

IV. FLASHLIGHT TECHNIQUE

In modern flashlight technique the camera shutter takes over the task of firing the bulb electrically at the right moment. In this way instantaneous flash exposures are possible with a hand-held camera.

The Synchro-Compur shutter in the Rolleiflex is, for this purpose, equipped with electrical contact. The contact may be adjusted to the required delay of the flash lamps by means of the Synchro-lever:

The **X-contact** presents the simplest type of contact (zero-delay). It is required for zero-delay electronic flash units (without relay) and a few flash lamps.

The **M-contact** means full synchronization. It works with most flash lamps and the electrically fired flash powder (capsule flash). The most important advantage of the M-contact: with certain flash lamps it may be employed at the shorter shutter speeds even including 1/500th sec. Due to the full synchronization the shutter is always open when the flash emitted by the lamp reaches its peak intensity.

Thus all types of instantaneous flash exposures are possible with the Rolleiflex.

The selection of flash lamp-type depends on the light output required by the subject. Many makes are available in three groups (normal, medium and high light output). The selection is dependent on the taking conditions, especially as to whether a room of shallow or great depth is to be illuminated.

Selection of M-X lever position, applicable speed range and exposures can be learned from the instructions of the different flash light products. For the best known makes the table on page 38 contains the necessary information and the permissible shutter speeds.

Connecting Flash Unit: push flash cord plug into the socket on the camera.

To Remove the Flash Cord: Swing the Synchro M-X lever partially to one side and pull out the plug.

When setting contacts X or M:
Swing Synchro-lever a full 180° until it stops!

Flash Contact and Permissible Shutter Speeds

FLASH LIGHT SOURCE		Contact	Shutter Speed: Fastest Slowest Recommended	
Make	Type			
I. Electronic Flash				
	Without Relay	X	1/500	1/250 1
General Electric Westinghouse	SM (1/200)			
Sylvania	SF (1/200)	X	1/60	1/60 1
West, Japan	SS (1/200)			
Osram	F0 (1/100) F1, F2 (1/50) XP, X0 (1/200)	X	1/30	1/30 1
West, Japan	12 (1/100)			
II. Flash Lamps				
Osram	S2	M	1/500	1/30 1
	S0, S1			
Philips (Mazda)	Pf 3 N, PF 14, PF 25, PF 56			
General Electric Westinghouse	5, 11, 22	M	1/500	1/60 1
West, Japan	0, 3, 5, 11, 22			
Sylvania	Press 25, 40, 0, Bantam 8			
	2	M	1/125	1/60 1
Philips (Mazda)	PF 110			
General Electric Westinghouse	50	M	1/60	1/30 1
Sylvania	3			
General Electric Westinghouse West, Japan	6, 31	M	1/250	1/30 1
Sylvania	FP 26, 2A			
III. Capsule Flash	Average	M	1/125	1/30 1

Explanation of the Table

The **"Contact"** column indicates the correct setting of the M-X lever for each lamp type.

The **"Shutter Speed"** column shows the permissible speed range:

Center: the recommended shutter speed includes practically the entire light output of the flash lamp. This assures the maximum illumination as well as the smallest diaphragm (for greater depth of field). The following applies as a general rule:

Use the standard recommended speed together with the correct setting of the M-X lever for the lamp in use.

Left: the fastest speed indicates the limit to which the shutter may be set. For lively action or sports subjects, the faster speeds are employed.

Right: the exposure time may be increased to the slowest speed (1 second or even time exposures), if, in addition to the flash, it is desired to make use of existing light. In such cases the total amount

of light from all sources must be considered in choosing the diaphragm opening.

The Effective Exposure Time (as indicated in the table by means of **colored** ink) is not in each case identical to the shutter speed, but depends on the portion of the flash lamp light output utilized:

With X-Contact the duration of the flash itself is actually shorter than any of the permissible shutter speeds. Therefore, the duration of the flash (figure shown in parenthesis) is the effective appropriate exposure time and the diaphragm opening must be the same regardless of the shutter speed selected.

With M-Contact the shutter speeds, from "fastest" to "recommended" fall within the duration of the flash: they, therefore, represent the actual exposure time and if the shutter speed is increased, the diaphragm must be opened accordingly. Only when slower shutter speeds are employed is the fully utilized light output equal to the actual exposure time, and this is the same as the recommended speed.

The illustration should make the utilization of the available flash light still more obvious: the white symbols represent the flash, and their size, the utilized light at the shutter speed employed.

How the Flash Contacts Work

The information given thus far is entirely sufficient for normal purposes and is adequately supplemented by the exposure tables usually furnished by the various flash lamp manufacturers.

The photographer who is familiar with and habitually makes use of flash lamp graphs should know something about the method of operation of both flash contacts.

X-Contact (zero-delay): contact is made shortly before the shutter blades reach full opening. Application: for lamps with short firing time (up to 5 milliseconds) and short flash duration.

M-Contact (full synchronization): contact is made approximately 16.5 milliseconds before the shutter blades are fully opened. Application: for flash lamps with long firing time (average firing delay 16.5 milliseconds) and long light duration.

For safety reasons one pole of the contact is grounded to the camera body (isolation-test: 700 volts). All commercially available flash guns and electronic flash units may be used. Current-carrying capacity of the contact when several flash lamps are connected simultaneously: 10 ampères at 24 volts for a period up to a maximum of 1/15th sec.

Tips on Flashlight Photography

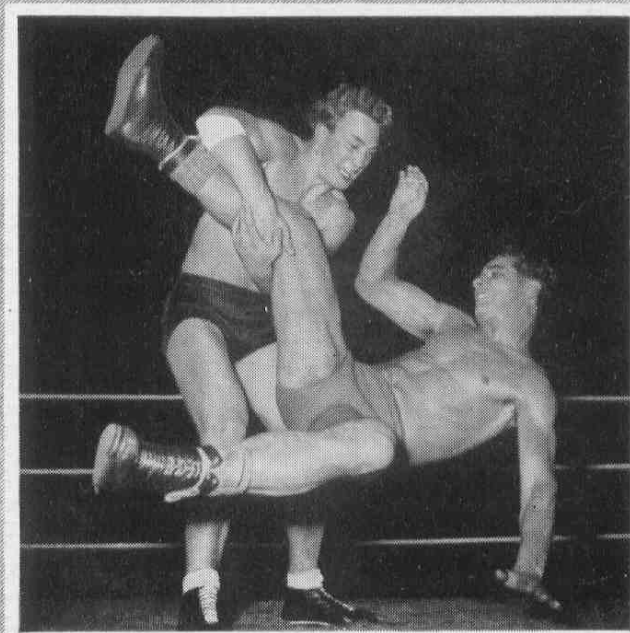
1. Use fresh batteries. Condenser or capacitor flash-guns are more consistent since lamp ignition is somewhat less dependent on battery power (Rolleiflash).
2. Be sure that the contacts of the battery and lamp sockets are clean. Handle flash cable with care, avoid kinking, otherwise there will be danger of short-circuit and premature flash ignition. — Note: the contact must not be connected to house current!
3. To light up long rooms or to achieve special illumination effects, one or two Rolleiflash comb. extension units may be connected to the Rolleiflash. Connecting cords adding up to a total length of 33 feet (66 feet with fresh battery) may be used. Always insert flash lamps in Rolleiflash first, then in extension units, to avoid premature firing. Unnecessary battery drain will be avoided by inserting lamps just before firing and ejecting immediately afterwards.
4. Blue flash lamps, like electronic flash, simulate daylight and are intended for use with daylight color film.
5. The power of flash illumination decreases according to the square of the distance: i. e., an object six feet away receives only one-fourth the light as an object

at three feet. Distance from flash to subject must therefore be carefully considered in selecting diaphragm opening. Lamp manufacturers supply easy to use guide numbers which are divided by the distance in feet to obtain the required diaphragm opening.

6. Flash as main light source: do not take weak room illumination into account, expose strictly according to flash output.

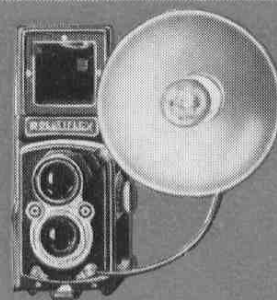
7. Flash as fill-in light: useful in brightening shadows whether due to insufficient illumination or to the fact that the picture is being taken "against-the-light", in full sunlight. The fill-in light must be kept at a lower intensity level than the main source of illumination, otherwise the strong flash will give an unnatural effect, not at all like daylight. Too strong a flash might even cause an apparent underexposure of the sky or the area not reached by the light. Electronic flash units are particularly well suited for use as fill-in lights when shooting color sports pictures. Use smaller lamps or keep them at greater distance.

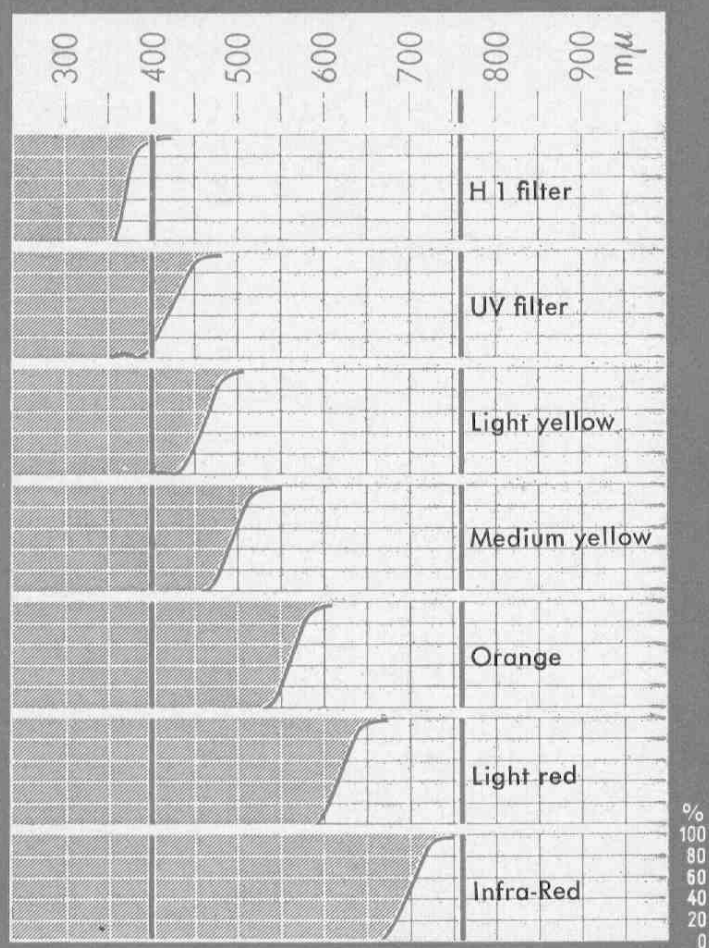
8. Fully synchronized flash pictures are possible when using the self-timer through the entire shutter speed range from 1-500 th sec. with M or X contact settings.



1:5.6 · 1/250

Electronic flash





V. TIPS ON PICTURE-TAKING

Landscapes

Focusing for distant views with foreground may be accomplished simply without using ground glass except for viewing: set infinity mark (∞) opposite diaphragm opening used — second corresponding diaphragm mark will indicate nearest point in focus. Example: ∞ at $f : 11$ — sharp area ∞ to 17 ft (5 meters).

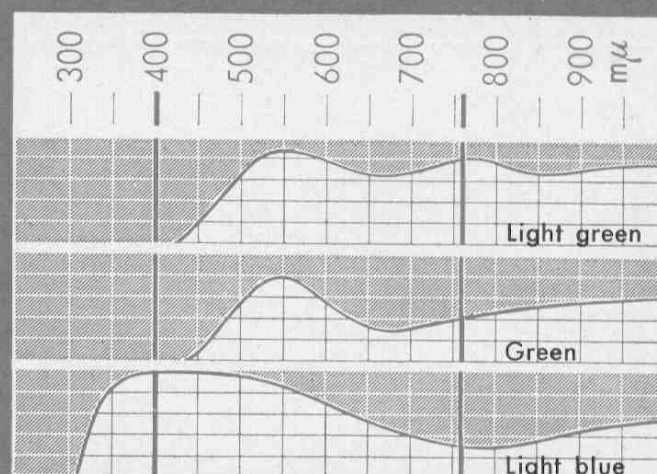
Filters: important for separating tones, which would otherwise be similarly rendered by the black and white film, or for influencing the mood of the picture.

1. Blue Sky with Clouds: yellow filters darken blue skies and thus improve the reproduction of clouds. The deeper the color of the filter, the stronger and more dramatic the effect. Blue snow shadows are also rendered truer to tone. The green filter tones down the sky, brightens foliage and darkens the occasionally too lightly rendered reds (with pan film) such as sun-tanned flesh and red tile roofs. For filtering the sky but not the landscape: the Rolleipol filter darkens the blue sky only by eliminating the polarized light.

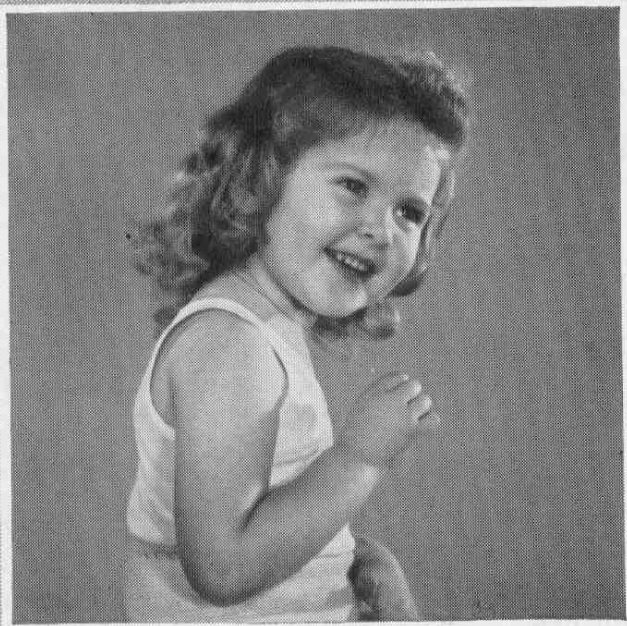
2. Haze and Mist: the blue filter, useful for pictorial effects, increases hazy effect. The orange or red cut through and improve the clarity of distant views. The blue filter reduces contrast, the red or orange increase brilliance. Maximum penetration of light haze is obtained with infra-red film and infra-red filter (700 $m\mu$). Barely visible mountain chains are reproduced clearly. An odd effect with this combination is that green leaves are rendered almost white. Filters are of no use at all in really bad weather when there is a good deal of moisture in the air.

3. Sea, Beach, Mountains: strong ultra-violet rays must be absorbed through use of UV filter. Results will otherwise be dull. The H 1 filter serves the same purpose for daylight-color film. Reduction of the bluish cast is quite marked.

Picture Composition Rules: distant views are generally better if foreground contains (for added depth impression) trees, people, animals, etc. Foliage is often used as a frame for the distant view. Focus should be sufficiently sharp in the foreground. Strong effects are created when deep shadows in the foreground are set against the lighter distance. Side lighting or even back lighting give the most impressive pictures.



The filter curves show the absorption of the various Rolleiflex filters in the spectral ranges ultra-violet, visible spectrum blue to red (appr. 400—760 $m\mu$), and infra-red. This means: darker portion of the spectrogram = absorbed light; lighter portion = useful light. The light-transmission of the filter from the lowest point to the peak point of the curve thus increases from 0 to 100%. While the H 1 filter cuts out the short wave ultra-violet portion of the spectrum, the green filter absorbs a substantial portion of the long wave red and infra-red range.



Artificial light 3000 watts
1:5.6 · 1/60

Portraits

Large heads: do not work closer than 40 inches to avoid possible perspective distortion. If necessary, enlarge from a smaller section or use Rolleikin. Focus on the eyes. Use quiet, neutral colored backgrounds and do not stop down too much ($f : 5.6$) so as to keep backgrounds from intruding. If possible, move subject away from background. Out of doors, try using sky as only background. Open air portraits are best taken early or late in day when light is softer and not too blinding. Favor soft light, avoid deep shadows. In emergencies use reflectors or fill-in flash. Simple, proven artificial light procedure: lamp No. 1 next to camera somewhat above head level, lamp No. 2 on the side to lighten shadows, approximately 1/30th sec. For special effects, lamp No. 3 as overhead or back-light. Important: use lens hood and focusing extension hood for reducing extraneous light. Pan film, no filter. Moisten lips (high-lights!). To reduce sharpness and add "glamor": Rolleisoft (soft diffusion disc) 0 or 1 (stronger) over lens. Use larger diaphragm openings and backlight for sunny effects. (See picture page 45.)

Children

Never use force, watch for interesting effects and expressions carefully. A clever assistant to divert children's attention from camera is often a valuable aid. Try close-up shots of children's expressions as they listen to favorite or exciting stories. Laughter, astonishment, pity and even an occasional yawn provide wonderful material for good shots or picture series. For close-up shots use same technique as for portraits. For children in motion, use snapshot technique outdoors and flash indoors. Low viewpoints and close-up effects are best.

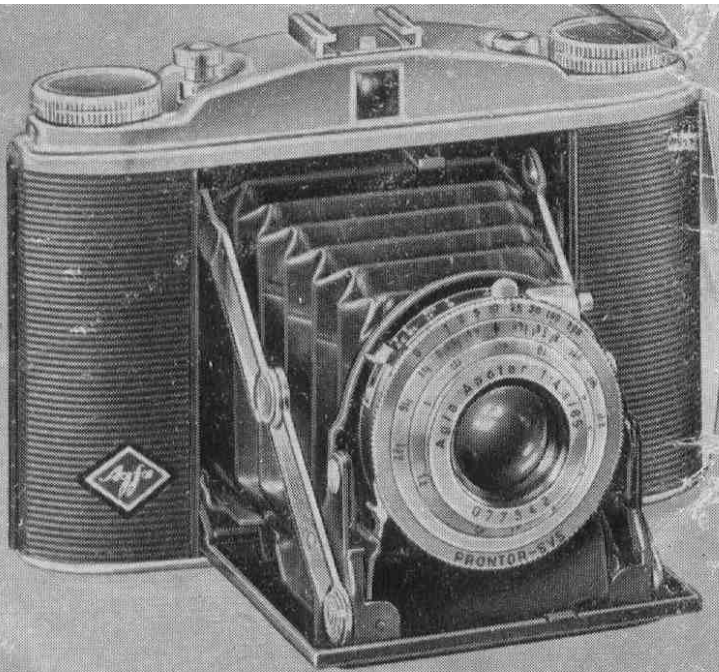
Animals

Patience, quietness and familiarity with the animal and its peculiarities are great assets. Close-up pictures are most rewarding; use portrait technique. Make use of natural light effects such as back-lighting. Action pictures: use snapshot or sport technique (with flash, if needed). Rolleinarars are often helpful with small animals. Zoo: animal portraits — avoid bars or netting. Hint: netting often becomes invisible when lens nearly touches wire. — Fish in aquarium: use side and overhead lighting in otherwise darkened room. A good trick is to limit movement of fish within sharp zone by means of vertical glass plate in tank.



1:4 · 1/125 · Rolleisoft 1
filter light green

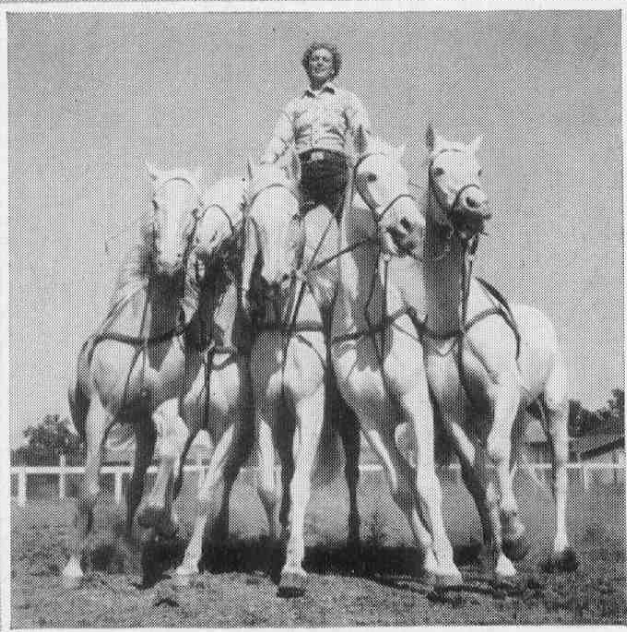




MADE IN GERMANY

DIRECTIONS FOR USE

AGFA ISOLETTE II



1: 5,6 · 1/500 · filter yellow

Snapshots

Unexpected picture opportunities or rapidly changing subject distance make a simplified technique, based on depth of field zones, highly desirable. The following three settings have been found very effective:

1/125 sec.

Diaphragm opening f : 8

Short distances

approx.
9 to 18 ft

Medium distances

approx.
13 to 33 ft

Long distances

approx.
18 to 100 ft

12 ft

20 ft

30 ft

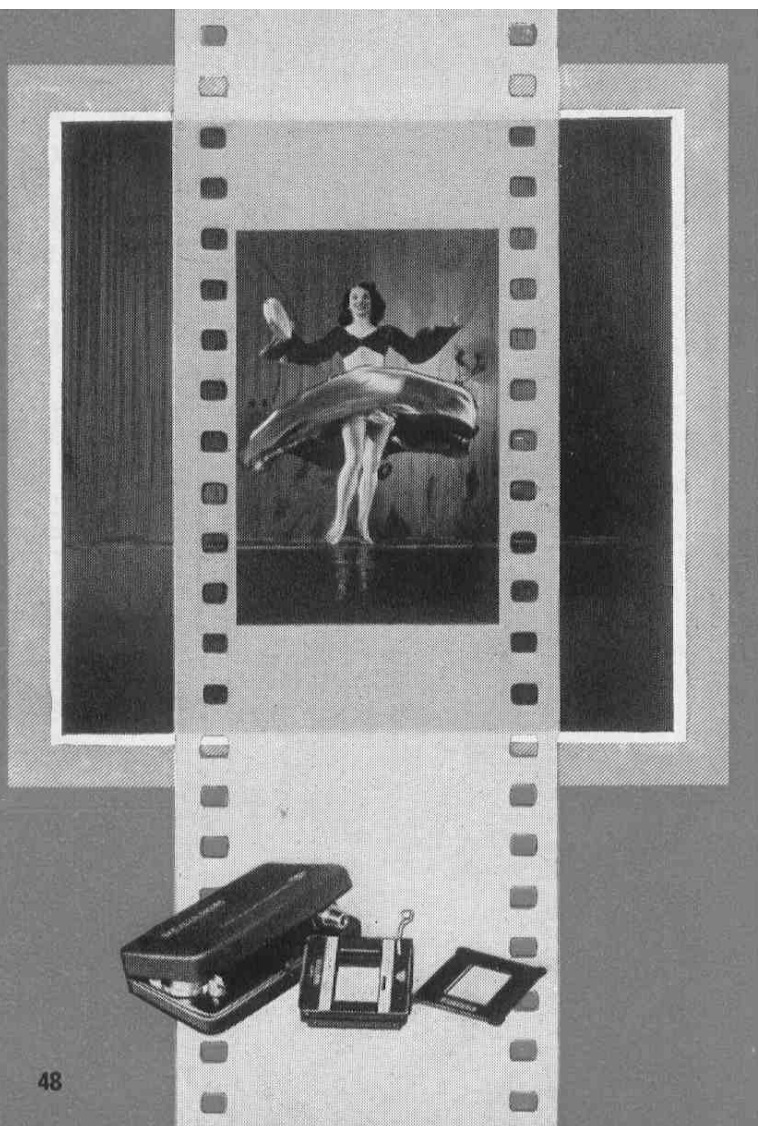
Shutter speeds and diaphragm openings do not often need changing in sunlight. Those suggested cover most contingencies. Thus instead of wasting time focusing when in a hurry, use one of the above settings. This snapshot technique is especially useful with the direct view finder. Variation of the values (see table page 21) makes this technique available for other depth of field zones. Example: diaphragm opening f : 11, focus at 30 ft, depth of field extends from 15 ft to ∞ for snapshots of scenes. Chief uses for this technique: groups in motion, street scenes, playing children, reportage, sports.

Sports

Sports pictures are generally most effective when the original rapid motion has been sufficiently "arrested" and the subject remains well defined. The fastest shutter speeds are essential, together with careful focusing. Sometimes pre-focusing on the spot where the action is to take place is possible. Do not overlook the possibilities of training sessions, since greater cooperation can often be had at such times. Snapshot technique is valuable for turf and ice shots and for any case when it would be difficult to guess exactly where to focus. Watch your shutter speeds and viewing angle. Shooting at right angle to the direction of the action requires a much faster speed than when the action is going in other directions (see table page 23). If the action is very fast or takes close to the camera, it is best to pan or follow with the camera. This results in a sharply rendered main object against a blurred background, thus increasing the impression of speed. There is often a fine moment for shooting when the action reaches a peak and stops momentarily, such as when a pole-vaulter "hits the top" before starting to come down again. With insufficient light or indoors use synchro-flash and 1/500th sec. The extremely short duration of electronic flash is highly desirable in some instances. Use the direct view finder; do not overlook the advantages of the Rolleikin with its telephoto effect, maximum use of film area and greater film capacity.



1:5.6 • 1/500



Theatre and Music-Hall

At longer distances only a section of the film is generally used hence this is a good field for using the Rolleikin. Do not depend on footlights but concentrate on spot-lighted performers or features. Exposures of $1/30$ th sec. are generally adequate under the strong lights with fast pan film. To take flash pictures without knowledge of or disturbing subjects: use dark flash (colored lamps or reflector with infra-red filter) and infra-red films. After pre-setting focus you can use direct view finder most comfortably.

Night

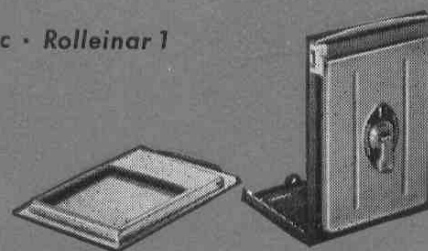
Include direct light sources as symbols of the night in the picture. Only very strong, close lamps must be hidden behind natural foreground objects (building, tree, persons), otherwise over-exposure will result. Make use of effects: reflections in wet streets, light deflected by snow, early twilight with traces of brightness in the sky. Use fast pan film only. For time exposure: cover up lens when auto headlights cross the picture area, to avoid streaks. Use flash for snapshots at night, not for night shots.

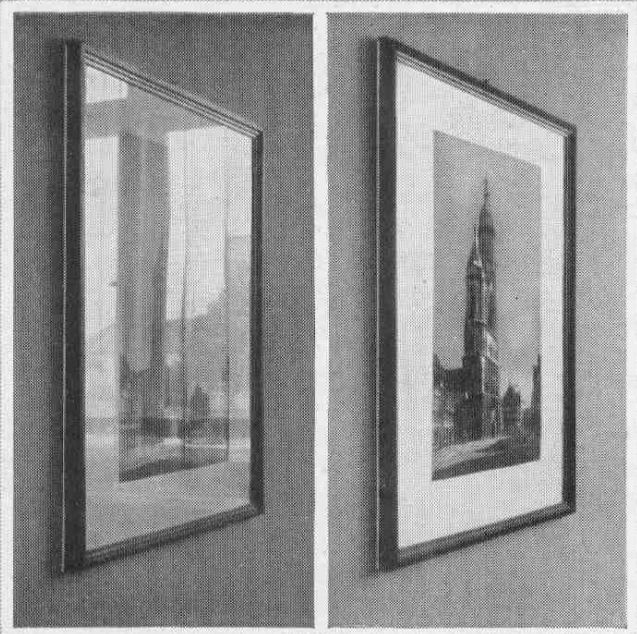
Copying

Smaller originals are best copied with Rolleinar's. See table page 55 for reproduction sizes. The camera should be set on a rigid, vibration free stand with the original parallel to the film plane. Use a small stop; $f:11$ recommended. Light evenly from both sides but avoid reflections. Glossy surfaces give less trouble if Rolleipol is used. Colored originals may require filter for better tone separation. Use contrasty ortho film (or even positive film with Rolleikin) for black and white originals. Spots on originals can be minimized by using a filter similar in color to spot with pan film. The Rolleikin is especially valuable for series or archive work. Single reproductions are economically taken with the plate back adapter. Reproductions from books are readable with ordinary magnifier directly from $2\frac{1}{4} \times 2\frac{1}{4}$ contact prints. Small objects (small machine parts, assembly pieces) may be handled similarly to copying. A spotlight can often be an additional aid in this case. Shadowless lighting effects are facilitated by placing object on a suspended glass plate. Reflections from fine glassware or other highly reflective objects can be reduced to a minimum, if the object is photographed by reflected light such as can be had inside an illuminated, white painted box.



1:11 • 30 sec • Rolleinar 1





Rolleipol



Shiny Surfaces

Eye-glasses, pictures, water surfaces, window glass and other brilliant reflecting surfaces often give disturbing reflections, not always avoidable by changing angle or illumination. A simple remedy in many cases is to use the polarizing filter Rolleipol. Reflected light is often polarized in one direction and this can be absorbed or reduced by proper orientation of the Rolleipol. This is done by merely turning it for best effect. It may sometimes be necessary to change camera position to obtain best angle. In artificial light a second pola-filter over the light gives full control at any angle. When the reflections are removed objects seen through the shiny glass or water surfaces become clearly evident. Torsion or strain tests of various materials are also possible with the help of the Rolleipol. Reflections from certain metal surfaces when the Rolleipol has little or no effect are best handled by photographing in diffused light or changing direction of illumination. Small, shiny metal parts can be held over burning magnesium to provide a white coat or greased and rubbed with graphite.

Plants

Flowers, blooms and grass are most effective in close-ups taken against the light. Use Rolleinars with fill-in light or reflectors. Stop down for needed depth of field and shoot in bright light with no wind. A semi-circular shaped cellophane shield is an effective guard against the ground breezes that destroy definition. Use filters to differentiate between equally bright colors. Keep in mind that a filter renders its own or similar colors lighter, whereas its complimentary color comes out darker.

Color Photography

Color films have little exposure latitude, so avoid strong light contrasts and use exposure meter. In doubtful cases make three exposures, varying diaphragm opening one half stop each side of what is considered normal. Correct color reproduction is possible only with correct matching of proper film types with illumination. Use compensating filters when needed according to manufacturer's instructions. Rolleipol-Filter: reduces glare from reflecting surfaces, also darkens the blue color of the sky (page 42) without affecting the color of the landscape. Select subjects with pleasing large color patches, not just an accumulation of loud colors. Overcast sky often renders pleasing pastel effect.



1:16 · 1/30 · Rolleinar 2
filter yellow



Pictures Through the Microscope

When a microscope is focused by someone with normal eyesight, the eye sees the image as if it were at infinity. Consequently, the Rollei, also focused at infinity, can simply take the place of the eye over the microscope in order to record the image on film.

Microscope and camera should be mounted on firm stands, without mechanical connections. Place the camera so that taking lens, focused at ∞ , is brought as close as possible to the ocular. Check optical axis carefully; film plane should be parallel to surface being photographed. For full coverage of $2\frac{1}{4} \times 2\frac{1}{4}$ use wide angle ocular, however, sufficient coverage for Rolleikin negative is to be had in any case. Framing through view finder is unnecessary. Do not stop down since this has no effect on exposure. Factors affecting exposure are illumination and transmission of the objective, to be ascertained through tests. Apochromatic micro-lenses are best, particularly with color film. In shooting black and white with these lenses, use ortho material and green filter. Generally interesting are micro-pictures of crystallized chemicals through Rolleipol filter in conjunction with another pola-filter over microscope condenser.

Care of the Rolleiflex

A precision camera demands care in handling. Protect it against moisture, dust, sand, strong sunshine, hard blows or falls. First safeguard: the ever ready case. Second safeguard (when not in use while traveling): a rubber bag to guard against water, sand or snow. Carry camera around neck to minimize transportation shocks. Keep all parts clear and clean lenses with a soft camel's hair brush or doeskin. Although the mechanism is not unduly sensitive to cold, some condensation may form on the lenses when the camera is brought into a warm room from outside in cold weather. Do not wipe off — let moisture evaporate. In the tropics arrange to keep the camera, when not in use, in an air-tight container.

In Case of Damage to the Rolleiflex

The task of repairing major or minor damage is the special province of the expertly trained mechanic. Franke & Heidecke maintain their own special workshop in which all repairs are done with precision at nominal prices. Abroad, apply to photo dealers and factory representatives for full information.

The Practical Accessories for the Rolleiflex Automat

Code:		Code:	
Berau	Ever Ready Case for Rolleiflex Automat	Etsof	Leather Case only
Baobe	Lens Hood	Focom	Complete Plate Adapter Equipment comprising: 1 Plate Adapter, 3 Slides, 1 Focusing Screen Slide, 1 Leather Case for 2 Slides
Baihe	Rollei Yellow Filter, light		
Baimi	Rollei Yellow Filter, medium	Foapt	Plate Adapter
Balin	Rollei Green Filter, light	Fosli	Slide
Baeen	Rollei Green Filter	Fopla	Cut-Film Sheath
Basky	Rollei UV Filter	Focas	Leather Case for 2 Slides
Baora	Rollei Orange Filter	Fofoc	Focusing Screen Slide
Baubi	Rollei Red Filter, light	Rolki	Rolleikin 2
Babla	Rollei Blue Filter, light	Foad	Panorama Head
Bahaz	Rollei H 1 Filter (UV Filter for Daylight Color Photography)	Fohod	Extension Hood
Bafir	Rollei Infra-Red Filter	Fogri	Rolleigrid Lens
Batnu	Rolleisoft 0	Basyn	Rolleiflash Attachment
Baton	Rolleisoft 1	Boxin	Boxin Case for 1 Rolleiflash + 1 Rolleiflash comb.
Batar	Rolleipol	Cekab	Extension Cord for Flash-Attachment 10 ft.
Bapun	Rolleinar Lenses, set 1 (40-18 in.)	Flaco	Extension Flashholder Rolleiflash comb. with Connecting Cord 80 in.
Baken	Rolleipar Lens 1	Trika	Extension Cord for Rolleiflash comb. 10 ft.
Baodo	Rolleinar Lenses, set 2 (20-12 in.)	Blika	Flash Connecting Cord 32 in.
Bakdu	Rolleipar Lens 2	Mardu	Rolleimarin Pressure Proof Underwater Housing
Etcom	Leather Case containing: 1 Lens Hood, 2 Sets of Rolleinar Lenses, 2 Rolleipar Lenses and your choice of 5 Filters		
Etlee	Leather Case only		
Etset	Leather Case containing: 1 Lens Hood and your choice of 2 Filters		

To avoid errors when ordering accessories please specify camera-number.

Full information on the use of Rollei accessories in the booklet "The Practical Accessories".

Table of Rollei Filters

Special compensation factors for light values are given when using filters, and these may be varied to suit type of film and lighting conditions.

Rollei Filter	Use	Light value compensation	
		Ortho	Pan
Light yellow	Landscapes, snow, clouds. Renders yellow and green lighter, blue darker.	-1.5	-1
Medium yellow		-2	-1.5
Light green	Landscapes, snow, clouds. Renders green lighter, red (complexion) and blue darker. For pan emulsions.	-1.5	-1
Green		-2	-1.5
Orange	Hazy distant views. Renders yellow-red lighter, blue darker, distant objects clearer.		-1.5 to -3
Light red	Hazy distant views. Renders red lighter, blue-green darker. Gives stronger effects than Orange Filter.		-2 to -3.5
Light blue	Artificial light. Renders red darker. For ultra-pan emulsions.	-0.5	-0.5
UV	High altitudes above 6000 feet. Seascapes. Eliminates ultra-violet rays which reduce contrast.	-0.5	-0.5
Infra-Red	Special filter for infra-red emulsions. Transmits dark red above 700 m μ and infra-red.	*)	
H 1	UV-Filter, especially designed for long distance color photography. Absorbs ultra-violet rays, subdues predominance of blue and cuts aerial haze in distance shots.	No increase of exposure	

*) Exposure depends on the type of emulsion used and must be determined by tests.

Focal Length and Focusing-Range with Rolleinar Lenses

Rolleinar Lenses	—	1	2
Focal Length	75 mm	71 mm	68 mm
Focusing-Range (in inches)	∞ — 35 ¹ / ₂	39 ¹ / ₂ — 17 ³ / ₄	19 ³ / ₄ — 12 ¹ / ₈

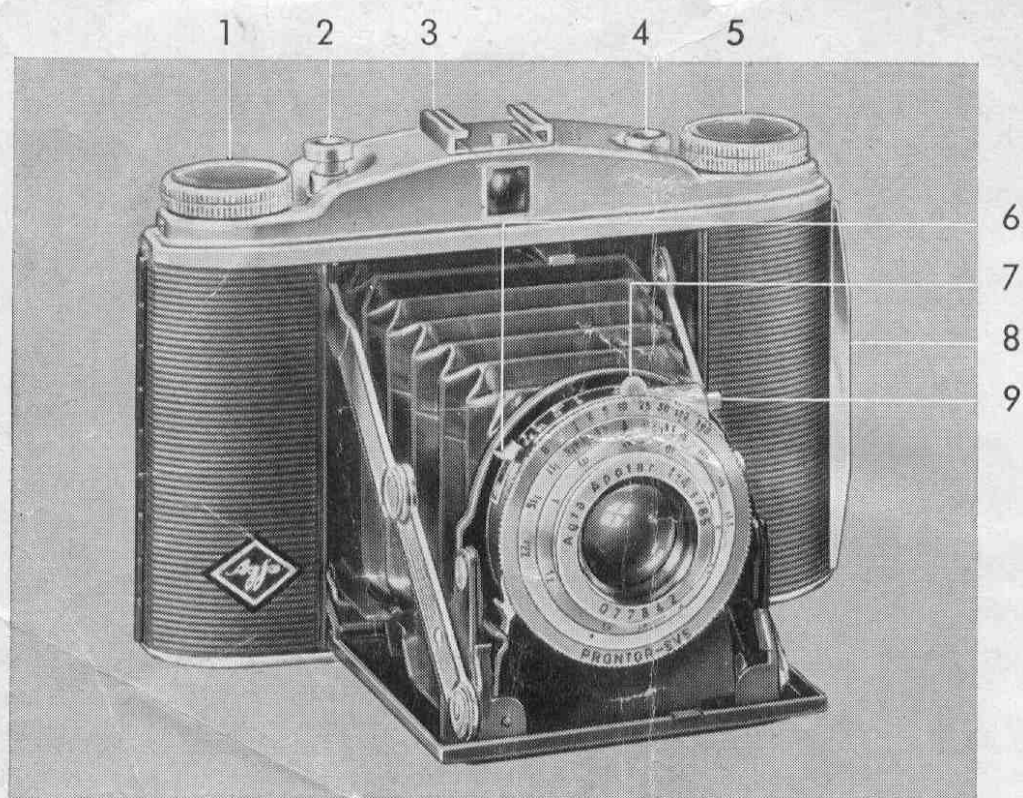
Field-Size and Scale of Reproduction

Focused Distance	31 ¹ / ₂ in.	19 ³ / ₄ in.	13 in.
Field-Size (in inches)	22 x 22	13 ³ / ₄ x 13 ³ / ₄	8 ³ / ₄ x 8 ³ / ₄
Rolleinar	9 x 12 ¹ / ₂	5 ¹ / ₂ x 7 ⁷ / ₈	3 ¹ / ₂ x 5 ¹ / ₈
Scale of Reproduction approx.	1 : 10	1 : 6.3	1 : 3.9

Depth of Field with Rolleinar Lenses

Rolleinar	1		2		f / Stop
Focused Distance (in inches)	31 ¹ / ₂	23 ¹ / ₂	19 ³ / ₄	15 ³ / ₄	
from to	29 ¹ / ₂ 33 ¹ / ₂	22 ¹ / ₂ 24 ³ / ₄	18 ⁷ / ₈ 20 ¹ / ₂		5.6
from to	28 ³ / ₄ 34 ¹ / ₄	22 ¹ / ₄ 25 ¹ / ₄	18 ³ / ₄ 20 ⁷ / ₈	15 ¹ / ₈ 16 ¹ / ₂	8
from to	28 35 ³ / ₄	21 ⁵ / ₈ 26	18 ¹ / ₈ 21 ¹ / ₄	15 16 ⁷ / ₈	11
from to	26 ³ / ₄ 38 ¹ / ₄	20 ⁷ / ₈ 27 ¹ / ₄	17 ³ / ₄ 22	14 ⁵ / ₈ 17 ¹ / ₄	16
from to	25 ¹ / ₄ 41 ³ / ₄	20 28 ³ / ₄	16 ⁷ / ₈ 23 ¹ / ₄	14 ¹ / ₄ 18 ¹ / ₈	22

Taking-distance measured from lens panel to object. Permissible circle of confusion in this special case (due to the large image and less need for enlarging) = t/1000. For increased sharpness further stopping down is required.



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Rolleiflex Rolleicord
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E

Rolleiflex

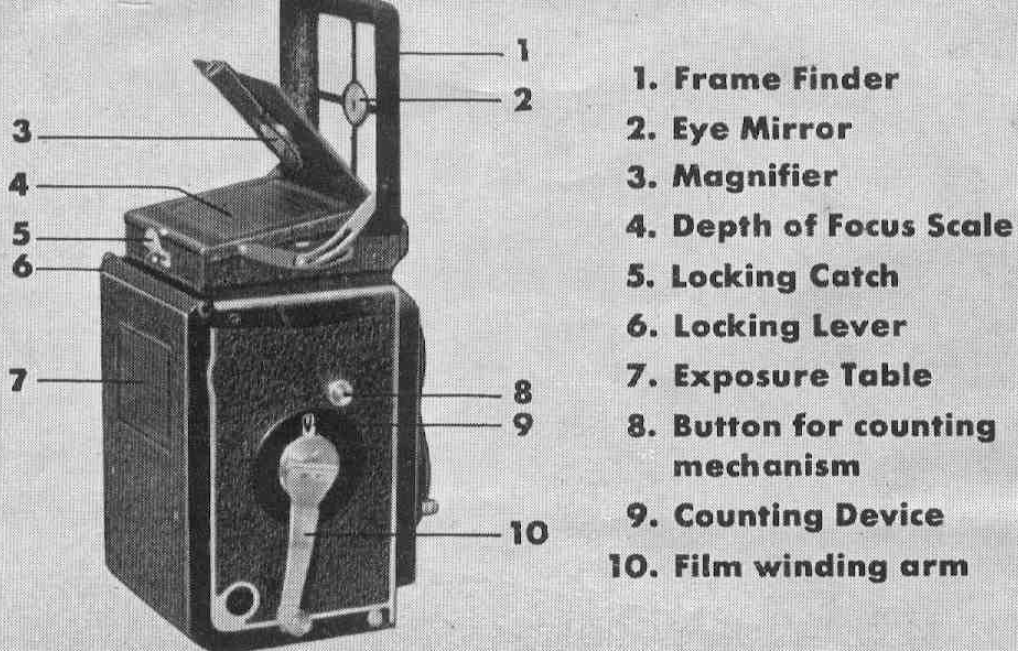
$2\frac{1}{4} \times 2\frac{1}{4}$

Working Instructions

No longer a mere
camera, it is a
Photo-automat!

FRANKE & HEIDECKE
BRUNSWICK

**For Plate-Adapter, Cine Film
Attachment, Stereo Fitment,
and Panorama Head, please
ask for separate Instructions.**

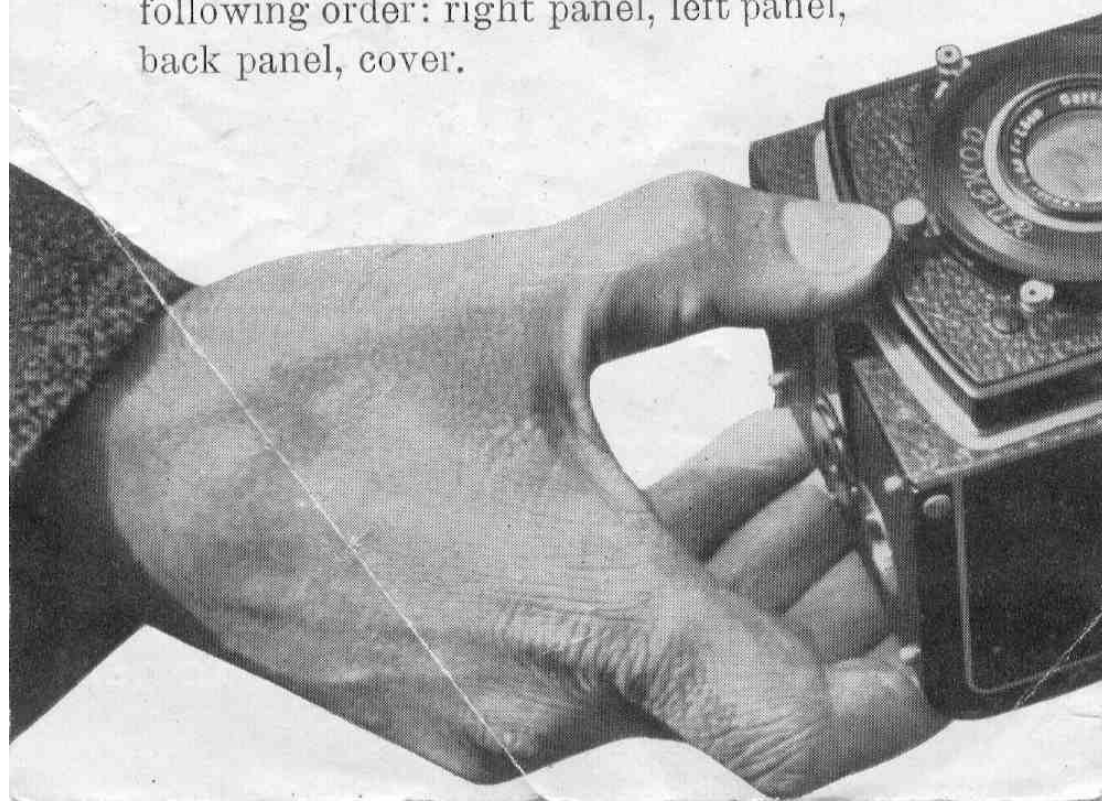


FOCUSING HOOD

To open: Release the catch 5; the focusing-hood then springs up automatically. At the same time the magnifier 3 springs into position for use, and the focusing-screen is open to view.

Fine focusing: Bring your eye close to the magnifier, turn the focusing-knob 17 and watch the focusing-screen. It is not necessary to displace the magnifier in order to observe the picture, but if it disturbs you in any way, simply fold it down.

To close: Press down the magnifier; then fold the side panels with the right and left thumbs in the following order: right panel, left panel, back panel, cover.



Observation at eye-level: The focusing-hood cover 1 serves as a frame view-finder. Press with your index finger on one of the leather-covered spaces and release the catch 5; the frame finder then springs upright. If you get the reflection of your eye in the small concave mirror 2, the diopter will give you the exact outline of the picture. The pupil of your eye must register exactly with the aperture in the mirror.

BACK PANEL

To open: Pull the bolt 14 downwards with the thumb. Then grip the back panel by the two corner nipples 13 and lift slightly. The back panel can now be opened fully.

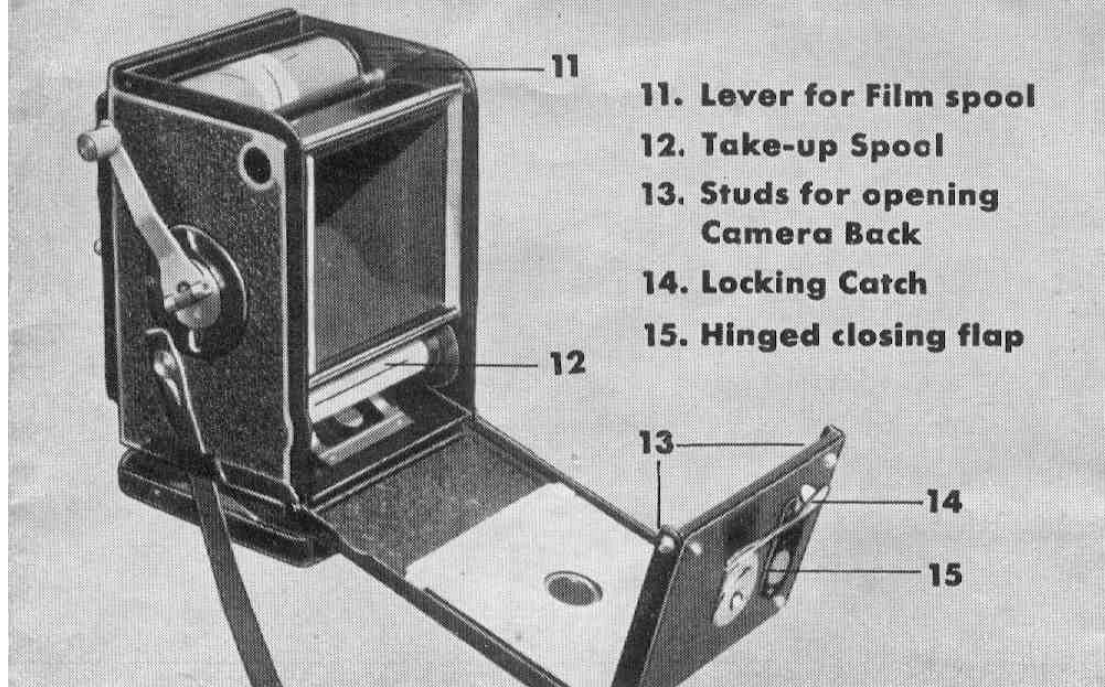
To close: Press the back panel firmly against the camera body with the thumbs and secure the bolt 14.

To remove the back: The back panel is attached in the manner of a hinge. To allow the Rolleiflex to be used with an enlarging lantern, the panel can be taken off by pressing lightly on the spring flange at the left, after having pulled upward the two locking-levers 6. First open the back to the full extent.



Opening

the back panel



- 11. Lever for Film spool
- 12. Take-up Spool
- 13. Studs for opening Camera Back
- 14. Locking Catch
- 15. Hinged closing flap

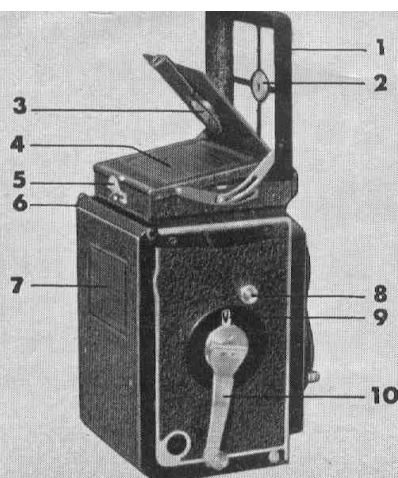
Tripod exposures: At the side of the bolt, the back panel has a bush for use with a tripod.

FILM CHANGING

Loading: Take the film out of its packing. Open the back panel, press the lever 11 firmly down and lay the spool in the groove. The spool clips fast by itself. Tear off the gummed seal. Now draw the pointed end of the cover-paper upwards over the picture window and push it as far as possible into the broad slit of the take-up spool. If necessary adjust the spool by turning the transport handle.

Changing spools: The 6 × 6 Rolleiflex uses 3 1/4 × 2 1/4 B. II, 8-exposure Film. It gives 12 pictures 2 1/4 × 2 1/4. When inserting a new take-up spool, make sure that the boring with a cross-cut comes on the right.

Transport: Bring the transport handle 10 into action by swinging it outwards from the resting position. A few short cranking movements will suffice to tighten the cover-paper on the spool. *Now make sure that the paper band is running straight: if it gets crooked, it will cause trouble!*



1. Frame Finder
2. Eye Mirror
3. Magnifier
4. Depth of Focus Scale
5. Locking Catch
6. Locking Lever
7. Exposure Table
8. Button for counting mechanism
9. Counting Device
10. Film winding arm

FOCUSING HOOD

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BACK PANEL

To open: Pull the bolt 14 downwards with the thumb. Then grip the back panel by the two corner nipples 13 and lift slightly. The back panel can now be opened fully.

To close: Press the back panel firmly against the camera body with the thumbs and secure the bolt 14.

To remove the back: The back panel is attached in the manner of a hinge. To allow the Rollei reflex to be used with an enlarging lantern, the panel can be taken off by pressing lightly on the spring flange at the left, after having pulled upward the two locking-levers 6. First open the back to the full extent.



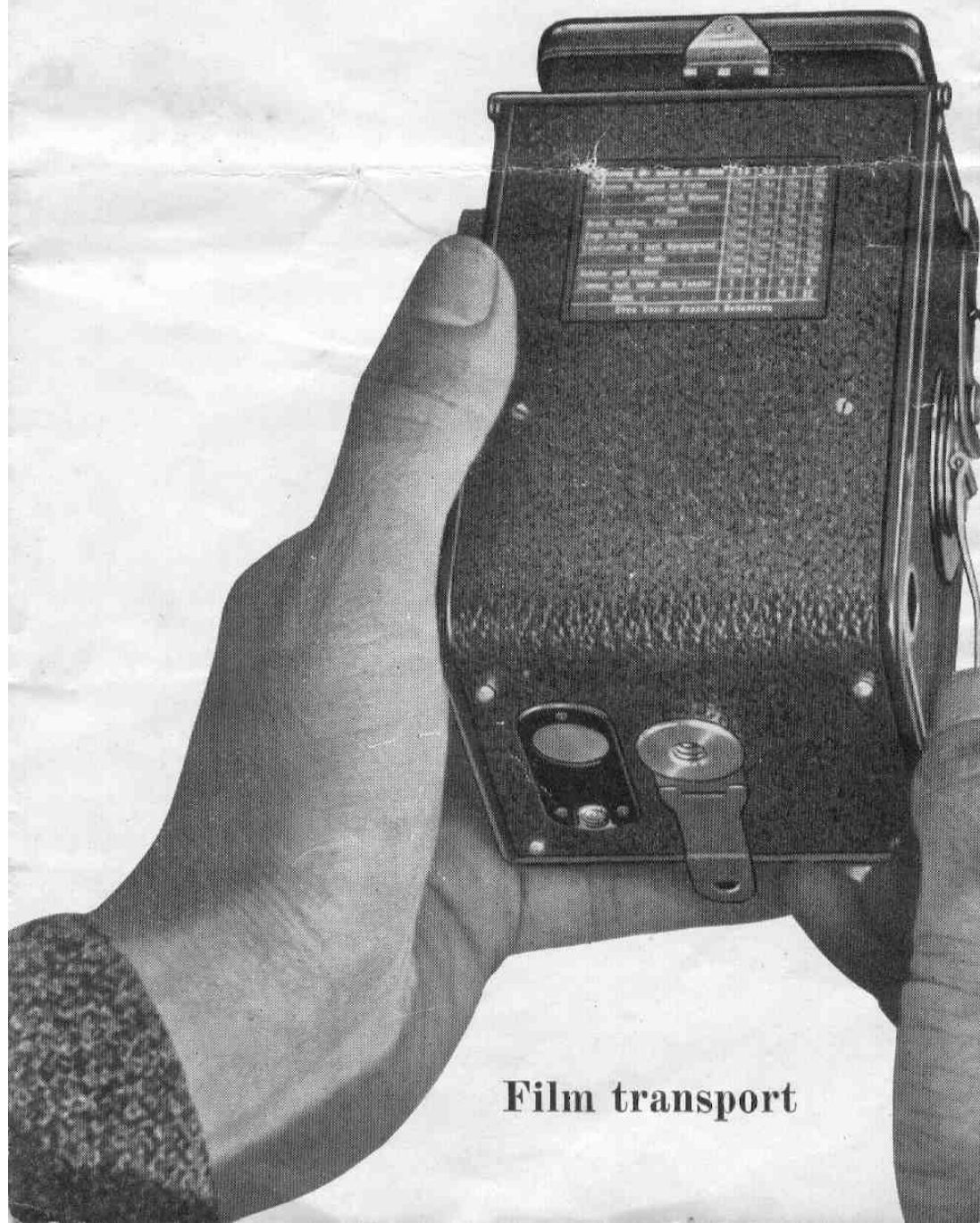
Opening

the back panel

Close the back panel. Continue the cranking movement as before, cautiously and until the figure 1 appears in the film-window in the back panel.

The film-window has now served its purpose. It is closed by means of the closing slide 15. Turn the transport handle backwards to the top check and press the button 8. The counter 9 springs to No. 1 and the camera is ready for the first exposure.

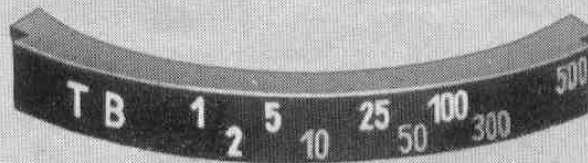
When the exposure is made, turn the handle downwards to the bottom check. The film has then travelled on the length of one picture, the counter shows No. 2 and the Rolleiflex is ready



Film transport



Scale of stops (Tessar f 3.5)



Scale of speeds

for the second picture. The film must be wound on in this manner after each exposure until the last has been made. The Red Dot behind No. 12 shows that the 12th exposure has already been made. When not in use, the transport handle is of course turned over into the resting position. In fact it is advisable to turn it over after each exposure, so as to avoid the film being moved accidentally.

Unloading: After making the last exposure, set the counter again at No. 1 and crank the transport handle until the whole film is completely wound up. Open the back panel. Pull out the knob 16, lift out the film spool and seal it at once.

Never change films in bright sunlight! Place the exposed films in the original light-tight packing.

IT IS IN YOUR OWN INTEREST
TO COMPLETE THE GUARANTEE
FORM, ISSUED WITH THIS CAMERA
IMMEDIATELY AFTER PURCHASE.

Close the back panel. Continue the cranking movement as before, cautiously and until the figure 1 appears in the film-window in the back panel.

The film-window has now served its purpose. It is closed by means of the closing slide 15. Turn the transport handle backwards to the top check and press the button 8. The counter 9 springs to No. 1 and the camera is ready for the first exposure.

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Film transport



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IT IS IN YOUR OWN INTEREST
TO COMPLETE THE GUARANTEE
FORM, ISSUED WITH THIS CAMERA
IMMEDIATELY AFTER PURCHASE.

Printed in Germany

5000. 436. Kr.

AGFA ISOLETTE II is available in the following models:

Order No.:

1334/335 with Agfa Solinar f/3.5 – 75 mm. with Prontor-SVS Shutter

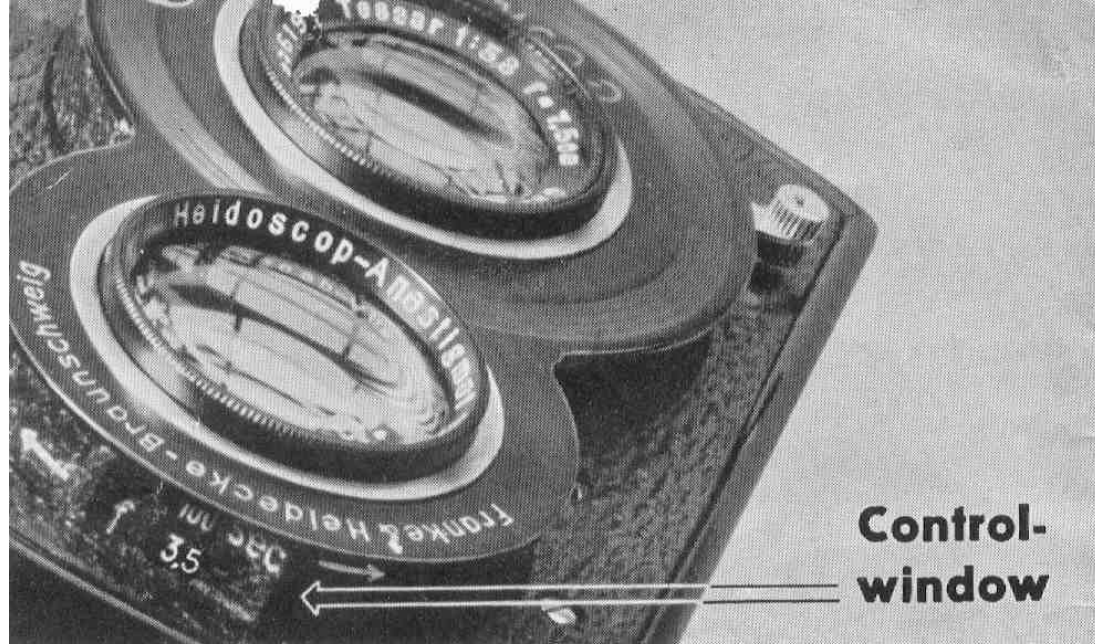
1335/335 with Agfa Apotar f/4.5 – 85 mm. with Prontor-SVS Shutter

1335/39 with Agfa Agnar f/4.5 – 85 mm. with Pronto Shutter

All lenses with anti-reflex coating.

The Agfa Isolette II takes the usual 6 x 9 film B 2 (120) giving twelve 2¼ x 2¼ in. (6 x 6 cm.) exposures.

	Page		Page
1 Film Winding Knob	6/8	5 Film Indicator Disc	4
2 Release Knob with thread for Cable Release, and Indicator Window of Double Exposure Lock	8/15	6 Diaphragm Lever and Scale . .	15/16
3 Accessory Shoe	21	7 Shutter Tensioning Lever . .	12/14
4 Locking Knob for opening Camera Baseboard	7	8 Lock for Camera Back . . .	4/7
		9 Synchronized Flash Contact 3 mm. diameter	12/14



THE SHUTTER

The manipulation of the Rolleiflex shutter is very simple and is easily carried out with the camera in working position. The lever 2 on the right hand operates the speeds, the lever 1 on the left the stops, and the lever 3 at the bottom the shutter. If the letters T or B are showing in the peep-window, by no means press the operating lever 3 to the right. The numbers 10, 50 and 300 are coloured red, so that the speeds most in use may be instantly recognised.

Long time exposures: If the letter T is showing in the small window and you press the operating lever of the shutter to the left, the shutter will open. It will not close until you push the lever to the left a second time. These speeds are used for long time exposures from a tripod.

Short time exposures: When the letter B shows at the window the shutter also opens when the lever is pressed to the left, but it closes again immediately the pressure is removed. This setting is used for exposures of from 2 to 5 seconds duration and these exposures should also be made from a tripod.

Instantaneous exposures: The numbers 1 to 500 indicate the fractions of a second, i. e. $1/1$ to $1/500$ th second. Set one of these numbers in the window

and lightly press the operating lever to the right. Now, when you release it, an exposure of the length selected is given automatically. Exposures down to $\frac{1}{25}$ th second may confidently be made from the hand, but longer exposures are much better made with the use of a tripod, to avoid distortion. It is possible to set at speeds in between those indicated in the scale, but not between $\frac{1}{10}$ and $\frac{1}{25}$ nor between $\frac{1}{300}$ and $\frac{1}{500}$. Further, in setting at $\frac{1}{500}$ th second a certain amount of resistance must be overcome, and the



The Rolleiflex 3-point control

- ① Stops ② Speeds ③ Shutter

16. Film Knob

17. Focussing Knob

The Rolleiflex in use at eye-level



shutter must be set *before* the spring is tensioned. When you set the lever 3, be careful that you move it until it comes to the stop, to avoid a disturbance.

Exposure table: A useful table with approximate data will be found on the back panel of the Rolleiflex.

The calculations are made on the basis of a roll-film with a speed of 18/10⁰ DIN in sunny weather, at midday in Summer. In Winter and in poorer lighting conditions the exposures must be proportionately lengthened. This can equally well be done by the table, by ascertaining the relative values, i. e., larger stop and lower speed.

Depth-of-focus table: (No. 4.) The top row of figures in table 4 shows the stops. The two outer columns, right and left, give the distance figures which must be adjusted by the focusing-knob. Where these two rows of figures cross will be found the figures indicating the distances between which all objects will be in sharp focus. The sign ∞ indicates infinity.

Self-portraiture: The Rolleiflex-Compur is supplied only without a built-in self-timer. In its place is given the highest speed of 1/500th second, and for self-portraiture any automatic release can be employed. A cable release is supplied with every camera.

Distance scale: In focusing from ∞ to 1 meter the focusing-knob makes 2 complete turns, so that great accuracy in focus is assured. The engraved meter scale, however, only covers from ∞ to 1.70 m. on the first revolution. The desired distance is in focus when the appropriate figure is set at the white dot.

The meter scale itself is not of very great importance, as the really needle-sharp focusing can only be obtained with the help of the focusing-screen. This is particularly the case for distances less than 1.70m., and when using the Proxar lenses.

Proxars: These auxiliary lenses allow objects to be photographed at a distance of 20 inches and 13 inches respectively. For the Rolleiflex 2 accurately paired Proxars are necessary. Set D 1 is for focusing from 40 to 20 inches and Set D 2 from 20 to 13 inches. No alteration in the length of exposure or special stopping down is necessary. For use the Proxars are simply clipped over the front of the camera lenses. If they do not at first fit, this can be easily remedied by bending the clips.

Plate adapter: This enables plates to be used, which can be developed separately as required. The special slides $2\frac{1}{4} \times 2\frac{1}{4}$ are loaded with plates $3\frac{1}{2} \times 2\frac{1}{2}$. The picture size remains the same as with the rollfilm. The $1\frac{5}{8} \times 1\frac{5}{8}$ slides are loaded with plates $2\frac{1}{4} \times 1\frac{5}{8}$ and the picture is $1\frac{5}{8} \times 1\frac{5}{8}$.

Carrying-strap: The Rolleiflex is provided with a neat black leather strap, so that the camera can be carried at breast height, ready for immediate use. The two side clips allow the strap to be so adjusted that when hung around the neck, the camera is always perfectly upright.

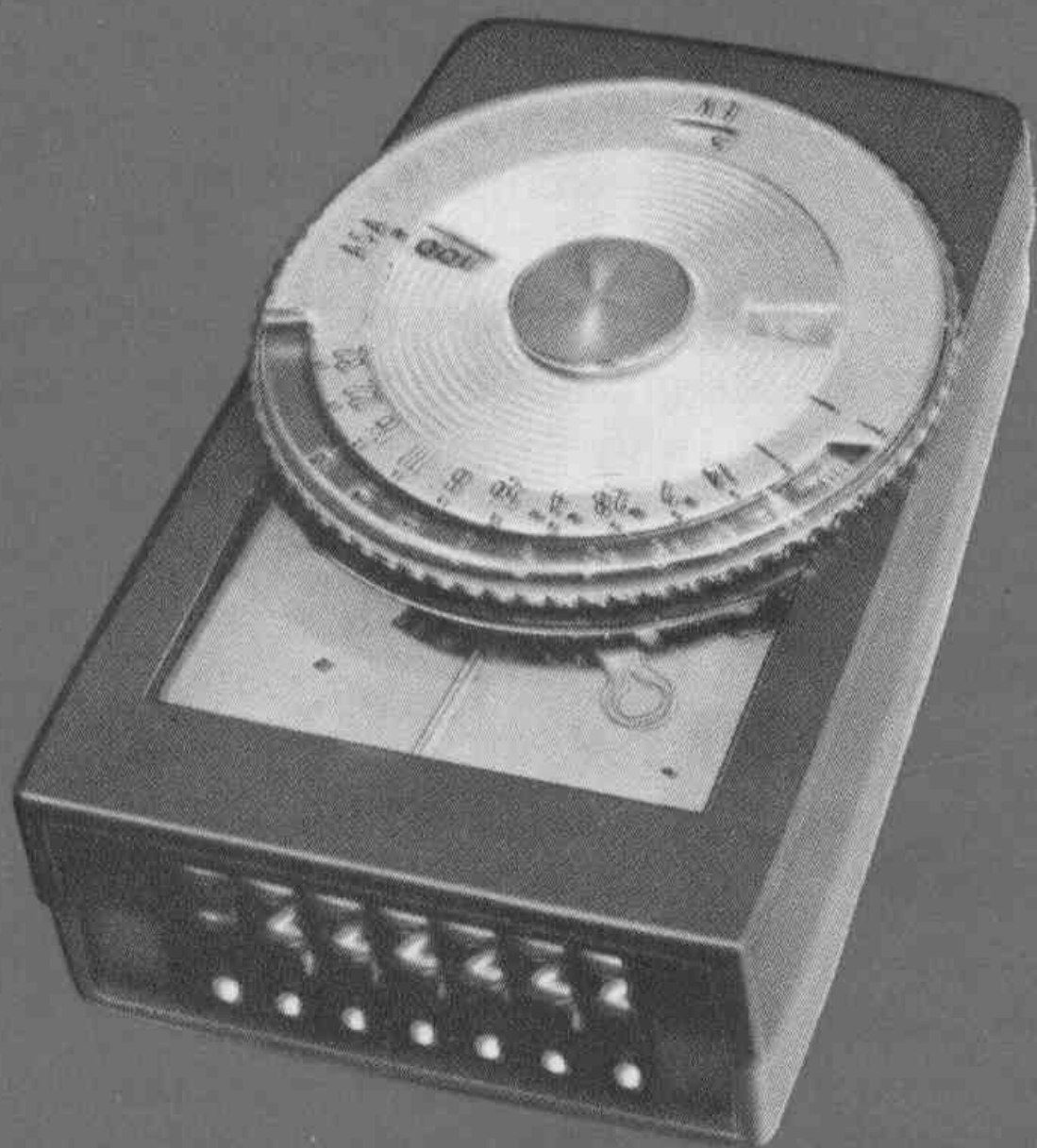
Accessories: Please ask for special literature on the cinefilm attachment, filters etc.

*Your Short-Cut
To Fine Photography..*

SEKONIC

AUTO-LUMI model L-86

EXPOSURE METER



For Perfect Exposures Every Time!

SEKONIC

AUTO-LUMI L-86 EXPOSURE METER

Complete with leather case and neck cord. At this tiny price, the L-86 will pay for itself in no time. Once and for all, you'll stop wasting costly film...instead perfectly exposed pictures will be yours everytime!

And the L-86 does it all so easily, so effortlessly, thanks to Sekonic's simplified, yet advanced design, and of course, Sekonic's renown precision and quality.

Just look at these features: Auto-guide indicator for quick, accurate readings... single-range simplicity... versatility, for stills and movies, color and black-and-white... convenient one-hand operation... f/stop f1 to f32... shutter 8 sec. to 1/2,000th... ASA 6 to 12,000... exposure value scale (E.V.S.) numbers 2 to 19... DIN numbers 3 to 42... ruggedness... quality components... lightweight and compact... handsome two-tone case... plus so much more!

HOW TO USE THE SEKONIC

SELECTING ASA SPEED SETTING

First, determine from the instruction sheet enclosed with your film, the correct ASA rating number. Turn the inner dial until the desired ASA number appears in the ASA window.

READING THE METER

Now that your ASA is in place, simply point the meter at your subject (at a distance of 3-6 inches). This will activate the red needle when the needle stops moving, rotate the outer dial (shutter speed dial) until the green auto-guide indicator is aligned with the red needle. Upon achieving alignment, release the outer dial and take your reading (the red outer dial indicates shutter speed; the white inner dial indicates f/stop). Any combination will give you a correct reading but select the f/stop shutter speed combination which best suits your subject.

If your camera incorporates an EVS or LVS system of exposure setting, simply read the number which appears in the EV window, after you have aligned the needle and auto-guide indicator. Then set this number on your camera and you're ready to shoot a perfectly exposed picture.

READING INACCESSIBLE SUBJECTS

When your subject is inaccessible, use the palm of your hand as a substitute. Position your hand so that the light strikes the palm at the same angle as it is hitting your subject. Take your reading with the meter about 4" away from your palm.

L-86 EXPOSURE METER

READING UNDER BRIGHT LIGHT

If the sun is very bright behind or near your subject, point the meter slightly down to prevent inaccurate readings because of excessive light from the sky.

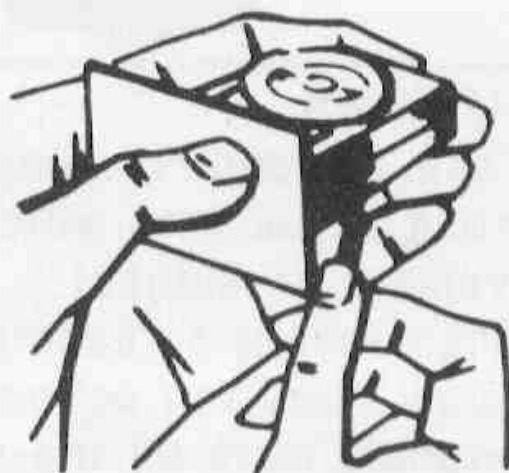
READING CLOSE-UP SUBJECTS

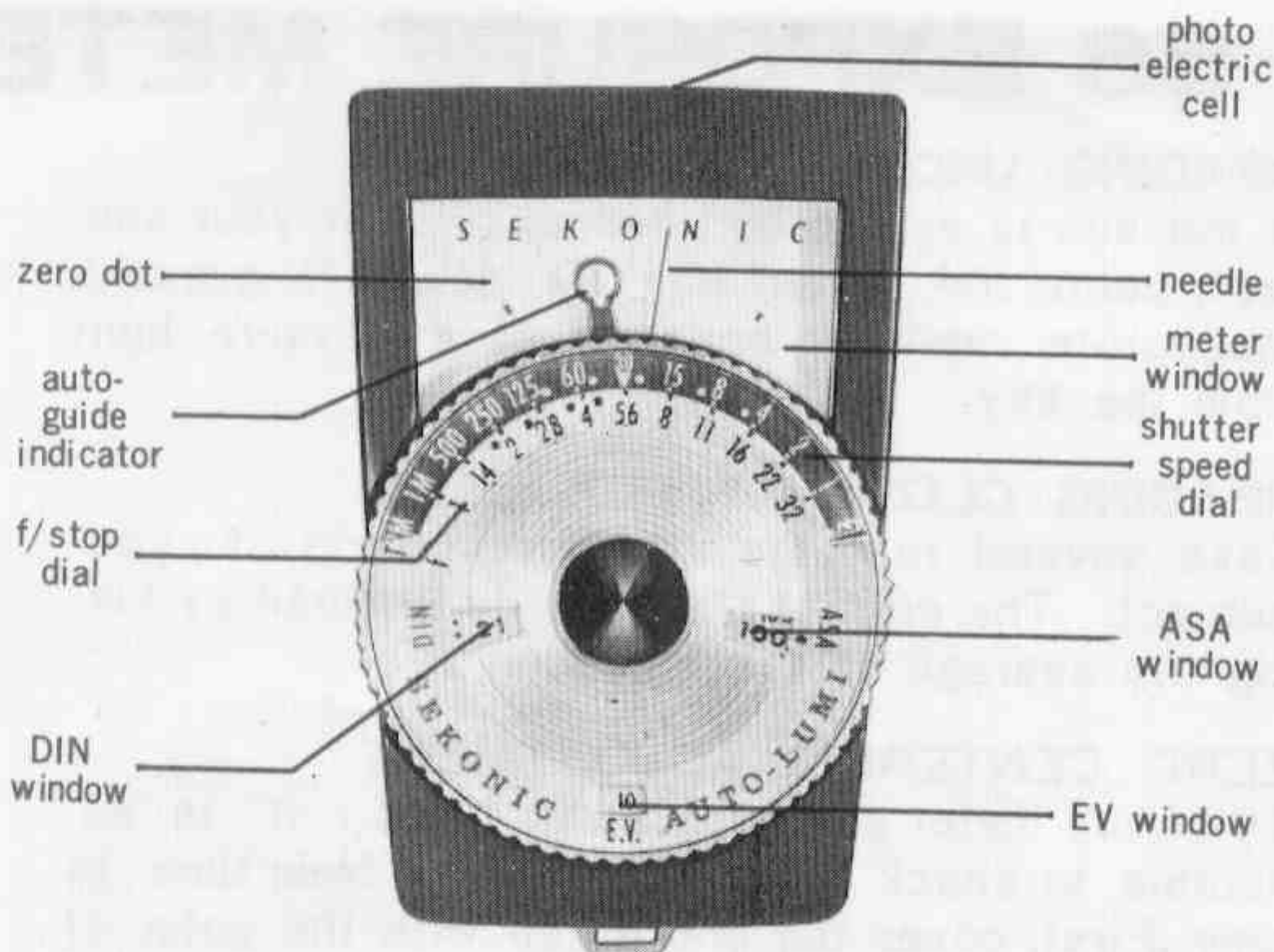
Take several readings at different parts of your subject. The correct f/stop is determined by taking the average of these readings.

ZERO CENTERING ADJUSTMENT

To insure meter accuracy at all times, it is advisable to check the zero centering from time to time. First, cover the photo cell with the palm of your hand. The red needle should align perfectly with the black dot located near the letter "S" in the light meter window, if alignment does not take place, adjust the zero centering screw at the back of the meter. Hold meter as shown in the illustration, cocovering the photo cell with a dark card. Turn the screw slightly in either direction until the needle and zero dot align.

Your meter is now zero centered for readings of pin-point accuracy.

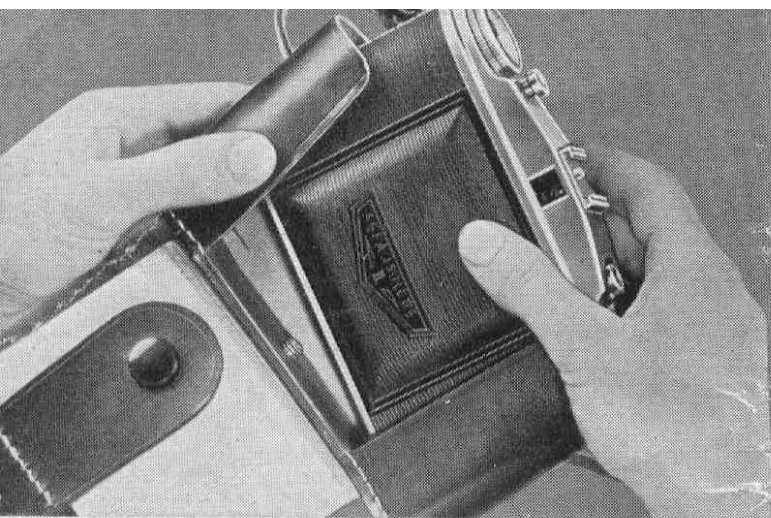




with
Leather
Eveready
Case

CAUTIONS

- 1-Take frequent readings to allow for changes in lighting conditions which occur due to excessive movement of subject.
- 2-When taking a reading, be sure that the meter's shadow does not reflect into the photo cell.
- 3-Triangle mark on the shutter dial is for 16f.p.s. movie shooting.



To insert film, unscrew tripod screw of ever-ready case, take out camera.

To open camera back, push locking device in direction of arrow, open camera back.

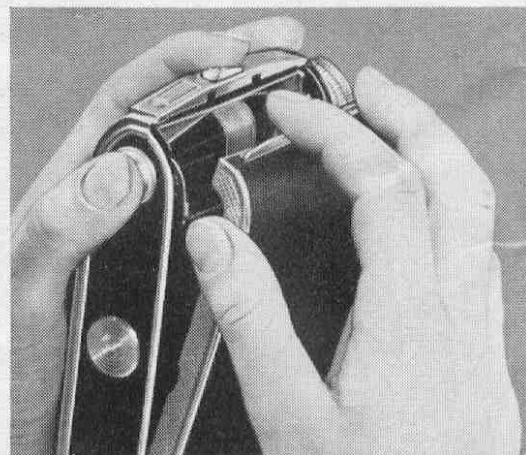
It is advisable to set the film indicator disc 5 (see illustration p. 2) before inserting the film.

Operation: Lift disc, turn it until it engages into the click-stop of the required mark.

Settings:

40	100	160	NT	ND	RT	RD
ASA	ASA	ASA	Col	Col	Col	Col

D = Daylight T = Tungsten (artificial light)
N = Negative film R = Reversal film





Sole Export Agent
COPAL CO.,LTD.

U. S. Service Station

European Service Station

Manufacturer
SEKONIC CO.,LTD.

Shimura 2-16-20, Itabashi-ku,
Tokyo, Japan.

SEKONIC Division
Harry Gocho Enterprises Inc.
56-01 Queens Blvd., Woodside,
New York 11377, U. S. A.

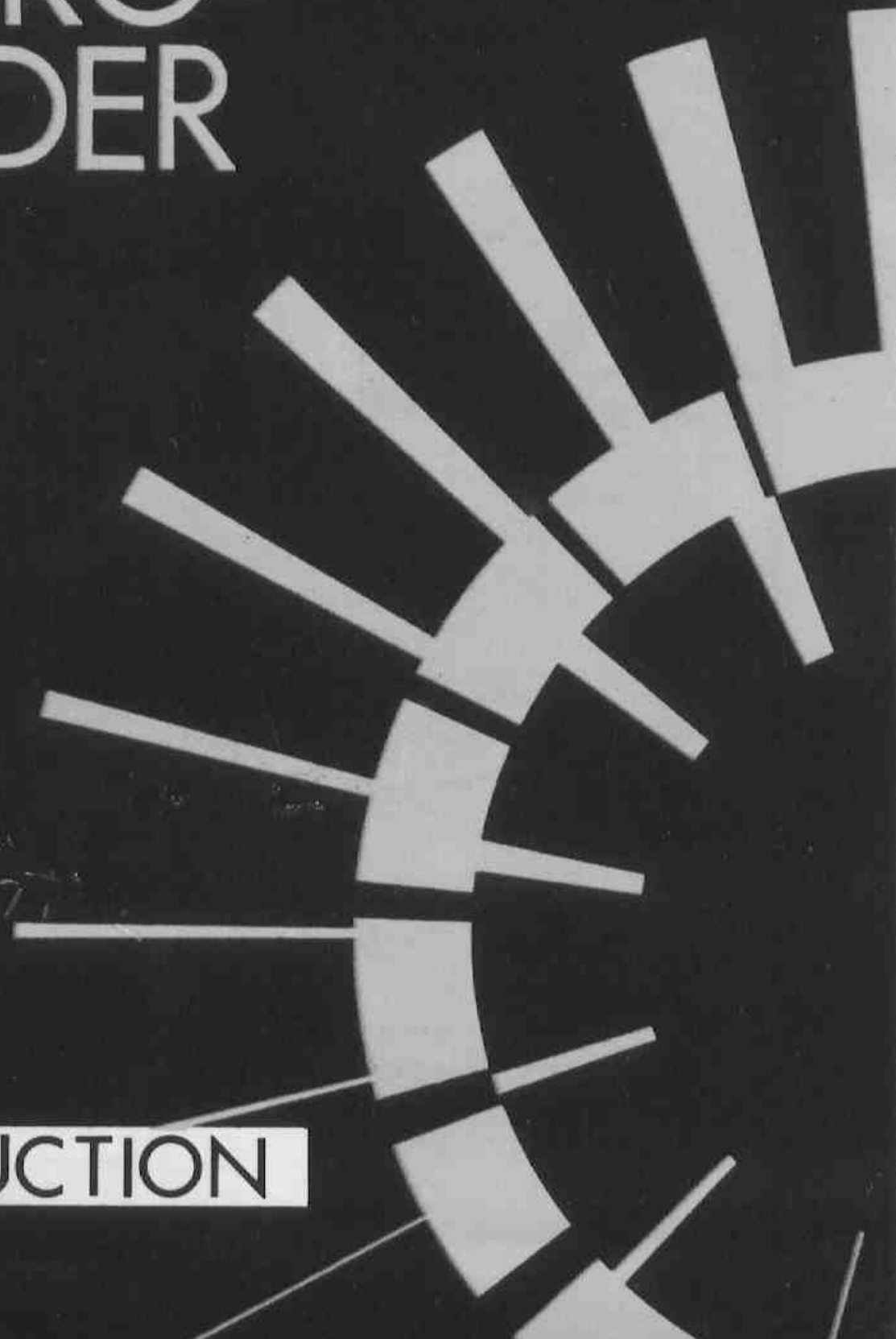
Copal Europe G.m.b.H.
2000 Hamburg 1, Schauenburgerstr.
6, F.R.Germany

558, Oizumigakuen-cho,
Nerima-ku, Tokyo, Japan.

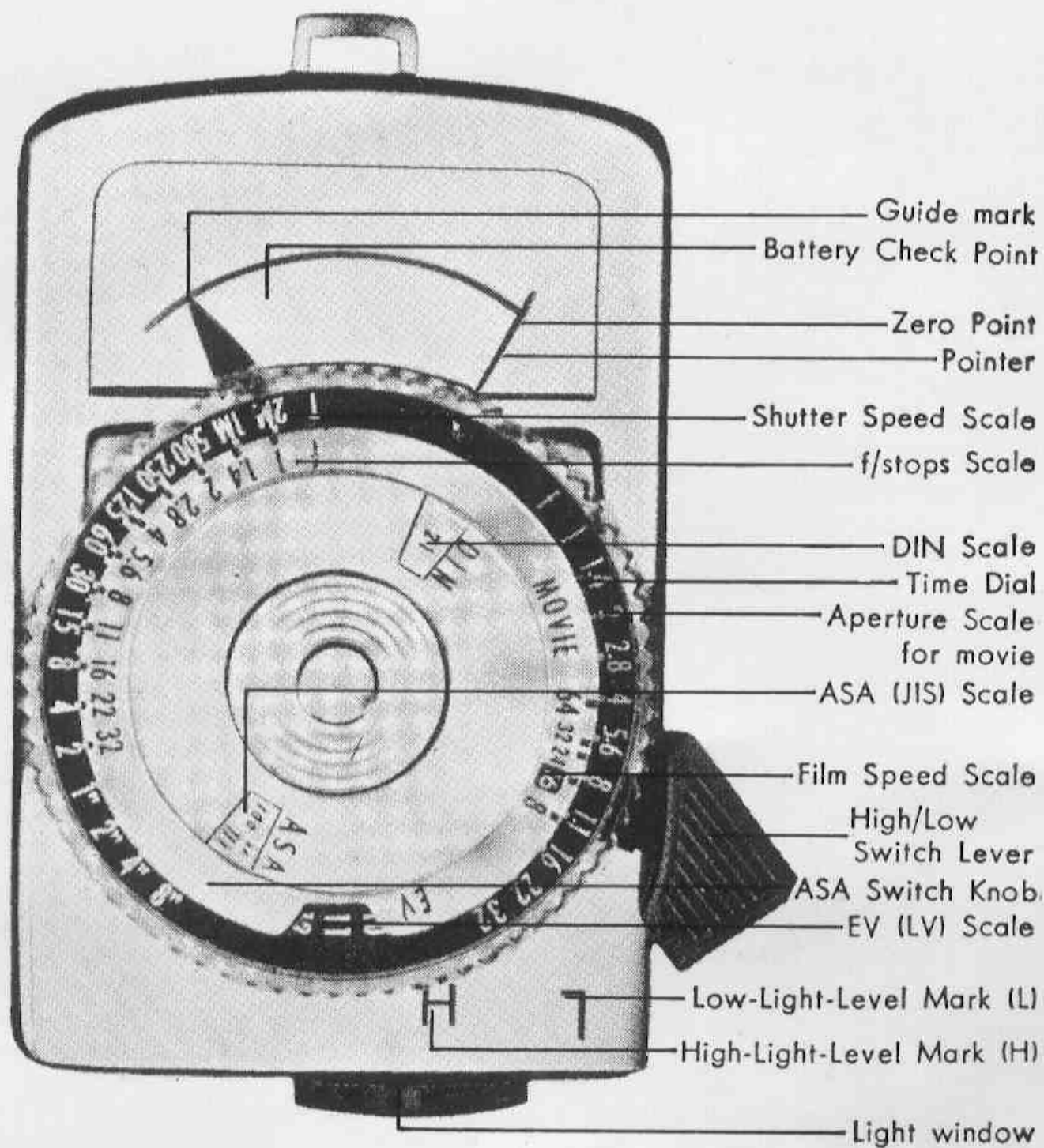
SEKONIC **MICRO- LEADER**

model
L-98

INSTRUCTION

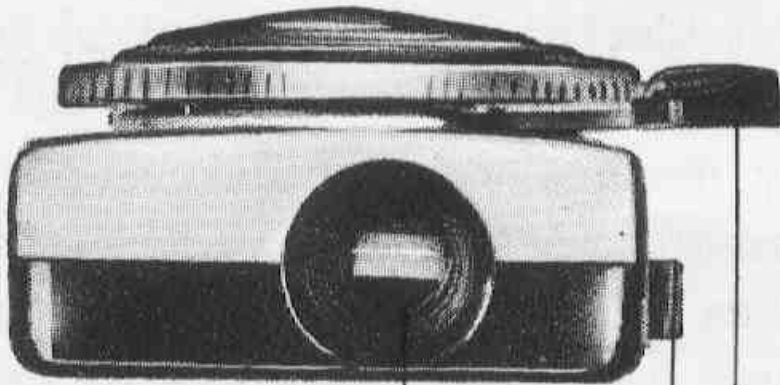
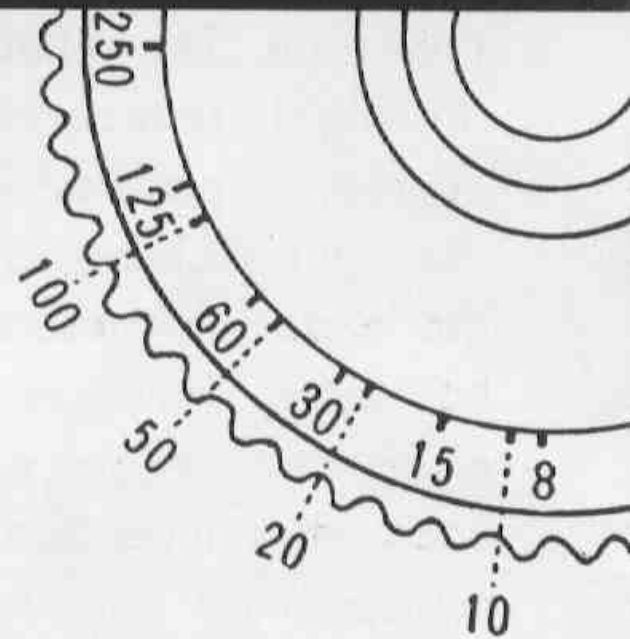
An abstract geometric design on the right side of the cover, featuring a series of white, curved, wedge-like shapes radiating from a central point, resembling a stylized sunburst or a fan. The shapes are arranged in a circular pattern, with some overlapping. The background is black.

Name of Parts



1"=one second

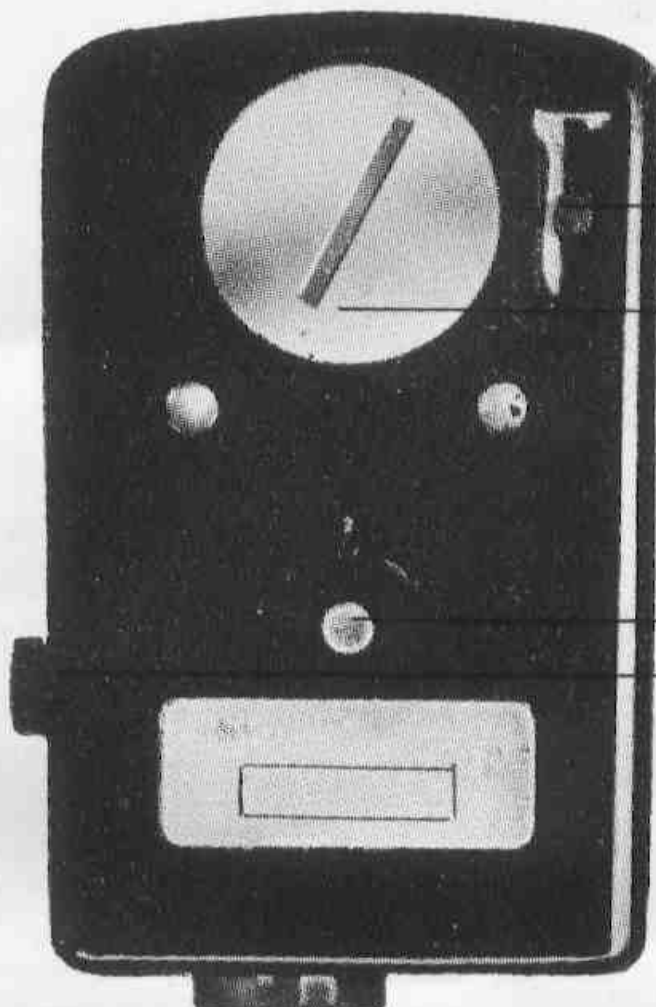
M=1/1000 second



Light window

Switch Button ('Push-button' Type)

High/Low Switch Lever



Battery Check Button
('Push' type)

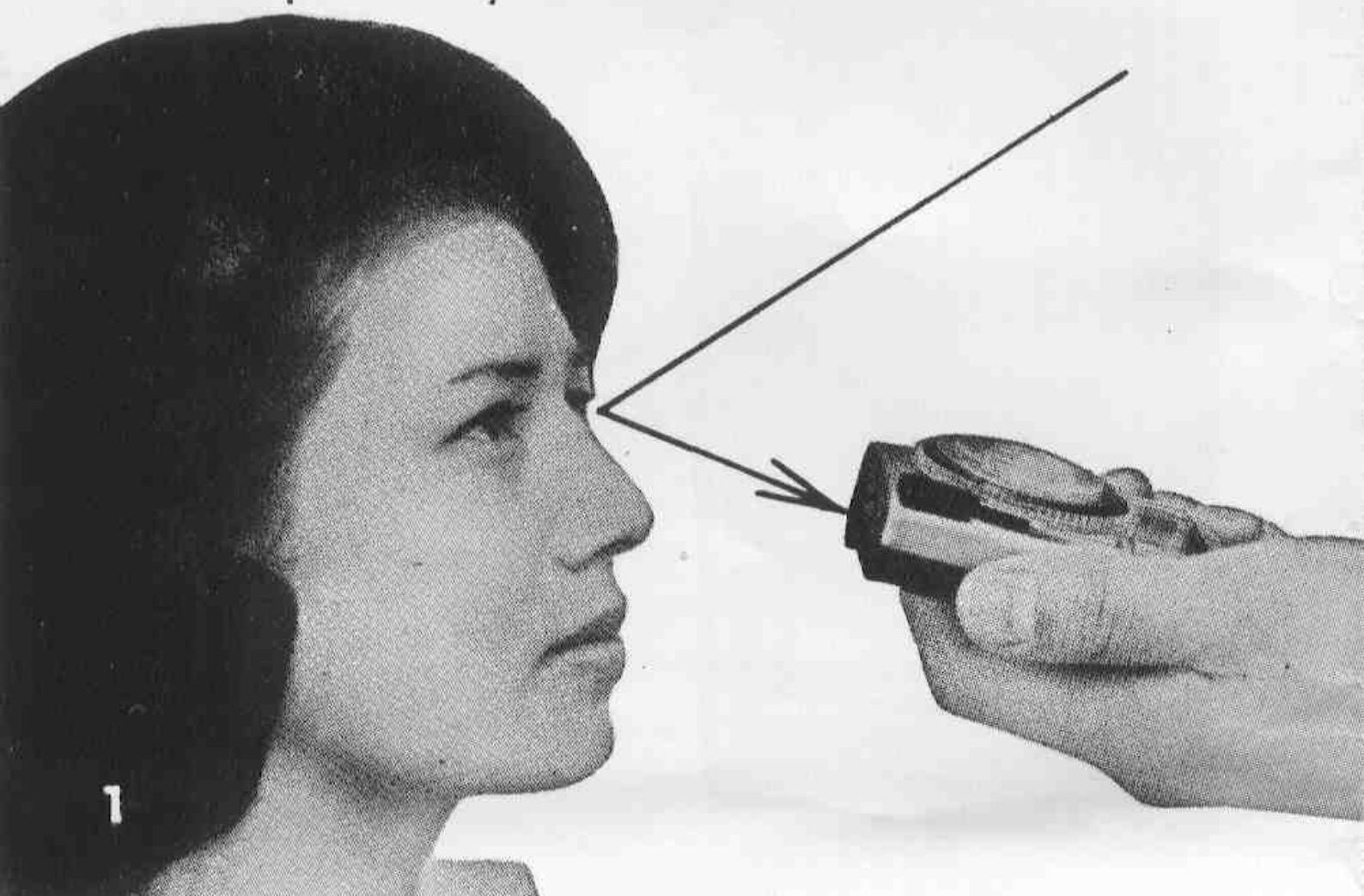
Mercury Battery Chamber

Zero corrector

Switch Button ('Push-button' Type)

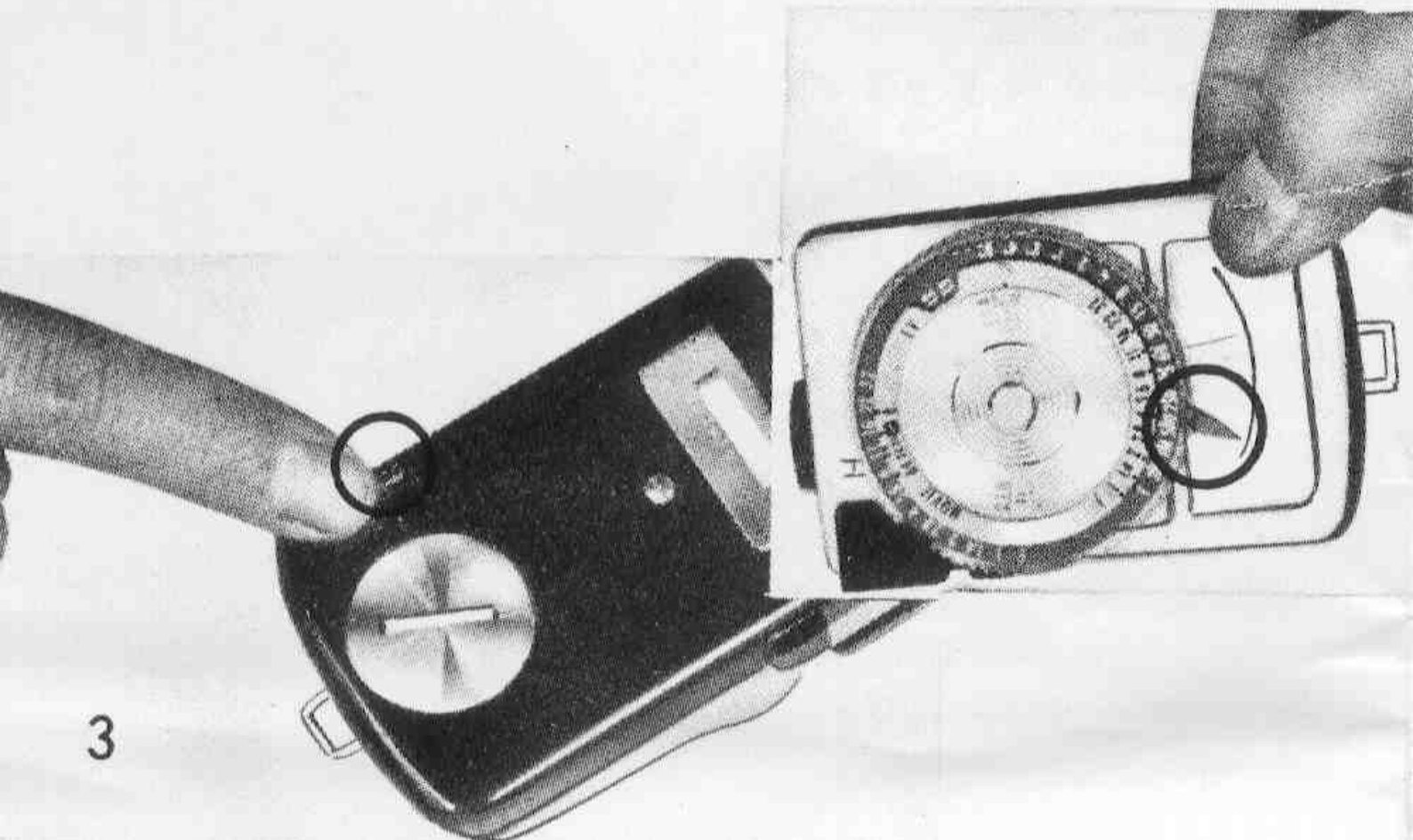
● Use the Reflected-Light-Type Meter Properly

The Sekonic L-98 is an exposure meter of the reflected-light type. The reflected type of exposure meter measures the light reflected from a subject and indicates the correct exposure. Do not use this meter in measuring the light incident on a subject. L-98 is the best of all the exposure meters now available on the market as it has been developed by the engineers of Sekonic Co., after many years of research. Model L-98, which uses cadmium sulfide (CdS), has an extremely wide range of measurement and indicates the correct exposure at any time and place. The meter, quite thin in thickness and light in weight, may be carried in your pocket. It can be manipulated by one hand.



Equip a Battery to the Meter

When using the meter for the first time, put a mercury battery in the Mercury Battery Chamber. Set the battery into position so that that side of the battery bearing the mark "M-D" comes in contact with the Battery Chamber Lid. When the battery is placed in the chamber, make sure that the lid is screwed tight. Depress the Battery Check Knob and see if the Pointer stops in line with the Battery Check Point. If the Pointer does not swing and stop at the check point, the Meter is not working properly and if this is the case, you must change the battery with a new one. The Mercury Battery of 1.35V is used with the meter.



●Features:

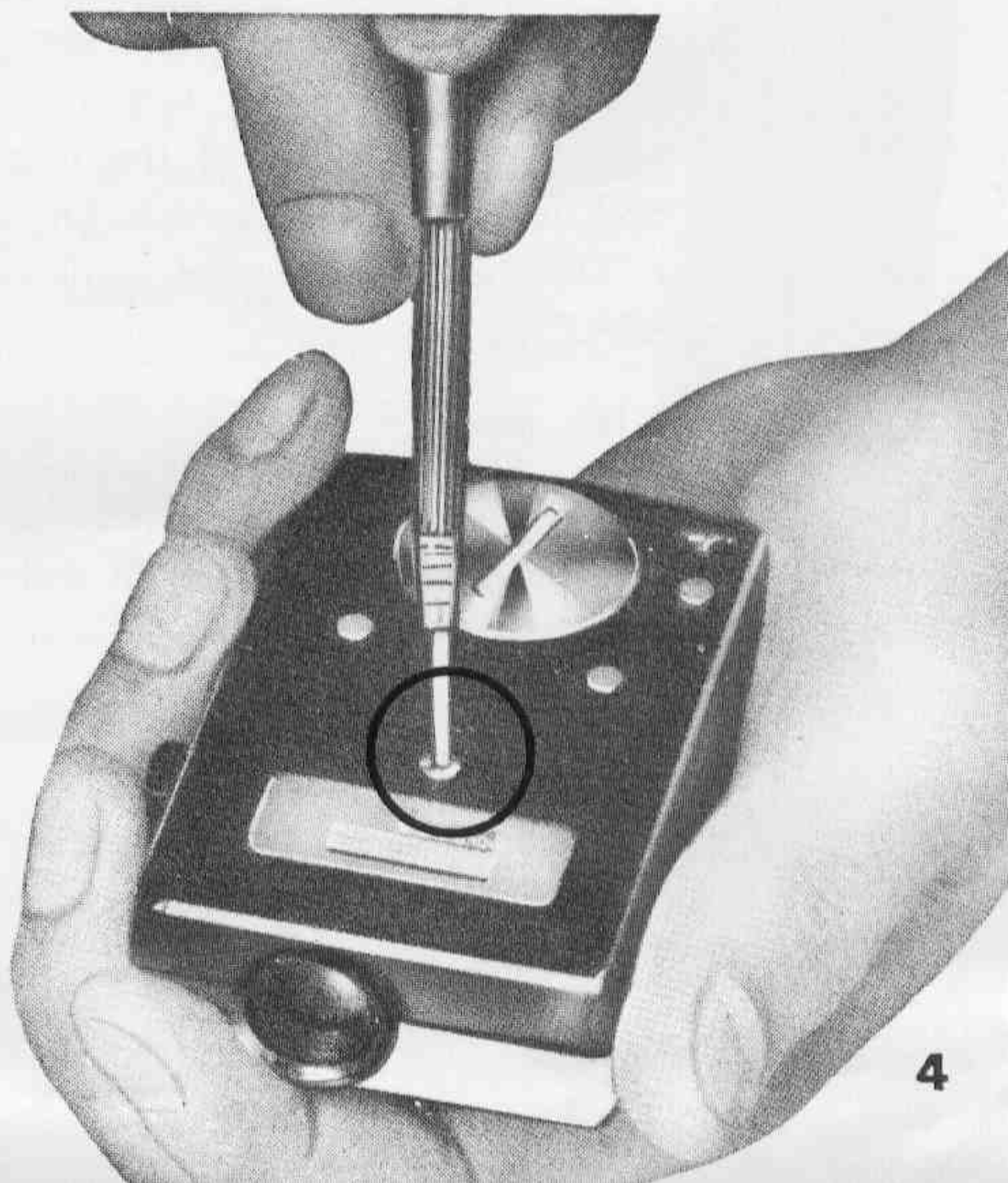
Highly sensitive cadmium sulfide (CdS)
Thin in thickness and light in weight
Reflected type High/Low switch lever
Measuring Range: LV 3~18 with ASA 100
Switch Button ('Push-button' Type)
Battery Checker

●Specifications

CdS (IMPR 63) - one piece
Mercury Battery 1.35V
Reflected Light type
High-and-Low level switch
(coupled to multi-filter)
Measuring Range (ASA 100) & light
receiving angle
High-level LV 10~18 40°
Low-level LV 3~11 60°
LV Scale: — 2~19
ASA Scale: 6~12,000
DIN Scale: 9~42
f/stops Scale: F/1~32
Shutter Speed Scale: 1/2000~8 seconds
Cine Scale:
(Aperture) F/1~32
(Film Speed) 8~64 f.p.s.
Measurements: 50.6×77.2×28.3 mm
Dial Diameter — 48.5 mm
Weight: 120 grams

●Align the Pointer with the Zero Point

After the battery has been placed in the chamber, check and see if the Pointer stops in line with the Zero Point when the Switch Button is not depressed. If the Pointer does not stop in line with the Zero Point although the Switch Button is not depressed, turn with a screwdriver the Zero corrector placed on upper back side of the Meter so that the Pointer comes in contact with the Zero Point.



● Use the Reflected Light-Type Meter Properly

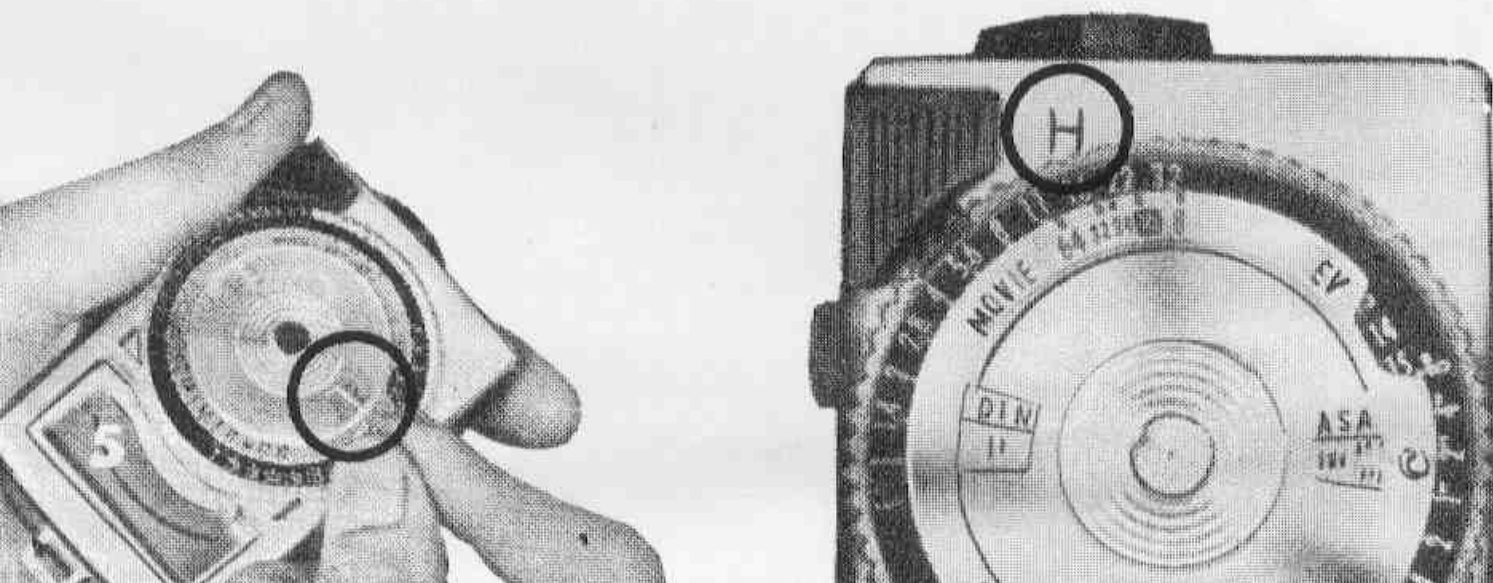
After the battery has been placed in the chamber, the battery checked and the Pointer brought in line with the Zero Point, L-98 is ready to measure the light and indicate the correct exposure with very seldom necessity for readjustment afterwards. The only remaining question lies in how you use the reflected light-type exposure meter as instructed.

Set the Proper Film Speed

Check the instructions sheet of your film and you will find the sensitivity figure of the film you are using. If the figure is, say, ASA 100, hold the High/Low Switch Lever tight and turn the ASA Switch Knob so that the ASA reading "100" appears in the small slit underneath the word "ASA."

Set the ASA° film speed

Turn the ASA film speed switch knob so that the ASA° reading of your film appears in the slit under the word "ASA°"



Turn out spool holder, and pull hinged spool carrier outward.

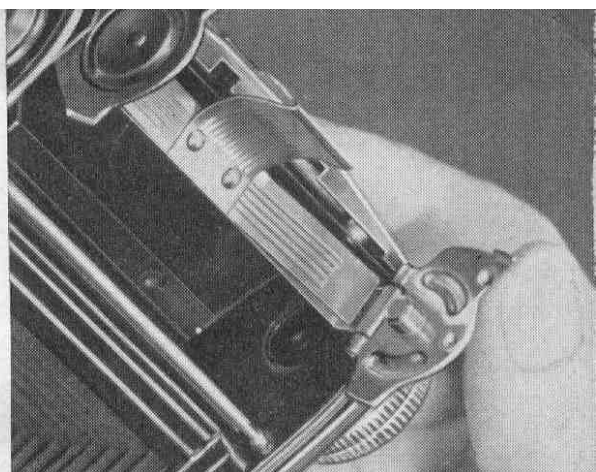
The empty spool should be in the opposite spool chamber. The film should be inserted in subdued light only.

Please note the number of your camera and of its lens (camera number on the outside of spool flange).

To insert film spool:

Slip one spool end over fixed carrier peg, return hinged carrier to engage second peg, return spool carrier to its initial position.

Attention—the position of the spool should be as shown in the illustration, the narrow end of the backing paper pointing towards the empty spool.



Point the Meter at the Subject

To measure the light, point the Meter toward the subject right from the camera position.

A. From the Camera Position «Landscapes»

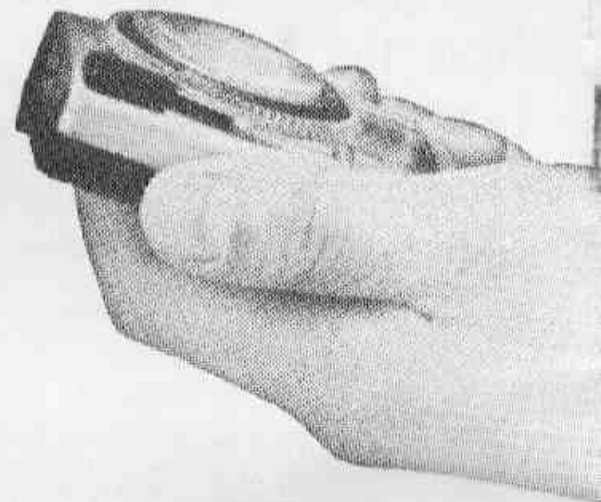
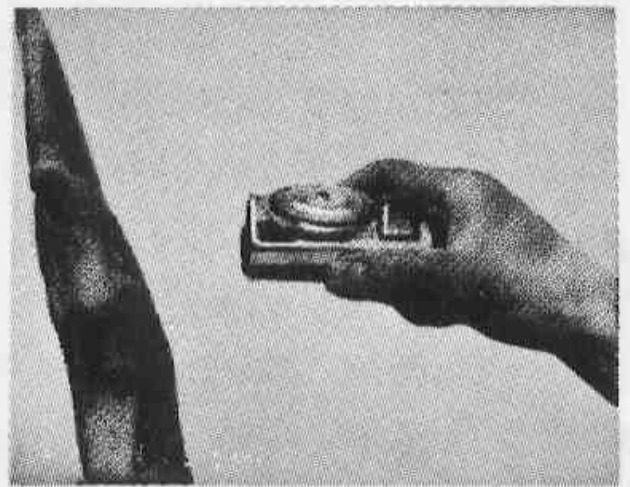
When you use this method, make sure that the Meter is tilted down so that it points midway between your feet and the part of the subject on which you desire to put special emphasis. Make sure that the sky has no part in the meter reading. Otherwise, your pictures will be under-exposed. When you take photographs of a vast landscape or mountains in the distance, reduce by half the reading which you have taken from the Meter.

Let us assume that one of the meter readings you have taken is, say, $1/250$ second at $f/22$, $1/250$ second multiplied by $1/2$ equals $1/500$ second. In other words, the correct exposure is $1/500$ second at $f/22$.



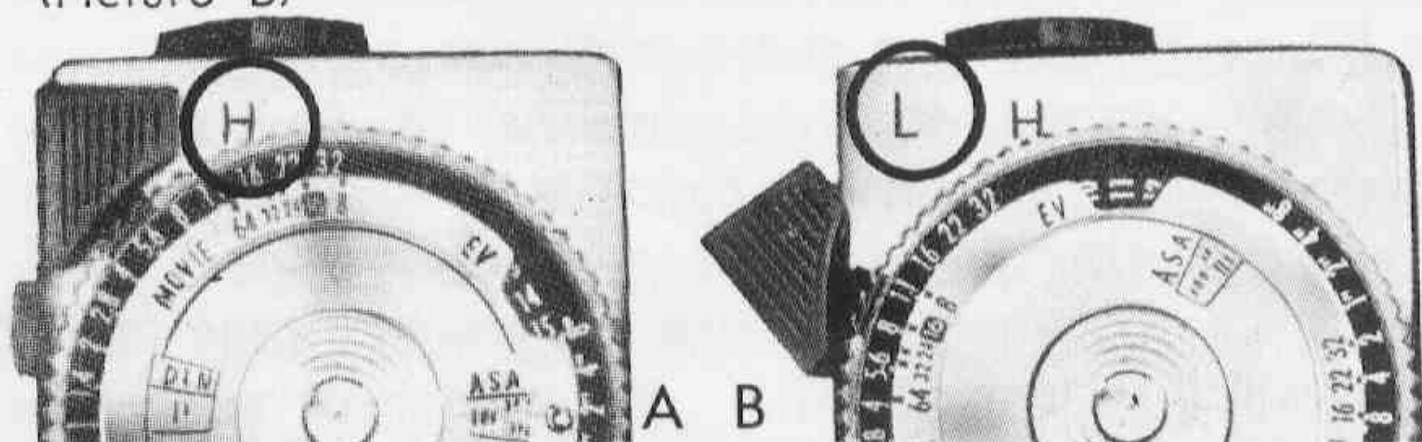
B. Measurement for Close-ups. «Portrait»

When this method is used, place the Meter about 10 centimeters (about 3 inches) from the subject for measurement. In portraiture, the most important part of the subject is the face. Place the meter as close to the face as possible to have the meter measure the light reflected from the face. When it is impossible to come near the subject, use your palm or a standard reflector in the light condition matched to the important part of the subject. In either case, make sure that your palm or the reflector must not be shadowed by the meter.



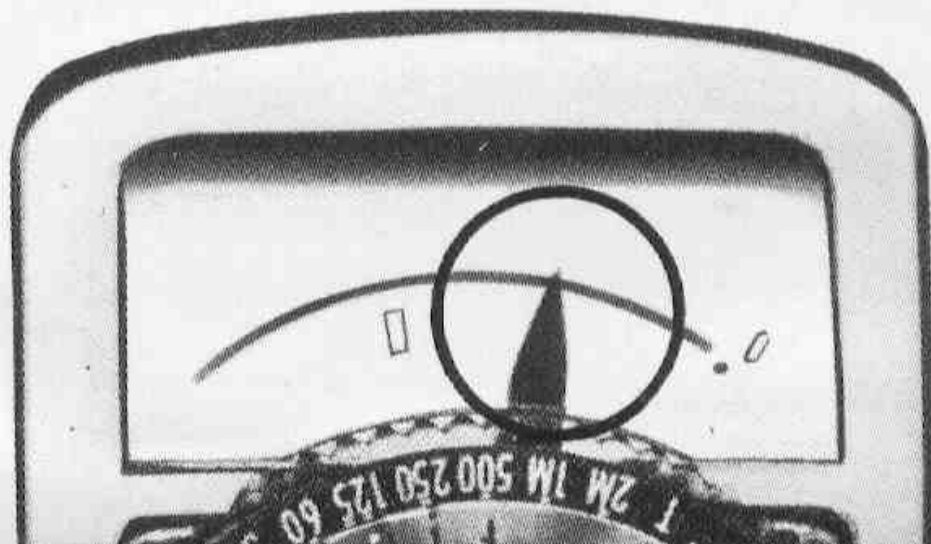
Depress the Switch Button

With the Meter pointed toward the subject in the manner mentioned earlier, depress the Switch Button. If the Pointer does not swing with the High/Low Switch Lever set for highlight measurement (Picture A), move the lever fully in the opposite direction for low light measurement and then depress the Switch Button again. (Picture B)



Turn the Guide Mark Dial to Align the Guide Mark with the Pointer

When the Switch Button is depressed, the Pointer swings and stops at a certain point within one second. Turn the Guide Mark Dial (outer dial) to align the Guide Mark (green-colored follow-pointer) with the Pointer.



When the Pointer and the Guide Mark are brought into line with each other, the scales of shutter speeds and lens apertures are now in their correct relation to each other to give a complete range of related shutter speeds and lens apertures, any one of which will give the correct exposure. If one of the correct combinations of shutter speeds and lens apertures is $1/30$ second at $f/5.6$, any intermediate combination, such as $1/250$ second at $f/2$ or $1/60$ second at $f/4$, may also be used.

In other words, whatever combination you choose depends upon the subject conditions and your photographing motive. For example, a rapidly moving subject needs a fast shutter speed and therefore a large aperture, which in turn covers a narrow zone of sharpness. A subject of great depth needs a small aperture and therefore a slow speed. Choice of best settings may need a compromise.

Set your camera according to a set of related shutter speed and lens aperture readings. If your camera is of the light-value system, then take a reading from the EV (LV) Scale.

1. Balancing for Tone Range

The following method is recommended when pictures are to be taken in the condition that there is a sharp contrast in the tone range of the subject.

Place the Meter about 10 centimeters (about 3 inches) from the subject to measure the light reflected from the highlight and shadow of the subject. Choose the intermediate value from both scale readings. When portraits are to be taken in this method, it is advisable to use auxiliary lights or reflectors so that the tone range will be of the order of 4:1 or less. (The tone range is the ratio of highlight to shadow brightness.) In color photography, make sure that the tone range is of the order of 4:1 or less.

2. Measurement in an Extremely Dark Place

In the extremely dark place where the light is so poor that the Pointer does not swing at all even if the High/Low Lever Switch is set for low light measurement, point the Meter toward the light source (for example, the moon). Whatever scale reading you may obtain must be multiplied by 10. If one of the correct combinations of shutter speeds and lens apertures is 1/15 second at f/1.4, 1/15 second must be multiplied by 10. The answer for the correct exposure is about one second at f/1.4.

3. When the Camera Is Against the Light...

A. To make Silhouettes

Point the Meter toward the sky or the white background. Take photographs exactly as the Meter indicates. Since the exposure is set for the bright background, the subject is under-exposed and shown as a black shape on the white background.

B. To Delineate the Subject in Rear Lighting

To measure the light, place the Meter near the shadow of the subject. In this case, make sure that the light coming from the back of the subject has no part in the meter reading.

C. To Delineate the Subject and Background In Rear Lighting

Measure the light reflected from the shadow of the subject first and then measure the light reflected from the bright background. For the measurement of the background, refer to the method taken from the camera position on Page 6. Then choose the intermediate value from both readings. This method, however, does not fit for use when the ratio of subject to background is of the order of 1:16 or more.



4. When a Filter Is Used ...

The Sekonic Meter L-98 is not provided with a scale of filter factors. The aperture value obtained from the meter must be increased according to the factor of the filter you are using on your camera. Example: If your filter has a factor of 2X and one of the combinations of lens apertures and shutter speeds is the order of 1/250 second at f/8, the correct exposure will, therefore, be of the order of 1/125 second at f/8.

5. Extreme Close-ups

The true lens aperture value for a close-up is given by the equation:

$$T = \frac{M \times D}{F}$$

where T-True aperture value F - Focal length of lens

D-Distance between lens and film surface

Example: When the focal length of the lens is 50 millimeters, the distance between the lens and the film surface is 100 millimeters and one of the correct combinations of apertures and shutter speeds is the order of 1/4 second at f/4, the true aperture value is:

$$\frac{4 \times 100}{50} = 8$$

This means that even if the lens is stopped at f/4, the aperture in this instance is the same as for f/8. Therefore the aperture must be increased by four times. The correct exposure is the order of 4 seconds at f/8 or one second at f/4.

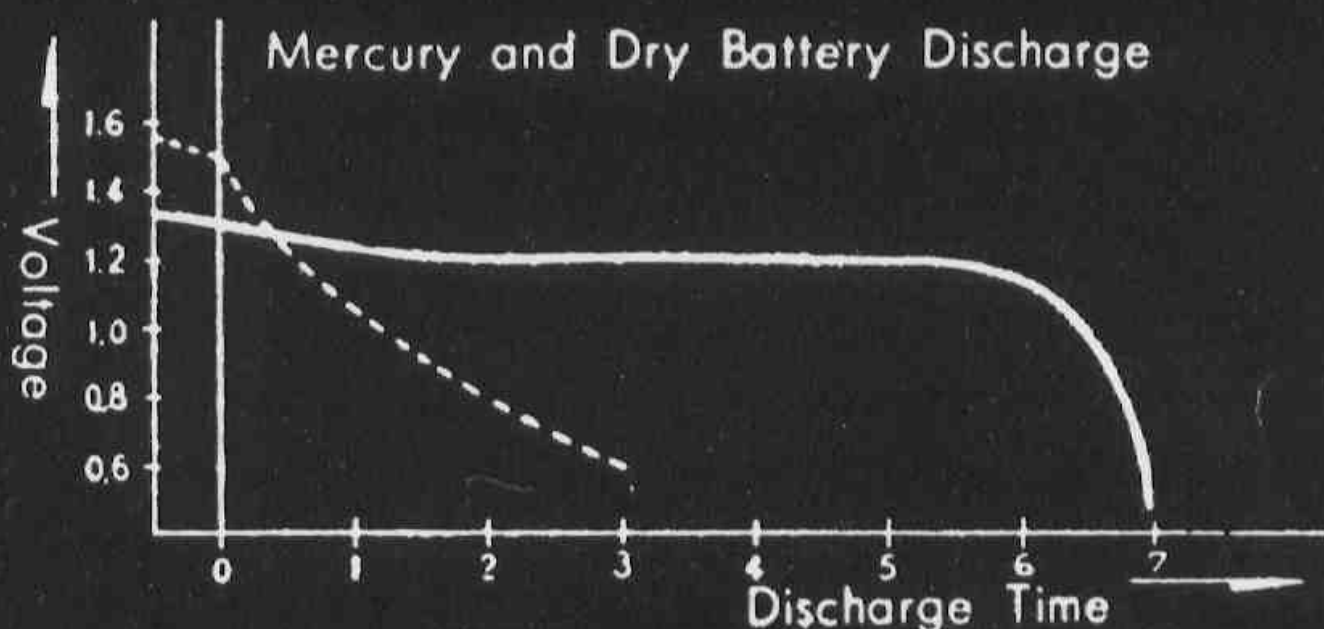
● Cine Photography

As far as the measurement is concerned, there is no difference between cine cameras and still cameras. In contrast to the 35mm still camera, the cine camera has a shutter speed scale calibrated in frames per second, such as 8, 16, 32 and 64 f.p.s. Take a film speed reading from the "Movie" scale provided on the inner dial of the Meter.

In ordinary 8mm cine photography, the standard film speed is 16 f.p.s. (1/30 second). A scale of related film speeds and lens apertures may be easily computed according to the formula that the film speed of 16 f.p.s. corresponds to the shutter speed of 1/30 second.



● To Safeguard the Meter



1. Do not leave the meter in a humid place for a long time.
2. Do not place the meter in a place with a temperature of more than 60°
3. Do not drop or jar the meter.
4. The meter, when not in use for a long time, must be taken out of the leather case and kept with a damp-proofing agent in a paulownia or other box. Do not keep it in a safe or any other metallic container.
5. Also, the same method as above 4 must be applied to safeguard the mercury battery.

● GUARANTEE

Your Sekonic Micro-Leader Exposure Meter is guaranteed against faulty workmanship and materials for a period of one year from the date of sale. It should be handled with the care which fine, precision mechanism deserves.

Should it become inoperative within the guarantee period, return it for repair. Re-pack it in its original container, packing with at least an inch of cushioning to prevent further damage. If original container has been disposed of, use a sturdy corrugated cardboard box. Address it to any Sekonic Service Department listed below whichever convenient with you to send.

Sole Export Agent:

COPAL COMANY LIMITED

Shimura 2-16-20, Itabashi-ku, Tokyo, Japan

Telephone: Tokyo 965-1111 Telex: J24521 COPALSUN

COPAL CORPORATION OF AMERICA

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COPAL (HONG KONG) LIMITED

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Kowloon, Hong Kong

Telephone: K-676225 Telex: 84048 COPAL HX

Manufacturer:

SEKONIC CO., LTD.

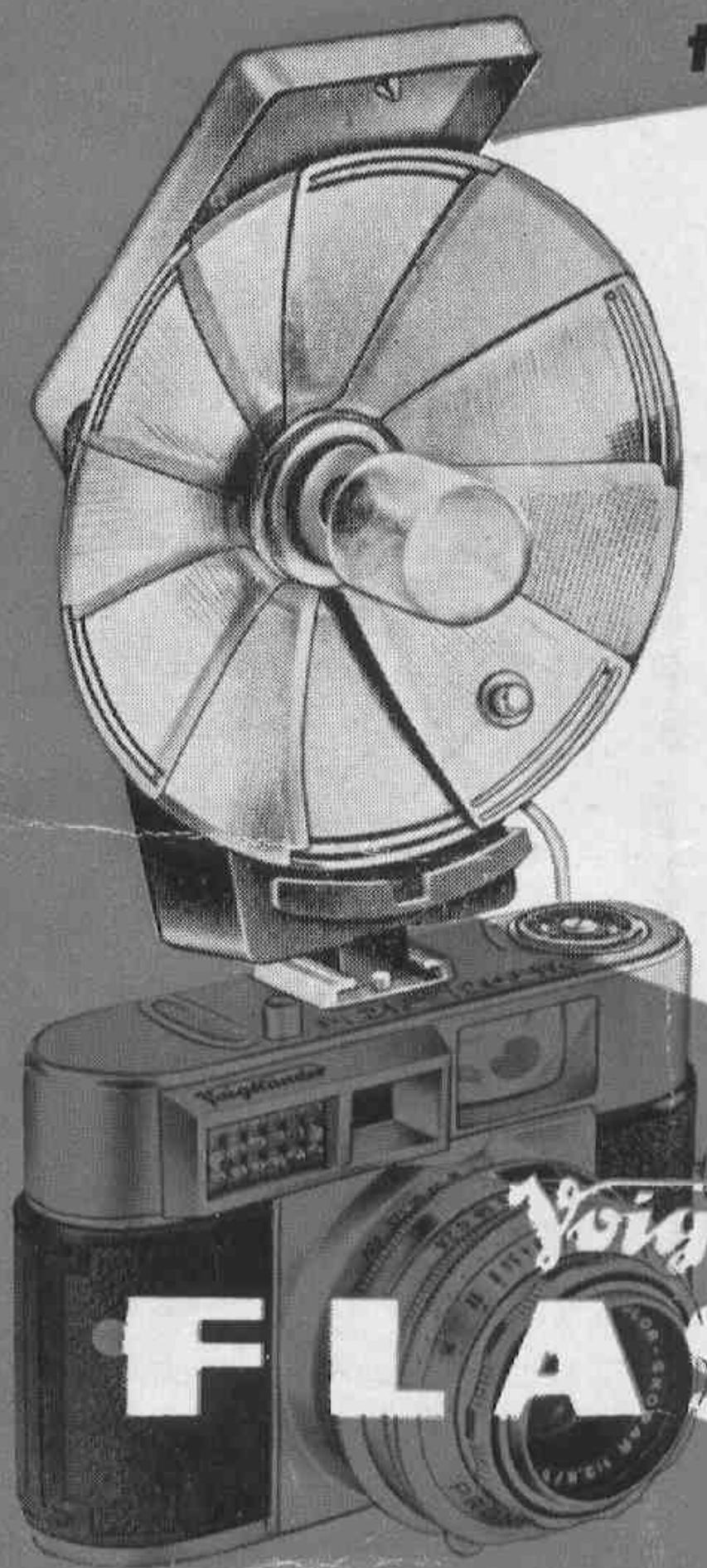
558, Oizumigakuen-cho, Nerima-ku, Tokyo, Japan



Printed in JAPAN

77 113000 M

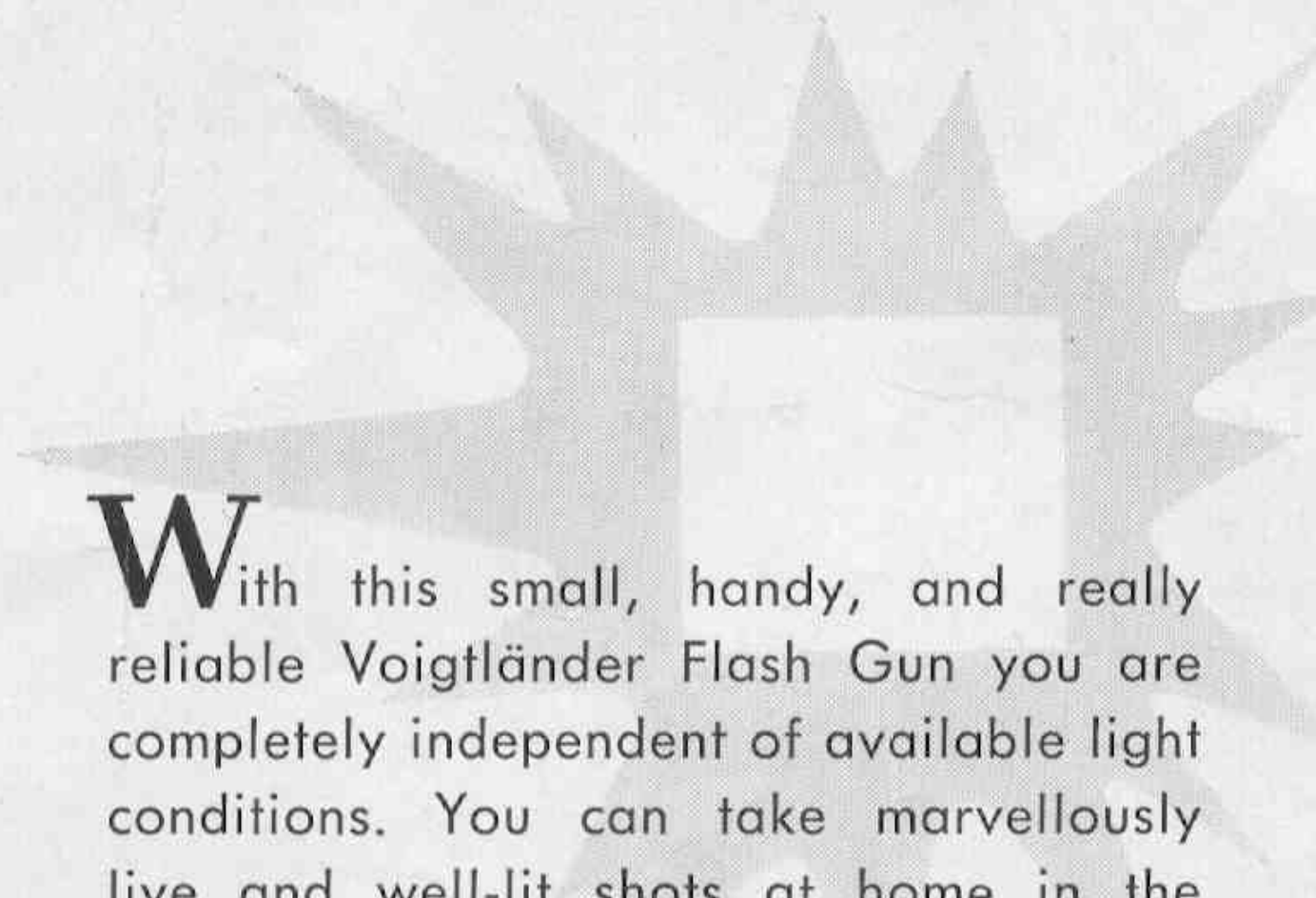
Always ready with
the



Voigtländer

FLASH





With this small, handy, and really reliable Voigtländer Flash Gun you are completely independent of available light conditions. You can take marvellously live and well-lit shots at home in the evening or at parties – you can equally add brilliant sunshine effects to outdoor portraits on dull days – you can light up deep shadows when shooting against the sun – and you can use the fastest shutter speeds

So the small

Voigtländer «FLASH GUN»

not only extends your scope, but also brings better detail into your pictures – and above all is really easy to use.

Voigtländer
FLASH



1

4

2

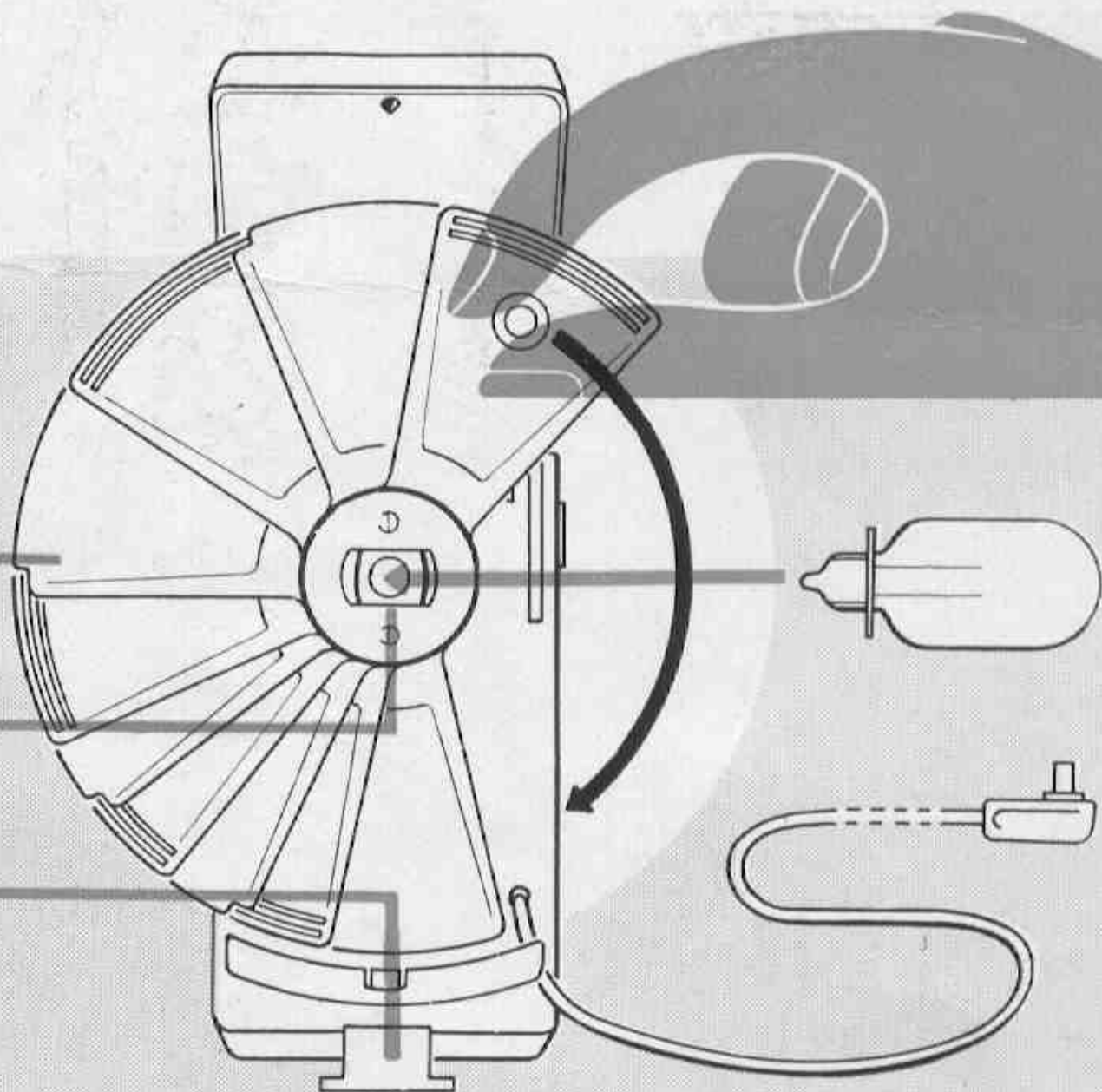
5

3

6

Opening the reflector: Swing up the front cover (1), unroll the cable (2), and rotate the reflector blades round by the handle (3) to open up fan-wise (4). To close the reflector after shooting proceed in the reverse order, then wind the cable round the holder.

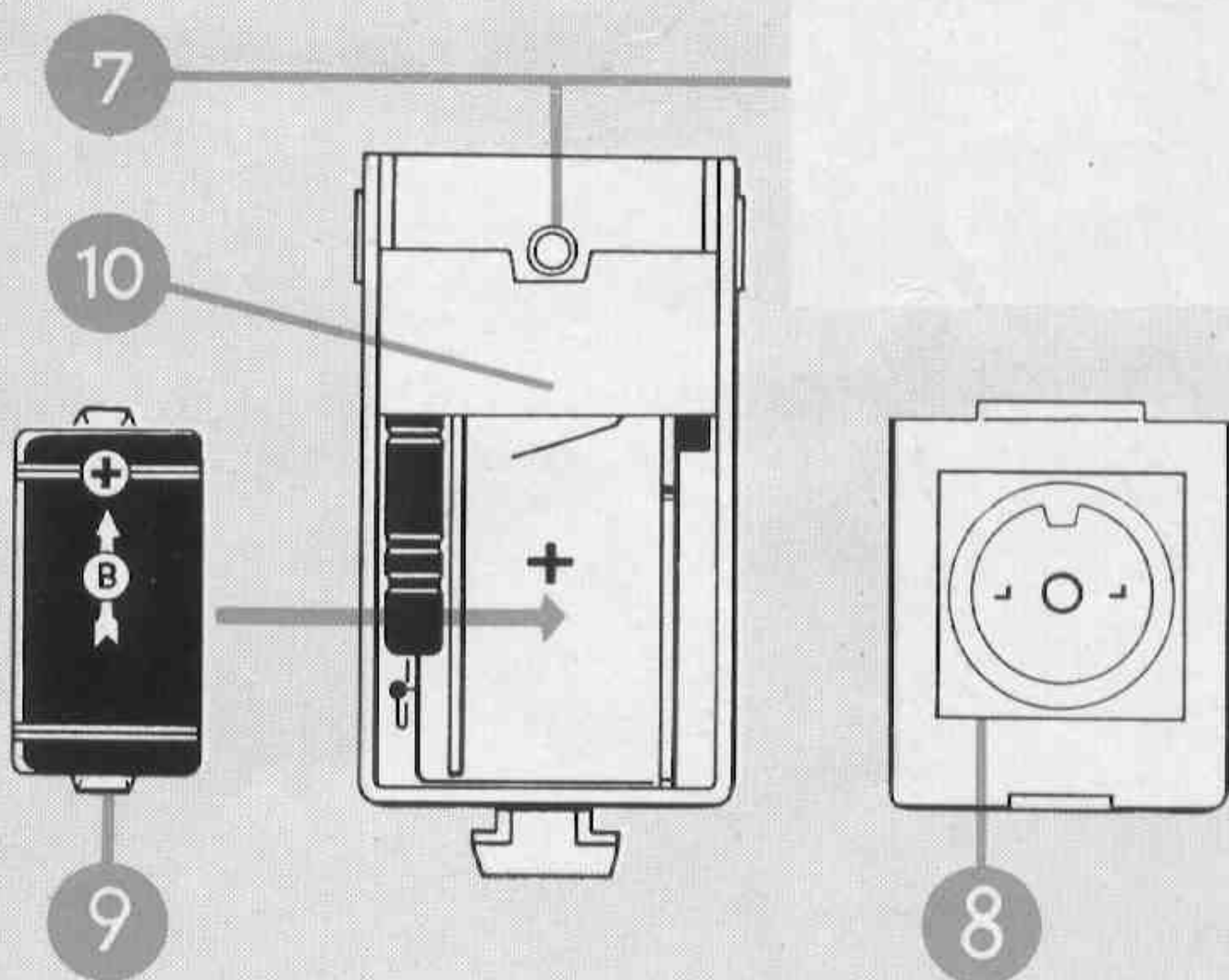
Mounting on the camera: Push the foot (6) into the accessory shoe of the camera and plug the flash cable into the flash socket on the camera shutter.



Inserting (and ejecting) the flash bulb: The flash gun is available in two models: for capless bulbs, and for bulbs with S.C.C. (BA 15 s) or miniature pinless (American type M 2 and M 5) metal caps.

Push the fresh bulb into the socket (5) until it engages. After firing eject the spent bulb by pressing the button (7).

Inserting the battery: Swing up the rear cover (8) and lift off. Place the battery (9) under the top contact strip (10) so that the positive terminal is **on top**. Hook in the cover at the top and press at the bottom until it clicks into place.



The Electric Circuit

of the Voigtländer Flash Gun uses the reliable battery-capacitor system which ensures certain synchronization of the camera and the flash bulb.

The current supply is a standard 22.5 volt miniature anode battery, available all over the world, with an average life of about one year. The charging time of the electrolytic capacitor is one to four seconds, according to the age of the battery. Note: correct orientation of the battery is important – inserting it the wrong way round ruins the capacitor!

The Aperture Dial

on the back of the Voigtländer Flash Gun shows you quickly the correct aperture setting for all shots and at any distance.

The outer ring of the aperture dial carries subject distances in feet (red figures) and in metres (black figures). The rotating centre disc carries the aperture numbers. As you turn the centre disc, the window at the top shows white figures on a black background; these are the guide numbers for the most common types of flash bulbs. You will find the guide number for your particular flash on the packing of the bulbs.

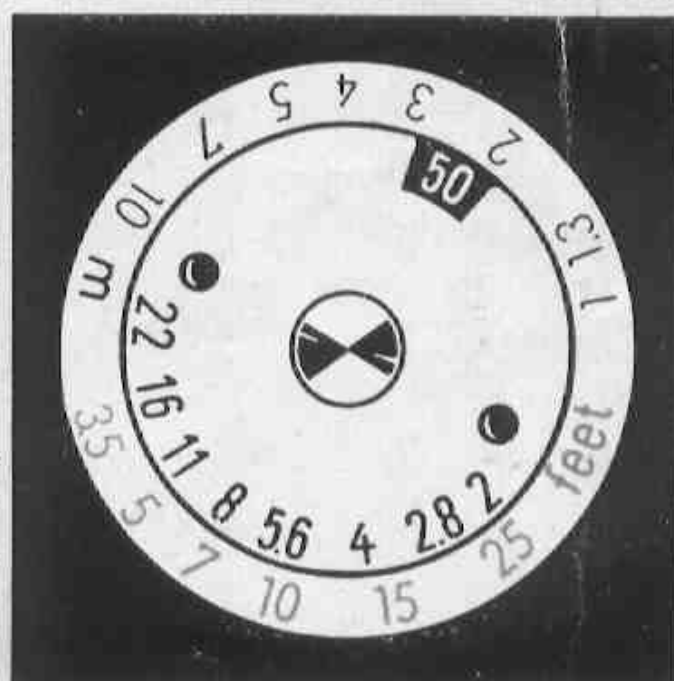
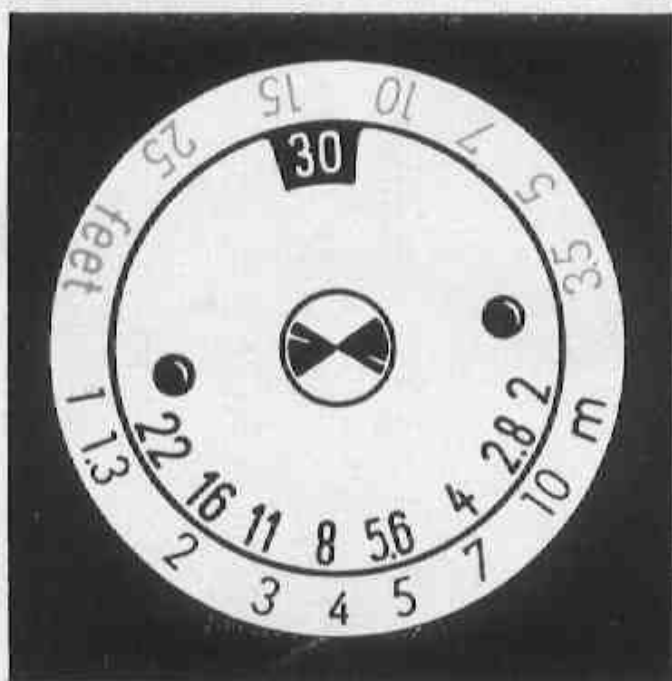
Setting and reading off the aperture dial: Move the aperture figures opposite the distance scale with which you are working (feet or metres). Turn the centre disc until the guide number of the flash bulb appears in the window on top. Then read off the required aperture figure opposite the distance corresponding to your flash-to-subject distance. Set that aperture on the camera.

Right-hand example: guide No. 50

Aperture f/	16	11	8	5.6	4—2.8	2
Distance	3½	5	7	10	15	25 feet

Left-hand example: metric guide No. 30

Aperture f/	22	16	11—8	8—5.6	5.6	4
Distance	1.3	2	3	4	5	7 metres





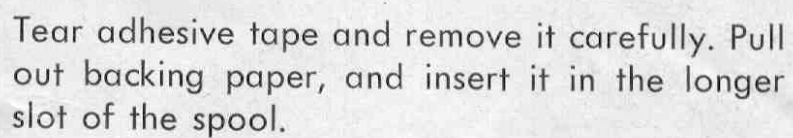
Order
No.

- For capless Flash bulbs .. 92/043
- For bulbs with S.C.C.
(BA 15s) and miniature
pinless cap 92/053
- Plastic case with zip
fastener 90/139



400 09 — 53 B/1160 ACO

Subject to modification
Printed in Germany



Adjust the backing paper along the camera edges carefully, and tighten with a few turns of the film winder in the direction of the arrow. Make sure that it is wound straight between the spool flanges, thus giving protection from stray light.

voigtländer

VF 101



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Film einlegen
nicht in direktem Sonnenlicht!

Rückwandriegel hochklappen, Fig. 1.
Rückwandriegel um 90° verdrehen, Fig. 2
(nach jeder Seite möglich).
Rückwand abziehen, Fig. 3.

Load the camera
not in direct sunlight!

Flip up locking lever of camera back, fig. 1.
Turn locking lever 90°, fig. 2
(to either side).
Remove camera back, fig. 3.

Charger l'appareil
protéger le film du rayonnement solaire!

Relever le verrou de la paroi dorsale, fig. 1.
Faire pivoter le verrou de la paroi dorsale de
90°, fig. 2
(possible dans les deux sens).
Retirer la paroi dorsale, fig. 3.

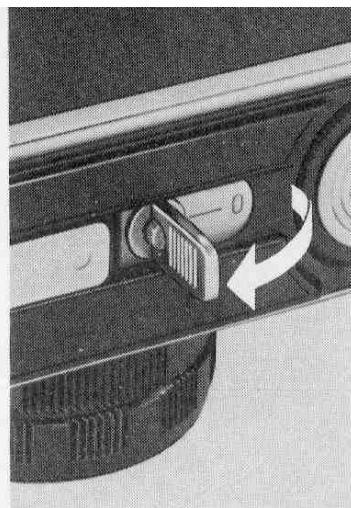


Fig. 1

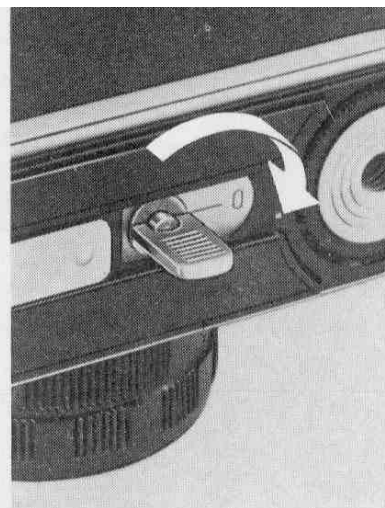


Fig. 2

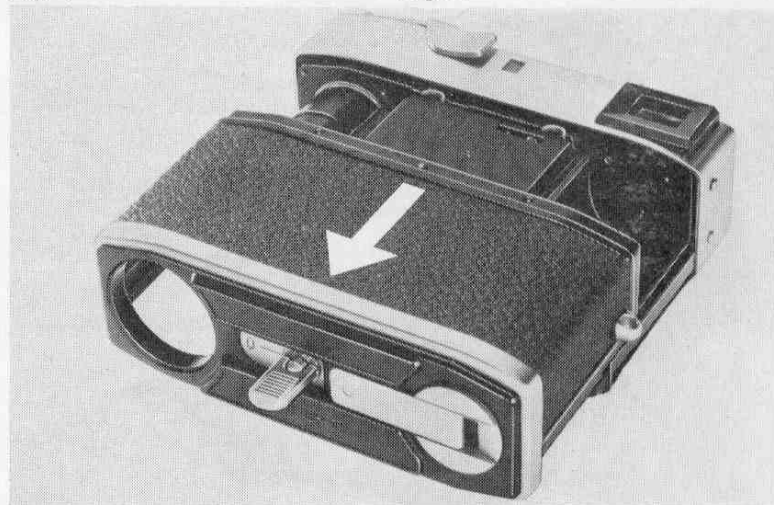


Fig. 3

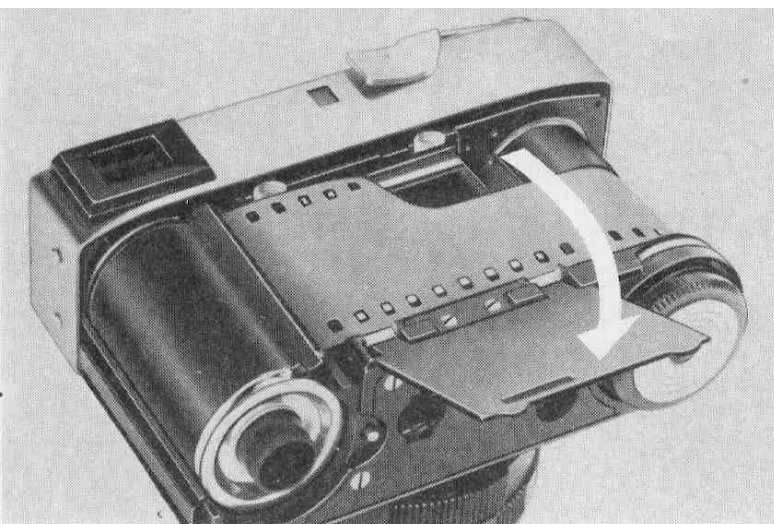


Fig. 4

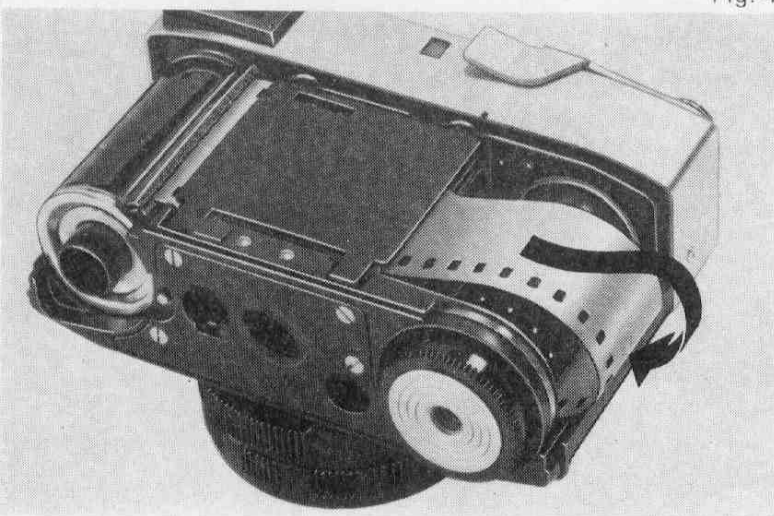


Fig. 5

Filmandruckplatte aufklappen, Filmpatrone einlegen.

Filmanfang so weit herausziehen, bis obere Perforation in die Zähne des roten Rädchens eingreift, Fig. 4.

Filmanfang tief genug (etwa 3 cm) zwischen Gehäuse und Aufwickeltrommel schieben. Filmandruckplatte zuklappen, Fig. 5.

Flip up film pressure plate, insert film cartridge.

Pull out sufficient leader so that the upper perforations engage in the sprockets of the red wheel, fig. 4.

Push approximately 1 inch of film leader between camera housing and take-up drum. Flip down film pressure plate, fig. 5.

Soulever la plaquette de pression du film, mettre la cartouche de pellicule en place.

Tirer l'amorce du film jusqu'à ce que la perforation supérieur de la pellicule s'engrène sur les dents de la couronne rouge, fig. 4.

Insérer l'amorce du film sur une longueur suffisante (3 cm environ) entre le boîtier et le tambour récepteur. Rabattre la plaquette de pression, fig. 5.

Schnellspannhebel schwenken, bis der Film von der Aufwickelspule mitgenommen wird und straff liegt.

Rückwand auflegen, bis zum Anschlag hochschieben und verriegeln, Fig. 6.

Rotate rapid advance lever until film is advanced by take-up drum and is tightly stretched.
Replace camera back, push it upward as far as possible and lock, fig. 6.

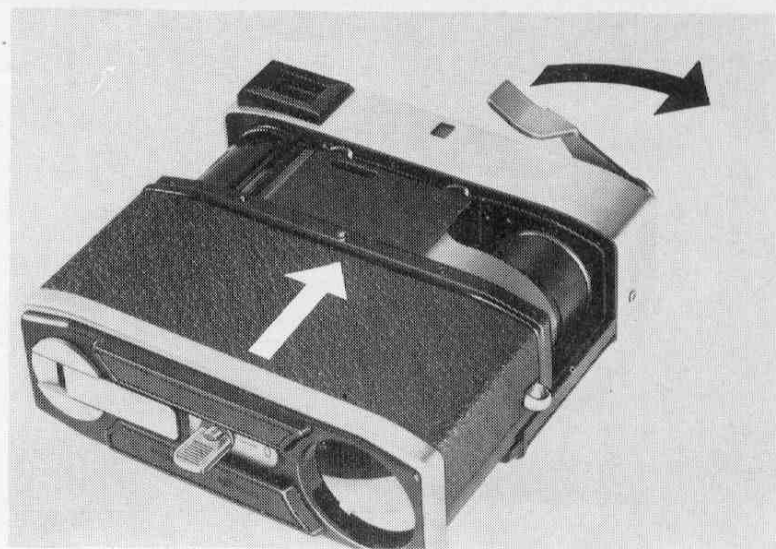


Fig. 6

Actionner le levier d'armement rapide jusqu'au moment où le film est entraîné par la bobine réceptrice et qu'il est soumis à tension.

Remettre la paroi dorsale en place, la faire coulisser jusqu'à butée et la verrouiller en position de fermeture, fig. 6.

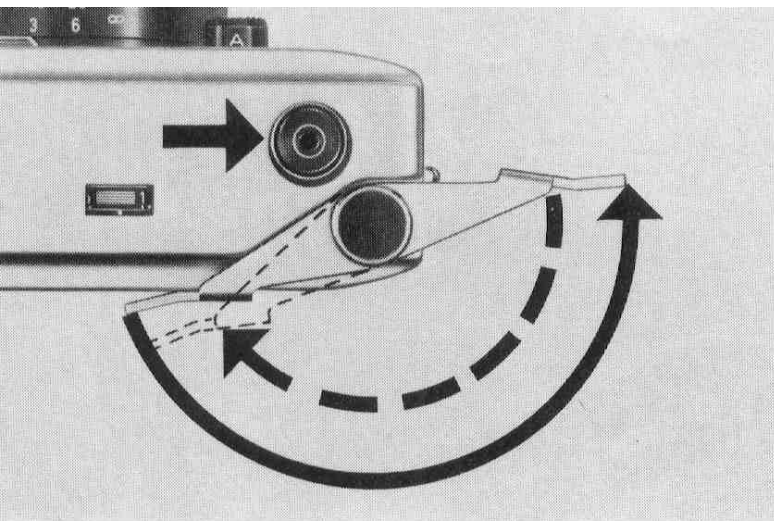


Fig. 7

Abwechselnd transportieren und auslösen, bis im Zählwerk die Zahl „1“ über der Markierung steht, Fig. 7.

Bereitschaftslage: Schnellspannhebel bleibt nach dem Rücklauf griffgerecht stehen. Zum Schließen des Tragbeutels Schnellspannhebel in Ruhelage drücken.

Release shutter and advance film as many times as necessary to bring number "1" in the frame counter over the index mark, fig. 7.

Ready position: The rapid advance lever stays in the ready position after film has been advanced to "1". Before closing the carrying case, push the rapid advance lever in the "rest" position (flush against camera body).

Actionner alternativement le levier d'armement et le déclencheur jusqu'au moment où le chiffre «1» s'inscrit au compteur en regard du repère, fig. 7.

Position **prêt à déclencher:** en revenant en arrière, le levier reste dans une position légèrement écartée, ce qui permet de le manier aisément. Pour fermer le sac contenant l'appareil, presser le levier en position de repos.

Filmempfindlichkeit einstellen

Wert ist auf der Filmpackung in DIN oder ASA angegeben.

DIN 15 . 17 . 19 . 21 . 23 . 25 . 27
(16) (18) (20) (22) (24) (26)

ASA 25 . 40 . 64 . 100 . 160 . 250 . 400
(32) (50) (80) (125) (200) (320)

Die Punkte auf der Kameraskala entsprechen den in Klammern gesetzten DIN- bzw. ASA-Werten.

Set film speed

as indicated in DIN and ASA on the film box.

DIN 15 . 17 . 19 . 21 . 23 . 25 . 27
(16) (18) (20) (22) (24) (26)

ASA 25 . 40 . 64 . 100 . 160 . 250 . 400
(32) (50) (80) (125) (200) (320)

Dots on camera scale correspond to DIN or ASA figures in brackets.

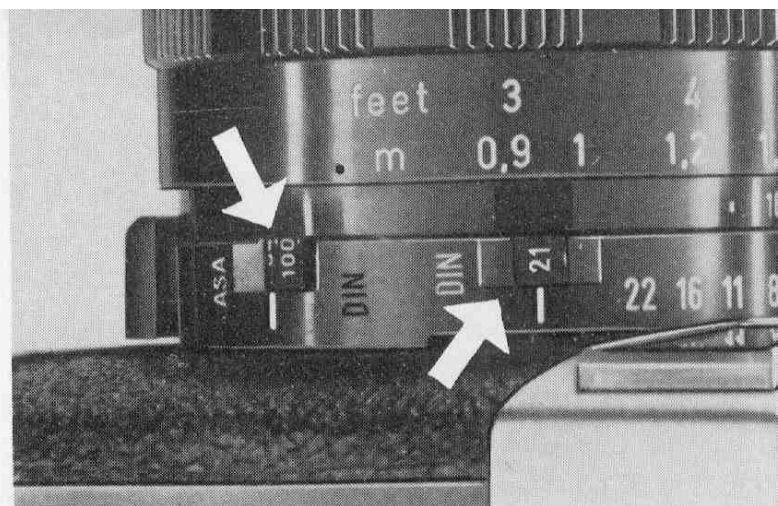


Fig. 8

Réglage de sensibilité du film

Cet indice figure sur l'emballage du film; indiqué en valeurs DIN ou ASA.

DIN 15 . 17 . 19 . 21 . 23 . 25 . 27
(16) (18) (20) (22) (24) (26)

ASA 25 . 40 . 64 . 100 . 160 . 250 . 400
(32) (50) (80) (125) (200) (320)

Les points sur l'échelle de l'appareil correspondent aux valeurs DIN ou ASA entre parenthèses.

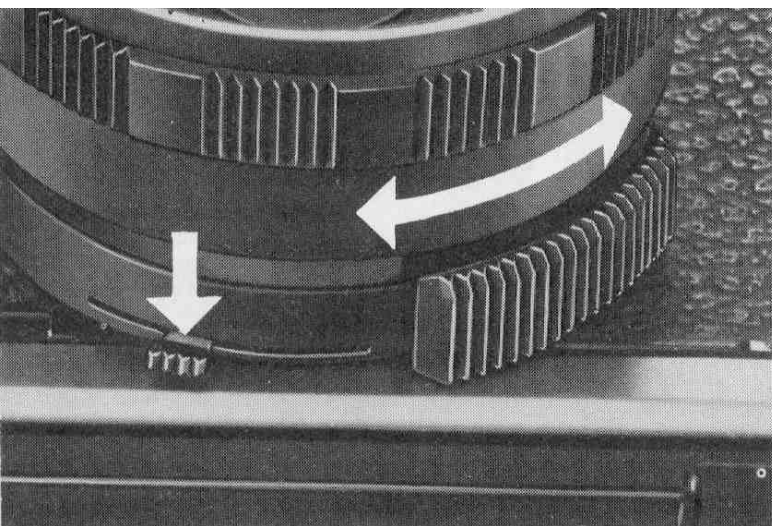


Fig. 9

Gegenlichtblende herausziehen
→ Fig. 13, Seite 10.

Einstellhebel tief eindrücken und Blendenring verdrehen, bis Filmempfindlichkeit im DIN- bzw. ASA-Fenster sichtbar ist (DIN-Werte in weiß, ASA-Werte in grün). Einstellhebel einrasten lassen, Fig. 9.

Pull out the lens hood → fig. 13, page 10.

Depress setting lever and turn the diaphragm ring until film speed is visible in the DIN or ASA window (ASA values in green, DIN values in white). Release setting lever and engage, fig. 9.

Tirer le parasoleil → fig. 13, page 10.

Enfoncer le levier de réglage et tourner la bague des diaphragmes jusqu'au moment où le sensibilité de la pellicule s'inscrit dans le voyant ASA ou DIN (valeurs ASA en vert, valeurs DIN en blanc).

Relâcher le levier de réglage à la position d'encliquetage, fig. 9.

Belichtungselektronik

Die Belichtungszeit wird von der Kamera zur vorgewählten Blende selbsttätig gebildet und ist abhängig von den Lichtverhältnissen und der eingestellten Filmempfindlichkeit.

Die Belichtungselektronik arbeitet nur, wenn „A“ (Automatic) auf Umschaltknopf von oben lesbar ist (auf Anschlag achten, Fig. 10), und die Batterien richtig eingelegt sind (Seite 19). Ohne Batterien liefert der Verschuß immer die kürzeste Zeit; Belichtung in diesem Fall mit geschätzter Blende regeln.

Electronic exposure

The camera automatically chooses the correct shutter speed for the pre-selected diaphragm opening. The shutter speed is dependent on the lighting conditions and the film speed set on the camera.

The electronic exposure works only when "A" (Automatic) on setting knob is visible from above (watch stop position, fig. 10), and batteries are properly inserted (page 19). Without batteries, the shutter is always set for the shortest shutter speed, in this case exposure may be controlled with a guessed aperture.

Dispositif électronique d'exposition

Le temps de exposition est formé automatiquement par l'appareil en fonction du diaphragme présélectionné. Ce temps est lui-même fonction des conditions d'éclairage et de la sensibilité de la pellicule pré réglée.

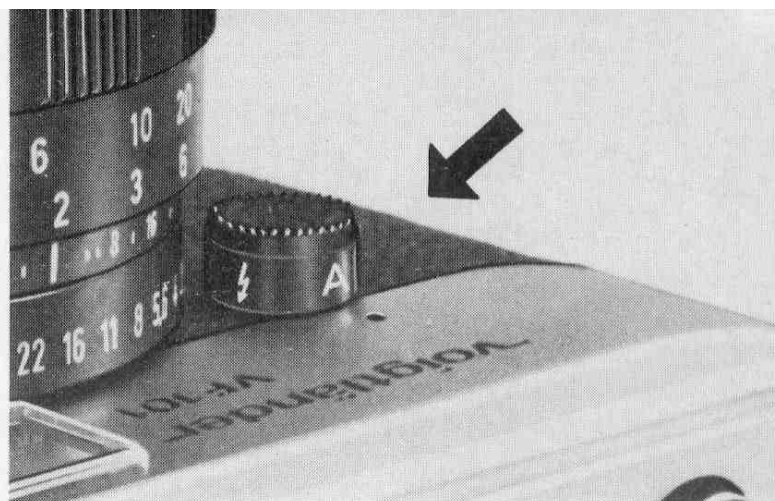


Fig. 10

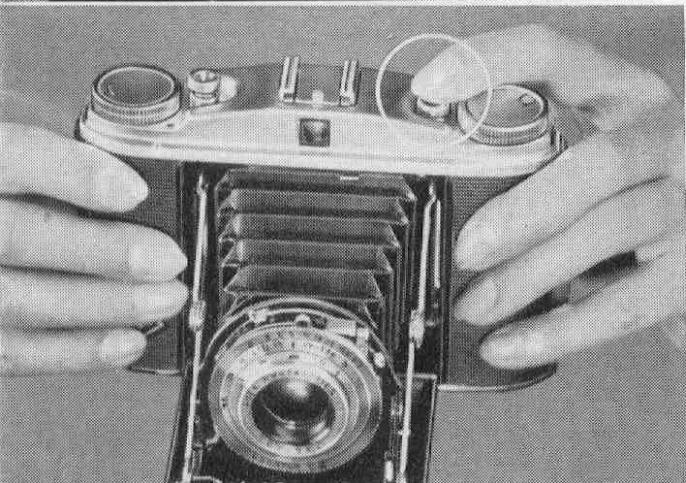
Le dispositif électronique fonctionne uniquement lorsque «A» (Automatic) est lisible d'en haut sur le bouton de commutation (tourné à fond, fig. 10), et que les piles sont correctement disposées (page 19). En l'absence de piles, l'obturateur fonctionne systématiquement au temps le plus court; dans ce cas, régler l'exposition avec une ouverture approximative.



To close camera back:

Press firmly on back with both hands, until you hear the lock engage.

On turning the film-winder, the warning marks (dots, hands, or arrows) will appear in the window. Stop at Number "1", when the film is ready for the first exposure.



To open the camera:

Pressure on the release button causes the lens carrier to slide forward, and the camera is ready for action. If necessary, assist the base-board to snap into position.

The advantage of the spring-brace design of the Isolette consists in its instant readiness for action, as well as in the particular rigidity of the lens carrier.

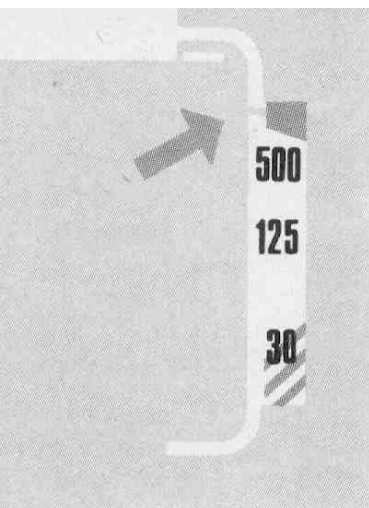


Fig. 11

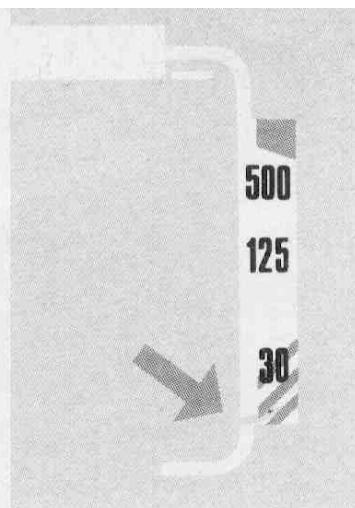


Fig. 12

Anzeige der Belichtungszeit

(speziell auf diese Kamera abgestimmt, nicht übertragbar).

Zeiger im oberen roten Warnfeld, Fig. 11:

Überbelichtungsgefahr!

Zeiger im unteren roten Warnfeld, Fig. 12:

Verwacklungsgefahr!

Bei Zeigerstand im oberen oder unteren Warnfeld:

Blendenring so verdrehen, daß der Zeiger das Warnfeld verläßt.

Bleibt der Zeiger auch mit Blende 2,8 im unteren Warnfeld stehen (schwaches Aufnahme-licht und/oder niedrigempfindlicher Film), dann liegt die Belichtungszeit zwischen $\frac{1}{30}$ sec und 4 sec:

Stativ oder feste Unterlage und Drahtauslöser verwenden! Zur Schonung der Batterien schaltet die Kamera nach ca. 40 sec ab.

Bleibt der Zeiger auch mit Blende 22 im oberen Warnfeld stehen (extreme Helligkeit und/oder höchstempfindlicher Film), dann ist der Automatikbereich überschritten:

Graufilter einschrauben oder niedrigerempfindlichen Film verwenden.

Zeitvorwahl für Sportaufnahmen → Tip ④.

Shutter speed indication

(specially computed for this camera, not to be transferred to other cameras).

Indicator in upper red warning are, fig. 11:

Danger of overexposure!

Indicator in lower red warning area, fig. 12:

Danger of movement blur!

With indicator in the upper or lower warning area:

Rotate diaphragm ring so that indicator is leaving the warning area.

If the indicator remains in the lower area even with f/2.8 (very poor light and/or slow film), the exposure time will be between $\frac{1}{30}$ sec and 4 sec: use cable release and tripod or solid support! To save battery power, the shutter closes after approx. 40 seconds.

If the indicator remains in the upper area even with f/22 (extreme brightness and/or high-speed film), then the automatic range is exceeded: insert a neutral density filter or load a slower film.

Pre-selection of shutter speed → hint ④.

Affichage du temps d'exposition

(spécialement accordé à cet appareil, n'est pas transférable).

L'aiguille dans le secteur supérieur rouge de mise en garde, fig. 11: Risque de surexposition!

L'aiguille dans le secteur inférieur rouge de mise en garde, fig. 12: Risque de flou!

Avec l'aiguille restant dans le secteur inférieur ou supérieur, tourner la bague de dia-

phragme de telle sorte que l'aiguille quitte le secteur.

Si l'aiguille reste dans le secteur inférieur même avec le diaphragme réglé à 2,8 (lumière très faible et/ou film peu sensible), le temps de pose est entre $\frac{1}{30}$ sec et 4 sec: utiliser un déclencheur souple et un pied ou une assise ferme de l'appareil! Dans le but de préserver les piles, l'appareil est mis hors circuit au-delà de 40 sec environ.

Si l'aiguille reste dans le secteur supérieur même avec le diaphragme réglé à 22 (lumière intense et/ou film de haute sensibilité), c'est que l'automatisme est dépassé: utiliser un filtre gris-neutre ou un film moins rapide.

Présélection de la vitesse d'obturation → conseil ④.

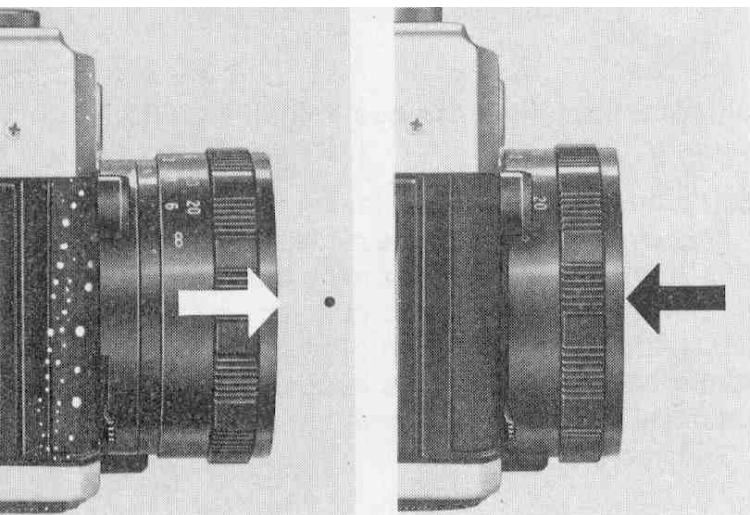


Fig. 13

Fig. 14



Fig. 15

Einstellungen Gegenlichtblende

Arbeitsstellung: Bis zum Anschlag herausziehen, Fig. 13. **Ruhestellung:** Bis zum Anschlag zurückschieben, Fig. 14.

Entfernungseinstellung mit Entfernungsmesser

Gegenlichtblende drehen, bis sich die in Suchermitte verschobenen Bilder decken. Der Leuchtrahmen gibt den Bildausschnitt an, Fig. 16 und 17.

Entfernungseinstellung nach Skala

Gegenlichtblende drehen, bis Aufnahmeentfernung am Einstellindex steht, Fig. 15.

Beiderseits vom Index die Marken der benutzten Blende aufsuchen: darüberstehende Werte auf Entfernungsskala umfassen den scharf abgebildeten Bereich.

Camera settings

Lens hood

Shooting position: Pull out to fullest extent, fig. 13. **Rest position:** Push back to fullest extent, fig. 14.

Distance setting with rangefinder

Turn lens hood until the displaced images in the center of the viewfinder coincide. The

bright-line frame shows the picture area, fig. 16 and 17.

Distance setting according to scale

Turn lens hood until subject distance is opposite the index point, fig. 15.

Find the markings of the aperture used on either side of index point: opposite values on distance scale include the zone sharply defined.

Réglages

Parasoleil

Position de travail: le tirer jusqu'à butée, fig. 13. Position de repos: le repousser jusqu'à butée, fig. 14.

Mise au point à l'aide de télémètre

Tourner le parasoleil jusqu'au moment où les images décalées au centre du viseur se superposent. Le cadre lumineux délimite la mise en page, fig. 16 et 17.

Mise au point avec l'échelle de distance

Tourner le parasoleil, jusqu'à ce que la distance du sujet coïncide avec le repère, fig. 15. Chercher les marques du diaphragme utilisé des deux côtes du repère: les valeurs coïncidant en l'échelle de distance délimitent la profondeur de champ.



Fig. 16



Fig. 17



Fig. 18

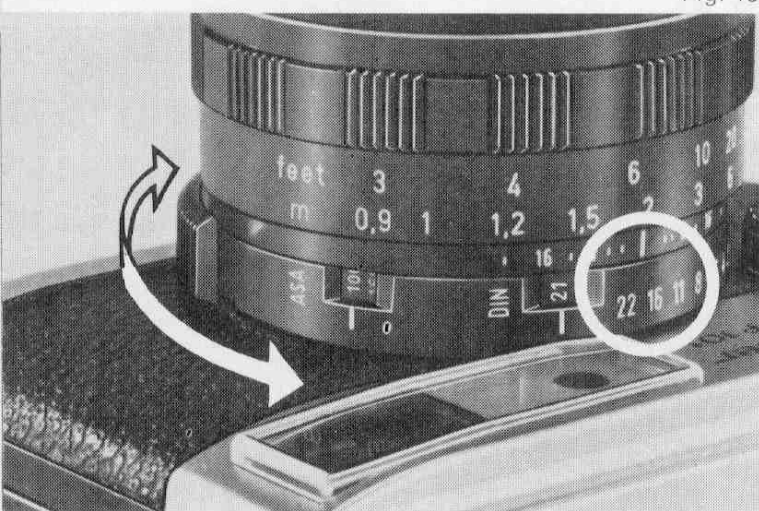


Fig. 19

Parallaxausgleich

Nur erforderlich bei Aufnahmen im Nahbereich um 1 m, Fig. 18: Motivoberkante (von Querformat-Aufnahmen) an die Markierungen stellen.

Blendeneinstellung über Außenskala

Blendenring am Griffstück drehen. Gewünschte Blende über Einstellindex stellen, Fig. 19.

Parallax compensation

Only necessary for close-ups around 1 m/3 ft, fig. 18: Line up top edge of subject (for horizontal shots) with the marks provided.

Diaphragm setting on exterior scale

Turn diaphragm ring with finger grip. Set required aperture number opposite index point, fig. 19.

Correction de la parallaxe

N'est indispensable que dans le domaine des faibles distances (1 m environ), fig. 18: Limiter la hauteur du motif (pour cadrage horizontal) aux deux traits-repères.

Réglage du diaphragme sur l'échelle extérieure

Tourner la bague du diaphragme par la prise striée. Amener le diaphragme requis en regard du repère, fig. 19.

Blendeneinstellung über Sucherskala

Rote Marke ist mit Drehung des Blendenrings gekuppelt, Fig. 20. Bei Änderung der Blende stellt sich automatisch die passende Belichtungszeit ein, → auch Tip ④, Seite 22.

Diaphragm setting on scale in viewfinder

Red mark moves when rotating diaphragm ring, fig. 20. When aperture is changed, the appropriate shutter speed is set automatically; → also hint ④, page 23.

Réglage du diaphragme sur l'échelle du viseur

Le repère rouge est couplé à la rotation de la bague du diaphragme, fig. 20. Lorsqu'on modifie le réglage du diaphragme, le temps d'exposition s'ajuste automatiquement, → aussi conseil ④, page 24.

Aufnahme

Auslöser bis zum Anschlag durchdrücken und freigeben. Nach jeder Aufnahme Schnellspannhebel bis zum Anschlag schwenken und zurückfedern lassen, Fig. 21.

Taking the picture

Depress shutter release as far as it goes and

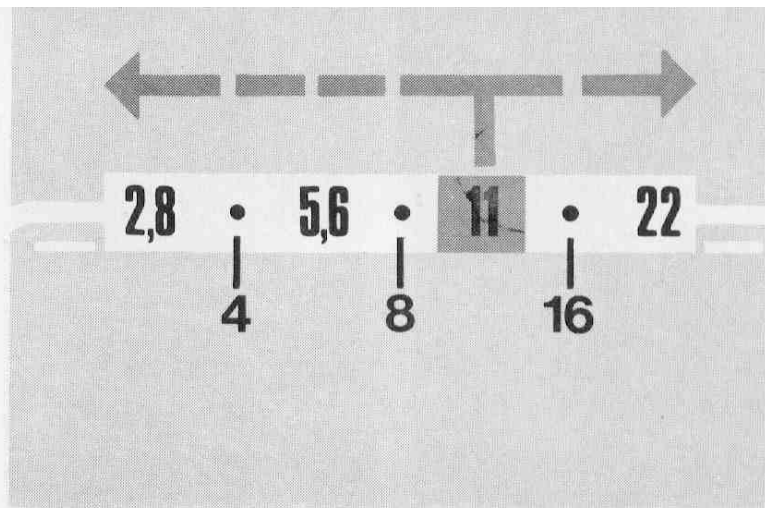


Fig. 20

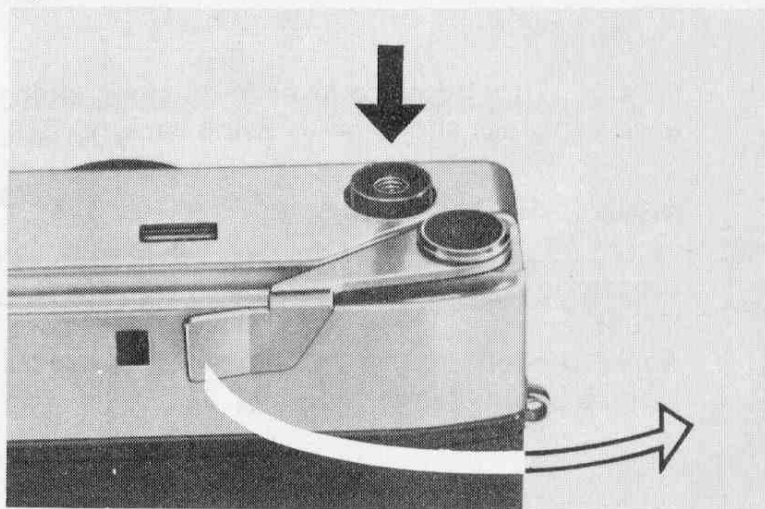


Fig. 21

tached with a flash bracket to the tripod socket. Connect flash cable by means of a standard synchro-adaptor.

Fill-in flash in daylight → hint ⑤.

Prise de vue au flash

Prendre le diaphragme et la distance dans la mode d'emploi du flash.

Amener le symbole de l'éclair $\frac{1}{2}$ du bouton de commutation en haut jusqu'à butée, fig. 22. Lorsque les piles sont en place, le temps d'exposition est $\frac{1}{30}$ sec. L'obturateur est doté de la synchronisation «X». Les torches-éclair bénéficiant d'un contact central sont directement insérées dans la griffe de l'appareil. Les torches-éclair à câble sont soit insérées dans la griffe, soit montées sur un bras-support visé dans l'écrou de pied. Le câble est branché à l'aide d'un adaptateur synchro vendu dans le commerce.

Technique du flash en lumière du jour → conseil ⑤.

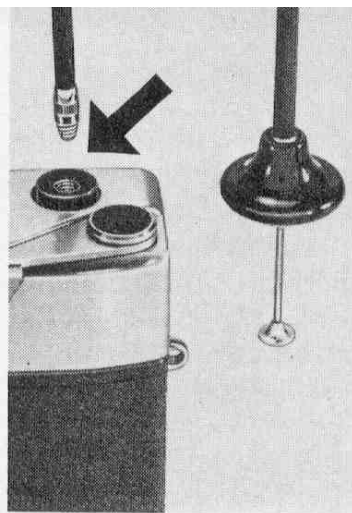


Fig. 24

**Drahtauslöser-
anschluß**

Cable release socket

**Raccordement du
déclencheur souple**

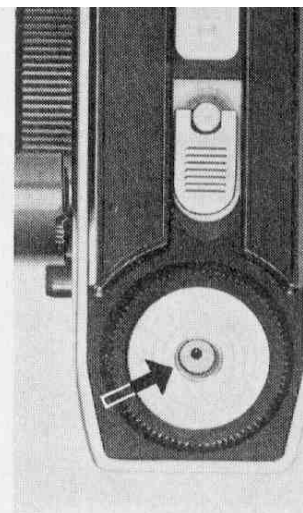


Fig. 25

Stativgewinde $\frac{1}{4}$ "

Tripod socket $\frac{1}{4}$ "

**Filetage $\frac{1}{4}$ "
pour le trépied**

Aufnahmen mit Filter

Filter in ausgezogene Gegenlichtblende einschrauben. Der Filter-Verlängerungsfaktor wird automatisch berücksichtigt. Bei dichteren Farbfiltern für Schwarzweiß-Film ist zu empfehlen, die Filmempfindlichkeitseinstellung entsprechend Filterfaktor 2 x, um 3 DIN-Werte zu vermindern, bzw. den ASA-Wert zu halbieren (nach Abnehmen des Filters Rückstellung nicht vergessen). Filter stets mit ausgezogener Gegenlichtblende verwenden.

Use of filters

Screw filter into lens hood pulled out. The filter factor is automatically taken into account by the exposure meter. When using dense colour filters for black-and-white film is it advisable to halve the ASA-film speed setting corresponding to the filter factor 2 x (reset film speed scale when removing filter). Always use filters with lens hood pulled out.

Prise de vue avec filtres

Visser le filtre dans le filetage du parasoleil. Le facteur de prolongation du filtre est pris automatiquement en considération. Uniquement avec des filtres colorés de forte densité, pour photographier en noir et blanc, il est recommandé de diminuer le réglage de sensibilité ASA de 50%, ce qui correspond à un facteur de filtre 2 x (ne pas oublier de revenir à la position initiale lorsqu'on cesse de faire usage du filtre). User des filtres uniquement avec le parasoleil tiré.

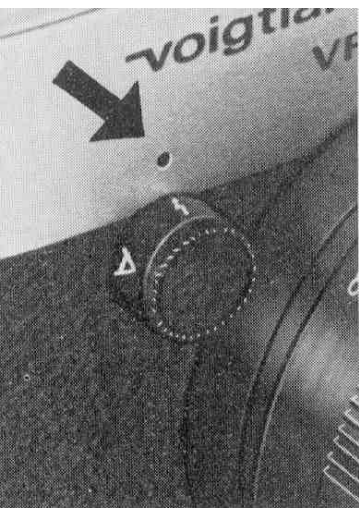


Fig. 22

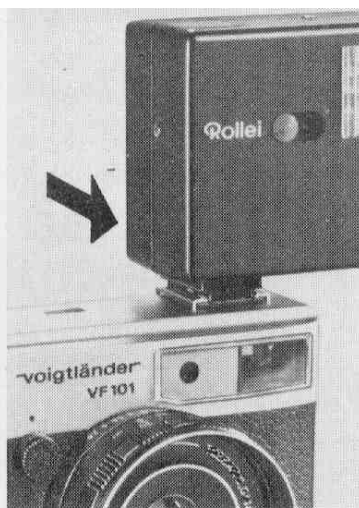


Fig. 23

let it go. Turn advance lever to its stops after each exposure and allow to swing back, fig. 21.

Prise de vue

Presser le déclencheur jusqu'à butée et le relâcher.

Après chaque exposition, actionner le levier jusqu'à butée et le relâcher, fig. 21.

Aufnahmen mit Blitzlicht

Blende und Entfernung aus Gebrauchsanleitung zum Blitzgerät entnehmen!

Blitzzeichen ⚡ auf Indexpunkt stellen, Fig. 22 (Belichtungszeit bei eingelegten Batterien $\frac{1}{30}$ sec). Der Verschluss ist X-synchronisiert. Blitzgeräte mit Mittenkontakt direkt auf Steckschuh schieben.

Blitzgeräte ohne Mittenkontakt in Steckschuh schieben oder mit Halteschiene am Stativgewinde befestigen. Blitzgerätkabel über einen handelsüblichen Synchron-Adapter anschließen.

Blitzaufnahmen bei Tageslicht → Tip ⑤.

Flash pictures

Take aperture and distance from instruction book of flash unit.

Turn setting knob to its stop so that the flash symbol ⚡ points on index, fig. 22. Shutter speed with batteries inserted is $\frac{1}{30}$ sec. The shutter is X-synchronized. Flash units with center contact are mounted directly on hot shoe of camera.

Flash units without center contact are at-

Rückspulen

Nach der letzten Aufnahme Kamera **nicht** mehr spannen (Filmzählwerk steht dann auf 20 bzw. 36). Werden trotzdem weitere Aufnahmen gemacht, kann der Schnellspannhebel am Filmende auf halbem Wege stehen bleiben. **Keine Gewalt anwenden!** Nur den Auslöser drücken (Spannhebel geht in Bereitschaftsstellung zurück) und dann rückspulen. Eine Belichtung erfolgt nicht.

Rewinding

Do **not** actuate advance lever any more after the last exposure (film counter indicates 20 or 36 exposures). If further pictures are taken, the lever may stop halfway. **Do not use force!** Simply press shutter release (lever then returns to ready position) and rewind the film thereafter. There will be no exposure made.

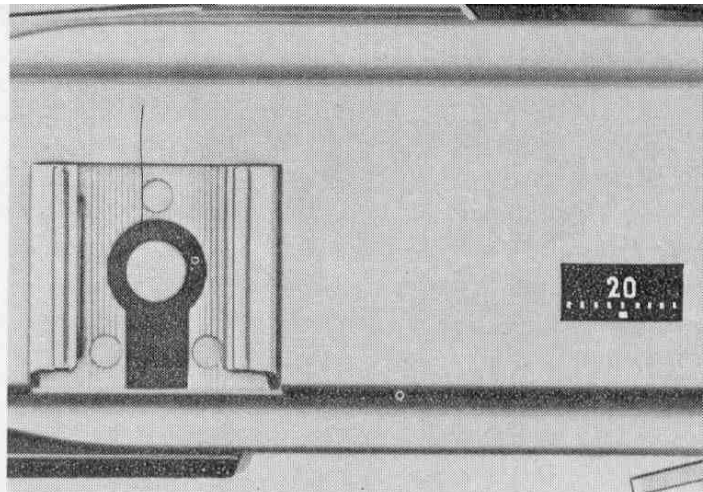


Fig. 26

Rebobinage

Après la dernière exposition, ne plus armer l'appareil (compteur de vues indique alors 20 ou 36). Si, par mégarde, le film a été entraîné plus loin, on peut laisser le levier d'armement rapide écarté à mi-course. **Ne pas forcer!** Presser simplement le déclencheur (le levier regagne sa position de départ) et procéder au rebobinage. Cela n'entraîne pas de nouvelle exposition.



The exposure:

Hold the viewfinder so close to your eye, that the field of view can be surveyed right up to its corners. Hold the camera securely and steadily with both hands. Slowly depress shutter release with your index finger until you feel resistance.

At $\frac{1}{25}$ sec. camera-shake can be avoided almost completely, but it is recommended to stand fast and to keep the upper arms pressed firmly to the body.

Always keep the camera in a horizontal position, never give it a lateral tilt.

Before the next exposure:

Turn film winder until you see the next number in the window. Close film window.

If the film is not wound on until immediately before the next exposure, the device to prevent double exposure offers the best protection against unintentional exposure (viz. p. 22).

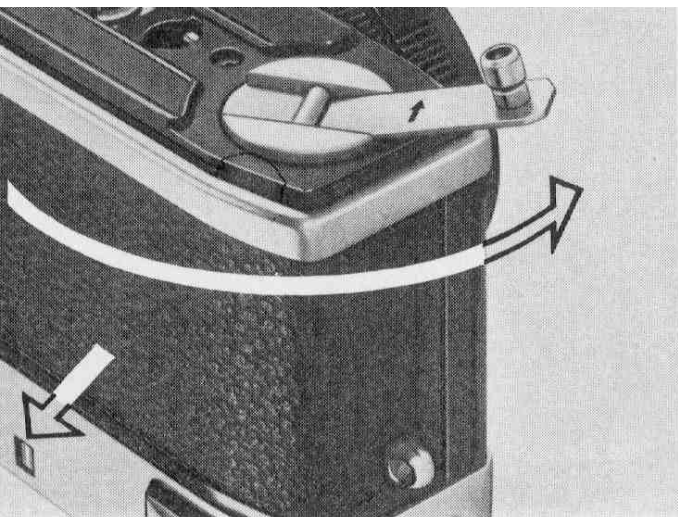


Fig. 27

Press release before rewinding film

This disengages the rewind lock.

Flip up rewind crank and turn it in direction of arrow until the red line index stands still, or the "clicking" stops, fig. 27. Fold crank back and remove camera back.

Now the frame counter automatically resets to zero (black and white lined marks become visible: camera is not loaded).

Vor dem Rückspulen Auslöser drücken

Rückspulsperrre wird dadurch aufgehoben. Rückspulkurbel ausklappen und so lange in Pfeilrichtung drehen, bis die rote Strichmarke stillsteht oder das Klickgeräusch aussetzt, Fig. 27. Kurbel einklappen und Rückwand abnehmen.

Zählwerk springt jetzt automatisch auf 0-Stellung. Schwarzweiße Strichmarken werden sichtbar: Kamera ist nicht geladen.

Actionner le déclencheur avant rebobinage

Le verrou de rebobinage est ainsi libéré.

Déployer la manivelle de rebobinage et la tourner dans le sens de la flèche, jusqu'au moment où l'indice rouge s'arrête ou qu'un déclic se fait entendre, fig. 27. Rabattre la manivelle et enlever la paroi dorsale.

Le compteur de vues revient alors automatiquement à 0 (les traits blanc et noirs sont alors visibles: l'appareil n'est pas chargé).

Energieversorgung

Zum Einlegen oder Auswechseln der Batterien den Batteriestab herausschrauben, Fig. 28 (auch bei eingelegtem Film möglich). 4 Batterien sind beigelegt.

Entladene Batterien mit einem schmalen Geldstück oder Gegenstand herausdrücken.

Ersatzbatterien:

4 Stück à 1,5 V, z. B. Varta-Pertrix 246 oder Mallory Mn 625 G, erhältlich im Foto-Fachhandel.

Wichtig: Batterien immer satzweise auswechseln!

Power supply

To insert or replace the batteries, unscrew battery holder, fig. 28 (also possible with film inserted). 4 individual batteries are included. Use thin coin or similar object to push out used batteries.

Replacement batteries: 4 batteries 1,5 V e. g. Mallory Mn 625 G or Varta-Pertrix 246 available in camera stores.

Caution: Batteries should be exchanged as complete set of four only!

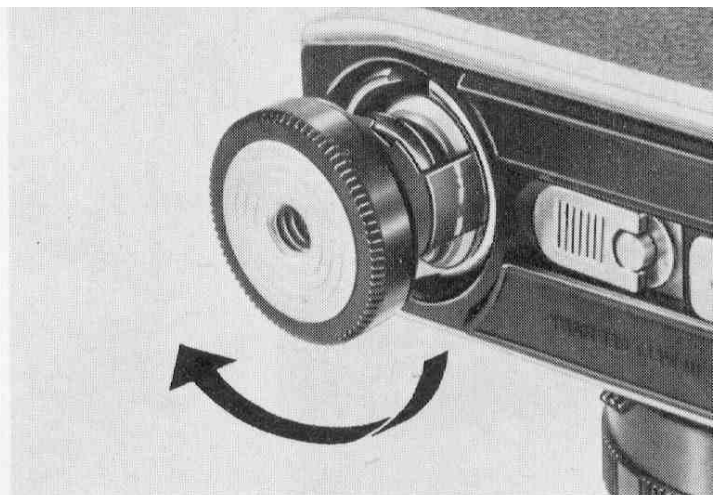


Fig. 28

Alimentation en courant

Pour mettre les piles en place ou pour les remplacer, dévisser le conteneur à piles, fig. 28 (est aussi possible avec l'appareil chargé). 4 piles sont comprises.

Extraire les piles épuisées avec une pièce de monnaie ou un objet étroit.

Piles de rechange: 4 piles de 1,5 V, p. ex. Varta-Pertrix 246 ou Mallory-Mn 625 G (en vente dans les magasins photographiques).

Important: Remplacer toujours les quatre piles!

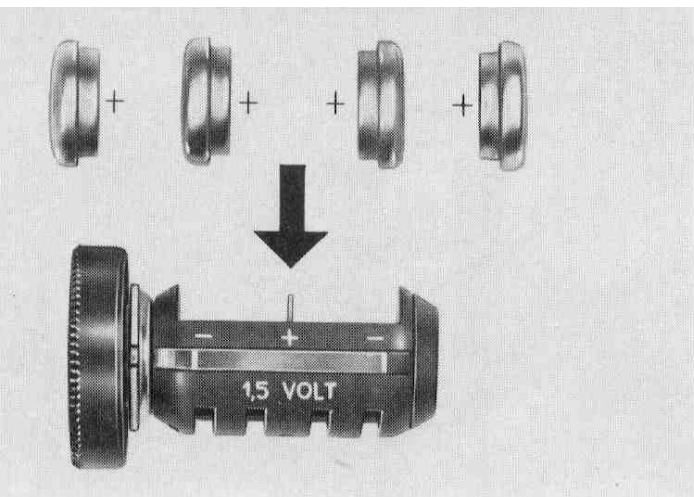


Fig. 29

Bei den Batterien auf saubere Kontaktflächen und richtige Polung achten. Die + Pole aller Batterien müssen auf das mittlere Kontaktblech des Batteriestabes zeigen, Fig. 29. Vorübergehend genügt auch ein Batteriepaar im oberen oder unteren Fach des Batteriestabes.

Make certain the contact surfaces are clean and watch for correct polarity. The + poles must face the contact plate in the middle of the battery holder, fig. 29. For temporary use, 2 batteries placed together in either the upper or lower compartment will be sufficient.

Veiller à la propreté des faces de contact des piles et au respect de la polarité. Les pôles + doit être orientés vers la paroi médiane de contact du conteneur à piles, fig. 29.

Mentionnons, au surplus, qu'une seule paire de piles, disposée dans le compartiment supérieur ou inférieur du conteneur, peut suffire.

Batterien prüfen: Umschaltknopf auf „A“ stellen und gleichmäßig beleuchtete Fläche anvisieren. Blendenring drehen, bis Meßzeiger die 125 **oben** berührt, Fig. 30. Auslöser leicht eindrücken: absinkender Zeiger soll die 125 zumindest noch **unten** berühren und innerhalb 5 sec nicht weiter nach unten „kriechen“. Auslöser freigeben: Zeiger soll **sofort** in Ausgangslage zurückkehren, nicht „kriechen“. Ist diese Prüfung negativ, sind alle 4 Batterien auszuwechseln.

Checking batteries: Move setting knob to "A" and view on an uniformly illuminated surface. Turn diaphragm ring until indicator needle is touching the 125 from **above**, fig. 30. Slightly depress the release: downgoing needle should at least touch the 125 from **below** and should not "creep" further down within 5 sec. On letting go the release: needle should **immediately** return into prior position without "creeping". Exchange all of the four batteries in case of poor checking result.

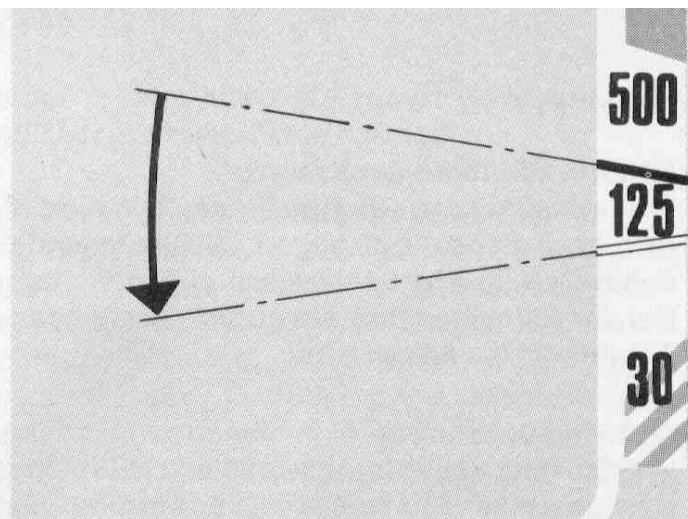


Fig. 30

Contrôle des piles: régler le bouton de commutation sur «A» et viser une surface éclairée uniformément. Tourner la bague du diaphragme jusqu'à ce que l'aiguille touche le **dessus** du nombre 125, fig. 30. Presser légèrement sur le déclencheur: l'aiguille descend mais doit encore toucher au moins le **dessous** du nombre 125 et, pendant 5 sec, ne doit pas descendre plus bas. Relâcher le déclencheur: l'aiguille doit **aussitôt** revenir à sa position de départ, rapidement. Si le test est négatif, les quatre piles sont à changer.

Praxistips

① Zum Mitführen der Kamera

Tragschlaufe je nach Bedarf an linker oder rechter Tragöse befestigen. Schlaufenende durch Öse im Tragbeutel nach außen ziehen. Bei der Aufnahme gibt der zurückgeschobene Tragbeutel die Kamera frei.

② Filmladekontrolle

In 0-Stellung des Bildzählwerks erscheint eine schwarzweiße Strichmarke als Anzeige für nicht eingelegten Film und bleibt auch nach Auslösen und Spannen sichtbar → auch Seite 18.

③ Filmtransport und Rückspulen

werden durch eine rote Strichmarke angezeigt → Fig. 27.

Transportkontrolle: Rotmarke (beim Durchziehen mit Schnellschalthebel) in Bewegung = Film wird transportiert. Rotmarke bleibt stehen = Film ist nicht transportiert, weil entweder nicht von Aufwickelspule gefaßt oder ganz abgewickelt oder aus Patrone herausgerissen → Seite 28.

Rückspulkontrolle: Rotmarke in Bewegung = Film wird zurückgespult. Rotmarke bleibt stehen = Film ist zurückgespult, Filmanfang noch griffbereit außerhalb Patrone.

④ Blende oder Zeit vorwählen?

Normalerweise wählt man die Blende vor und belichtet die Aufnahme mit der automatisch eingesteuerten Zeit → Seite 8. Bei Schnappschüssen, Sportaufnahmen usw. ist jedoch eine möglichst kurze Belichtungszeit erforderlich: der Meßzeiger wird durch Drehen am Blendenring auf mindesten $125 = \frac{1}{125}$ sec, besser auf $500 = \frac{1}{500}$ sec eingestellt, um verwacklungsfrei zu belichten. Voraussetzung hierfür: helles Aufnahmelicht bzw. hochempfindlicher Film.

⑤ Aufhellblitz bei Tageslicht

ergibt brillantere Farben und bessere Durchzeichnung der Schattenpartien. Umschaltknopf hierbei auf „A“ stellen (**nicht** auf $\frac{1}{2}$, da sonst Überbelichtung durch die dann wirksame $\frac{1}{30}$ sec). Belichtung wie üblich mit Zeigerregelung durch Blendenwahl vornehmen. Größere Blenden (2,8 bis 8) ergeben stärkere Aufhellung, bei kleineren Blenden (11 bis 22) nimmt die Aufhellung ab.

Practical hints

① For carrying the camera

fit the carrying strap to the left or right eyelet. Pull the strap end out through the hole in the carrying case. When shooting the case is pushed back to expose the camera.

② Film loading indicator

With the frame counter in zero position, black and white lined marks appear to indicate that no film is loaded. These marks remain visible even after releasing and tensioning → page 18 also.

③ Film advance and rewinding

are indicated by a red line index → fig. 27.

Film advance indication: Red line index vibrating (when rapid advance lever is being tensioned) = correct film advance. Red line index stopping = no film advance because film is not engaged into take-up drum, or entirely wound off, or even torn out of cartridge → page 29 also.

Film rewind indication: Red line index vibrating = film is being rewound. Red line index

stops = film has been rewound, film leader still accessible outside cartridge.

④ Preselecting aperture or shutter speed

Normally the f-stop will be preselected and the shot exposed with the automatic shutter speed control → page 8. Snapshots, action pictures etc. require, however, a maximum shutter speed: by rotating the aperture ring, set indicator needle at least to $125 = 1/125$ sec; better still, to $500 = 1/500$ sec to avoid movement blur. High-speed film or bright subjects are necessary when preselecting these fast shutter speeds.

⑤ Fill in flash in daylight

produces more brilliant colours and better modelling in the shadows. Turn setting knob to position „A“ (not to $\frac{1}{2}$, to avoid overexposure by the $1/30$ sec then being effective). Expose as usual by rotating aperture ring to center the indicator needle. Larger f-stops (2.8 to 8) give noticeable fill-in, while smaller apertures (11 to 22) reduce the effect.

Conseils pour la pratique

① Pour porter l'appareil

Fixer la dragonne sur l'anneau droit ou gauche, au choix. Faire passer la dragonne à travers l'ouverture du sac-bourse, de l'intérieur vers l'extérieur. Pour prendre une photo, il suffit de faire glisser le sac-bourse pour libérer l'appareil.

② Contrôle de chargement de film

Quand le compteur d'images est à zéro, un repère blanc et noir apparaît pour indiquer qu'il n'y a pas de film dans l'appareil. Ce repère subsiste même après déclenchement et armement → également page 18.

③ Entraînement du film et rebobinage

Ils sont indiqués par un repère rouge → fig. 27. Contrôle d'entraînement: Le repère rouge (quand on actionne le levier d'armement) est en mouvement = le film est entraîné. Ce repère reste immobile = le film n'est pas entraîné, soit parce qu'il ne s'est pas accroché à la bobine d'enroulement, soit parce qu'il a été arraché du noyau de la cartouche → page 31.

Contrôle de rebobinage: Repère en mouve-

ment = le film se rebobine. Repère rouge reste immobile = le film est rebobiné, l'amorce sort encore un peu de la cartouche.

④ Choix préalable du diaphragme ou du temps de pose?

Normalement, c'est le diaphragme que l'on choisit, est le temps de pose est déterminé par l'automatisme d'exposition → page 8. Mais pour les instantanés sur le vif et les photos de sport, il faut un temps de pose aussi court que possible: tourner la bague de diaphragme pour que le temps de pose affiché soit au moins $125 = 1/125$ de sec., et mieux $500 = 1/500$ de sec., pour éviter le bougé. Mais il faut que l'éclairage soit assez intense ou employer un film très rapide.

⑤ Flash en lumière du jour

Un flash employé pour une photo en lumière du jour éclaire les ombres et avive les couleurs. Régler le bouton de commutation sur „A“ (et **non** sur $\frac{1}{2}$, sinon il y aurait surexposition, à $1/30$ de seconde). Régler le diaphragme comme d'habitude (réglage de 2,8 à 8, éclaircissement important, réglage de 11 à 22, éclaircissement faible).

Daten und Zahlen

Typ: Kompakt-Sucherkamera 24 x 36 mm mit Entfernungsmesser-Kupplung und elektronischer Verschußzeit-Automatik.

Ausstattung: Film-Schnelladesystem, selbstrückstellendes Bildzählwerk mit Filmladeanzeige, Schnellaufzug mit Bereitschaftsstellung, Sperre gegen Doppelbelichtung und Leerschaltung, Rückspulkontrolle, eingebaute Gegenlichtblende; Leuchtrahmensucher 0,48 x mit Parallaxmarken, Zeit/Blendenanzeige und Warnfeldern gegen Verwacklung oder Überbelichtung; gekuppelter Mischbildentfernungsmesser mit seitlichem Parallaxausgleich; Zentralverschuß, X-synchronisiert bei allen Verschußzeiten für Tageslichtaufnahmen mit Blitz, Steckschuh mit Mittenkontakt; Drahtauslöseranschluß, Stativgewinde $\frac{1}{4}$ ", Tragösen.

Belichtungsautomatik: elektronische Verschußzeitsteuerung, ca. $\frac{1}{500}$ bis 4 sec nach Blendenwahl, umschaltbar auf $\frac{1}{30}$ sec für Blitzaufnahmen ohne Tageslicht; einstellbare Filmempfindlichkeiten 15-27 DIN/25-400 ASA; CdS-Zelle in Objektivnähe, auch bei Filtergebrauch wirksam;

Meßbereich 0,25-33000 cd/m² bzw. Belichtungswert 1-18 bei 21 DIN/100 ASA; Energieversorgung durch 4 Knopfzellen 1,5 V, Batteriekontrolle über Zeitanzeige, Batteriefach auch bei eingelegtem Film zugänglich.

Objektiv: Voigtländer Color-Skopar 1:2,8/40 mm, 4 Linsen, 3 Glieder, Blendenbereich 2,8-22; Entfernungseinstellung ab 0,9 m/3 ft, Schärfentiefenskala, Filtergewinde E 49 x 0,75.

Maße: ca. 102 x 73 x 35 mm.

Gewicht: ca. 490 g.

Zubehör: Filter Gelb-mittel, Grün, Orange, Hellrot, UV, R 1,5; Tragbeutel, Tragschlaufe.