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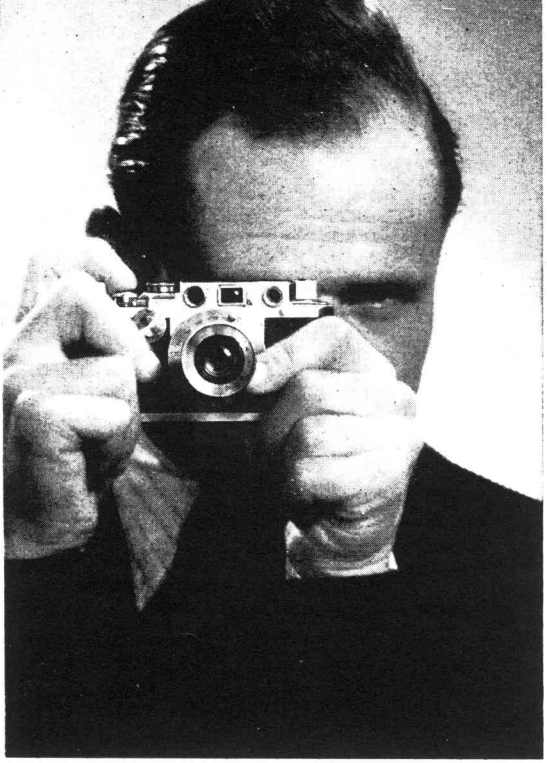


HOLDING the LEICA:

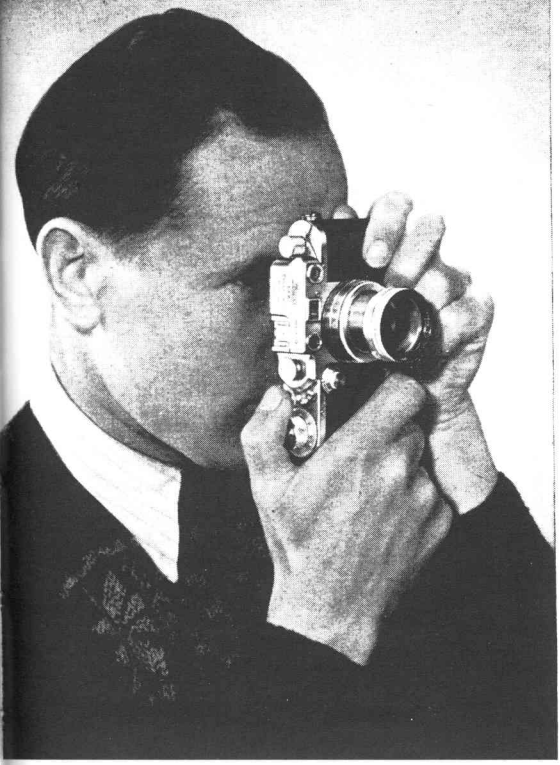
Grip the LEICA with the right hand so that the rounded end of the baseplate rests in the palm. The index finger should rest lightly on the shutter-release button. It is important that the camera is cupped in the base of the palm counteracting the pressure of the finger on the release. The other end of 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 37, experienced users hold their breath at the moment of release.

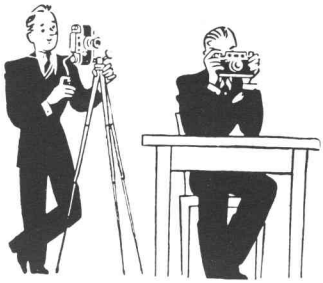
Some enthusiasts boast that they are able to hold the camera steady for a whole second. However, it is always safer to set the camera on a firm support when using exposure times of the slow speed dial, i. e. shutter speeds between 1/25 and 1 second.



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.

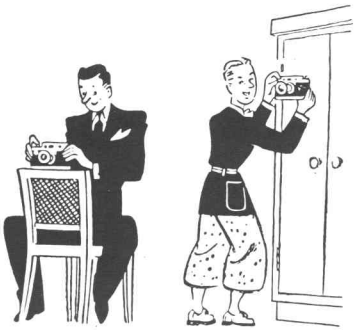
Slow-speed, hand-held snapshots are not difficult . . .

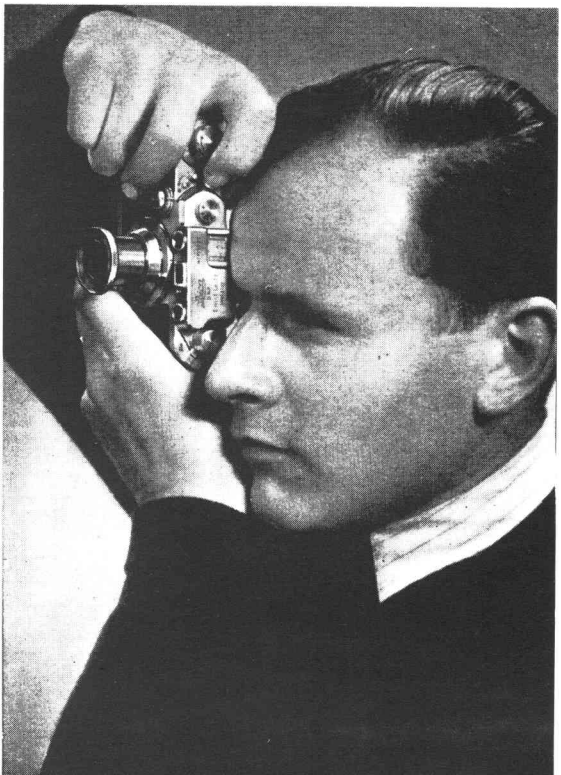


THE SECOND METHOD

of taking vertical pictures, popular when changing from horizontal to vertical position or vice versa. Grip the LEICA as described on page **36**, then turn to the vertical position.

. . . if ingenuity is called upon.

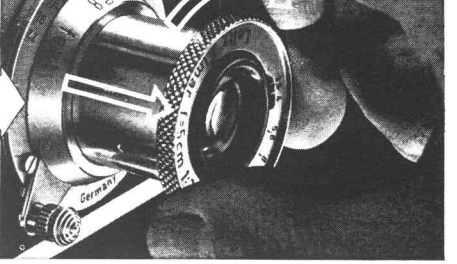




1

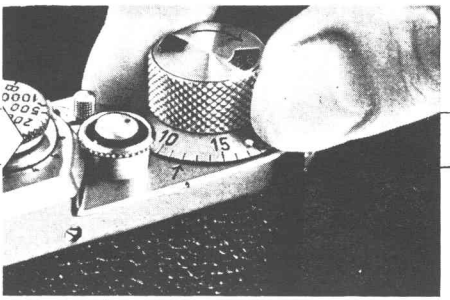
CAMERA DRILL

Remove LENS CAP.



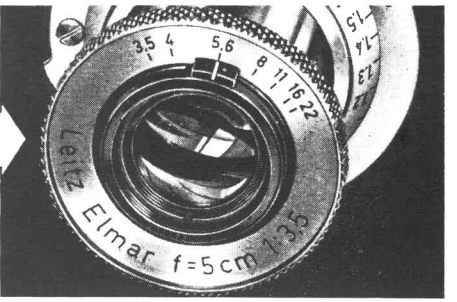
2

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



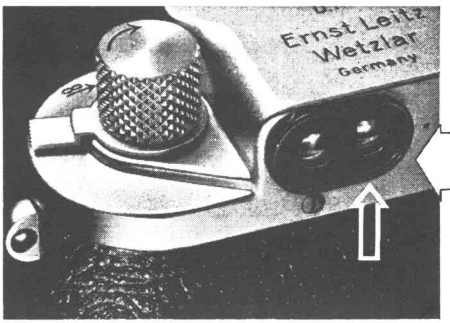
3

Turn WINDING KNOB to the stop.



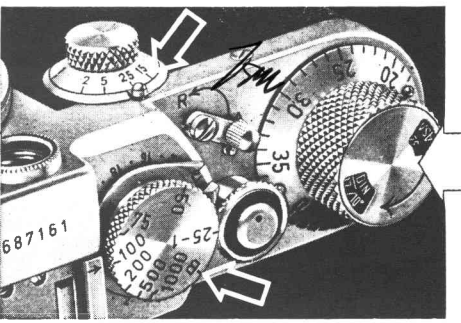
4

Adjust LENS APERTURE.



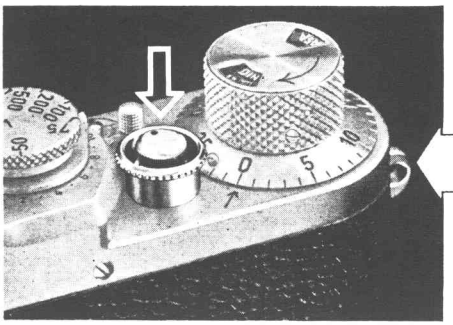
6

COMPOSE PICTURE in viewfinder.



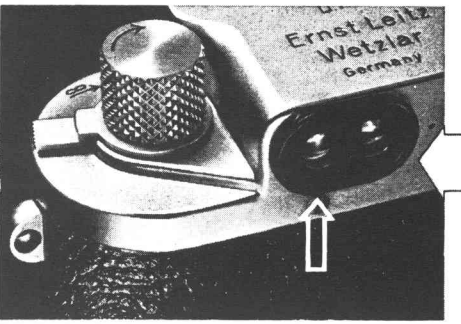
5

Set SHUTTER SPEED DIAL



8

. . gently press RELEASE BUTTON.



7

FOCUS LENS through rangefinder, move eye back to VIEWFINDER, and

FILM CARTRIDGES, SPOOLS, CASSETTES

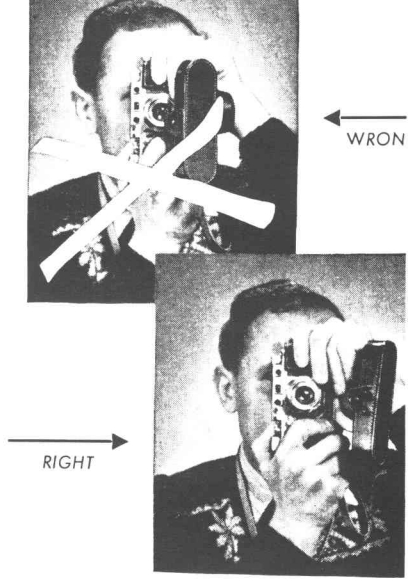
The principal manufacturers supply 35 mm. perforated film as used in the LEICA in various degrees of sensitivity etc. and issue the following:

1. 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 18 - 200 feet. In the darkroom the required length is cut off, loaded into the LEICA cassette and trimmed (see page 31). The LEICA film cassette holds 1.6 m. (approx. 5 1/4 feet) of film, sufficient for 36 exposures.



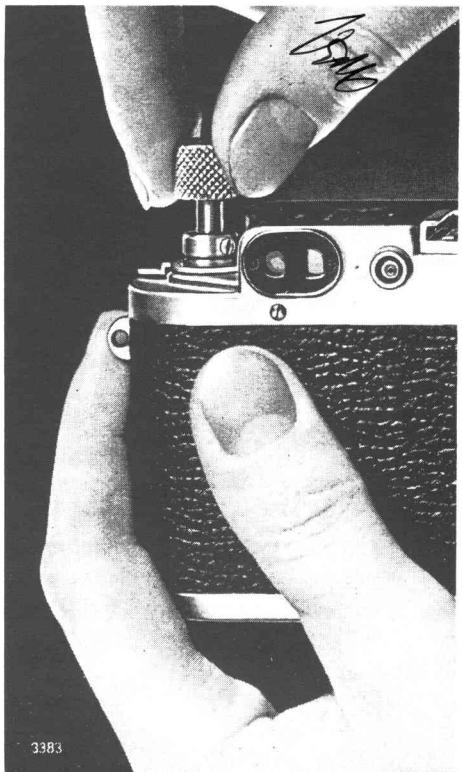
The Ever-Ready Case:
The LEICA is best kept and carried in the ever-ready case. To remove the LEICA from the case, loosen the bottom screw.

Caution: *When using a new case and when taking vertical pictures care should be taken that the hinged portion does not swing in front of the lens.*

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.



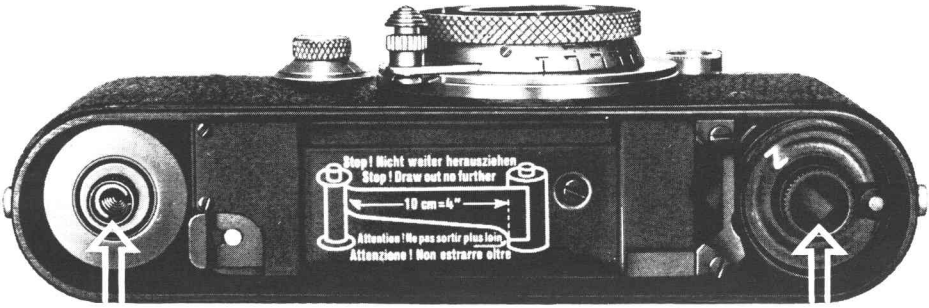
TO LOAD THE LEICA:

1. Before inserting a new film cassette, **set reversing lever** (16) **to A** (Advance), **i. e. against the stop pin.** Wind and release the shutter to make sure that it is in order. Wind the shutter again but do not release it.

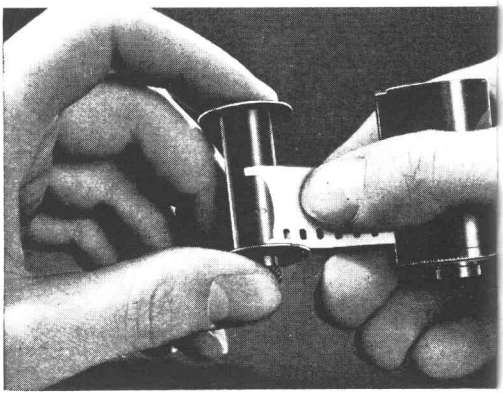
2. Open the camera by raising the locking handle on the baseplate and turning to "OPEN" and lift the baseplate. (Some models are marked) "AUF" (open) and "ZU" (close).

3. Remove the take-up spool from the camera.

4. Place the LEICA on a firm support as shown in the illustration.

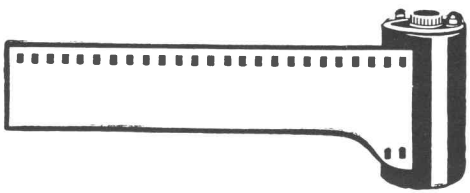


TAKE-UP SPOOL *FILM-CASSETTE*

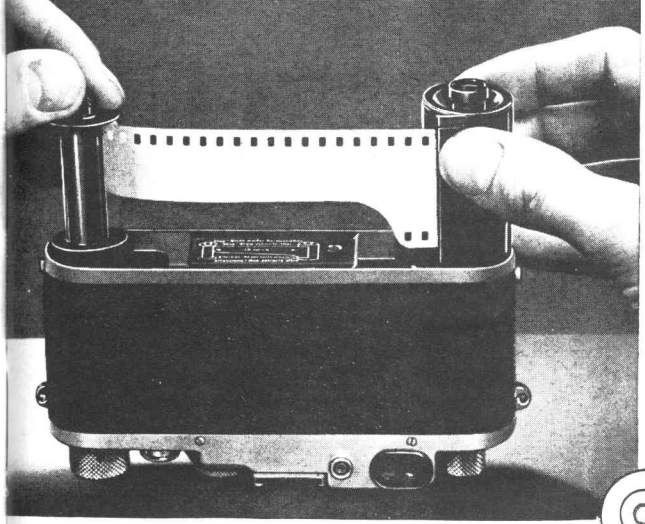


5. Hold the take-up spool in the left hand and the loaded film cassette in the right. Both knurled heads should point downwards (see illustration). Insert trimmed end of the film under the clamping spring of the take-up spool as far as it will go. The perforated edge of the film should abut the spool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

6. Draw the trimmed leader strip from the film cassette slot until two (but no more) perforations on the trimmed edge of the film are visible. (See illustration.) The curved mark on the outer shell of the LEICA cassette indicates the correct position of the film.



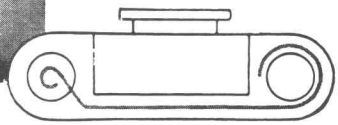
10 cm = 4"



LOADING THE LEICA

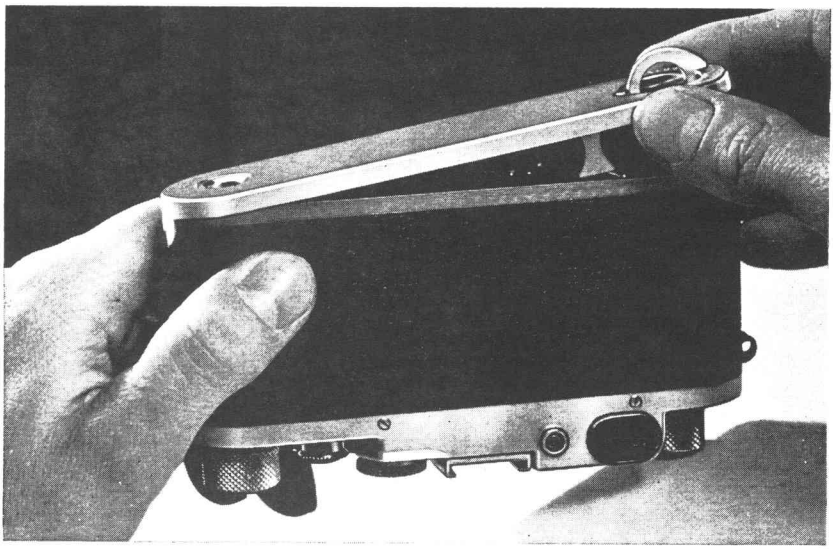
The safety spring of the standard LEICA film cassette should always lie in the corner next to Z, as illustrated.

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.



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

9. Turn the rewind knob (15) carefully in direction indicated by the arrow until a slight resistance is felt. This will tighten the leader strip and ensure that the film roller sprockets engage the perforations of the film properly. 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 doing this **the rewind knob should revolve.** This will indicate that the film is travelling properly. With the exposure counter pointing to 1 the LEICA is ready for use.

To avoid failures always set reversing lever to A against the stop pin when loading the camera and check that the rewind knob rotates while the shutter winding knob is being operated for simultaneous film advance.

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.

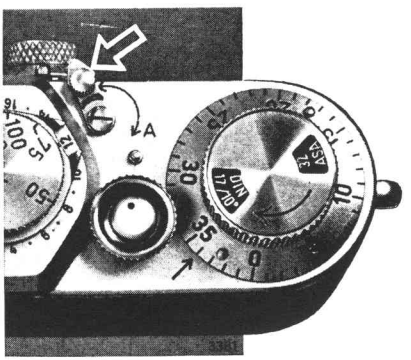
First set reversing lever (16) to **R,** then turn rewind knob (15) in the direction of the arrow. **only so long as the release button continues to rotate.** When the latter ceases to rotate the film will have passed the release shaft and only a very short length will be protruding from the mouth of 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.

UNLOADING the LEICA

When the full length of film has been exposed it will be impossible to turn the winding knob without exerting undue force. It will be necessary to rewind the film into the cassette. Before doing so verify that the slow-speed dial is not set to T or the shutter might be open and the film would be exposed while being rewound. To be doubly sure fit the lens cap while rewinding.

1. To unload the camera set the reversing lever (16) to **R** (**R**everse). This disengages the automatic coupling of the film transport and the shutter mechanism.

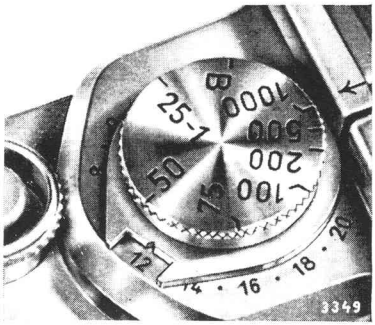
2. Pull up the rewind knob (15) and turn in the direction of the arrow until resistance is felt. This will indicate that the film has been unwound from the take-up spool and is being held merely by its tip under the spring of the spool. Wind to overcome resistance, and after two complete turns the film will be completely rewound into the cassette.



If a partially exposed film is removed from the camera and the unexposed portion is to be used at a later date, the film must not be fully rewound into the cassette. Watch the release button carefully when rewinding and stop as soon as it ceases to turn. (See also page 34.)

3. After rewinding the film the baseplate may be removed and the cassette withdrawn. Protect loaded cassettes from dust and light by storing in the original plastic containers.

FLASH SYNCHRONIZATION



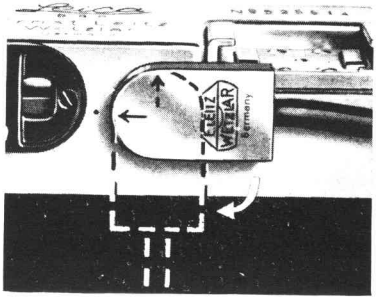
The LEICA has provision for flash synchronization at the various shutter speeds. An adjustable contact scale (18) with red figures is fitted under the fast shutter-speed dial (5).

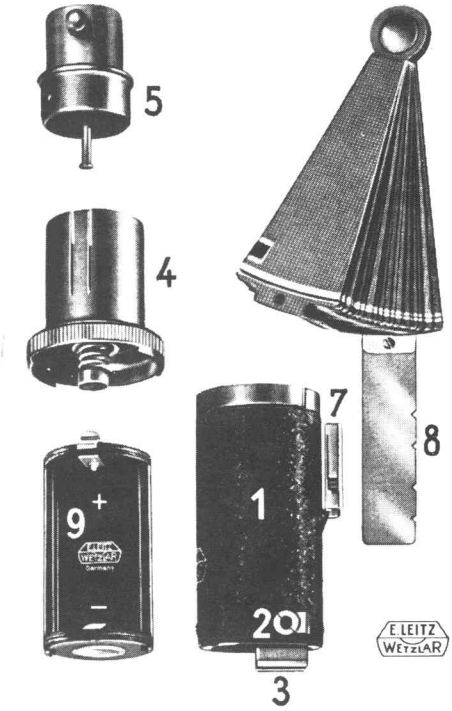
The contact scale allows adjusting the built-in shutter synchronization in accordance with the flash peak of all commercial types of flash bulbs and also electronic flashes.

The appropriate setting of the contact scale for any exposure time required is taken from the Tables printed on pages 45 & 71. Similar folding Tables are supplied for retention in the ever-ready case. The circular plug socket to take the connecting cable of the flash attachment is built-in at the right hand side of the twin eyepiece of the rangefinder and viewfinder.

Special attention is drawn to the fact that these Tables are only valid for cameras with RED contact numbers and distance calculation in FEET. Special tables are available for earlier III f cameras with BLACK contact numbers.

The camera plug held in a horizontal position and with the arrow engraved on it pointing towards the twin eyepiece is pushed into the flash socket (19) of the LEICA and secured there by turning it downwards so that the arrow now points to the top. To remove the plug, turn it so that the arrow is horizontal again and pointing to the twin eyepiece.



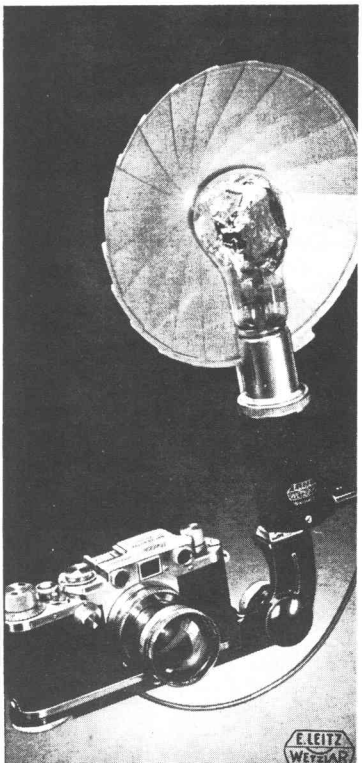


The LEITZ flash attachment is fitted to the accessory shoe of the camera or to the shoe of the adjustable holder for the flash attachment. The unit consists of the battery container (1) with lateral socket (2) for inserting the two-pin plug of the connecting cable, tripod thread (3), detachable holder for large flash bulbs with E. S. cap (4), adapter (5) with ejecting device (6) for small flash bulbs with S. C. C. cap, reflector holder (7) and collapsible (segmented) reflector (8), and connecting cable.

The battery container includes an adapter (9) with tubular capacitor and with holder taking a small commercial 22.5 volt dry battery (commonly used with hearing aids).

Successful firing is guaranteed by the capacitor. The adapter with capacitor can be fitted, without modification, in place of the battery holder supplied with earlier flash attachments. The flash bulb socket (4) is detached by a slight left turn and similarly replaced by a right turn.

The current supplied by the battery, even after long use, will still be sufficient for firing. Ignition is, therefore, practically independent of



the condition of the battery as long as it is not completely exhausted. The capacitor is charged by inserting the flash bulb or the test filament bulb (6 volts, 0.05 amps). No bulb should, therefore, be kept inserted if the flash attachment is not in use.

The holder for flash bulbs with E. S. cap (4) takes the adapter (5) for the small flash bulbs with S. C. C. cap. This adapter is turned until its pins engage the springs of the holder and the red dots on either part are in alignment. By pressing the knob (6) of the ejecting device the hot bulb can be ejected immediately after firing.

The collapsible reflector is so attached to the holder with click stops (7) that the flash bulb is in the centre of the reflector. Radius and surface of the reflector are designed to produce a pleasing soft lighting covering a wide angle, so that the 35 mm. wide angle lens can also be used for flash photographs. With the reflector folded the flash attachment requires a minimum of space.

One or more flash attachments can be connected to the synchronized LEICA and fired simultaneously at various distances (mounted on tripods) to give special lighting effects. In this case a long connecting cable and multiple socket have to be used with the normal flash attachment cable.

Exposure Guide
for LEICA-Cameras with RED Flash Synchronisation Scale

Table ❶

	Shutter Speed →	1/25	1/50	1/75	1/100	1/200	1/500	1/1000	
	Contact Number →	**16**	**13**	**7**	**5**	**2**	**1**	**0**	
Flash Bulbs (Type FP) for Focal Plane Shutter	Philips PF 24, Osram SO Gen. El. USA No. 6 *) Sylvania USA FP 26 West Japan No. 6 u. 6 A	100	75	62	56	40	26	20	**Guide Numbers**
	Philips PF 45	115	100	80	70	45	30	–	
	Gen. El. USA No. 31 *) Sylvania USA No. 2 A	150	110	95	80	56	36	23	
	Osram S 2 Gen. El. USA No. 22 *)	200	150	125	110	80	50	33	

*) Same positioning for bulbs of the same type made by Westinghouse, Duramite, Amplex, Japan etc.

1. Adjust red scale of synchro-dial below the shutter speed dial in accordance with the CONTACT NUMBER given in the table for the required shutter speed.
2. Look up the GUIDE NUMBER for the flash bulb and shutter speed used, divide by the **distance (in feet)** between bulb and subject and set lens diaphragm to the figure thus ascertained. This adjustment ensures satisfactory exposures on films of medium speed 17/10° DIN or 32 ASA.
3. Open up one lens stop for 16 ASA (14/10° DIN) and close down one stop for 64 ASA (24/10° DIN) films. Also stop down when allowance must be made for highly reflecting objects or surrounding bright surfaces.

Consult special table for LEICA III f with BLACK contact scale.

See tables on page 71.

Guide numbers are approximate values. They are calculated for the Leitz folding reflector, the subjects to be photographed having a normal brightness and the ceiling reflection being considered as the standard one. It is, therefore, necessary to consider extraordinary lighting conditions when selecting the lens stop.
Pictures taken that way can be developed in the ordinary procedure together with pictures taken in daylight on the same film. Developing flash pictures in the ordinary way has the further advantage that the depth of the picture turns out brighter than it would when chosing a higher guide number and developing longer. This procedure is only to be recommended if one intends to bring out distinctly subjects in the foreground of the picture.
For colour film the following rules are to be adhered. With **negative colour film** clear glass flash bulbs can be used as any correction of the colour temperature can be attended to while copying the colour positives.
With **artifical light colour film** yellow-tinted flash bulbs are to be used.
Daylight colour film demands blue-tinted flash bulbs with the exception of electronic flash where the colour temperature is equal to daylight.
The contact numbers mentioned in our tables are the same for all the differently tinted flash bulbs of the same type. The guide numbers, however, are influenced by the tinted flash bulbs and are to be corrected accordingly.
The great number of different colour films and the necessity of exposing correctly makes it not adviseable to specify special guide numbers. It is recommended to gain some experience with certain colour films and flash bulbs as only by doing so satisfactory results can be expected. It has been found, for example, that using blue-tinted flash bulbs with the daylight colour film of 15/10° DIN (i. e. Agfacolor L – UT) half the value of the guide number is about correct. If a colour film, however, has a sensitivity of 10 ASA, such as Kodachrome K 135, the diaphragm is to be opened by half a stop more than theone specified in our table.
It is pointed out that the colour temperature of flash bulbs can also be corrected to suit the colour temperature of the film by using colour temperature correcting filters such as they are known as conversion filters.

Table ❷

Flash Settings for the synchronized LEICA with red Synchro-dial.

Shutter Speed →	1/25	1/50	1/75	1/100	1/200	1/500	1/1000
Osram XP	**1** 52	**6** 46					
XO	**3** 70	**7** 60					
Osram XM 1 / Philips PF 1	**7** 52	**10** 52					
Philips PF 3 N	52	52					
PF 14 N	**14** 72	**11** 60	**5** 50				
PF 25 N	105	80	70				
PF 38 E	150	110	92	80	56	36	
PF 60 E	**14** 200	**11** 160	**6** 130	**4** 115	**2** 82	**1** 52	**0** 36
PF 100 E	**16** 250	**13** 180	**7** 150	**4,5** 125			
General No. 5	100	75	65	56	43	26	–
Electric*) No. 11	105	80	70	60	46	33	23
	14	**11**	**6**	**4**	**2**	**1**	**0**
Sylvania No. 0	100	75	65	56	43	26	–
Press 40	130	100	85	75	56	33	23
Electronic flash	**0**	**20**	Check guide number against specification of electronic flash				

*) Same positioning for bulbs of the same type made by Westinghouse, Duramite, Amplex, Japan West etc

To use this table consult Directions 1. to 3. on preceding page.

Simplified Testing Method for Built-in Flash Synchronization.

The cause of failures is usually found outside the camera. The voltage of batteries may have dropped by long storage so much that there is no ignition of flash bulbs. The synchronization is checked as follows: the two-pin plug of the connecting cable is inserted into the flash attachment fitted with a test filament bulb or connected to a torch battery with a filament bulb in series connection. The filament will light up when the pins of the plug, while inserted in the socket, are shorted. To test the cable the camera plug on the other end of the cable must also be carefully shorted.

For actually checking the LEICA synchronization, push camera plug into the socket of the LEICA and test series contact with shorted main contact as follows: Wind shutter, set speed dial to 1/25 sec. and synchro-dial to 0 or 1. Press down release button (shutter will release). The test filament bulb will light up only for a fraction of a second due to the capacitor. If a commercial battery with suitable bulb is used with the flash attachment for checking purposes, the bulb will light up on depressing the release button and go out again as soon as the pressure is released.

For checking the various contact settings of the synchronization, set shutter speed and synchro-dial as follows:

Shutter speed	1000	500	200	100	75	50	25
Synchro-dial	0	1	2	5	7	13	19

The shutter speed dial is held firmly and the release button pressed down. No contact, the bulb does not light up. Then the shutter speed dial is allowed to revolve slightly. Contact is established, the bulb lights up. On rewinding the shutter speed dial to the stop the current must be switched off again. With these tests proper flash synchronization is established. In case of difficulty with electronic flashes it is advisable to have the insulating resistance checked by an expert (electrical engineer) at the two-pin plug of the cable while the camera plug is pushed in position. The test voltage should be not more than 220 volts, the insulating resistance at least 2 megohms. If the camera does not conform with this requirement it should be sent to our works or our official agency.

CHOICE OF FILM MATERIAL:

A wide variety of films of differing speeds and other characteristics is available, enabling the LEICA photographer to select the type most suitable for any particular purpose.

Medium Speed Films with a rating of about $^{16}/_{10}$ DIN to $^{18}/_{10}$ DIN are most suitable for general use. They yield high contrast, fine grain images, exhibit wide exposure latitude and possess high resolving power.

High Speed Films should only be used under certain circumstances, such as poor light, indoor and theatre work and sports photography when high shutter speeds are essential. High speed can only be realised at the expense of some coarsening of grain structure and therefore of resolving power.

Slow Films possess particularly fine grain and yield the highest contrast. They are most suitable when the reproduction of fine detail is required and length of exposure is unimportant. The copying of documents and drawings is best done on slow films.

Film manufactures express the speeds of their materials by various systems. The more frequently used ratings employed by film and exposure meter manufacturers are shown in the accompanying table.

DIN	B. S. & A. S. A.		General-lect ic	Weston	American	European
	Arithmetic	Logarithmic			Scheiner	Schelner
10/10	6	19°	8	5	16°	20°
11/10	8	20°	10	6	17°	21°
12/10	10	21°	12	8	18°	22°
13/10	12	22°	16	10	19°	23°
14/10	16	23°	20	12	20°	24°
15/10	20	24°	24	16	21°	25°
16/10	25	25°	32	20	22°	26°
17/10	32	26°	40	24	23°	27°
18/10	40	27°	48	32	24°	28°
19/10	50	28°	64	40	25°	29°
20/10	64	29°	80	50	26°	30°
21/10	80	30°	100	64	27°	31°
22/10	100	31°	125	80	28°	32°
23/10	125	32°	160	100	29°	33°
24/10	160	33°	200	125	30°	34°
25/10	200	33°	250	160	41°	35°

Scheiner, DIN, ASA/BS (log) ratings progress by three units per doubling of speed. In the other systems, doubling of the speed figure denotes a doubling of the film speed.

N.B. For films in current production refer to manufacturers literature.

CORRECT EXPOSURE:

A good exposure meter greatly simplifies exposure problems, but even without a meter, it is possible to acquire a facility for estimating exposures based on previous experience. From the start, make two different exposures of each subject and compare the result after development. The accompanying table applies to average subjects.

When estimating exposures bear in mind that in a photograph bright objects appear relatively brighter, while dark objects appear darker than they do to the eye. This is because the eye adapts itself to the prevailing light. When making a visual estimate of an exposure, therefore, until extensive experience has been gained in bright light, take a second picture giving one third of the estimated exposure. In dull light make a duplicate exposure giving 3 to 5 times the estimated time. The above applies to black-and-white film. Colour film has little exposure latitude and the use of an exposure meter is recommended.

Snapshots, Groups, Street Scenes, Houses:	f/5.6	1/50 – 1/100
Rapidly Moving Objects, Sports Pictures:	f/4 f/2.8	1/200 – 1/500 1/500 – 1/1000
Landscapes with foreground:	f/8	1/25 – 1/50
Open Landscapes:	f/8	1/50 – 1/100
Open Sea, Snow Scenes:	f/8 – f/11	1/50 – 1/200
Outdoor Portraits in the shade:	f/3.5	1/25 – 1/50
Indoor Portraits near window:	f/2 f/3.5	1/5 – 1/50 1/2 – 1/25

The above exposures are for medium speed films $^{17}/_{10}$ DIN (28° European Scheiner, 27° B. S. & A. S. A. Logarithmic Index) and a clear sky during the summer months between 10 a. m. and 4 p. m. In spring and autumn double these exposures and in the winter months multiply by four. High-speed films will require only half the exposures indicated.

The geographical latitude also influences exposures. Those shown apply to the temperate zones.

THE INTERCHANGEABLE LEICA LENSES

are offered in a large variety of types ranging from wide-angle to telephoto, ensuring excellent results in all branches of amateur photography and most specialized professional work.

Average requirements are often wholly satisfied by one of the 50 mm. standard lenses while extra lenses open up many special photographic possibilities.

More recent additions to the range of LEICA lenses are the TELYT 400 mm. f/5 and the HEKTOR 125 mm. f/2.5 both fitting the VISOFLEX focusing housing.

General Purpose Lenses:
ELMAR 50 mm. f/3.5 (**1**)
SUMMICRON 50 mm. f/2 (**2**)

Ultra Speed Lenses:
SUMMARIT 50 mm. f/1.5 (**3**)
SUMMAREX 85 mm. f/1.5 (**4**)

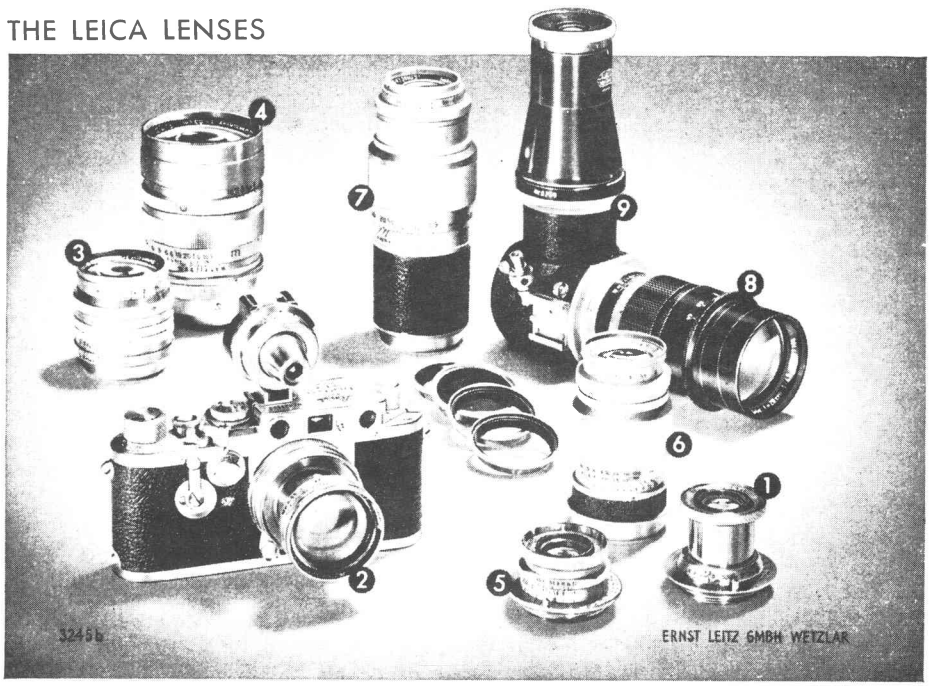
Wide-Angle Lens:
SUMMARON 35 mm. f/3.5 (**5**)

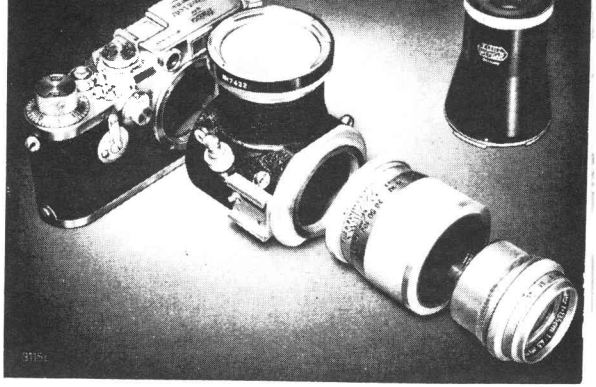
Long-focus Lenses:
ELMAR 90 mm. f/4 (**6**), HEKTOR 135 mm. f/4.5 (**7**)

Telephoto Lens:
TELYT 200 mm. f/4.5 (**8**)

The TELYT 200 mm. can only be used in conjunction with the VISOFLEX mirror reflex housing (**9**), which also takes the HEKTOR 135 mm. when fitted with a short mount.

THE LEICA LENSES





THE UNIVERSAL VIEWFINDER

is designed for lenses of 35 mm. up to 135 mm. focal length and presents the fields covered in natural left-to-right and vertical orientation, the field diaphragm being operated by a milled ring with click stops. A graduated lever provides the necessary parallax correction for close-ups.

THE MIRROR REFLEX HOUSING "VISOFLEX"

is intended for viewing and focusing directly on a ground glass screen with the aid of a 5 x magnifier. This device is primarily designed for focusing the 125, 200 and 400 mm lenses but use can also be made of the 135 mm. lens for which a special short focusing mount is available. (For sports photography with the 200 and 400 mm. lenses direct vision viewfinders are also offered.)

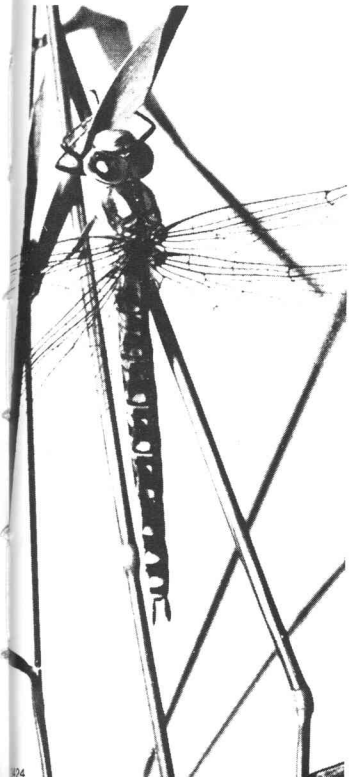
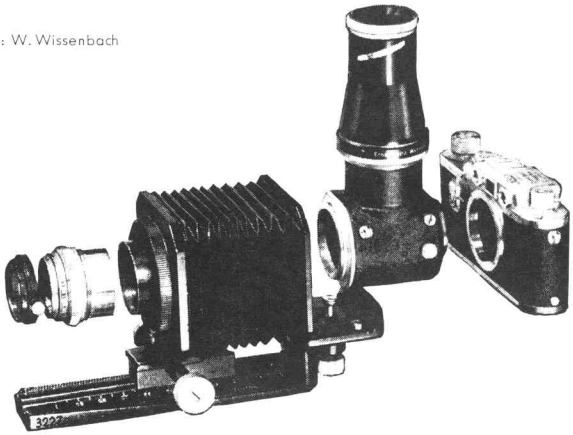
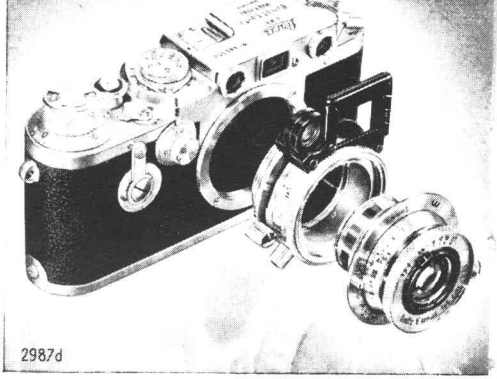


Photo : W. Wissenbach



THE UNIVERSAL FOCUSING BELLOWS

in conjunction with the VISOFLEX housing and the 135 mm. lens (used without its normal focusing mount) affords continuous focusing from infinity down to scale 1 : 1 (natural size). Other scales of reproduction, i. e. magnifications up to 6 : 1 on the negative, are obtainable with lenses of shorter focal length. An extending lens shade is most effective, particularly when using artificial sources of light or photographing against the sun.



LENS HOODS

should form part of every camera outfit. They not only screen off direct sun and other extraneous light but prove very advantageous when photographs have to be taken under adverse weather conditions as they will protect the front lens from rain or snow.

FILTERS

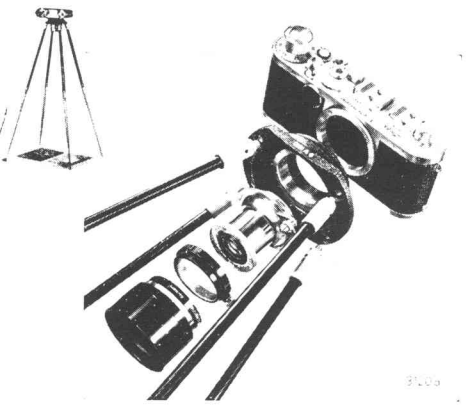
are recommended in order to increase contrast and improve general picture quality. For all LEICA lenses yellow, green, orange, red, UV protective, and polarizing filters are supplied.

THE OPTICAL NEAR FOCUSING DEVICE

enables the LEICA user to focus the 50 mm. ELMAR or SUMMICRON lens for distances between 17 inches and 3½ feet, parallax being automatically compensated. Even in this range use is made of the coupled rangefinder of the LEICA II f and III f.

THE BALL-AND-SOCKET TRIPOD HEAD

allows the camera to be adjusted easily and rapidly when taking photographs with the aid of a tripod. The heavy design ensures reliable clamping with any LEICA outfit.



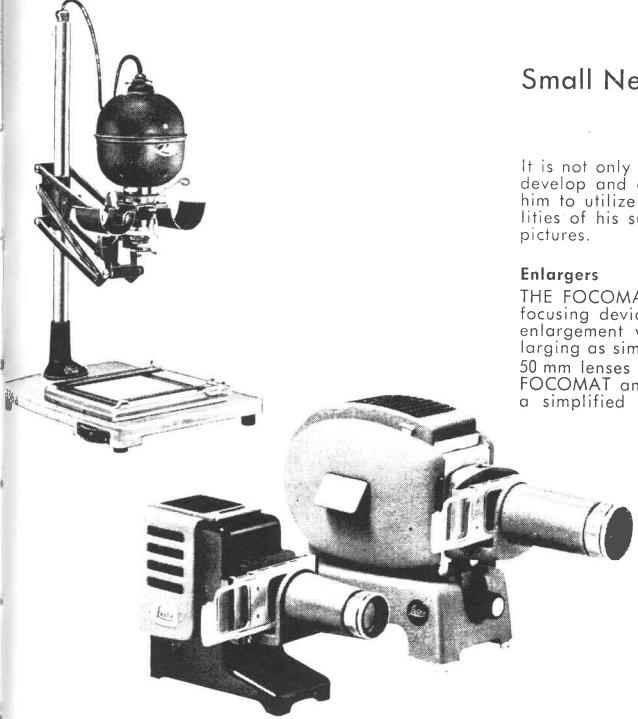
Contact your photodealer for literature on all LEICA accessories you are interested in.

AUXILIARY SETTING DEVICES

are made in various models for the LEICA to provide inexpensive mechanical means for copying or similar close-up work. Focusing for scales of reproduction of 1 : 4, 1 : 6 and 1 : 9 (approx. fields 4" x 5¾", 5¾" x 8¼" and 8¼" x 11¾") is achieved mechanically by 4 extending rods and 3 intermediate adaptors fitting between camera body and 50 mm lens ELMAR or SUMMITAR (BOOWU).

Another outfit which makes use of 3 intermediate collars, 4 extensible rods and a universal clamping collar gives negatives at the scales 1 : 1.5, 1 : 2 and 1 : 3. (Only suitable for ELMAR 50 mm, codeword BEHOO.)

The auxiliary setting device for scale 1 : 1, i. e. reproduction in natural size on the film, is made with clamping collars fitting either the 50 mm. ELMAR or SUMMITAR (codewords BELUN and BELUN-HESUM).



Small Negatives . . . . .
LARGE PICTURES

It is not only economical for the LEICA photographer to develop and enlarge his own negatives, but it enables him to utilize to the fullest extent the pictorial possibilities of his subjects and to express individuality in his pictures.

Enlargers

THE FOCOMAT ENLARGER is fitted with an automatic focusing device to ensure maximum sharpness of every enlargement without tedious adjustment.It renders enlarging as simple as contact printing.

50 mm lenses ELMAR or SUMMITAR may be used in the FOCOMAT and also in the VALOY II enlarger which is a simplified form, focusing being nonautomatic.

Miniature projection

The brilliance of LEICA photographs projected on to a screen makes for lifelike presentation and most impressive demonstration of the LEICA photographer's work for entertainment, teaching or many other purposes. The LEITZ PRADO projectors 150 & 250 are the ideal equipments for showing black-and white and colour films in the home or lecture rooms. A high-power model for a 500 or a 750 watt lamp is also available. The PRADO 250 and 500 projectors can be fully adapted for showing 2¼" x 2¼" slides if desired.

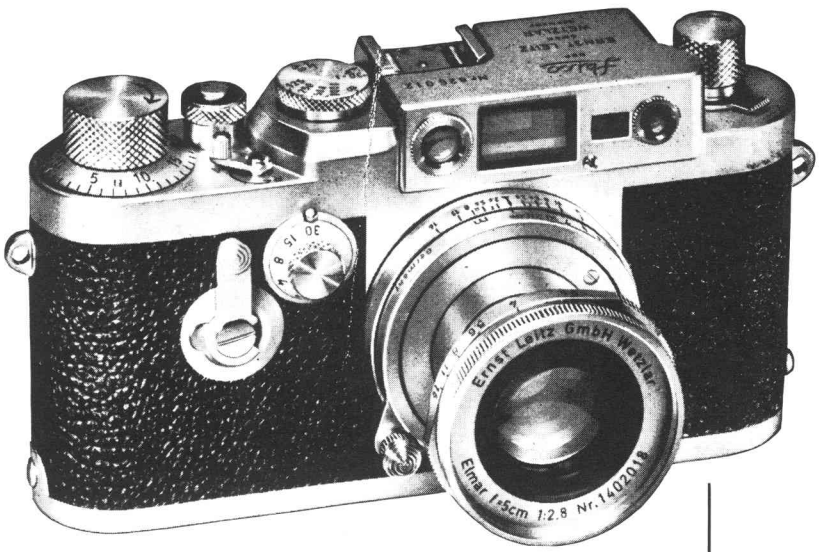
NEVER TRY

to repair a LEICA if by any chance it has become damaged. Always take it to an authorized LEICA repair service. The LEICA is built by specialist and only specialists should be entrustet with its repair.

EVERY LEICA and EVERY LEICA LENS
bears a REGISTRATION NUMBER

In case of loss or theft it is important that this number be known. Make a note of all serial numbers and carefully preserve it for reference in case of loss. It may help to recover a lost or stolen camera or lens. If you furnish us with the necessary details, all our technical services will be notified and will communicate about every camera reported.

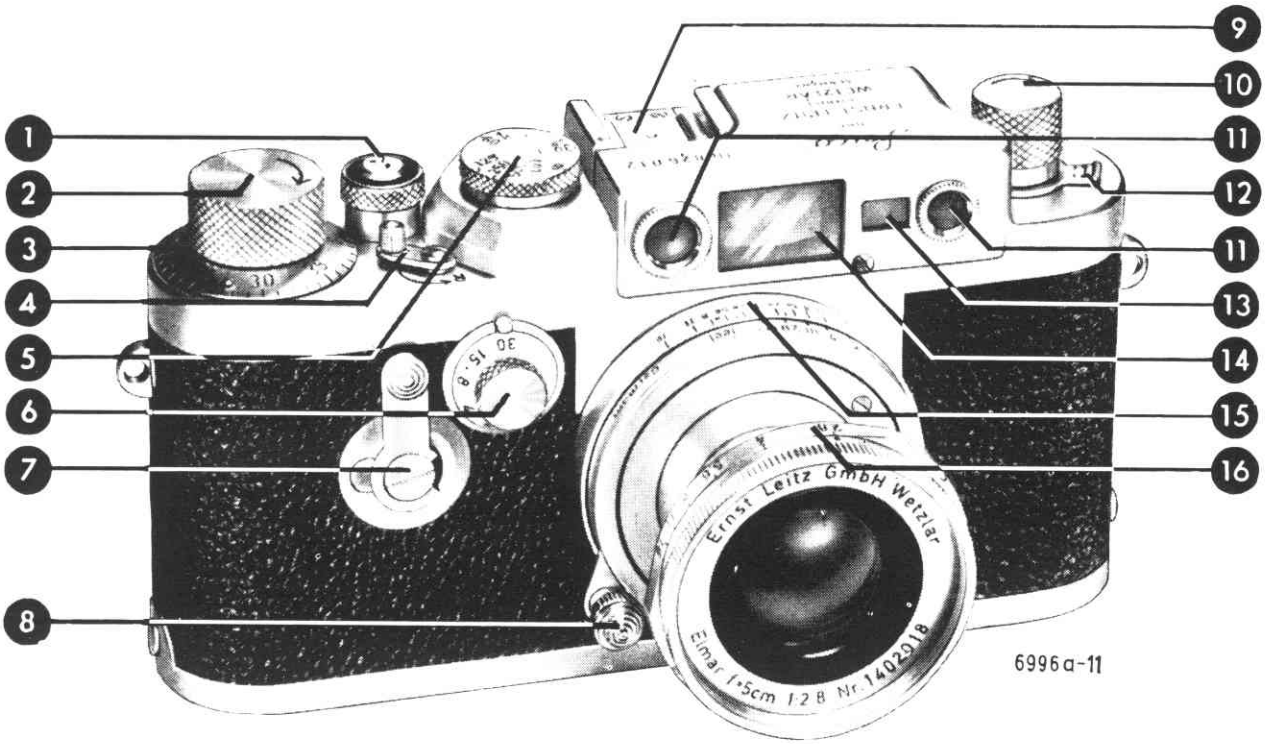
SECTION THREE: Leica g Series



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 constantly help you to experience the thrill of their brilliant realism.

Leitz
WETZLAR

ERNST LEITZ GMBH WETZLAR
GERMANY



1 Shutter release button
2 Film transport and shutter tensioning knob
3 Film counter disc
4 Reversing lever (A = advance, R = rewind)
5 Fast shutter speed dial ($^1/_{30}$ to $^1/_{1000}$ second and time exposures; $\lightning$ = synchronization of electronic flash)
6 Slow shutter speed dial ($^1/_{30}$ to 1 second and time exposures)
7 Self-timer
8 Focusing lever with infinity catch
9 Accessory shoe for special finders, etc.
10 Rewind knob
11 Rangefinder windows
12 Rangefinder eyepiece adjustment
13 Illuminating window for finder frame
14 Viewfinder window
15 Distance and depth of field scales
16 Aperture scale of lens
17 Twin viewfinder and rangefinder eyepiece
18 Flash socket to take flash cable
19 a and b Eyelets for carrying strap
20 Film indicator
21 Base plate locking key
22 Tripod bush

INSTRUCTIONS IN A NUTSHELL

A. Taking the Picture

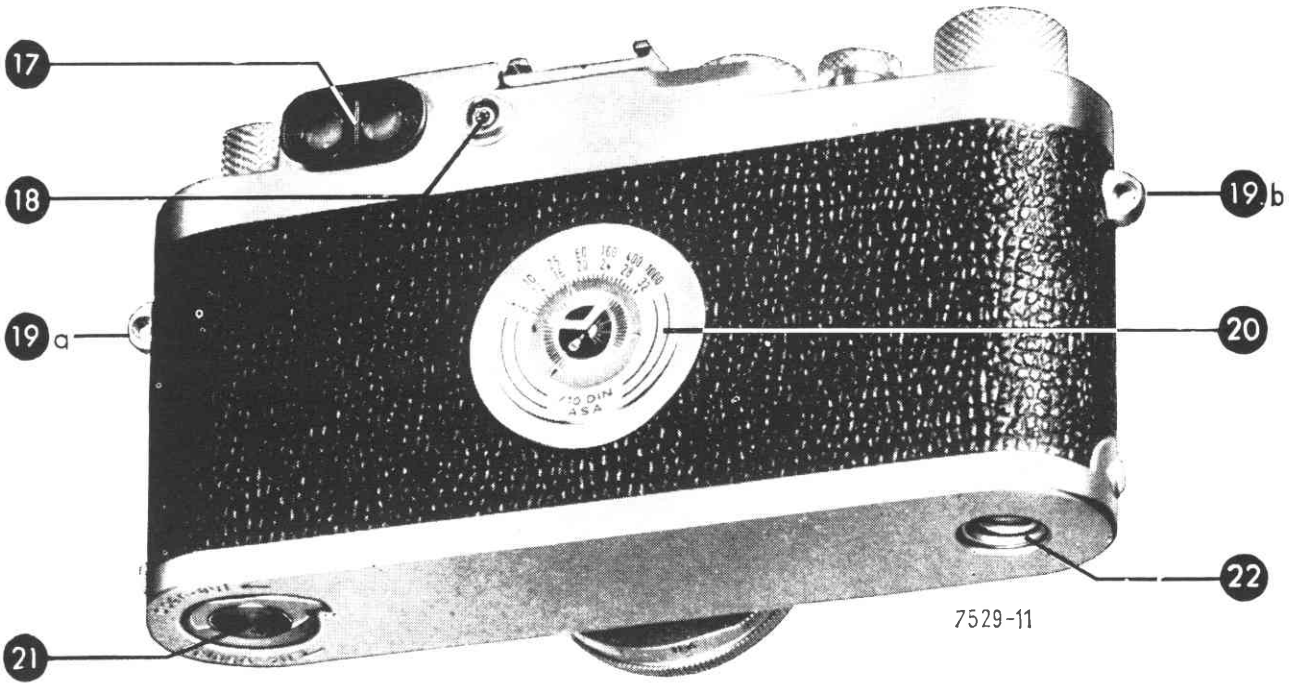
1. Take off lens cap. Pull out barrel of collapsible lenses, and lock.

2. Turn transport knob (2) as far as it will go.

3. Set aperture (16) and shutter speed (5 and 6).

4. View subject through right-hand (finder) eyepiece. Decide on view to be taken in. Go close to the subject to fill the negative area.

5. Focus rangefinder through left-hand eyepiece (17), then look through right-hand eyepiece again and gently press release.



B. Changing Lenses

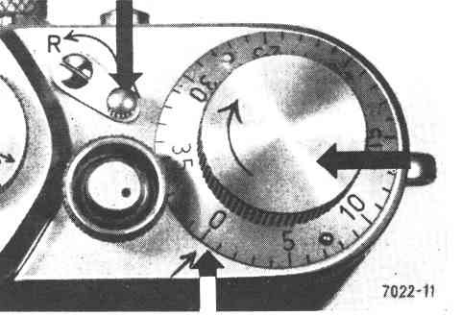
1. Avoid changing lens in brilliant light, keep camera opening towards own body.
2. Unscrew lens by turning mount anti-clockwise.
3. Screw in new lens by turning clockwise.

C. Inserting the Film

1. Lift off base plate and remove take-up spool.
2. Push film leader under spring of take-up spool.
3. Insert cassette and take-up spool into camera. Note detailed instructions on page 65.
4. Check that teeth of transport sprocket engage film perforations, then replace base plate and lock.
5. Advance film by two frames (fully wind transport knob (2), release, wind again, and release). Set film counter (3) to 0, and advance film once more. The camera is then ready to shoot.
6. Set film type and speed (20).

D. Unloading

1. Set reversing lever (4) to "R".
2. Pull out rewind knob (10), and turn in direction of arrow until film is fully rewound (after winding past a slight resistance as the film is pulled off the take-up spool).
3. Take off base plate and remove cassette.

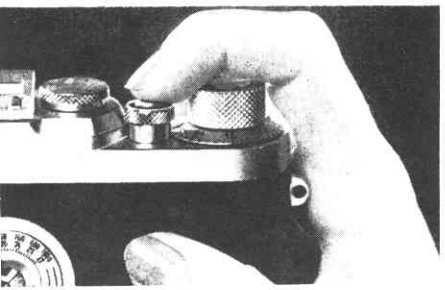


Turn the Transport Knob

in the direction of the arrow as far as it will go. This tensions the focal plane shutter and at the same time advances the film by one frame. Make sure that the reversing lever is fully pushed to position "A" (if set between "A" and "R", the transport mechanism is locked).

The Film Counter

automatically indicates the number of exposures made. After loading the film, set the counter disc to 0. The disc can be turned by its small lug against the direction of the arrow on the transport knob.

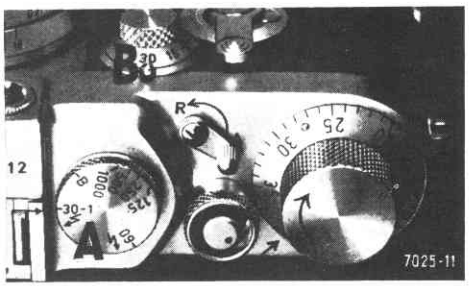


The Release Button

Press the release button with your right index finger — press gently, don't jar it! Careless releasing will impair the sharpness of your pictures. As there are different ways of releasing for upright and horizontal shots, be sure to hold the camera steady.

Setting the Shutter Speed

The LEICA III g has two shutter speed dials: the fast speed dial (A) on the top of the camera, and the slow speed dial (B) on the front. The complete range of settings covers shutter speeds from $^1/_{1000}$ to 1 second, as well as time exposures of any duration. The steps are chosen so that each setting yields half or double the exposure time of the next lower or higher setting respectively. As a general rule, remember that the speeds marked on the fast shutter speed dial ($^1/_{30}$ to $^1/_{1000}$ second) are suitable for hand-held exposures. For the speeds slower than $^1/_{30}$ second it is advisable to mount the camera – at least in the beginning – on a firm tripod, to avoid camera shake.



The Fast Shutter Speed Dial

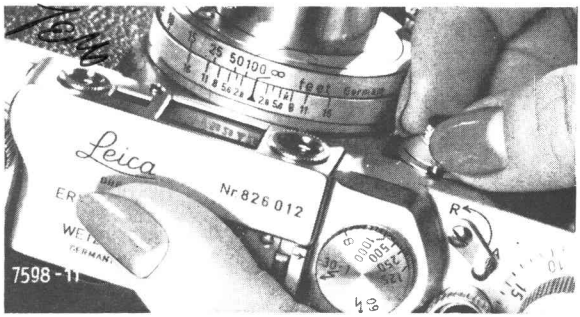
The engraved figures indicate fractions of a second, e. g. 1000 = $^1/_{1000}$ second, 125 = $^1/_{125}$ second. The speed set can be read off opposite the arrow only when the shutter is tensioned. To change the shutter speed, lift the speed dial, turn it to the required speed, and let it drop into position again. No intermediate settings are possible. The fast shutter speed dial rotates as the shutter runs down, and will show correct setting only after the shutter has been tensioned again.

The fast shutter speed dial also carries two flash symbols ( ) in red and black, which are only required for flash synchronization (pages 71). At the B setting the shutter remains open as long as the release button is depressed. The shutter speeds from $^1/_{30}$ to 1 second are set on the slow speed dial. In that case the fast speed dial must first be set to 30–1 or to the red mark.

The Slow Shutter Speed Dial

sets an escapement which controls the speeds from $^1/_{30}$ to 1 second. A small spring catch engages at $^1/_{30}$ second; the slow speed dial can only be turned if you first push back this spring with the thumb nail. The figures are easily readable from above, and indicate shutter speeds of $^1/_{15}$, $^1/_8$, $^1/_4$, $^1/_2$, and 1 second. Unlike the fast shutter speed dial, the slow speed dial can be set to intermediate positions, e. g. $^3/_4$ second between $^1/_2$ and 1 second. On releasing at the T setting, the shutter opens and remains open. It only closes on turning the slow speed dial away from this setting. This is useful for photomicrography and other special purposes.

Always remember that the slow speed dial yields the right speeds only if the fast speed dial, after tensioning, is set to 30–1 or to the red $\frac{1}{2}$ mark.



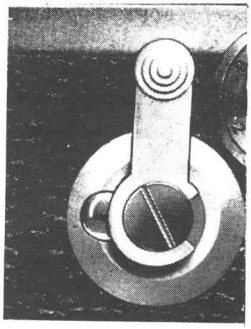
The Delayed Action Release (Self-timer)

Turn the self-timer lever downwards until it locks. To release the self-timer, press the small button at the side, but first check that the shutter is tensioned, for only then can it be released by the self-timer.

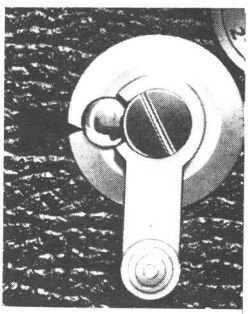
The delay is about 8–10 seconds, you thus have plenty of time to take your place in the picture. By observing the movement of the lever as the mechanism runs down you can not only hear but also see the moment of exposure, since the lever releases the shutter always in the same position during its return.

Before the self-timer releases the shutter, it can always be stopped and re-tensioned. The shutter can also be released in the normal way when the self-timer is tensioned. When the shutter is not tensioned, the self-timer can be released without opening the shutter. It is not advisable to keep the self-timer permanently tensioned.

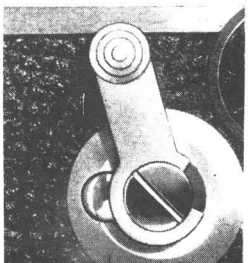
The self-timer can be used with all shutter speeds from 1 to $^1/_{1000}$ second and with time exposures, as well as with synchronized flash of all types.



Tensioning



Release



Shutter is released after 8–10 seconds

Extending the Lens

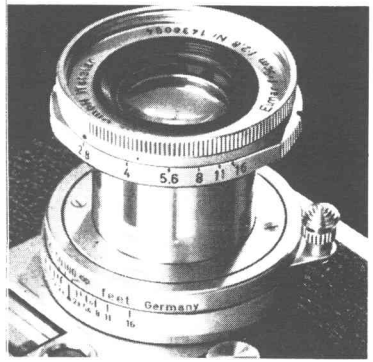
When not in use, the collapsible lenses of the LEICA can be unlocked by turning the front slightly anti-clockwise, and pushed into the camera body. For use, pull out the lens as far as it will go, and lock by turning to the right.

Catch locking the lens at the infinity setting

Setting the Aperture

Turn the lens of your LEICA to the light, and rotate the aperture ring. You can then see through the lens components how the iris diaphragm opens and closes. The aperture or f-numbers - 2 - 2.8 - 4 - 5.6 - 8 - 11 - 16 - 22 - 32 - are an indication of the amount of light passing through the lens*). They are chosen in such a way that closing down the aperture from each number to the next reduces the light by one-half. Conversely, on opening up, each aperture passes twice the light of the previous 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.



Releasing the iifinity catch for focusing

Focusing the Lens

The standard 5 cm lenses of the LEICA focus from "infinity" to $3^1/_2$ feet. The focusing lever locks in the infinity position. To release the lever for focusing on nearer distances, depress the button at the end of the lever.

The Distance Scale

The scale conveniently shows the focused distance, and at the same time indicates the depth of field at the aperture used.

The Depth of Field Scale

The picture reproduces with maximum sharpness those parts of the scene which are at the exact distance on which the lens is focused. This maximum sharpness **gradually** falls off in front of, and behind, this distance, resulting in a certain zone within which everything is still acceptably sharp. The smaller the aperture used, the greater will be the depth of this zone of sharpness, i. e., the depth of field.

To find the limits of this zone, look at the depth of field scale of your lens. If, for instance, you have set your 5 cm lens to 15 feet, the useful depth of field with an aperture of f/4 extends from about 13 to 18 feet. At f/8, it would cover a field from about 10 to 25 feet. (See illustration 1).

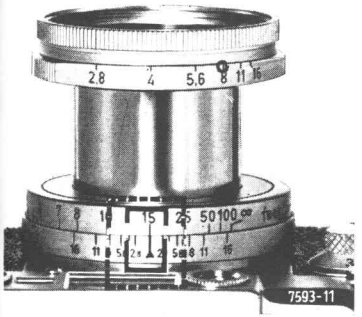


Fig. 1

Fig. 3

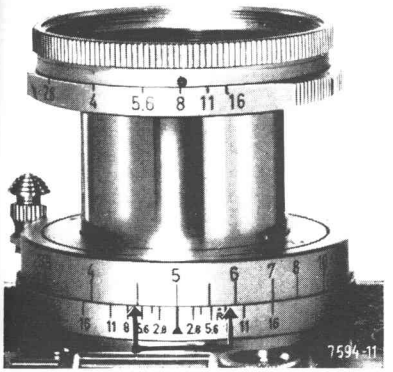


Fig. 2

If you now look at the various distance settings, you will notice that the depth of field obtainable is appreciably less at near distances than at far ones. For instance, at f/8 and 5 feet, the depth covers a zone from 4′5″ to 5′9″feet (see illustration 2); while at f/8 and 25 feet the depth extends from 14 to 100 feet (see illustration 3).

Zone Focusing for Snapshots

with the 5 cm Lenses

Near zone: Focus on 10 feet at f/8, to obtain a zone from 8 to 15 feet.

Far zone: Focus on 35 feet at f/8, to obtain a zone from 17 feet to infinity.

Useful Rules for Stopping Down

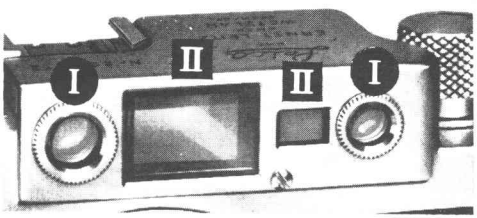
1. The plane of maximum sharpness is always at the distance at which the lens is focused. Focus, therefore, on the centre of interest of the subject.
2. For distant views without foreground set the lens to infinity and use a medium aperture – e. g. f/5.6 or f/8.
3. For portraits use a large aperture – about f/2.8 to f/4 – to subdue the background, and possibly the foreground, by keeping them slightly unsharp.
4. Landscapes with foreground, views in town, and interiors usually require great depth of field. Measure the near and far limits of the zone of sharpness required, and set them on the depth of field scale, so that both are opposite similar aperture figures. This aperture, together with the distance read off in the centre, are the correct settings.
5. With candid and action shots there is often no time for exact focusing with the rangefinder. In that case use a zone focus setting for the required depth zone.

Twin eyepiece for

Rangefinder Viewfinder

Window for I Rangefinder

II Viewfinder and brilliant frame



The Twin Viewfinder and Rangefinder Eyepiece

The twin eyepiece combines the eyepieces of the viewfinder and the rangefinder. A slight movement of the eye is sufficient to change from the one to the other. The eye should be close to the eyepiece, with the eye socket in contact with the LEICA body.

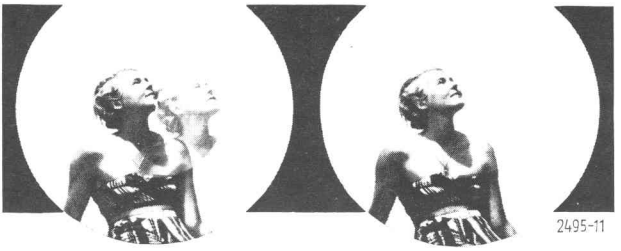
For users with defective eyesight, correction lenses are available for the twin eyepiece, to take the place of spectacles. This has the advantage that the eye can get really close to the eyepiece, and permits photographers with even strong eyesight defects to see the whole field of view in the viewfinder and rangefinder. The correction lenses are made according to the optician's prescription for distance glasses.

The Reflected Frame Finder with Automatic Parallax Compensation

On looking through the right-hand finder eyepiece, you will see the exact field of view for the standard 5 cm lens outlined by a bright frame. The corner marks visible at the same time in the finder indicate the field of view for the 9 cm lens.

An ingenious adjustment of the reflected brilliant frame compensates automatically for parallax during focusing, and covers the full focusing range of the lens.

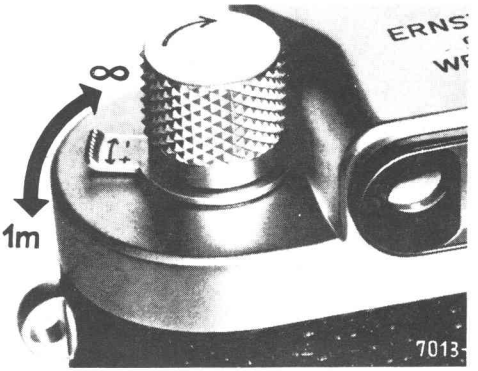
Special viewfinders can be fitted in the accessory shoe (9) for lenses with focal lengths up to 13.5 cm.



The Coupled Rangefinder

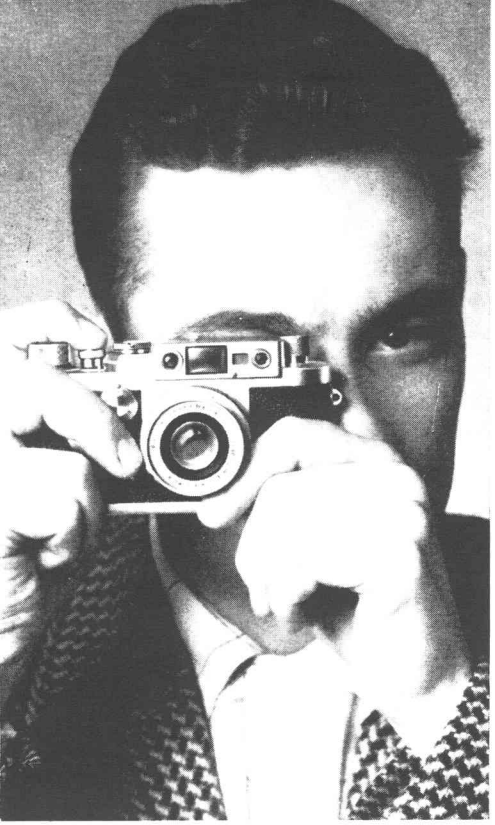
The left-hand aperture of the twin finder eyepiece is the rangefinder eyepiece. Measurement of the distance is automatically coupled to the focusing movement of the lens. The measuring accuracy is exceptionally high, as a magnifying eyepiece shows the subject under observation on a larger scale than the unaided eye. With the lens set to infinity, any nearer object appears with double outlines in the rangefinder field. Turning the helical focusing mount of the lens will bring these two images nearer together until they fuse into one when the lens is set to the correct distance. The LEICA lenses in screw mount with focal lengths up to 13.5 cm are automatically coupled to the rangefinder as soon as the lens is screwed into the camera.

To utilize the maximum accuracy of the rangefinder, always use the centre of the rangefinder field. For the beginning, we therefore recommend the following method: Place the index finger of your left hand over the window showing the direct rangefinder image – the small external rangefinder window – so that only a small bright circle is visible in the eyepiece. Sight the subject in the centre of this circle. If you uncover the rangefinder window again, you will see a double image of the subject within a larger round area. Now move the focusing lever of the lens until the double outlines coincide. That is the point of correct focus. With this method you use exactly the centre of the rangefinder field. After some practice in rangefinding you can of course do without covering the rangefinder window. A good way with near subjects is to set the distance, and compensate for small changes by moving the whole camera forward or back.



Focusing the Rangefinder Eyepiece

A small lever permits adjustment of the magnifying eyepiece of the rangefinder for near and distant subjects. This at the same time provides correction for minor defects of eyesight between +2 and −4 dioptres. Move the small lever until you obtain the best sharpness to suit your own eyesight.



Holding

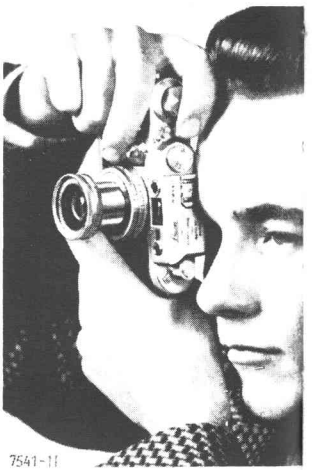
A good hold is the best safeguard against camera shake. Grip the LEICA so that the base rests in the palms of both hands. Use a firm, but not a cramped grip. The eye should be close to the twin eyepiece. Practise holding the camera so that it is supported as much as possible against the face; the camera, 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 it 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.

the Camera

When you want to change from horizontal to vertical shots, turn the LEICA upright about the optical axis of the finder. 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 forehand. This hold makes for particularly smooth releasing.

The Interchangeable Lenses of the LEICA III g

You have a choice of focal lengths from 2.8 to 40 cm, and have at your disposal even lenses with the exceptional aperture of f/1.4. With this range you can choose your viewpoint at will, and have complete control over the field of view and perspective, make the fullest use of the pictorial possibilities available. Every one of these lenses represents the peak of achievement possible at the present-day level of scientific research and production.

2.8 cm SUMMARON f/5.6 – 3.5 cm SUMMARON f/3.5 – 5 cm ELMAR f/2.8 – 5 cm ELMAR f/3.5 – 5 cm SUMMICRON f/2 – 5 cm SUMMARIT f/1.5 – 8.5 cm SUMMAREX f/1.5 – 9 cm ELMAR f/4 – 12.5 cm HEKTOR f/2.5 – 13.5 cm HEKTOR f/4.5 – 20 cm TELYT f/4 – 40 cm TELYT f/5

Changing Lenses

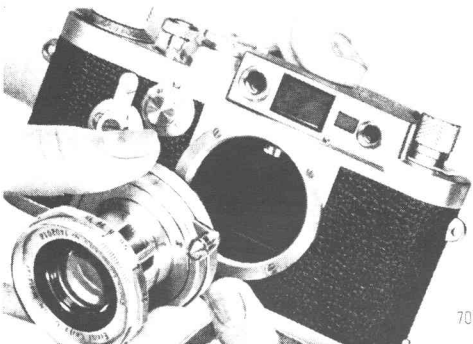
When changing the lens, hold the camera in the left hand. With the right hand grip the lens by its focusing mount close to the camera body, and unscrew by turning anti-clockwise. Screw in the new lens clockwise; do not tighten excessively. Lenses with infinity lock should be locked at infinity for changing.

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

Any high class lens can yield its maximum performance only if the two outside glass surfaces are in perfect condition. And it is much better to keep the surfaces clean than to keep cleaning them. A light yellow filter (with black-and-white-film) or a colourless ultra-violet filter (with colour film) that is permanently left on the lens will protect the surface against outside influences (e. g. fine sand on the seaside).

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 washing soap. (Other washing or cleaning agents may leave harmful chemical residues.)

Every LEICA lens with screw changing mount will fit every LEICA body with screw mount.

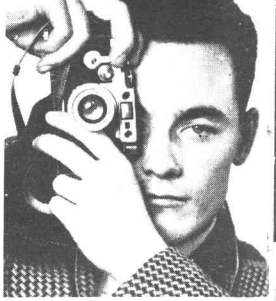


wrong

In its Ever-ready Case

the LEICA III g is protected against the weather and minor knocks, but is always ready for action. As it is held in the case by a screw it will not easily get lost.

When taking upright pictures, keep the lid of the case well clear of the lens. See illustration.



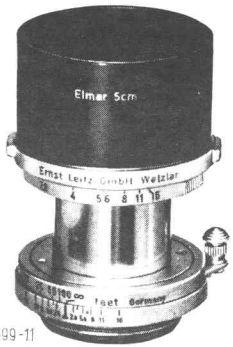
correct

Filters

improve the tone values of black-and-white pictures. The yellow and orange filters in particular bring out pictorial cloud effects. The new truly neutral LEITZ polarizing filters are also useful in colour photography, for they subdue disturbing reflections from glass, water, and varnished surfaces (though not metals) and increase the contrast of clouds against a blue sky.

Lens Hoods

protect the lens against direct rays of strong light sources that can give rise to flare, and also against rain and snow.
Lens hood and filter can be used together; provided the correct hood is used for the lens, it will not cause vignetting (i. e. cutting off of the corners of the negative field).
If you use the ever-ready case for the LEICA III g with SUMMARIT f/1.5 lens (ENSOO), the lens hood can remain permanently in the ever-ready case; simply invert it over the lens.



LEICA Films

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

Daylight cassettes consist of a light-tight shell, containing a length of film sufficient for 20 or 36 exposures 24×36 mm, for loading into the LEICA by daylight.

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 upwards in light-tight tins. They are designed for cutting and loading into cassettes in the darkroom.

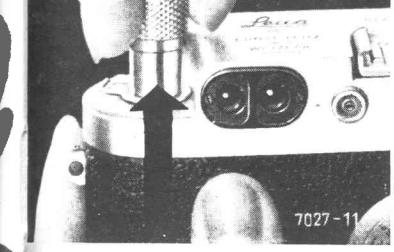
Black-and-white films are available in all these packings, positive film and other special emulsions only as bulk film, and colour films usually only in daylight cassettes.

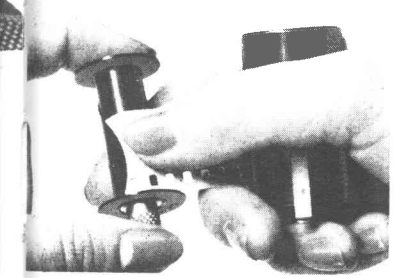
Of the various film characteristics we shall mention only the speed.

Medium speed emulsions of about 40 to 80 ASA (17° to 20° DIN) are ideal as all-round material for most purposes. They yield brilliant images, fine grain, and high resolution, with appreciable exposure latitude, and the negatives produce firstclass enlargements.

High-speed emulsions of about 100 to 250 ASA (21° to 25° DIN) or more are special films for exposures in poor light (interiors, theatre, and night shots), as well as short exposure times (sports photography). Fineness of grain and resolving power are limited.

Slow emulsions of about 12 to 32 ASA (12° to 16° DIN) are special films yielding the finest grain and highest resolution to reproduce minute detail. They are suitable for copying, architectural photography, and scientific work.





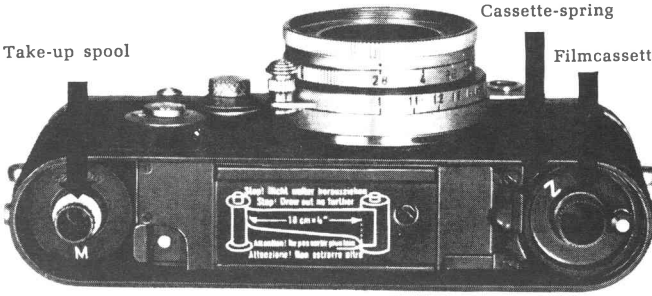
Loading the Camera

Although daylight cassettes and closed LEICA cassettes are light-tight, avoid loading or unloading the camera in direct sunlight or strong artificial light. The shade of your own body will provide adequate protection. Also, do not leave exposed or unexposed cassettes lying about, but keep them in a cassette container until you are ready to use or develop them.

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 unload the camera as described.

Turn the key in the base plate in the direction marked "auf – open", and lift off the base plate. The special LEICA cassette and the take-up spool are now easily removable. Place the camera in front of you on the table, with the open base upwards, and the camera back facing you.

Now take the take-up spool in the left hand, and the freshly loaded cassette in the right, both with the spool knobs pointing down. 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.

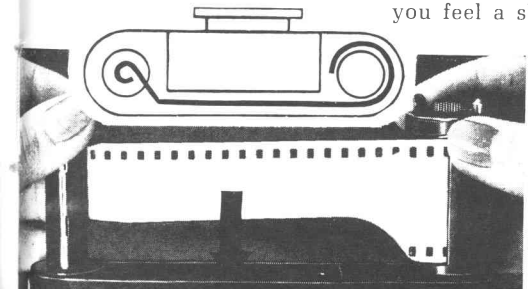


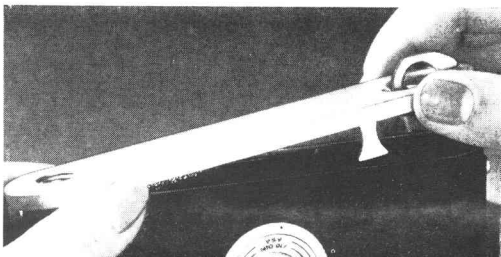
Before inserting a new cassette, move the reversing lever (4) fully to "A" (advance). If the lever is not fully pushed to "A", the film transport and shutter release are locked. Check that everything is in order by winding the transport knob and releasing the shutter.

Next, draw out just enough of the film leader from the cassette to enable you to insert the two parts – take-up spool and cassette – into the camera. The milled spool knobs should point upwards, while the film slides into the film slot at the back of the camera. Check that the position of the film corresponds to that shown in the diagram; the emulsion side must face lens and focal plane shutter. The take-up spool winds up the film with the emulsion side out.

Check also that the take-up spool and cassette are fully pushed home, so that the film is correctly positioned in the film track, and that the teeth of the transport sprocket engage the perforations of the film. If the cassette will not go in fully, turn the rewind knob slightly to and from.

Replace the base plate, and lock it, thus closing the camera light-tight. Tension the film by pulling out the rewind knob and turn it carefully in the direction of the arrow until you feel a slight resistance.

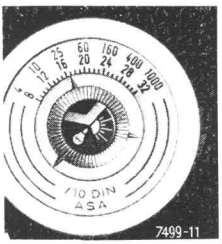




Advance the film, and release the shutter. Repeat these steps, and set the film counter disc to No. 0. Advance the film once more; the film counter will now indicate No. 1, and the camera is ready for the first exposure. You can recognize whether the film is advancing correctly by watching the shaft of the rewind knob; this should turn against the direction of the arrow.

To Set the Film Indicator

in the camera back press on finger 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 for black-and-white film, sun on red background for daylight colour film, or lamp on red background for artificial light type colour film) should point to the required film speed in ASA or DIN.

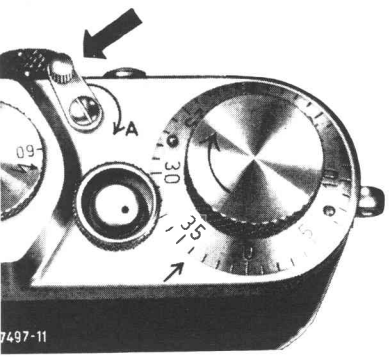


If the Film was Incorrectly Loaded

it may become detached from the take-up spool, and will not advance (the rewind knob does not move while winding the shutter). In that case reload the film properly as follows.

1. Move the reversing lever (4) to "R" (rewind).

2. Turn the rewind knob (10) in the direction of the arrow, but only as long as the release (1) also rotates, then stop immediately. At this point the film has passed the shaft of the release button, and only a short length protrudes from the cassette. This is important when inserting the film again. If you were to wind the film completely into the cassette, you would have to draw out the end again in a darkroom.



Unloading

When you have exposed the whole film, the transport knob can no longer be turned; a sign that the film must be rewound into its cassette. Set the reversing lever (4) to "R", pull out the rewind knob (see illustration on page 65), and turn it in the direction of the arrow until you feel a resistance. Do not press the release button while doing this. Wind past the resistance, and give the rewind knob about one more turn. The film will now have come off the take-up spool, but a short piece should still protrude from the cassette. You can now open the camera (page 65), and remove the cassette with the exposed film. It is not advisable to rewind the film fully into the cassette, because the protruding piece makes the cassette more light-tight. Make a note on this piece that the film is exposed.

You can also expose only part 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 an unexposed film, and then keep releasing the shutter and advancing the film with the lens covered by a lens cap, until film counter (originally set to 0) indicates No. 12.

Using Flash

A flash is synchronized when it lights up at the precise instant when the shutter is open. The speed-synchronization of the LEICA III g permits the use of all electronic flash units and flash bulbs. Setting the shutter speed automatically determines the correct moment of firing of the chosen flash. The enclosed table "Flash Guide Numbers for the LEICA III g" indicates the shutter speeds suitable for the various types of flash, and their guide numbers when using the collapsible LEITZ flash reflector.

Before using the table, note the following points.

1. **Flash bulbs** of class M and FP are synchronized at all shutter speeds shown as suitable in the table.
2. **Electronic flash units,** on the other hand, are synchronized only when the fast shutter speed dial is set to one of the two ϟ symbols. The black ϟ symbol indicates the shortest suitable shutter speed of $^1/_{50}$ second, while the red ϟ symbol yields a shutter speed of $^1/_{30}$ second.

Fig. 1

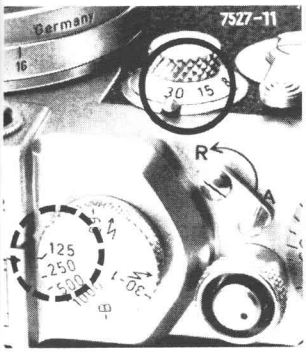


Fig. 2

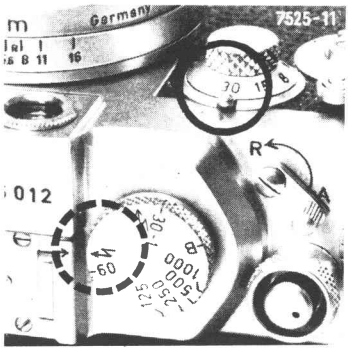
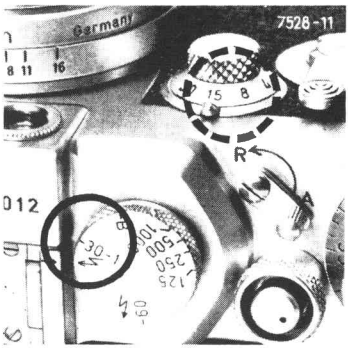


Fig. 3



3. **Slow shutter speeds (times longer than $^1/_{30}$ second)** are synchronized with both electronic flash and flash bulbs by setting the fast speed dial to the red ϟ symbol, and the slow speed knob to the required time.

4. The B setting on the fast shutter speed dial can be used with flash bulbs as well as electronic flash.

A few practical hints:

The LEITZ flash guns with collapsible reflector spread the light very evenly over the subject area. You will find this particularly useful 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 the LEITZ collapsible reflector, and subjects of average brightness, with allowance for some light being reflected from the walls and ceiling indoors. For extreme subject conditions adjust the aperture accordingly. Negatives exposed in this way can be developed normally, in other words 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 the use of a higher guide number coupled with over-development. The latter procedure has been recommended at times, but tends to emphasize only 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 (flash type) 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. Use only blue flash bulbs as fill-in lighting for pictures taken by daylight.

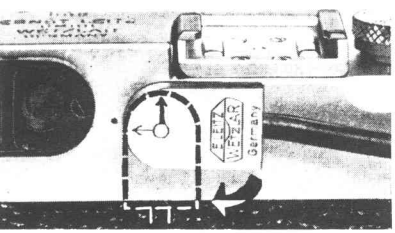
The possible shutter speeds for flash bulbs of the same type are of course independent of the colour of the bulb. The filter effect of the coloured coating will, however, lower the guide number.

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. The following method will yield an approximate guide to exposures for colour film with blue flash bulbs. First work out from the table the aperture corresponding to the guide number for the same clear glass flash bulb, and then increase the aperture as follows.

(a) with daylight reversal films of 40 ASA or 17° DIN open up by one stop;

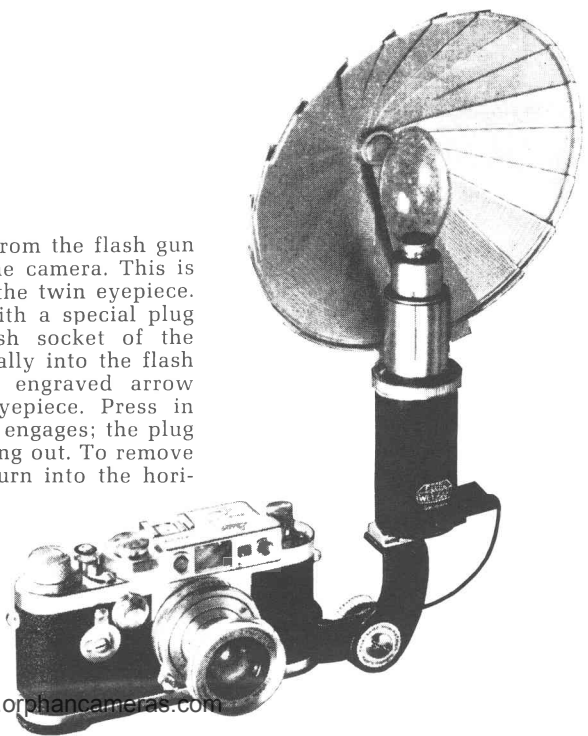
(b) with daylight reversal films of 25 ASA or 15° DIN open up by two stops;

(c) with daylight reversal films of 12 ASA or 12° DIN open up by



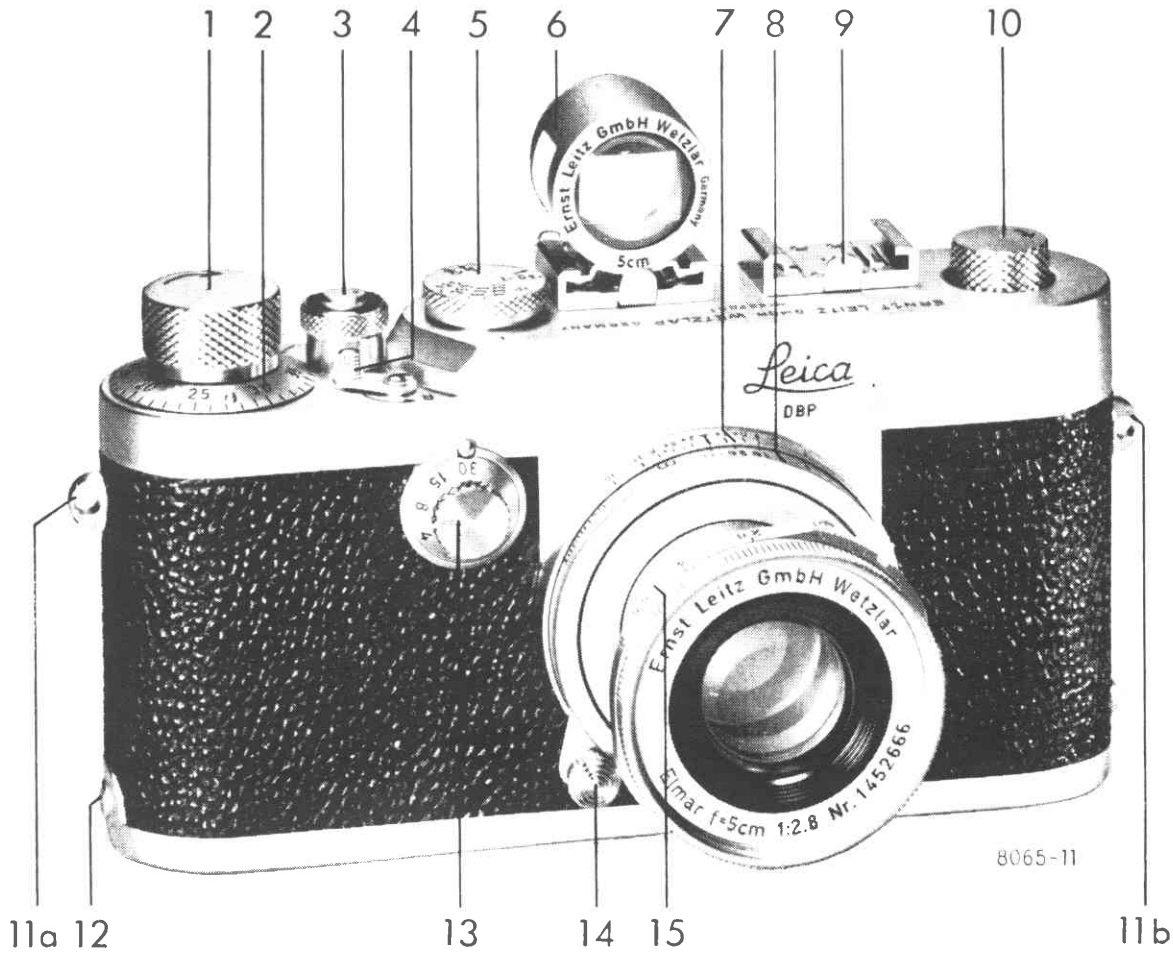
Connect the flash plug of the cable from the flash gun to the flash socket at the back of the camera. This is situated immediately to the right of the twin eyepiece. The LEITZ flash cables are fitted with a special plug which can be locked into the flash socket of the LEICA III g. Insert the plug horizontally into the flash socket of the LEICA, so that the engraved arrow at first points towards the twin eyepiece. Press in slightly, and turn downwards until it engages; the plug is now secure against accidental pulling out. To remove the flash plug, press in again, and turn into the horizontal position to unlock, then lift off. (See also leaflet flash connection cables).

The swivelling flash gun bracket which can be attached to the LEICA will take all usable types of flash guns.



Additional Instructions for the Leica Ig

Basically, the operation of the ®Leica Ig does not differ from the manipulation of the Leica IIIg, except that the Leica Ig is not fitted with coupled rangefinder, nor with the delayed action release.



1 Film transport and shutter tensioning knob
2 Film counter disc
3 Shutter release button
4 Reversing lever (A = advance, R = rewind)
5 Fast shutter speed dial (1/30 to 1/1000 second and time exposures: ϟ setting for electronic flash synchronization)
6 Detachable brilliant finder
7 Depth of field scale
8 Distance scale
9 Accessory shoe with retaining springs for rangefinder and other accessories
10 Rewind knob
11 a and b Eyelets for carrying strap
12 Pin at side for attaching the base plate
13 Slow shutter speed dial (1/30 to 1 second and time exposures)
14 Focusing lever with infinity catch
15 Aperture scale of lens

Camera back

16 Flash socket to take flash cable

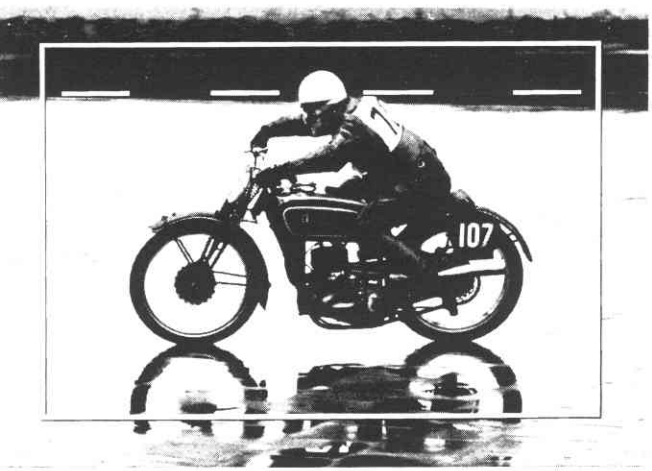
17 Film indicator

The Rangefinder

The accessory shoe (9) serves to take the accessory rangefinder.

Focusing with the LEITZ Accessory Rangefinder

1. Determine the field of view in the brilliant finder.
2. Look through the eyepiece of the rangefinder, and turn the setting wheel until the double image fuses into one (see also page 12 of the LEICA III g instruction book).
3. Read off the distance to which the rangefinder is set, and adjust the lens focusing to the same distance.



The Brilliant Finder

shows a bright image in natural size with the field of view outlined by a brilliant frame.
The dotted line near the top indicates the limit of the field of view for subjects nearer than 10 feet.

Note especially:

As the finder shows the image in natural size, you can observe the subject with both eyes, so that the bright frame appears suspended in a natural three-dimensional field of view.

Flash Tables

▼	LEICA If, IIf, IIIf RED SCALE		LEICA ab - from No. 360001 BLACK SCALE		LEICA bis - up to No. 360000 jusqu'au	
	Zeit Time Temps	SYNCHRO RED No.	Zeit Time Temps	SYNCHRO BLACK No	Zeit Time Temps	SYNCHRO No.
XM 1 PF 1	1/15	2	1/15 - 1/20	9	1/20	14
	1/25	5	1/30	16	1/30	13
	1/50	10				
PF 5	1/15	2	1/15 - 1/30	16	1/20 - 1/30	14
	1/25	14	1/40	11	1/40	11
	1/50	11				
	1/75	5				
AG 1	1/15	2	1/15 - 1/20	8	1/20	10
	1/25	9	1/30	11	1/30	12
	1/50	8	1/40	8	1/40	8
	1/75	3	1/60	5	1/60	5
GE 5 25	1/15	2	1/15 - 1/30	16	1/20 - 1/30	14
	1/25	14	1/40	11	1/40	11
	1/50	11	1/60	8	1/60	9
	1/75	6	1/100	5.5	1/100	7
	1/100	4	1/200	4		
	1/200	2				
	1/500	1				
M 3	1/15	2	1/15 - 1/20	9	1/20	14
	1/25	7	1/30	15	1/30	13
	1/50	10	1/40	11	1/40	12
	1/75	6	1/60	8	1/60	10
Alle All Tous	B, T		B, T		T, 1 → 1/8	6
	1 → 1/10	2	1 → 1/10	6	B	9
Elektronen-Blitz / Electronic Flash / Flashes électroniques						
ϟ	1/50	20	1/30	2	1/30	0
	T, 1 → 1/25	0	T, 1 → 1/20	2	T, 1 → 1/20	4
	B	2	B	6	B	6.5

LEICA	M 3 bis up to jusqu'au hasta Nr. 854 000		Ig, IIIg
Elektronen-Blitz Electronic-Flash Flashes-électron. Flash-electrónico	ϟ	B → 1/50	B ϟ (=1/30) ϟ (-1/50)
Blitzlampen / Flashbulbs / Lampes-éclair / Lámparas de flash			
AG 1 M 2	ϟ	B → 1/25	B ϟ (-1/30)
XM 1 PF 1		B → 1/50	B → 1/60*
PF 5		B → 1/100	B → 1/60*
GE 5 25		B → 1/500	B → 1/500*
M 3		B → 1/100	B → 1/125*

Für T, 1-1/15 Kurzzeitknopf auf ϟ (neben 30-1) einstellen
For T, 1-1/15 set high-speed-dial at ϟ (near 30-1)
Pour T, 1-1/15 placez le barillet des instantanés rapides sur ϟ (à côte de 30-1)
Para T, 1-1/15 ajustar el botón de velocidades rápidas al signo rojo ϟ (junto a 30-1)

* Außer Einstellung ϟ und ϟ. * Except ϟ and ϟ. * Sauf ϟ et ϟ. * Excepto ϟ y ϟ.