ½5 sec., both dials are set at red figures.

## 6 SLOW SHUTTER-SPEED DIAL

Before setting this dial the top dial of the LEICA III f must be set to the red index 25-1. *This is most important*. The figures on the slow-speed dial can be read from above and provide for exposures of 1/25, 1/15, 1/10, 1/5, 1/2 and 1 sec., and "Time".

This range also covers speeds intermediate between those marked; thus, set half-way between 1/2 and 1 sec., the shutter yields an exposure of 3/4 sec. Intermediate speeds are not possible in the faster exposure range. When the slow-speed dial is set to "T", the shutter opens on being released and remains open until the slow-speed dial is turned back a little. A safety catch retains the slow-speed dial at the "25" position. This catch is released by the thumb-nail, as shown on the next page, when slower speeds are required.

## SETTING SHUTTER SPEEDS - Summary:

#### Short Instantaneous Exposures:

from 1/25 to 1/1000 sec. 1. Set slow-speed dial to 25. 2. Wind shutter, lift fast-speed dial and turn to appropriate setting.

Slow Instantaneous Exposures:

1/25 sec. to 1 sec.

1. Wind shutter and set top speed dial to 25-1.

2. Set slow-speed dial.

#### Brief Time (Bulb) Exposures:

1. Set slow-speed dial to 25.
2. Wind shutter and set top dial to B. The shutter will remain open so long as pressure is maintained on the release.

#### Time Exposures:

1. Wind shutter and set top speed dial to 25 – 1.
2. Set slow-speed dial to T

The shutteropens when pressure is applied to the release button and remains open until the slow-speed dial is turned slightly back.

To release slow-speed dial, press spring catch towards the camera with the thumbnail as shown.



#### THE STANDARD LENS OF THE LEICA

is the world-famous ELMAR having a maximum aperture of f/3.5 and a focal length of 50 mm. Of the wide range of LEICA lenses it is the most useful general-purpose lens. It is highly corrected to ensure optimum definition. Its aperture is sufficiently wide for all but exceptional purposes.

The SUMMITAR f/2 is of the same focal length but passes three times as much light as the ELMAR at full aperture. As is to be expected it is larger and heavier than the standard lens. It is intended for the experienced LEICA photographer for use under difficult lighting conditions.

Both ELMAR and SUMMITAR are fitted with collapsible mounts, the barrel sliding into the camera body when not in use. The lens is drawn out and locked in position by a slight clockwise turn, and returned to its collapsed position by reversing the movements.

Routine Practice: 1. Draw out! Lock!
2. Unlock! Push back!



A bluish sheen characterises the "coated" or "bloomed" LEICA lenses. The coating, by reducing surface reflection, minimises loss of light and markedly improves the brilliance and contrast of the picture.

## CHANGING LENSES

All LEICA lenses are interchangeable and will fit any LEICA camera (except very early models). To change a lens hold the camera horizontally, lens pointing upwards, in the left hand, and with the right hand grasp the lens close to the camera body and unscrew it by turning anti-clockwise.

To fit the alternative lens, hold the camera as described and present the lens to the flange in such a way that, in the case of 35 or 50 mm lenses, the focusing



lever (8) is directly in front of the viewfinder window (12). Engage the threads by a slight anti-clockwise turn and screw home by turning the lens mount in a clockwise direction. The lens tube should be drawn forward and locked before the lens is fitted to the camero.

When the lens is detached the shutter is visible. It is made of a special rubberised cloth, unaffected by temperature, while its flexibility ensures smooth running. Below the upper rim of the flange opening will be seen the lever which couples the focusing adjustment and the rangefinder. It is actuated by a helix on the lens barrel.

Rule: Do not change lenses in direct light. Turn away from the sun and work in the shadow of the body. When carrying extra lenses, fit a dust cover to protect the precision coupling mount. Also put a lens cap over the front component.

## 7 1

#### IRIS DIAPHRAGM ADJUSTMENT

The human eye is able to adapt itself to varying intensities of light by dilation or contraction of the pupil. The lower the light intensity the wider the pupil becomes and vice versa. The "pupil" of the photographic lens is enlarged or reduced by means of an iris diaphragm. The light-passing value of a lens is governed by the ratio of its focal length to the diameter of the "pupil", and is usually referred to as the "aperture" or "stop".

The numerical value of the stop is stated either as a ratio, thus 1:3.5 or commonly f/3.5. A lens of this value has a focal length three and a half times as large as the diameter of the pupil. Theoretically, all lenses having the same f-number pass the same amount of light for the purpose of exposure.

It is customary to graduate the aperture scale on photographic lenses so that the values vary in a 2:1 ratio. Thus, stopping down one division demands a doubling of exposure time, other conditions being equal.

The following table shows the relation between aperture value and exposure time:

Lens aperture:	1.4	1.5	2	2.8	(3.5)	4	5.6	8	11	16	22
Relative exposure time:	0	.5	1	2	(3)	4	8	16	32	64	128



LEICA lenses ELMAR 50 mm. have the aperture scale engraved on the front of the lens mount. The iris is opened and closed by adjustment of a small lever engraved with an index line. On all other LEICA lenses the diaphragm is controlled by means of a milled ring.



# LENS APERTURE and EXPOSURE TIME

#### Example:

Assuming an exposure time of 1/100 sec. is correct for a diaphraam setting of f/5.6, the exposure time must be doubled, i. e. increased to 1/50 sec., if the diaphragm is stopped down to f/8, other conditions being equal. On the other hand, if the stop were opened up to f/4, only half of the exposure at f/5.6 would be needed, viz. 1/200 sec. Slight differences in the exposure times used, especially somewhat longer times, are of no significance in practice and are covered by the latitude of modern films. For best results in photography, of course, correct exposure times should always be aimed at.

## 8 FOCUSING THE LENS

All LEICA lenses having a focusing lever are automatically locked at the infinity ( $\infty$ ) position. To release the lever for focusing on nearer subjects press the knob at the end of the lever.

#### DON'T FORGET:

ELMAR 50 mm. and SUMMITAR 50 mm. lenses have collapsible mounts. The lens barrel must be drawn out and locked before focusing. (See page 9.)

## 9 DISTANCE SCALE

Normally, actual distances do not interest LEICA photographers as focusing is effected by the rangefinder. The distance scale, therefore, is of importance only when referring to the depth of field scale described on page 15.





## GENERAL RULES FOR STOPPING DOWN

- 1. Objects most sharply defined are those at the distance at which the lens is focused. Therefore, always focus carefully on the centre of interest of the subject.
- 2. Snapshots: Stop down to f/5.6 and focus on principal object. The depth of field will usually be sufficient.
- 3. Long distance views without foreground interest: Set lens to infinity and stop down to f/5.6 or f/8.
- **4.** Landscapes with foreground: Stop down so that the depth of field scale indicates a range extending from the foreground distance to infinity.
- 5. Portraits: Use full lens aperture and focus accurately on the eyes. The sitter should be sharply defined and the background subdued by being diffused.

The Second Index Line marked R on distance scale is used for infra-red-photography. First focus accurately on the object in the usual way, then adjust the lens mount until index line R registers with the distance indicated by the rangefinder setting. Exceptions: When working with wide-angle lenses, no special adjustment is required.

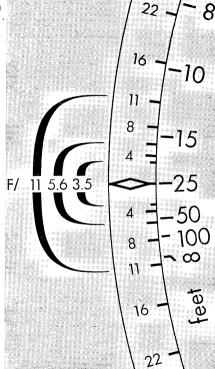


## DEPTH OF FIELD SCALE

An object is most sharply defined in a photograph when it lies at the distance on which the lens is focused. Definition would gradually deteriorate if the object were moved nearer the camera until a point would be reached when definition would be quite unsatisfactory. Similarly, definition would deteriorate, although not so rapidly, if the object were moved away from the camera. The distance between the nearest plane and the furthest plane at which objects are sufficiently sharply defined is known as the "depth of field" (often erroneously called "depth of focus"). It varies with the distance focused upon and the aperture of the lens. The nearer the principal object and the larger the stop of the lens the shallower the depth of field and therefore the more critical must focusing be.

A scale on LEICA lens mounts enables the depth of field to be read at each aperture and each distance setting down to 3.5 feet. Objects at distances between those indicated on the scale will be sufficiently sharply defined.

Example: With a standard focal length of 50 mm., when the distance scale is set at 25 feet and the lens aperture at f/3.5, the depth of field extends from 20 feet to 40 feet. With the lens stopped down to f/5.6 it will extend from 16 feet to about 60 feet. At f/11 all objects beyond 12 feet will be in focus.



## VIEWFINDER and RANGEFINDER:

## 11 TWIN EYEPIECE

This carries the eyepieces of both viewfinder and rangefinder so that only a slight movement of the head is necessary when changing from one to the other.

Correction lenses can be fitted to the twin eyepiece, enabling users with defective eyesight to operate the LEICA without glasses. Such lenses are made to the user's optician's prescription.

## 12 VIEWFINDER

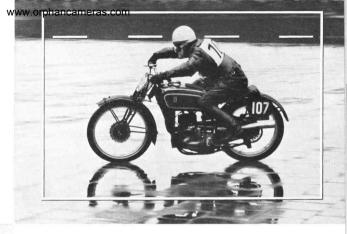
The built-in viewfinder indicates the view embraced by the standard 50 mm. lenses. When lenses of other focal lengths are in use, the universal viewfinder, which fits into the accessory shoe (17), must be brought into use.

RANGEEINDER VIEWFINDE

Place the eye close to the twin eyepiece. Care should be taken to look squarely through the centre of each eyepiece.

The viewfinder of the LEICA If is detachable since this camera often serves special purposes, i. e. scientific photography, where other methods of observation are advantageous (micro-attachment, reflex housing etc.).

12 THE VIEWFINDER of the LEICA I f is of the reflecting type and can be used to good advantage on models II f and III f.





As the field covered by 50 mm lenses is shown in its natural size this reflecting finder allows the use of both eyes, the brilliant field frame appearing in the observer's unimpaired natural field

of view without the risk of eyestrain.

A dotted line along the upper edge enables one to make adequate allowance for parallax in the case of close-ups (distances less than 10 feet).

## 13 COUPLED RANGEFINDER



In miniature photography accurate focusing is essential for perfect definition and sharp enlargements.

Former visual examination under

the black cloth is now replaced by the movement of a single finger.

The rangefinder coupled with the LEICA lens measures the distance and at the same time focuses the lens accurately on that distance.



Focusing is effected by means of the lens focusing lever (8). When the lens is set at "infinity", near objects appear to be "double" when viewed through the rangefinder. When the lever is operated so that the two images of an object coincide the lens is focused on that object. All interchangeable LEICA lenses up to 13.5 cm. focal length are automatically coupled with the rangefinder when screwed into the camera body.

Only LEICA If differs in that it has an attachable range-finder without provision for coupling lenses (A conversion into models II f or III f is possible).



Out of focus

Correct focus

#### www.orphancameras.com

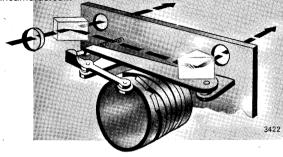
## How the Coupled Rangefinder Works:

As the lens is focused, the backward and forward movement is communicated by a lever to the rangefinder, the precision of which resembles that of a high-grade microscope.

# ADJUSTMENT OF RANGEFINDER TELESCOPE

The accuracy of the LEICA rangefinder is augmented by a built-in telescope having a magnification of 1.5. By means of the small lever (14) it may be focused on distant objects. It will also compensate for slight eyesight defects (between -2 and +1.5 dioptres).

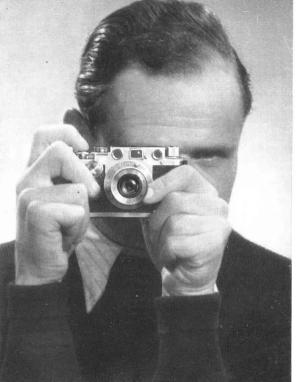
To demonstrate the operation of the rangefinder: Sight, through the rangefinder, an object about 12 to 15 feet away, the lens being set to "infinity". Cover the left hand rangefinder window with the middle finger of the left hand. Look centrally into the rangefinder eyepiece. The object will be seen in a small circular field. Adjust lever (14) until the greatest possible sharpness is obtained. When the finger is removed from the window a double image of the object will be seen in a



larger circular field. Adjust the lens by lever (8) until the two images coincide. The lens is then accurately focused on the selected object. Unless the small field appears exactly in the centre of the larger, the line of sight is sideways and incorrect. Bearing this in mind will quickly enable the LEICA user to focus rapidly and accurately.

When working at short distances it is advisable to focus the lens by scale on the appropriate distance and correct slight difference by approaching or receding from the subject until the rangefinder images merge.

To enhance the colour differentiation of the rangefinder images a small orange filter in mount can be fitted to the left window (13).



## HOLDING the LEICA:

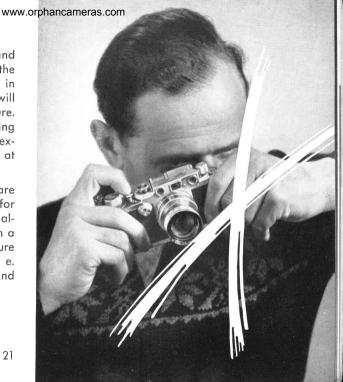
Grip the LEICA with the right hand so that the rounded end of the baseplate rests in the palm. The index finger should rest lightly on the shutter-release button. It is important that the camera is cupped in the base of the palm counteracting the pressure of the finger on the release. The other end of the camera is gripped in the left hand, with the index finger on the focusing lever. Hold the camera steadily against the head with the twin eyepiece immediately in front of the eye. Press the elbows to the chest and stand with the feet well separated.

Press the release button gently but firmly, taking care not to jerk. Apply pressure with the forefinger only and maintain pressure until the shutter has completed its run.

## THE WRONG WAY:

The camera is not held firmly and may give way to the pressure on the release button when not cupped in the base of the palm. The result will almost certainly be a blurred picture. In addition to the method of holding the LEICA described on page 20, experienced users hold their breath at the moment of release.

Some enthusiasts boast that they are able to hold the camera steady for a whole second. However, it is always safer to set the camera on a firm support when using exposure times of the slow speed dial, i. e. shutter speeds between 1/25 and 1 second.





#### **VERTICAL PICTURES:**

Grip the LEICA with the right hand with the thumb on the release button and the fingers exerting counter pressure. The upper end of the camera is grasped with the left hand, one finger of which operates the focusing lever. The top of the camera should rest against the forehead. Thus held, the camera can be operated without jerking.

Slow-speed, hand-held snapshots are not difficult . . .

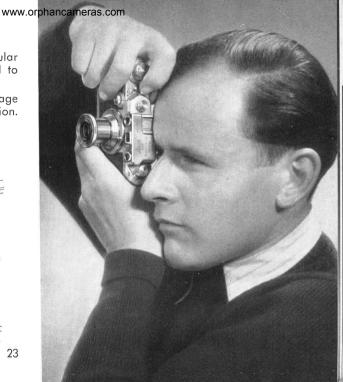


## THE SECOND METHOD

of taking vertical pictures, popular when changing from horizontal to vertical position or vice versa.

Grip the LEICA as described on page 20, then turn to the vertical position.

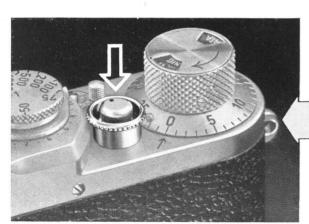




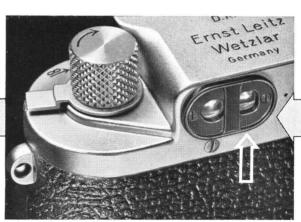
8



Withdraw LENS and lock it by turning clockwise to the stop.



. . gently press RELEASE BUTTON.



FOCUS lens by means of the rangefinder. Move eye back to viewfinder and . . .

24

CAMERA DRILL



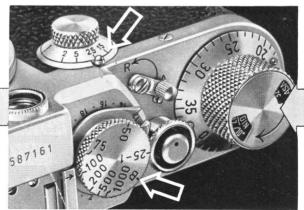
Turn WINDING KNOB to the stop.



Adjust LENS APERTURE.



COMPOSE PICTURE in viewfinder. Approach subject as closely as possible to obtain the largest possible image of the subject.



Set SHUTTER SPEED DIAL.

3367a

GM8H WETZLAR

**ERNST LEITZ** 

## FILM CARTRIDGES, SPOOLS, CASSETTES

The principal manufacturers supply 35 mm. perforated film as used in the LEICA in various degrees of sensitivity etc. and issue the following:

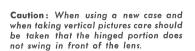
- Daylight Loading Cartridges which are simply inserted in the camera in daylight in the same way as LEICA film cassettes.
   They should not be loaded a second time.
- 2. Daylight Loading Spools which consist of a standard length of film with opaque paper leaders and wound on a centre spool. Directions for use are supplied with the spools.
- 3. Darkroom Loading Spools which contain ready-trimmed lengths of film which require to be loaded into the LEICA cassette in the dark-room.
- 4. Bulk Supply. This is available in lengths of 5, 10, 15 metres and upwards. In the darkroom the required length is cut off, loaded into the LEICA cassette and trimmed (see page 30). The LEICA film cassette holds 1.6 m. (approx. 51/4 feet) of film, sufficient for 36 exposures.

#### The Ever-Ready Case:

The LEICA is best kept and carried in the ever-ready case. To remove the LEICA from the case, loosen the bottom screw.







## LOADING the LEICA

The fact that exposures as short as 1/500 or 1/1000 sec. can produce successful pictures is sufficient indication of how minute an amount of light may affect a film. LEICA cassettes and daylight loading cartridges are light-tight but even so, they should never be exposed to direct

sunlight. Always load and unload the camera in the shadow of the body in the absence of other light protection.

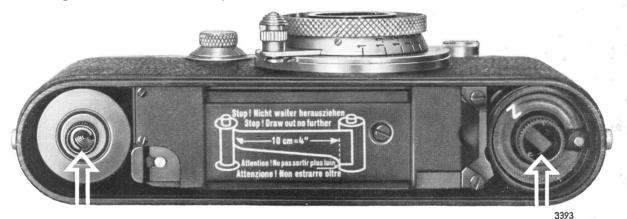
Before opening the LEICA make sure that the film has been rewound into its cassette. If there is any doubt about the camera being loaded, pull out the rewinding knob (15) and turn it in the direction of the arrow. If resistance is felt the camera is loaded and the film should be wound back into the film cassette



#### TO LOAD THE LEICA:

- 1. Before inserting a new film cassette, set reversing lever (16) to A (Advance). Wind and release the shutter to make sure that it is in order. Wind the shutter again but do not release it.
- **2.** Open the camera by raising the locking handle on the baseplate and

- turning to "OPEN" and lift the baseplate. (Some models are marked "AUF" (open) and "ZU" (close).)
- **3.** Remove the take-up spool from the camera.
- **4.** Place the LEICA on the table as shown in the illustration.

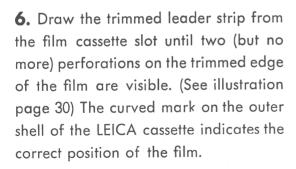


TAKE-UP SPOOL

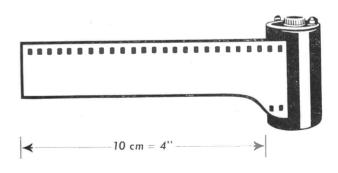
FILM-CASSETTE

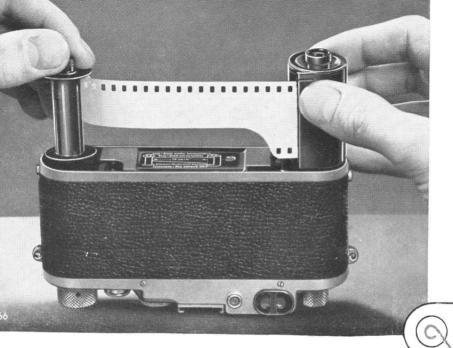
#### LOADING THE LEICA

5. Hold the take-up spool in the left hand and the loaded film cassette in the right. Both knurled heads should point downwards (see illustration). Insert trimmed end of the film under the clamping spring of the take-up spool as far as it will go. The perforated edge of the film should abut the spool flange.









#### LOADING THE LEICA

The safety spring of the standard LEICA film cassette should always lie in this corner.

With properly trimmed film no more than two perforations should be visible on the trimmed edge.

7. Introduce the take-up spool and film cassette into camera simultaneously, knurled heads pointing upwards. The trimmed film will then enter the slot along the back of the camera. If the cassette will not drop right down, turn the rewinding knob (15) slightly.

Check the path of the film by this diagram, the emulsion side must face the lens. LOADING THE LEICA



**8.** Hook the baseplate over the pin, close it and turn the locking handle to "CLOSE" (or ZU). The camera is now light-tight.

#### LOADING THE LEICA

- **9.** Turn the rewind knob (15) carefully indirection indicated by the arrow until a slight resistance is felt. This will tighten the leader strip. Press the release button (3) and turn winding knob once again.
- 10. Turn exposure counter (2) anticlockwise to 0, release shutter and again turn the winding knob. While the winding knob rotates clockwise, the rewind knob should turn in the opposite direction to the arrow, viz. anticlockwise. This will indicate that the film is travelling properly. The exposure counter will now be pointing to 1 and the LEICA is ready for use.

## If the film has not been correctly inserted..

it may disengage from the take-up spool and will not advance. This fault will be recognized by the rewind knob failing to rotate while the winding knob is being turned. The film must be re-inserted: first set reversing lever (16) to R, then turn rewind knob (15) in the direction of the arrow, only so long as the release button continues to rotate. When the latter ceases to rotate the film will have passed the release shaft and only a very short length will be protruding from the mouth of the cassette. Should the end of the film be drawn into the cassette it will be necessary to go into a darkroom to withdraw the leader.