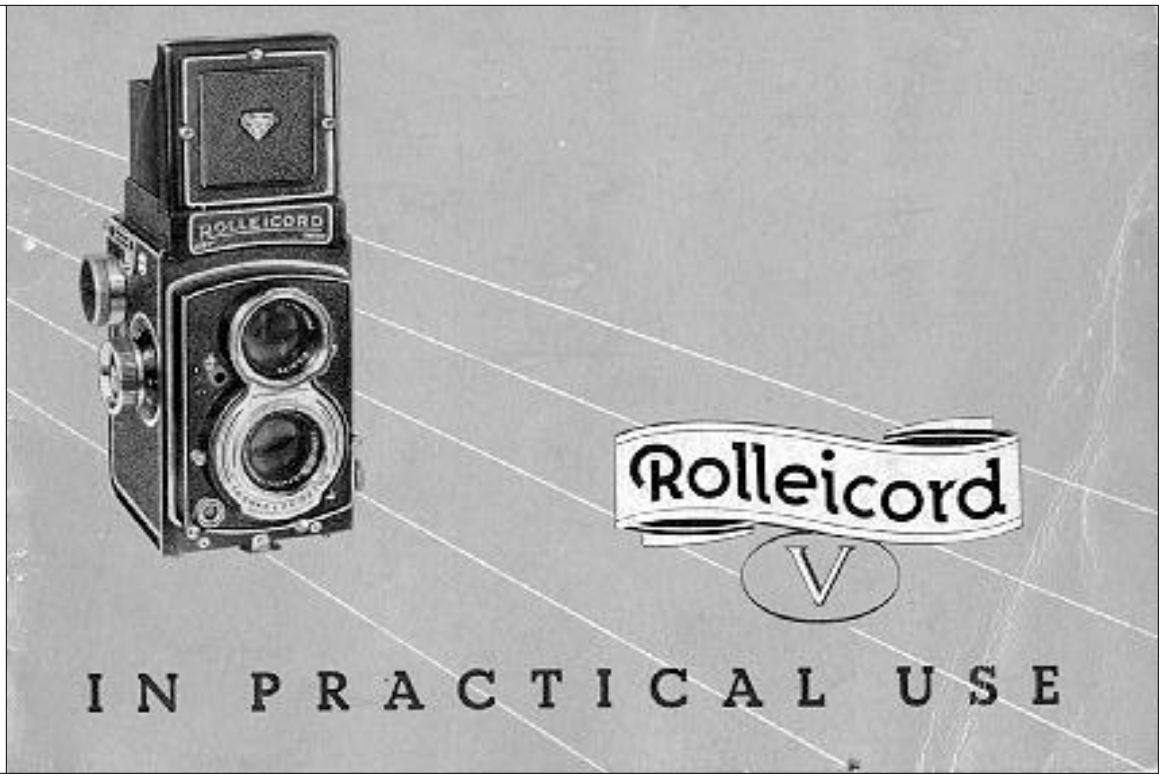


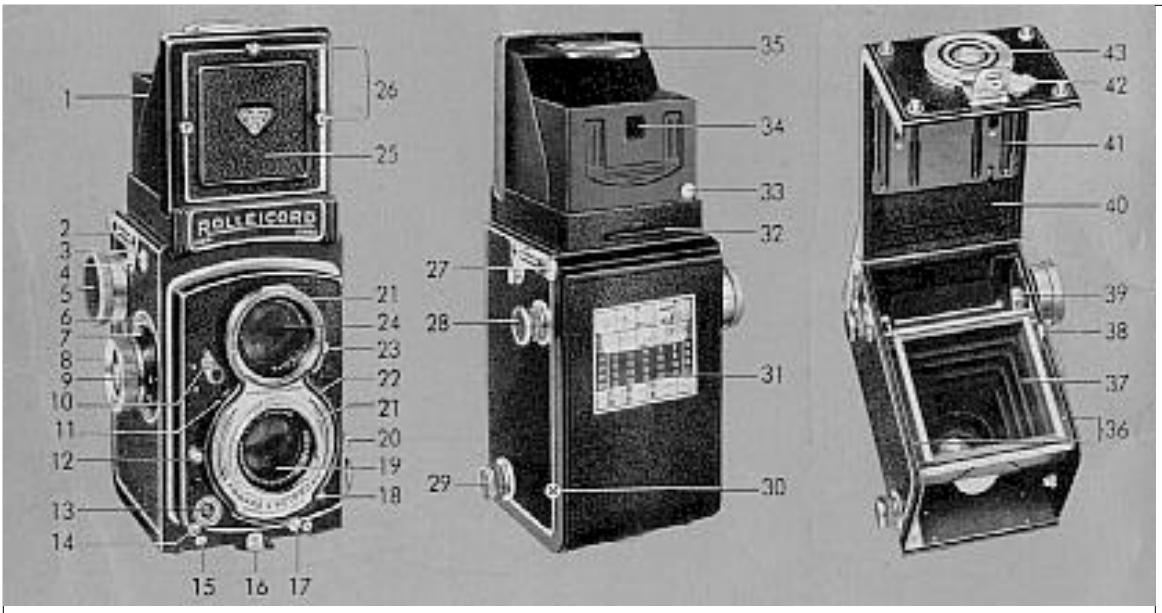
15. Locating sockets for Panorama Head
16. Back lock clip
17. Shutter tensioning and release lever
18. Cable release socket
19. Taking lens
20. Diaphragm control lever
21. Double bayonet mount for lens accessories and lens hood
22. Indicator window for diaphragm and light value scale
23. Double exposure prevention lever and release
24. Viewing lens
25. Direct view finder flap
26. Pin-socket for Rolleikin direct view finder mask
27. Back hinge with safety lock
28. Take-up spook knob
29. Film spool knob (and Rolleikin-rewind knob)
30. Focal for film plane (focus distances measured from this line)
31. Exposure table
32. Retaining device for Rolleigrid or Rolleikin ground glass mask
33. Release button for direct view finder flap
34. Rear sight for direct view finder
35. Focusing magnifier
36. Indicator marks for starting 120 roll film
37. Anti-reflective baffles
38. Sliding lever for engaging counter
39. Winding key of take-up spool
40. Combination back for 120 and 35mm film
41. Adjustable film pressure plate
42. Back locking lever
43. Tripod socket

The Rolleicord V is equipped with the high quality Schneider Xenar 1:3.5 lens and many features of important technical advantage. Precise construction of the camera, fool-proof operation, all controls easily manipulated in picture-taking position: These are features which, together, make up the convenient operation method of the Rollei. The fine photographic performance of this camera is made fully available through its extremely simple operation.

The following pages will describe in detail the principle as well as the correct methods of handling the camera. Many rules and hints are included, making it possible for even the inexperienced to acquire soon proficient in the practice of Rollei photography.

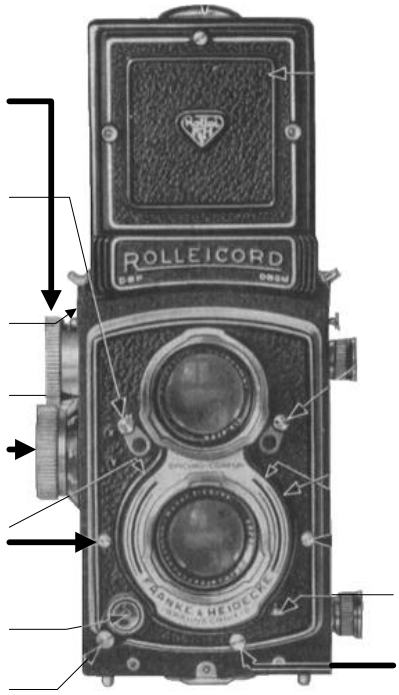
We trust that this booklet will be a helpful and constant guide to the new Rolleicord owner, speeding him or her way to real success with the camera.

Franke & Heidecke
Germany



1. Focusing Hood
2. Eyelet slot for neck strap
3. Exposure counter window
4. Strap hook
5. Film winding knob
6. Depth of field scale
7. Focusing scale
8. Focusing knob
9. Adjustable film speed reminder
10. Synchro lever (also serves as cocking lever for self timer)
11. Indicator window for shutter speeds
12. Shutter speed control lever
13. Flash cable socket
14. Locking device for flash cord plug

THE QUICK BASIC PRINCIPLE



After the exposure: advance the film

Flash exposures: adjust M-X lever
Self-timer pictures: cock mechanism

Check exposure number

Observe depth of field

FOCUS

Shutter Speed: { read / **adjust**

Flash pictures: connect flash gun

unlock flash cord plug before pulling it out

Check focus and composition

Sports Pictures: use direct view finder

For intentional double or multiple exposures or when using Rolleikin 2 or plate back: release double exposure prevention lock

Read light value

Read / **Adjust** } diaphragm opening

Screw in cable release (when required)

Tension and release shutter

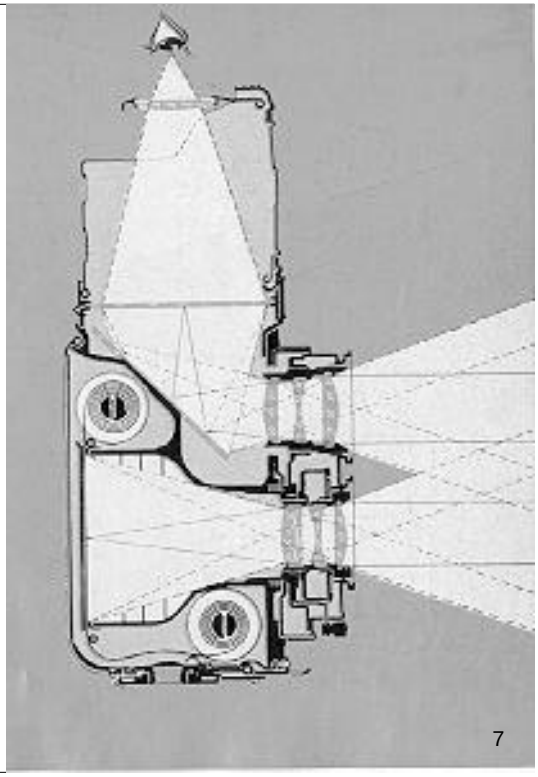
REFERENCE INDEX:

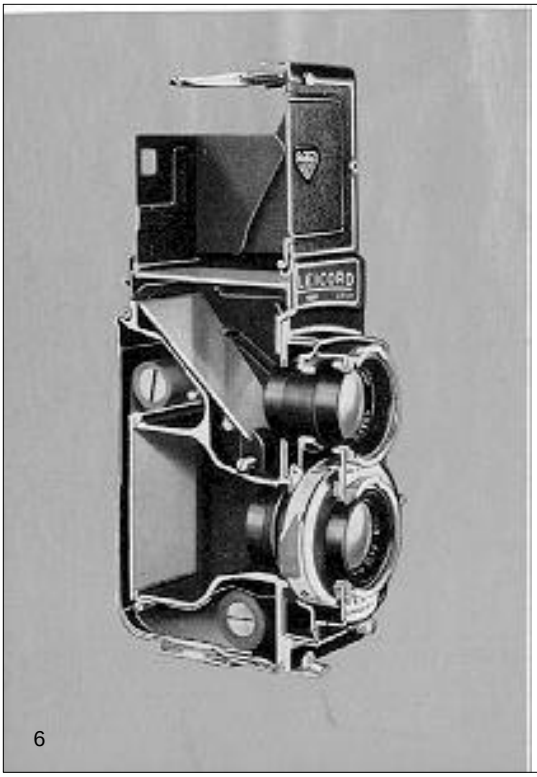
Important: Before attempting to use or handle the camera we urge you to carefully read pages 12, 16, 24 and 36.

The image forming rays are transmitted by the fully open viewing lens, projected onto the ground glass screen via the mirror and the result is a right-side-up ground glass image, in the full size of the original picture. This viewing image is visible at all times and every detail of composition and framing may be watched even during exposure.

The ground glass screen is ruled vertically and horizontally across the center making it possible to detect errors, such as lines which converge that should be parallel or a slanting horizon, in time to notice and correct them. It is easy to straighten or level the camera by means of the lines on the ground glass screen.

Above all, the ground glass screen provides the means for
focusing the camera. This is accomplished by rotating the focusing knob. Both lenses, which are inflexibly coupled to each other by means of a sturdy common front plate, are thereby adjusted simultaneously: a sharp viewing image, therefore, guarantees an equally sharp picture. Since the Rolleicord is equipped with a fast viewing lens and an optically prepared ground glass screen, the viewing image is
extremely bright and clear and focusing can be done very critically.





6

I. A BRIEF ROLLEICORD ANATOMY

The Rolleicord owes its photographic efficiency to the classic Rollei design, the twin-lens reflex-principle.

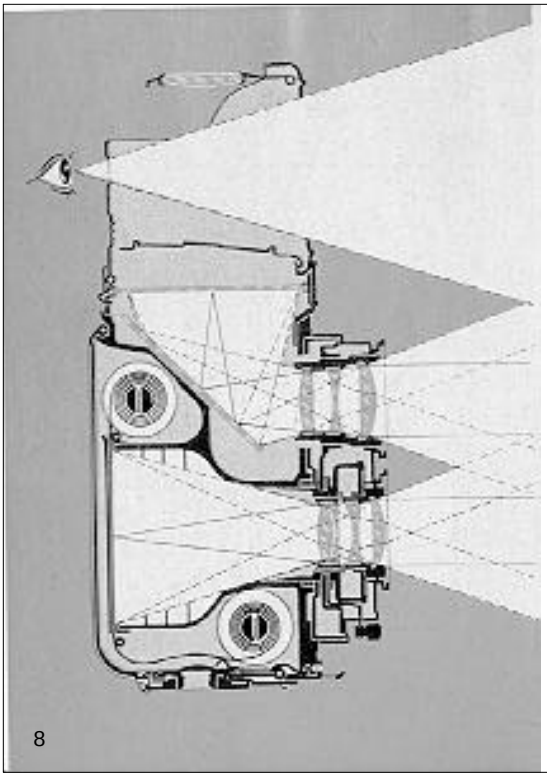
It adopted this basic idea from the several years older model, the Rolleiflex. To achieve the highest possible performance in its price field, the Rolleicord went its own way in the matter of mechanical development. This resulted in certain difference between the two cameras. In spite of these variations numerous common advantages exist in operation and practical use, so that working rules conform in many respects.

Construction of the Twin Lens Reflex

In the Rolleicord two separate cameras are joined in a twin-camera with a common sturdy die-cast body: the bottom half is the

taking-camera, in which the film is exposed, and the upper half is the

viewing-camera, which is designed on the mirror-reflex principle. Its special task is to make the focusing visible on the ground glass and to supply a control image essentially similar to that of the prospective picture.



8

The **focus hood**, which is designed for one-hand operation, is kept in both open and closed positions by sprint tension. It is equipped with a **magnifier** offering approximately 2.5 times magnification for critical focusing.

After focusing the camera, the front flap of the focusing hood may be folded back: the focusing hood is thereby converted to an open frame type **view finder**, through which it is possible to view the subject in natural size and to follow action easily.

Focusing the front lens panel throughout the range from ∞ (infinity) to $35^{1}/_{2}$ inches (distance measured from the focal or film plane to the subject) is accomplished by one full turn of the focusing knob. The special design of the focusing mechanism (a cam-drive based on the principle of the archimedic spiral) ensures uniform movement of the lens panel in both directions without play or backlash.

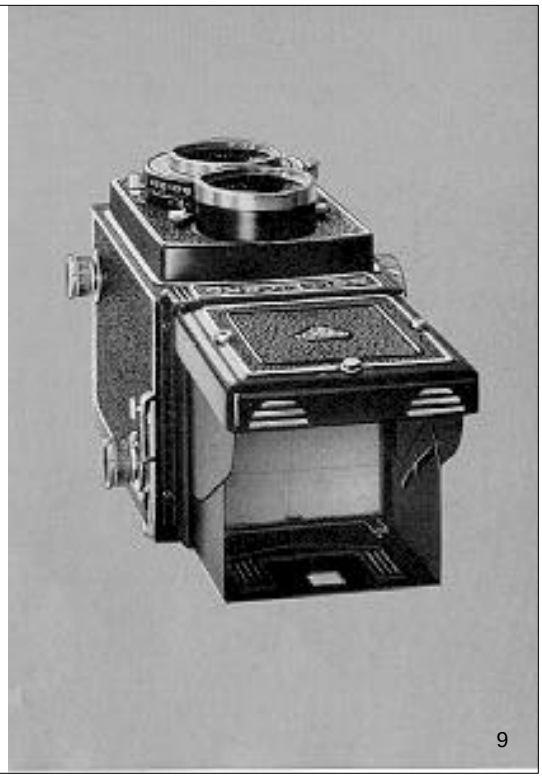
Tied in with the movement of the lenses is a simple sliding mechanism, located beneath the ground glass, providing completely automatic parallax compensation. Consequently, the final picture is always framed exactly as originally viewed on the ground glass screen. Similarly complete control can be had even when using supplementary Rolleinar lenses for close-up work merely by adding the Rolleipar.

Diaphragm openings and **shutter speeds** are set by means of control levers on both sides of the taking lens and are observed through two separate indicators windows. The selected values are read from above.

Light values scale and **shutter speed-diaphragm coupling** simplifies the pre-selection of shutter speed and diaphragm opening by permitting a quick change to the desired combination.

The **Synchro-Compur shutter** has a single tensioning and release lever with double exposure prevention. The shutter can therefore be tensioned and immediately afterwards released without changing position of the hands. Thus all diaphragm and shutter manipulations are accomplished with the camera in operating position.

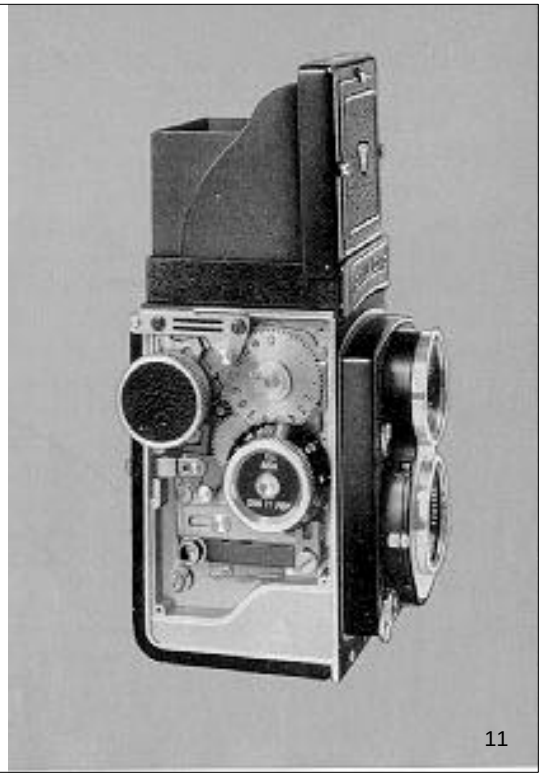
Since the two **lenses** are of identical focal length (f=75mm, picture angle [across diagonal], 56° it follows that the images in both sections of the camera will always be critically focused on the same portion of the subject simultaneously. The Schneider Xenar f:3.5 taking lens, is a four glass construction with two cemented elements



If engaged after the exposure, the lock will furthermore serve as an effective shutter release guard. Intentional double or multiple exposures (trick shots) on roll film are also possible through temporary release of the lock.

Proper starting of the film when loading the camera is easily accomplished. Immediately after inserting the film it is advanced as far as the arrow mark on the paper backing. Closing the back at this point depresses the sliding lever and engages the film measuring mechanism. The knob can now be turned only the correct amount to the stop. The number in the film counter window will automatically advance from 0 to 1, when the film is ready for the first exposure.

The last sign visible in the exposure counter window (after 12) is a center-dotted circle ⊙ to indicate that all the film has been exposed. Opening the back will cause the counter dial to return to 0.



(modified Taylor-type) and features outstanding correction for black and white and color pictures, while the three-element viewing lens f:3.2 meets with the special requirements for best ground glass focusing. Both lenses are treated with abrasion resistance coating. The bayonet receptacles circling the mounts are intended for attaching the lens hood and supplementary optical accessories, which in this way will be held in optically correct position and for a solid unit with the camera.

The removable **combination back** is attached to the camera by means of two hinges with locking device and at the bottom it contains the tripod socket and the safety back lock. Its adaptability for the two picture sizes 2-$^1/_4$ x 2-$^1/_4$", and 24x36mm. is the result of the adjustable film pressure plate which can be set for 120 film with paper backing or for 35mm film without paper backing when used in conjunction with the Rolleikin 2 attachment. In both cases a film channel is created with a width that corresponds to the thickness of the film being used. Thus the film can be properly held in the focal plane, and also can slide through without undue friction when advanced.

Film Transport and Double Exposure Prevention

The film transport mechanism (for roll film) is equipped with a **double exposure prevention device.** Shutter and film transport are thus locked alternately so that the correct order of the operating steps necessarily has to be: advance film, tension shutter, release shutter.

Turning the film winding knob until it stops (film lock) will advance the film one full frame and at the same time cause the next number to appear in the exposure counter window. Now the shutter can be tensioned. After release, the operation of the inter-lock is reversed so that the shutter is locked until the film has been properly advanced to the next frame. In this way double exposure or blanks are neatly avoided.

In special cases -- when using the Rolleikin 2 or Plate Back -- the double exposure prevention lock must be released or else the shutter r would be permanently locked.

II. THE ROLLEICORD IN OPERATION

The Ever Ready Case
deserves mention here since it is so often used with the camera.

The case may also be used with the Rolleikin 2 attachment merely by removing the leather insert to permit passage of the larger counter knob. In order to assure solid contact when working with a tripod, do not use the ever ready case.

To Open: lift the top by grasping the snap catch buttons at the rear and fold forward and down (1).

To Close: pull the top over the camera and push down to engage the snaps. (Simultaneous folding of the focusing hood is also possible with this movement.) Always return the focusing knob to infinity position since the extended front may otherwise interfere with closing the case.

Removal of Camera from Case: pull up the clips on the side walls of the case (2), spread the case apart, lift the camera forward and out (3).

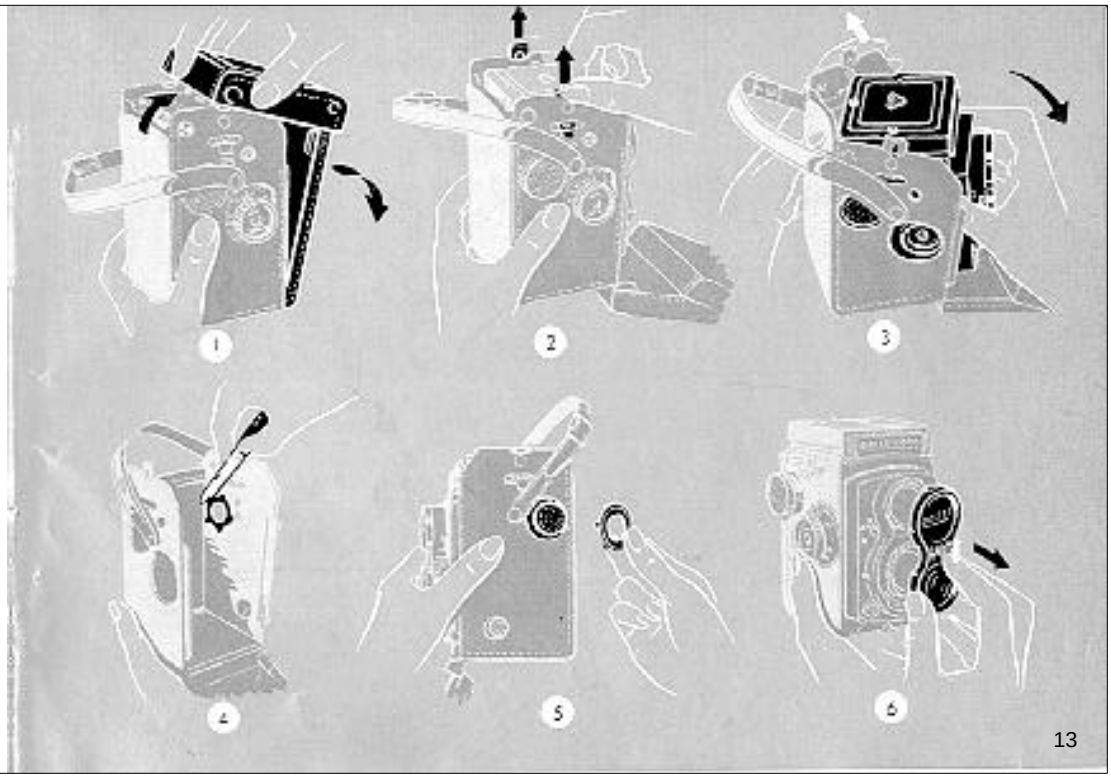
Inserting Camera into the Case: pull up the side clips, spread the case apart and lower the camera backwards into the case. Push the clips through the strap holders of the camera.

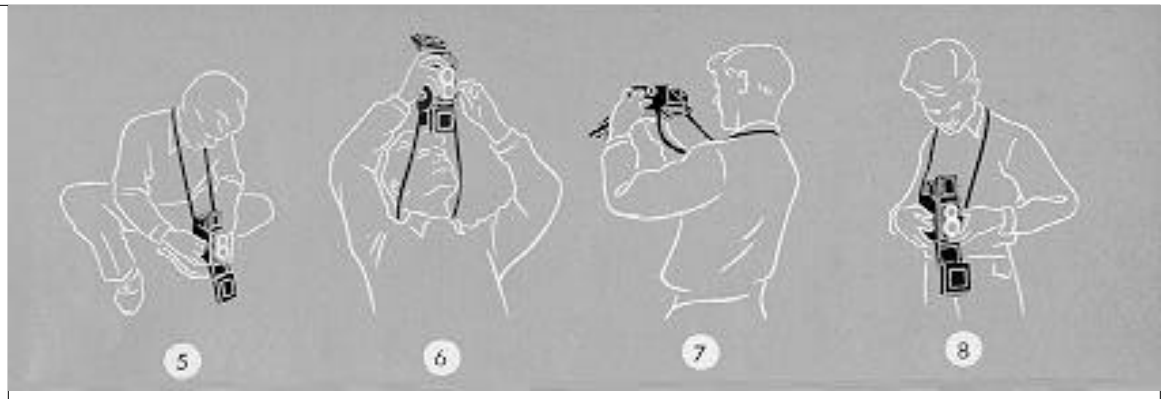
For Cameras with Rolleikin 2: straighten out the five metal tabs, which hold the leather insert on the inside of the case, with a knife (4) and then push out the now superfluous disk (5).

The Lens Cap
The lens cap of light-metal serves to protect the lenses when not using the camera for any length of time or when traveling. It is attached to the bayonet ring of the taking lens by means of a locking knob. The cap fits in front of the lenses only when the upper part which is marked Rollei covers the viewing lens.

To Remove Lens Cap: slide the locking knob in the middle of the cap upward (6).

Attaching Lens Cap: slide locking knob upwards, place cap over the mounts, slide knob downwards.

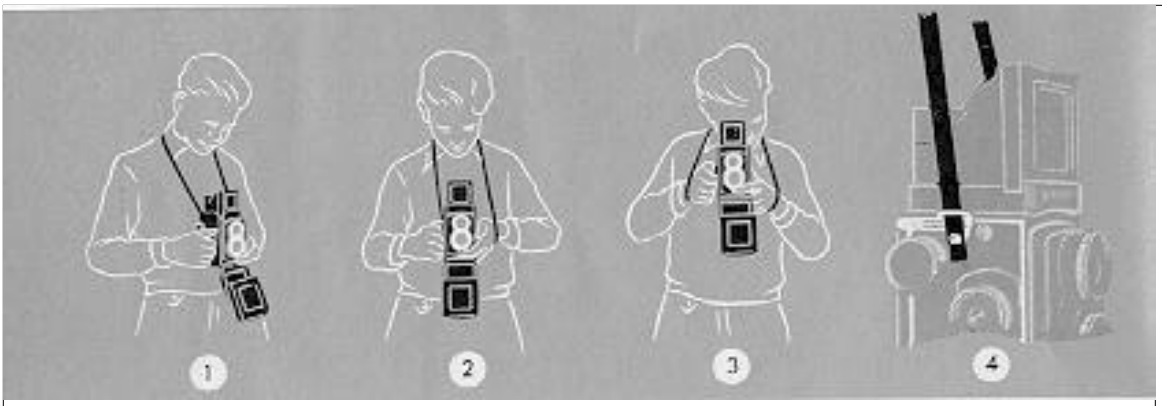




Caution: a wrong or uncomfortable "grip" may cause you to inadvertently lift the hanging top of the ever ready case.

A leather neck strap is also available for working without the ever ready case. To attach: slip both ends through the strap holder slots and fasten to the strap hooks (4).

Waist-lever or eye-level positions for the camera are considered normal for most pictures. The extremely flexible Rollei, however, readily permits exposures at or near floor level, overhead, shooting straight up or down, and occasionally, surprise snaps "around the corner". The illustrations(5) through (8) show a few possibilities for such pictures with the camera in different positions.

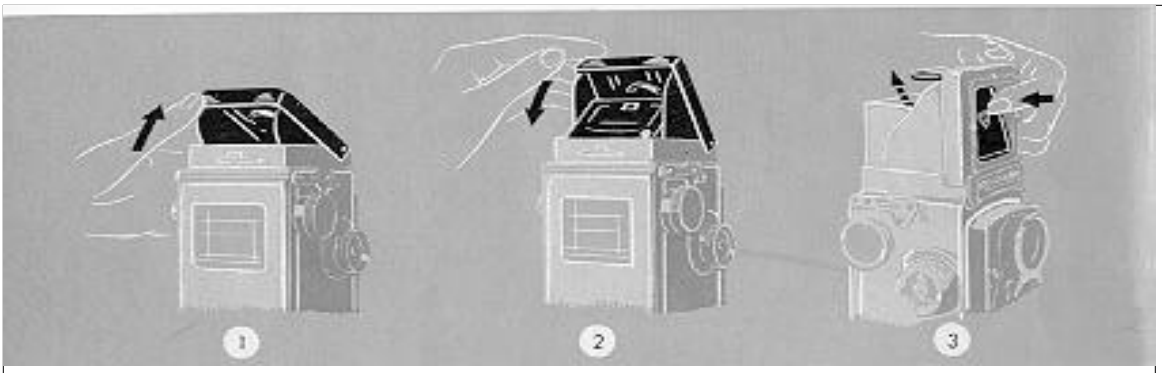


Holding the Camera

Basic rule: camera hanging around the neck with taut strap and held firmly with both hands. The left hand grasps the camera at the bottom, index finger on the combined shutter tensioning and release lever. The right hand takes over the focusing (1).

In this position shutter and diaphragm are easily controlled with two fingers.

The carrying strap is adjusted to a comfortable length, so that the camera may be carried on the shoulder when not in use. In order that the shutter may be released with taut strap to avoid camera movement, loop the strap around the left hand, thus shortening it to achieve normal viewing distance (2). Further shortening of the strap when using the magnifier can easily be effected by making use of the right hand in the same way (3).



Focusing Hood

To open: lift the rear edge of the focusing hood cover
-- spring tension keeps it open (1).
To close: fold down focusing hood (2).

The focusing hood can also be folded down with the same hand movement that closes the ever ready case (see page 12).

The push-button at the rear of the focusing hood serves to hold the Rolleikin ground glass screen mask or the Rolleigrid lens.

Focusing Magnifier

To raise: push the direct view finder flap inwards -- the magnifier springs into position (3).

To lower (before closing focusing hood): fold down magnifier (4).

Use of magnifier: use magnifier as close to the eye as possible.

The magnifier is interchangeable and may be replaced
for the convenience of near or far sighted people. Strengths from minus 3 to plus 3 diopters are available.

Direct View Finder

To open: push the direct view finder flap inwards until it locks into place (5).

To close: release the flap by means of the button on the back of the focusing hood -- it will spring back into place (6).

The two pin-sockets and small knob on the front of the hood permit attachment of the Rolleikin direct view finder mask.

Changing Magnifier (if eye-sight demands)

To remove: take hold of magnifier by both surfaces, push it against the retaining spring (in direction of the hinge of the magnifier holder) and then fold it up and lift out.

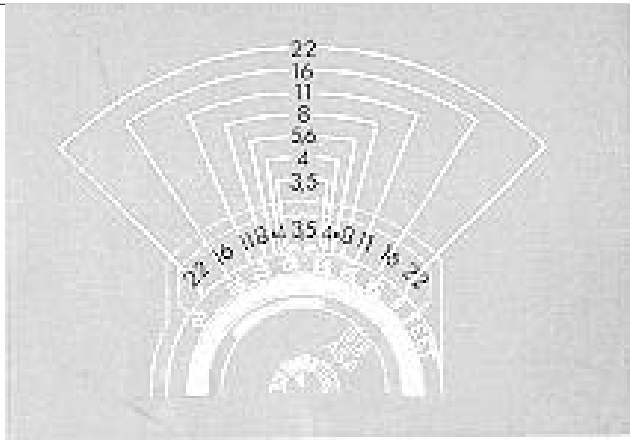
To insert: place in socket and push back against spring until it can be snapped down into place.

Depth of Field

Most pictures subjects require that acceptable sharpness extend somewhat before and behind the exact distance focused on. Landscapes, for instance, require considerable "depth of field". Two factors influence the extent of the sharp zone: distance actually focused on and diaphragm opening. In contrast to close-up focusing the sharp zone is many times greater when the lens is focused on long distances. In any case, however, the sharp zone of the picture may be increased considerably by stopping down the diaphragm.

To review: (1) the depth of field increase with the taking distance and (2) the depth of field increased when stopping down. As a practical rule the second alternative is preferable and only in emergency cases should the taking distance be increased because of loss in image size.

The extent of the depth of field at any distance may be read off the focusing knob.



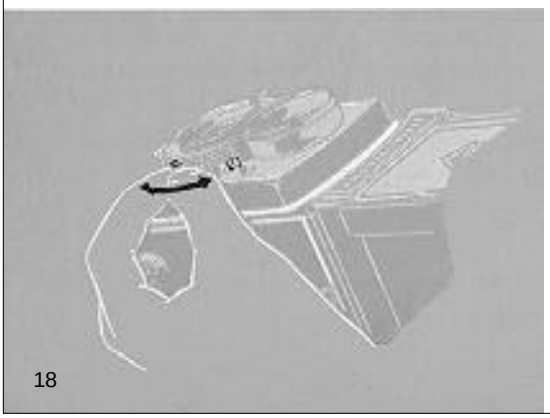
Depth of Field Scale

On and next to the focusing knob two scales are visible: the movable focusing scale with figures indicating feet [or meters] and the non-movable diaphragm scale. Together, these comprise the depth of field indicator. The diaphragm values, which are arranged symmetrically in pairs on both sides of the central focusing point indicate the limits of the sharp focusing range at the various settings. The diaphragm opening at 3.5 is represented by the white center area and 5.6 by a dot.

Focusing

Focus the Rolleicord by turning the focusing knob, at the same time critically observing the sharpness of the ground glass screen image. The footage scale serves also to indicate the depth of field, a matter which need not concern you too much at first.
The magnifier facilitates the most critical focusing.

Focus so that the greatest degree of sharpness prevails at the main subject distance



The Diaphragm

The diaphragm controls the amount of light passing through the lens. It has a double effect:

Stopping down
i n c r e a s e s the depth of field and
r e d u c e s the effective amount of light

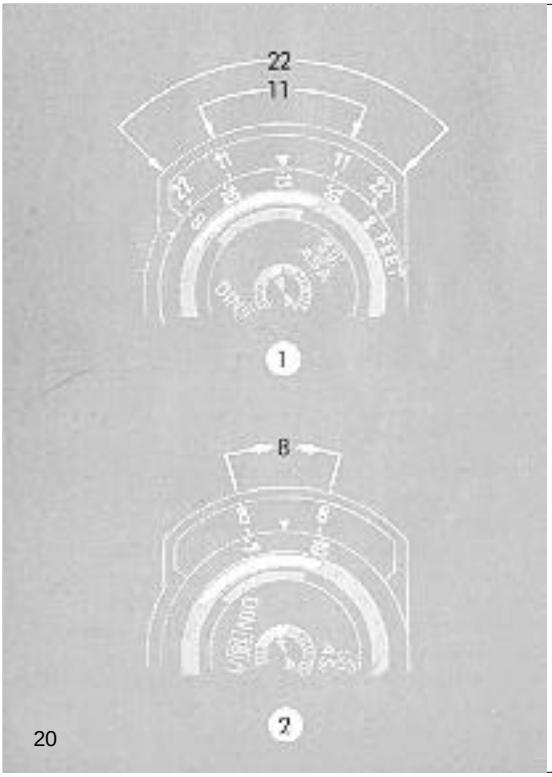
Therefore, the exposure must be increased correspond-
ingly at smaller diaphragm openings. The following table gives the ratio of exposure at different openings.

Diaphragm	3.5	4	5.6	8	11	16	22
Exposure	3/4	1	2	4	8	16	32

Notice that each succeeding smaller stop requires exactly double the exposure of the preceding one. Only exception: the relation between f:3.5 and f:4 (see page 26).

The diaphragm scale itself is easily seen in the peep window to the left of the lens. The dot before f:3.5 indicates the position for f:4.

Setting of Diaphragm: by means of the diaphragm lever



In Practice

After focusing, the near and far limits of the depth of field may be read off directly below the pair of figures indicating the diaphragm opening chosen.

Sharp focus extends throughout the area bracketed by the marks representing the selected diaphragm opening

1. Example: focusing to 15 ft with diaphragm opening 8 gives a depth of field from 10 ft 30 30 ft approximately, focusing to 10 ft with diaphragm opening f:22 gives on the other hand a depth of field from 8 ft to 00 approximately. (Stopping down improves the depth of field).
Considerable stopping down necessitates greatly increased exposure time. To obtain depth of field with the largest possible diaphragm opening, a different method of focusing must be employed.

2. Example: the subject requires sharpness from 7 ft to 10 ft. (Other distances, if unknown, can be read directly off the scale after focusing separately to the limits required). Procedure: the focusing knob is turned until both footage values are located opposite identical diaphragm openings, and in this way the most favorable diaphragm opening is obtained, in this case f:8.

Depth of Field Table (distance in feet)

Diaphragm	3.5	4	5.6	8	11	16	22
∞	141' - ∞	86' - ∞	61' - ∞	43' - ∞	31'4" - ∞	21'6" - ∞	15'7" - ∞
60'	42' - 105'	35' - 198'	30'3" - ∞	25' - ∞	20'7" - ∞	15'10" - ∞	12'4" - ∞
30'	24'9" - 38'	22'3 - 46'	20'2" - 59'	17'8" - 99'	15'4" - ∞	12'6" - ∞	10'3" - ∞
20'	17'6" - 23'4"	16'3" - 26'	15'1" - 20'8"	13'8" - 37'	12'2" - 55'	10'4" - 290'	8'9" - ∞
15'	24'9" - 38'	12'9" - 18'2"	12'1" - 19'10"	11'2" - 23'	10' - 29'8"	8'10" - 50'	7'8" - 350'
12'	10'6" - 13'11"	10'6" - 13'11"	10' - 14'8"	9'5" - 16'8"	8'8" - 19'6"	7'8" - 27'1"	6'10" - 52'
10'	9' - 11'5"	9' - 11'5"	8'7" - 12'1"	8'2" - 13'2"	7'7" - 14'10"	6'10" - 19'	6'1" - 27'5"
8'	7'7" - 8'6"	7'5" - 8'10"	7'2" - 9'2"	6'10" - 9'9"	6'6" - 10'7"	6' - 12'5"	5'5" - 15'8"
7'	6'8" - 7'4"	6'6" - 7'7"	6'5" - 7'10"	6'1" - 8'3"	5'9" - 8'10"	5'5" - 10'1"	4'12" - 12'1"
6'	5'9" - 6'3"	5'8" - 6'5"	5'6" - 6'7"	5'4" - 6'11"	5'2" - 7'4"	4'9-1/2" - 8'1"	4'5-1/2" - 9'4"
5'	4'10-1/8" - 5'2"	4'9" - 5'3"	4'7-5/8" - 5'5"	4'6-3/8" - 5'7"	4'4-1/2" - 5'10"	4'1-5/8" - 6'4"	3'10-3/4" - 7'1"
4'	3'10-1/8" - 4'2"	3'10-1/8" - 4'2"	3'9-3/8" - 4'2-7/8"	3'8-1/4" - 4'4-1/4"	3'7-1/4" - 4'6"	3'5-3/8" - 4'9-3/8"	3'3-3/8" - 5'2"
3.5'	3'5-1/8" - 3'6-7/8"	3'4-5/8" - 3'8-1/2"	3'4" - 3'8-1/8"	3'3-1/4" - 3'9-1/8"	3'2-3/8" - 3'10-1/2"	3'1" - 4'0-7/8"	2'11-3/8" - 4'4-1/8"
3'	2'11-3/8" - 3'0-5/8"	2'11" - 3'1"	2'10-1/2" - 3'1-1/2"	2'10" - 3'2-1/4"	2'9-3/8" - 3'3-1/8"	2'8-1/4" - 3'4-3/4"	2'7-1/8" - 3'6-7/8"
Diaphragm	3.5	4	5.6	8	11	16	22

Taking distance (in feet)

Speed of Moving Subjects and Shutter Speeds

	3 mph	6 mph	12 mph	30 mph	60 mph	120 mph
Example	Pedestrians	Runners Moving air	Bicycles Windy	Light Athletics Stormy Surf	Automobiles Railway Trains Racing	Motor Racing

Distance (feet)																	Distance (feet)
120		1/30	1/60	1/30	1/60	1/125	1/60	1/125	1/250	1/125	1/250	1/500	1/250	1/500		1/500	150
45	1/30	1/60	1/125	1/60	1/125	1/250	1/125	1/250	1/500	1/250	1/500		1/500				45
24	1/60	1/125	1/250	1/125	1/250	1/500	1/250	1/500		1/500							24
12	1/125	1/250	1/500	1/250	1/500		1/500										12

Moving Objects require short shutter speeds in order to be reproduced sharply. For this purpose the table contains computed minimum values, depending on the factors: speed, distance and direction.

Taking distance: the yard column on the left stands for sufficient sharpness (f/4000), the yard column on the right for increased sharpness (f/2000). In spite of these normally correct figures, it is often possible in actual photography to use longer shutter speeds. This is because the eye interprets slight unsharpness as giving an added impression of speed.

Long arrow = direction of movement.

A short arrow = taking direction (→ up to 10°, ↗ up to 30° and ↑ up to 90° to the direction of movement.

The Depth of Field Table

Since the sharp zone in the picture does not end abruptly, but gradually changes to something less sharp, it is generally sufficient to read the depth of field in round figures. With this in mind the scale on the focusing knob has been calibrated for quick and practical use.

If exact figures are desired, these may be found in the table on page 21.

For normal use the upper of the double row of diaphragm figures is used as in the case when on enlargement is to be made later from the entire 2-$^1/_4$ x 2-$^1/_4$ negative. (These diaphragm openings are based on a circle of confusion of 1/1400 of the focal length.)

One the other hand if enlargements are to be made from a small portion of the negative (or Rolleikin negatives), it is advisable to go by the lower row of diaphragm openings (circle of confusion = f/2000).

Explanation: the degree of sharpness required from a negative is exclusively dependent on the magnification of the prospective enlargement and its subsequent viewing distance.

In order to obtain a correct perspective impression at 10" (a comfortable viewing distance) a whole Rollei negative would have to be enlarged 3.3 x to $7^1/_2$ x $7^1/_2$". Enlargements of this size, viewed at 10", determine the basis for the minimum acceptable sharpness. With this in mind the size of the circle of confusion is computed and the limits of the depth of field ascertained. Negatives made in this way will permit enlargements also to larger sizes, when still retaining the same impression of sharpness. This is because the viewing distance is always correspondingly increased.

With enlargements from portions of Rollei negatives or from Rolleikin negatives, the requirements with regard to sharpness are more critical. In this case depth of field is calculated using a smaller circle of confusion. In practical use the required depth is obtained through the use of a smaller diaphragm opening. The effectiveness of the scale on the camera itself may be extended in the same manner merely by using the next smaller diaphragm opening than the one indicated for the desired zone.

If enlargements of very great size are to be made, use a diaphragm opening two stops small than the one indicated.

	Tripod Pictures:					Hand-Held Pictures:				
Time Exposure	Slow Speeds					Fast Speeds				
B	1	1/2	1/4	1/8	1/15	1/30	1/60	1/125	1/250	1/500

The Shutter Speed

The single lever Synchro-Compur shutter is a between the lens shutter with combined lever for tensioning and releasing, employing the above mentioned speeds. 1/60th second represents the most commonly used instantaneous shutter speed, with little risk of camera movement. shutter speeds longer than 1/30th second are most advisedly used only with a tripod. To minimize or avoid unsharpness due to subject movement: see table page 23.

The shutter speed values appear in the indicator window to the right above the taking lens. Read them as denom-inators of the fraction values, i.e., 30=1/30 second.

Intermediate scale settings between engraved values are not possible. Because of the shutter speed diaphragm coupling it is better to set the shutter speed first, before the diaphragm opening, to avoid unintentional change of the diaphragm's position.

Setting the shutter speeds: by means of the shutter speed lever (1)(a). Watch diaphragm coupling!

The Light Value

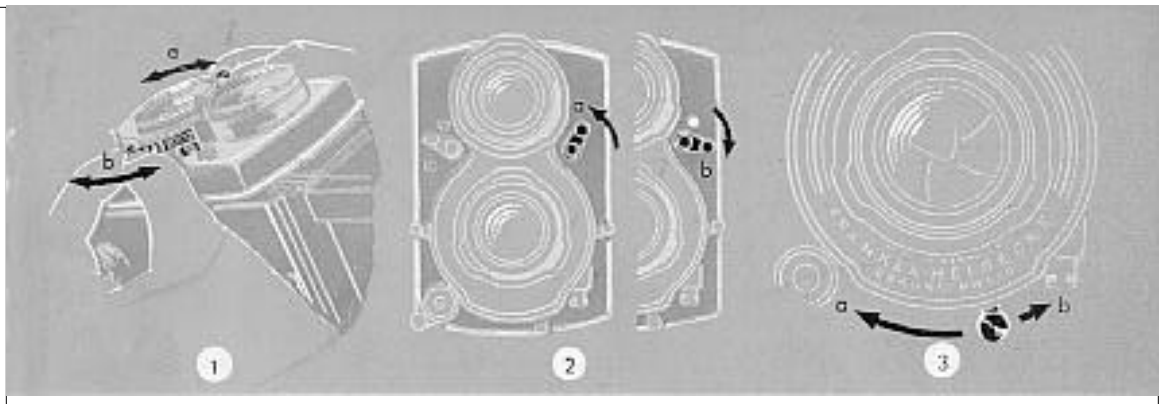
is indicated by the movable mark on the light value scale. For details on use of the light value system: see page 26.

Setting the Light Value: Adjust shutter speed lever (1)(a) and diaphragm lever (1)(b) at the same time. To change shutter speed and diaphragm combination, while maintaining same light value: Move shutter speed lever (1)(a) only.

The Double Exposure Prevention Lock is engaged with the lever in the upper position (2)(a) and is disengaged in the lower position (2)(b). When released, the red mark (otherwise covered) acts as a warning signal: "Beware of unwanted double exposure!"

Engage the lock when using roll film. **Disengage** when using Rolleikin 2, plate adapter back or when making intentional double exposures (p. 10).

Re-engage the lock after completing a double or multiple exposure, before re-tensioning shutter.



Tensioning and Releasing

The shutter lever serves alternately as both cocking and releasing lever. A cable release or the Rolleicord accessory body release may also be used.

Tensioning: move lever to the right as far as it will go (3)(a) and then back to original position.

Releasing: gently move lever to left until shutter click is heard (3)(b).

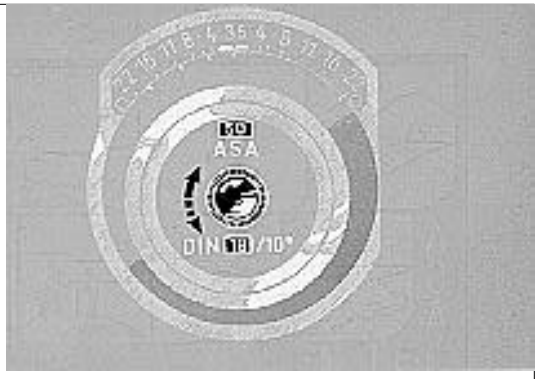
Time Exposures: set shutter speed control to B and move shutter lever to left (3)(b), holding for required time. Releasing the lever closes the shutter. To avoid camera movement during time exposures, use a locking type cable release.

The shutter and self-timer may be left cocked even when the camera is laid away for short periods of time without weakening the power of the springs.

The **exposure table** with its light values has been designed for use with the most often met with lighting conditions and serves to prevent serious errors. In difficult cases or for greatest accuracy, it is advisable to make use of a photo-electric exposure meter. If the meter is not calibrated for light values, shutter speed and diaphragm scales are set separately. Thus the correct light value will be indirectly ascertained and changes to other combinations may be easily and quickly made in the previously described manner.

General Exposure Rule: It is not always possible to pair a sufficiently fast shutter speed (to minimize effect of subject motion) with a small diaphragm opening (for greater depth of field). Obviously a compromise is required and it would be well to remember that under exposure results in hopelessly lost shadow detail, whereas over exposure may be compensated for a great extent by proper processing. Therefore, a good general rule for exposure is:

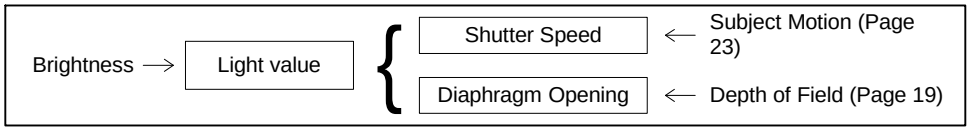
Always expose for the **shadows**,
rather a bit **more** than too little!



Film Speed Reminder ASA/DIN

So that one may know at all times the speed of the film in the camera, a simple reminder, showing both the ASA and DIN speeds is located in the outer part of the focusing knob. This is especially valuable when frequent changes of film material are mode. Values range from 8 to 160 ASA and 10/10 to 23/10o DIN.

Setting the Film Remainder: Press knob in center of disk and turn to desired value.



Exposure and Light Value

Correct exposure is dependent upon existing illumination (more exactly: subject brightness). The light value indicates the correct exposure. A reading is taken from the exposure table or a photo-electric exposure meter set for the proper film speed and then transposed to the light value scale of the camera. The shutter speed and diaphragm opening relationship are thus adjusted at once for the correct exposure.

This correct relationship between the shutter speed and diaphragm opening is automatically maintained by the coupling mechanism even when another speed diaphragm combination is sought to obtain a certain depth of field (see table). For this only the speed lever is employ-ed. Thus it is possible the quickly choose the most suitable of the possible combinations, without calculations and without changing the basic required exposure.

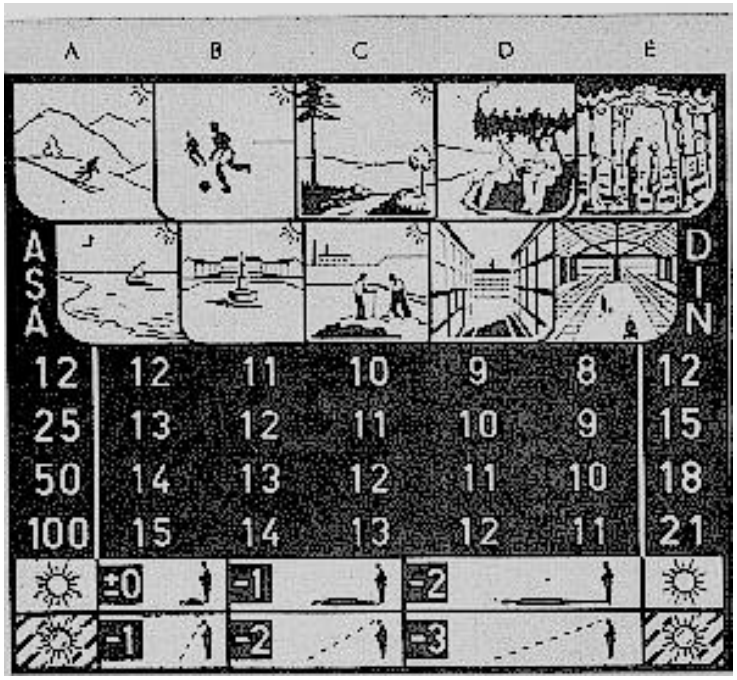
The light values 13 to 9 permit a choice from six shutter speed and diaphragm opening combinations, ranging from f:4 to f:22, for example, light value 13:

Shutter Speeds	1/500	1/250	1/125	1/60	1/30	1/15
Diaphragm Opening	4	5.6	8	11	16	22

If the "B" setting appears when choosing the shutter speed diaphragm combination it will indicate that double the next previous setting is required, or 2 seconds. Exposure time is doubled for each smaller diaphragm opening. For example, light value 6:

Shutter Speeds	1/4	1/2	1	(2)	(4)	(8)
Diaphragm Opening	4	5.6	8	11	16	22

Intermediate values may be used on the light value scale. In such cases between figure diaphragm positions will result, although automatic coupling in the proper relationship will still be maintained. f:3.5 is itself an example of an intermediate stop, positioned between f:2.8 and f:4 of the international diaphragm scale.



Explanations of the Picture Examples:

A
High mountains (snow) without foreground. Open beach.

B
Sports scenes. Bright streets and squares, open landscapes

C
Landscapes with foreground. Groups in open air.

D
Groups in shade. Street scenes with shade.

E
Groups under trees, slightly shaded. Groups in glass roofed halls.

The Exposure Table

Subject brightness is easily judged and classified by means of the five standard lighting conditions represented by two illustrations each at the top of the table.

Film speed is indicated at the left by ASA figures and at the right by 1/10° DIN values.

Light value is found where brightness and film speed columns cross.

Light value adjustment, due to overcast sky or when sun is lower in the sky, is made by use of lower scale. Upper scale: full sunshine -- lower scale: overcast sky. The length and intensity of your own body's shadow will give some idea of light conditions. The ability to estimate and choose the correct light value for various lighting conditions and time of day will soon come when you begin working on sunny and cloudy days.

Example: Color film 25 ASA (15/10° DIN), landscape with foreground, sunny, noontime (shadows short, no light value adjustment): light value 11. Available speed diaphragm combinations: 1/125 - f:4, 1/60-f:5.6, etc. Same subject in the afternoon, longer shadows, would require adjusted value, perhaps 11-1 = 10.

Speed of Photographic Emulsions
(Comparison values approximated)

Relative exposure	DIN	Scheiner (Europe)	ASA (BS)	General Electric	Weston
8	7/10	18	4	4.5	3
7	8/10	19	5	----	4
5	9/10	20	6	7.5	5
4	10/10	21	8	9	6
3.3	11/10	22	10	12	8
2.7	12/10	23	12	15	10
2	13/10	24	16	18	12
1.7	14/10	25	20	24	16
1.3	15/10	26	25	30	20
1	16/10	27	32	36	24
0.8	17/10	28	40	48	32
0.67	18/10	29	50	60	40
0.5	19/10	30	64	75	50
0.4	20/10	31	80	100	64
0.33	21/10	32	100	120	80
0.25	22/10	----	125	150	100
0.2	23/10	----	160	200	125
0.17	24/10	----	200	250	160

The characteristics of the different rating systems do no permit a direct mathematical conversion. However, the approximate comparison values of the table offer sufficient information of most practical purposes.

III. F L A S H L I G H T T E C H N I Q U E

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 Rolleicord 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** (2) presents the simplest type of contact (zero-delay). It is required for zero-delay electronic flash units (without delay) and a few flash lamps.

The **M-contact** (3) means fully synchronization. With 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 second. 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 Rolleicord.

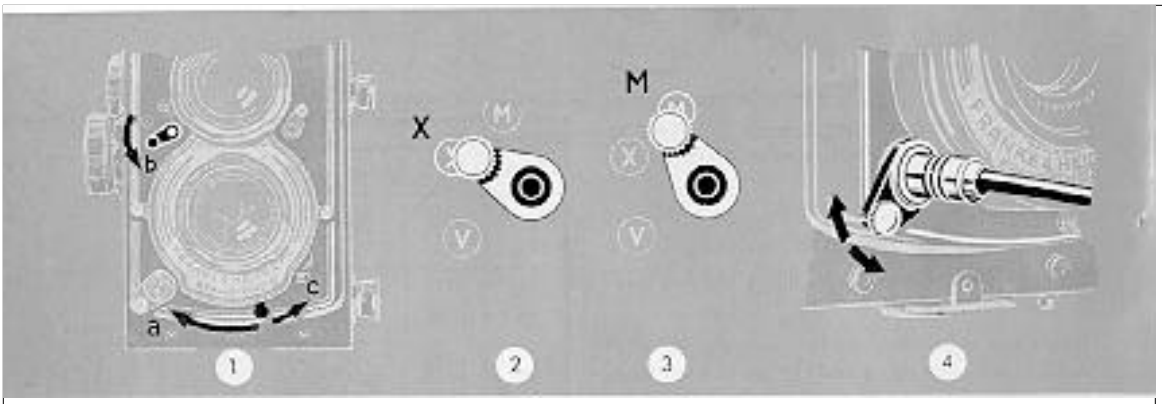
The selection of flash lamp-type depends on the light output required by the subject. Many makes are available in three groups (normal, medium and high light output). The selection is dependent on the taking conditions, especially as to whether a room of shallow or great depth is to be illuminated.

Selection of the 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 32 contains the necessary information and the permissible shutter speeds.

Use: The flash attachment is connected to the camera by means of the flash cable, plugging into the special socket provided therefor.

Move the Synchro lever to X (2) or M (3).

To release the flash cord plug: unlock by swinging locking lever (4).



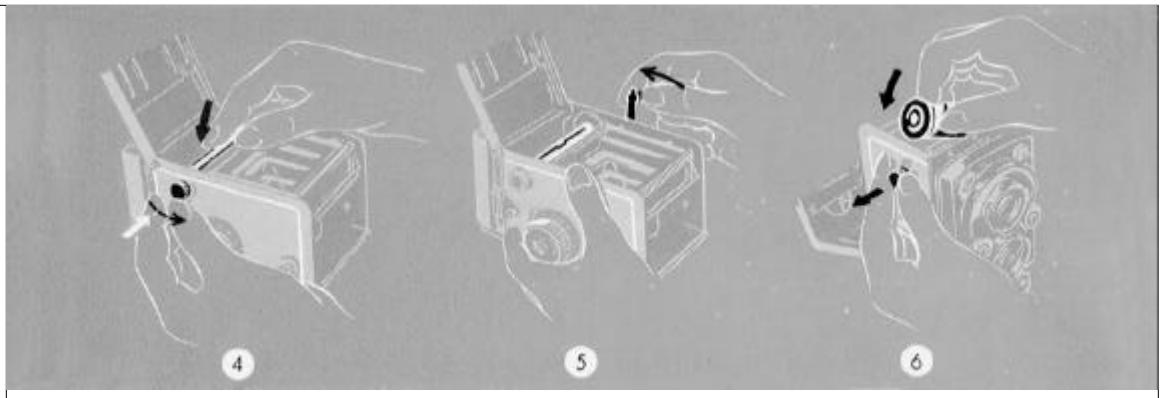
Self-timer

When using the self-timer, approximately ten seconds will elapse before the shutter is released. All speeds, 1 to 1/500th second may be used, but "B" setting cannot be used. Cocking of the self-timer mechanism is possible only after shutter is tensioned and is accomplished by moving Synchro lever to V (1)(b). Shorter delays of less than ten seconds may be obtained by setting the Synchro lever to an intermediate position between X and V. After releasing the shutter the lever immediately snaps back to X (2). This indicates that the self-timer mechanism is running and also shows that the X setting is the only possible one for self-timer flash shots; see page 35. Self-timer flash exposures must be calculated for X setting since M-contact cannot be used.

To Use: cock shutter (1)(a), set Synchro lever to V (1)(b) and release (1)(c).

Flash Contact and Permissible Shutter Speeds

FLASH LIGHT SOURCE Make	Type	Contact	Shutter Speed: Fastest / Recommended / Slowest	
I. Electronic Flash	Without Relay (1/2000)	X	1/500 **1/250**	1
II. Flash Lamps				
General Electric Westinghouse	SM (1/200)	X	1/60 **1/60**	1
Sylvania	SF (1/200)			
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)			
Osram	S2	M	1/500 **1/30**	1
	S0, S1			
Philips (Mazda)	Pf 3 N, PF 14, PF 25, PF 56	M	1/500 **1/60**	1
General Electric Westinghouse	5, 11, 22			
West, Japan	0, 3, 5, 11, 22			
Sylvania	Press 25, 40, 0, Bantam 8	M	1/250 **1/60**	1
	2			
Philips (Mazda)	PF 110	M	1/60 **1/30**	1
General Electric Westinghouse	50			
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

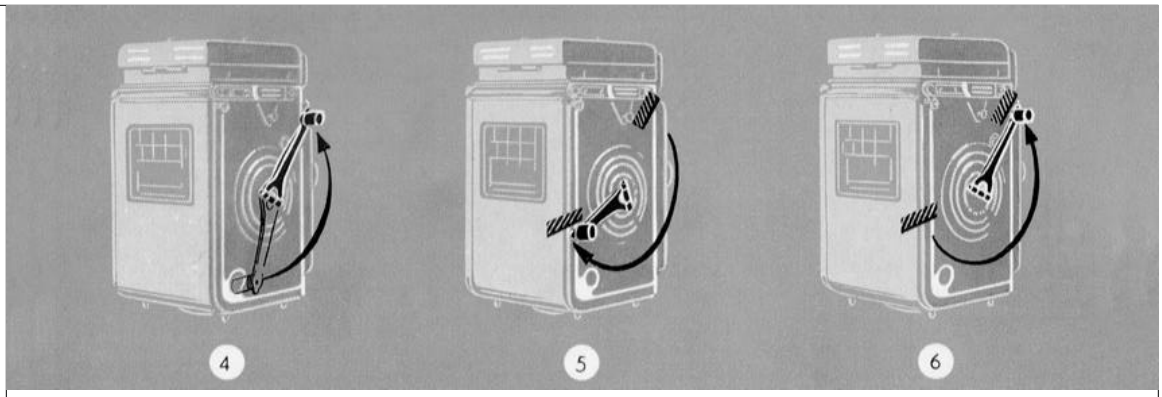


The pulled out upper knob (take-up-spool) may be held in that position by turning it slightly; turning it a little more permits it to snap back by itself.

To Insert the Empty Spool: first fit the spool over the winding key on the right (crank side) and pull out the guide knob (3). Push the spool down on the left applying slight pressure, so that the knob may snap back into place fully (4). It is then necessary to turn the crank until the long slot in the empty spool comes uppermost (5).

Note: when using the adapter the empty 120 spool is removed from the camera. However, it must be handily retained especially on trips, since otherwise a new roll-film cannot be loaded into the camera.

To Insert a Full Film Spool: in the same way as applies to the take-up spool (6). The pointed end of the backing paper must point in the direction of the take-up-spool chamber, so that the colored side of the backing paper remains on the outside.



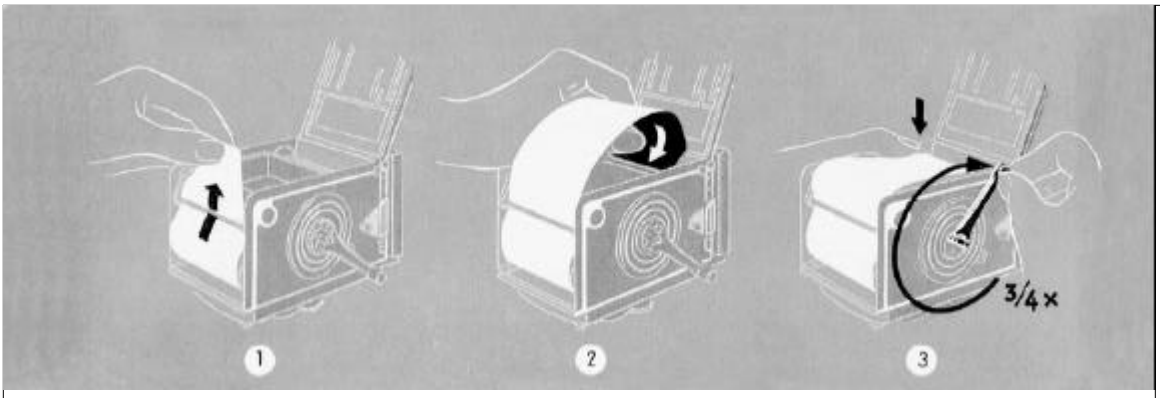
Swing Out crank (4),
turn it until it stops with one continuous swing (5) and then back again until the next stop (6)!

It is now locked, until the automatically cocked shutter
is released. The simple rule then reads:

I f the crank can be turned, it must be turned — once in each direction until it stops, until it locks!

When advancing the film to exposure No. 1 some 4 to 5 c o m p l e t e crank turns are required. During the last turn a slight resistance of the mechanism must be overcome as the counter moves from 0 to 1. If it should happen that the crank reaches starting position when it stops, reverse direction one full turn, so that it locks!

During continued film transport the amount of crank travel decreases gradually to about a half turn.



Threading the Film (Paper Leader)

After inserting the new film-spool tear the tape seal open and remove it.

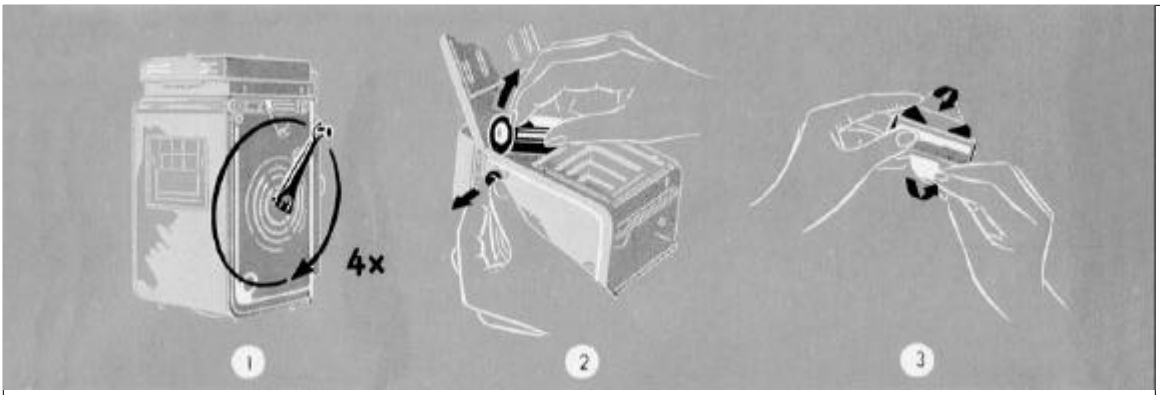
1. Thread the beginning of the backing paper **through the rollers** of the film feeler mechanism (important!) and draw it up to the take-up spool, colored and printed side outwards (1).

2. Push the paper leader through the long slot of the take-up spool as far as it goes (2).

3. Tighten the backing paper by one spool turn (= approximately 3/4 crank turn), making sure that the paper is wound up properly on the take-up spool (3). Close back (with the film pressure plate adjusted according to instructions).

Film Transport

The correct positioning of the film according to the first and following numbers of the exposure counter is accomplished exclusively by the crank. The correct operation of this is governed by stops



When making exposures in rapid succession it is unnecessary to fold down the crank each time, It remains locked in its starting position, ready for tile next film advance, with a slight pressure of the thumb keeping it against its stop.

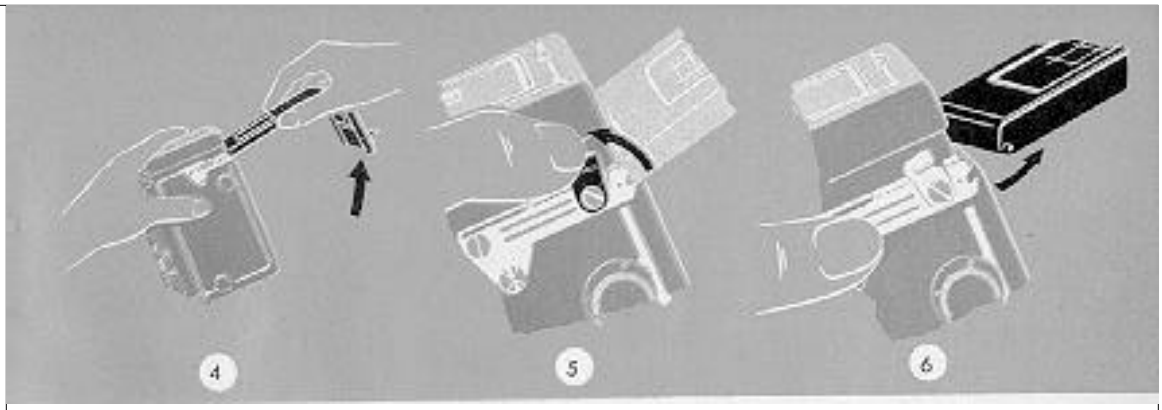
If longer intervals occur between exposures the question could arise, has the film already been advanced and the shutter cocked? The crank gives the answer immediately:

Only if locked is it “ready to shoot” l

To Remove the Film

After the 12th and last exposure four complete crank turns are enough to wind off the rest of the backing paper (1).

To Remove: open the back in the shade, pull out upper spool knob and remove the film from the same side (2). Fold under a good portion of the backing paper (for easier opening when developing) and seal (3). Put the exposed film back into the light-proof protective cover of the original package!



The back of the camera is generally removed only when placed by the plate adapter.

To Detach: open back wide (4) and swing locking lever on the left hand back hinge upward (5). Remove back from hinge on this side (6).

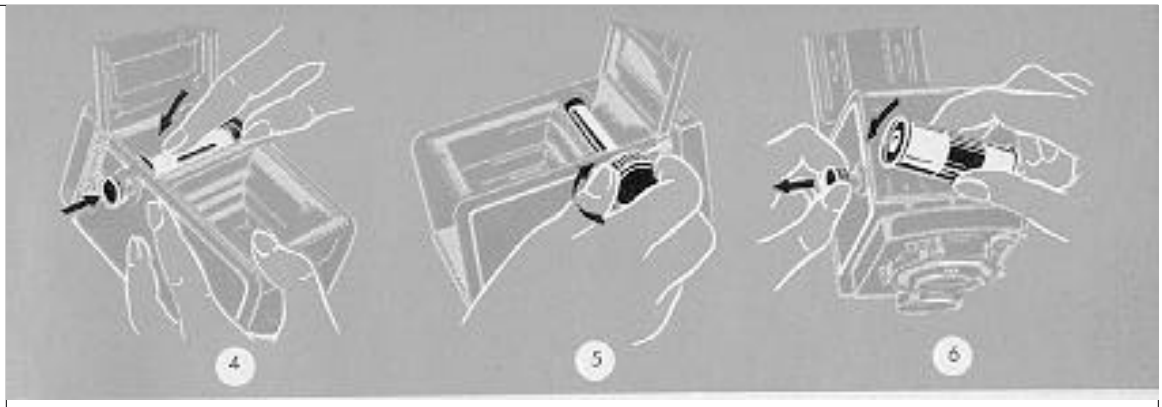
To Attach: fit back first to right hand hinge, then to the left hand (slotted) hinge, and lock.

The plate back adapter is also attached to the camera in this manner.

Protect the open camera against prevailing dust and dirt and clean it occasionally with a soft camel's hair brush!

Never change film in direct sunlight, utilize at least your own body's shadow!

The camera may be attached to a **tripod** by means of the threaded socket on the bottom. Caution: the length of the tripod screw must not exceed 3/16". If longer, employ a washer or spacer to avoid damage to camera. If your tripod screw is too small for the camera's threaded socket obtain a tripod reducing bushing from a larger camera store.

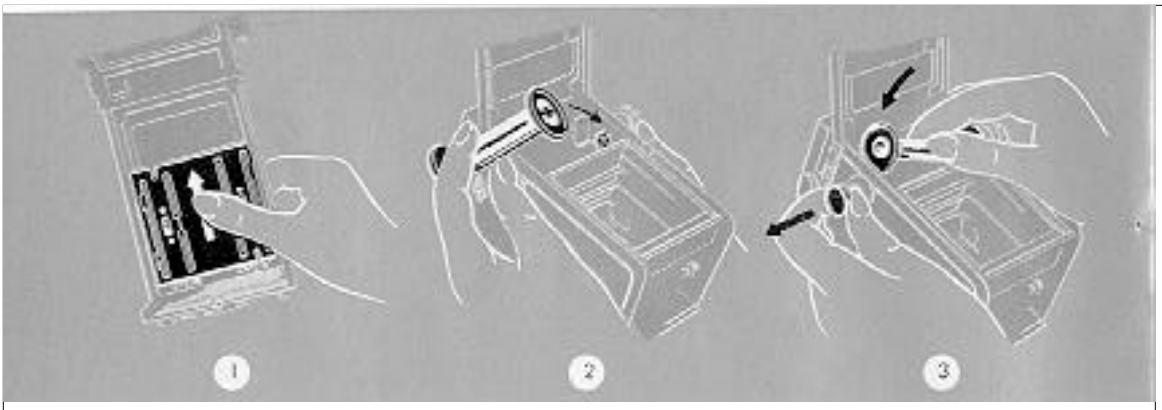


This retracts the inner plug and releases spool, which pops up due to spring pressure. Care must be taken to avoid pulling out the spool knobs and thus dislocating film spool be fore all exposures have been made and film fully rewound.

To Insert the Empty Spool: first fit the spool over the winding key on the right (winding knob side) and pull out the take-up spool knob (3). Push spool down on the left so that the knob may snap back into place fully (4). It is then necessary to turn the winding knob until the long slot in the empty spool comes uppermost (5).

Note: when using the plate adapter the empty 120 spool is removed from the camera. However, it must be handily retained especially on trips, since otherwise a new roll film cannot be loaded into the camera.

To Insert a Full Film Spool: in the same way as applies to the take-up spool (6). The pointed end of the backing paper must point in the direction of the take-up spool chamber, so that the colored side of the backing paper remains on the outside.



Film Pressure Plate Must be Positioned Correctly!

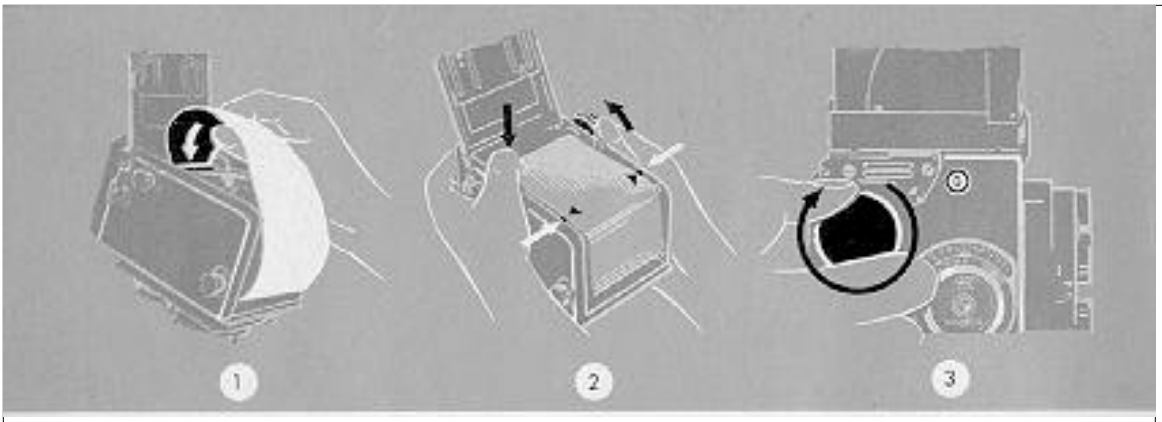
When 120 roll film is employed, the inscription $2^1/_4$ x $2^1/_4$" must be visible below the film pressure plate. When changing from 120 roll film to 35mm film, or the reverse, an adjustment must be made according to the film type being used.

To adjust the film pressure plate (1): press the plate against the back and push it up or down until it stops. When released it must spring forward completely into the normal plane!

Inserting the Film Spool

In the factory-new camera the empty spool (take-up spool) is already in position. After removal of the exposed film the just emptied spool becomes a take-up spool, and must be transferred to the upper spool-chamber. The end with the slot goes to the right engaging the winding key of the film transport mechanism (2).

Film spools are held on either side by suitable metal plugs which act as bearing surfaces. Change films by pulling out spool knob on the side of camera.



Starting the Film

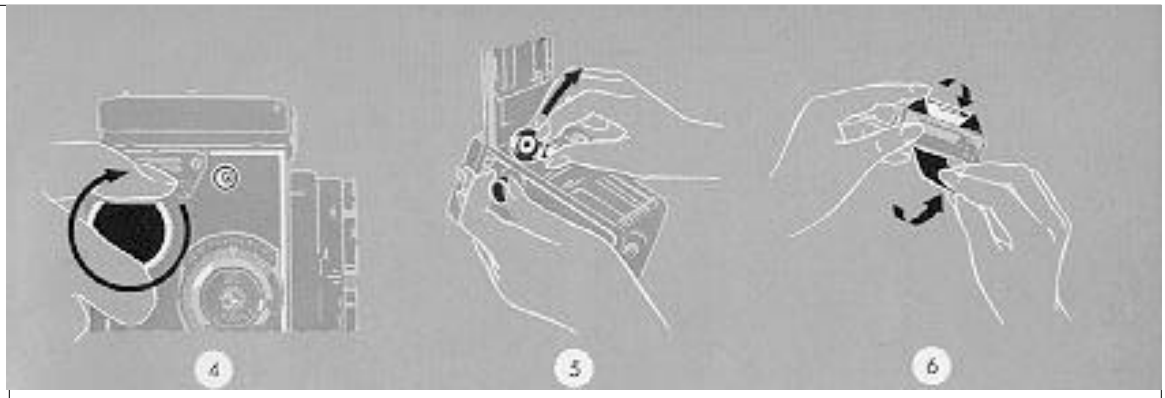
After inserting a full film spool break the seal and remove it.

1. Pull the beginning of the backing paper up to the take-up spool, printed side outwards, and insert the tapered end into the long slot of the take-up spool as far as it goes (1).

2. Wind up the backing paper by turning the film winding knob until the triangular marks (or double arrows) are in line with the read indicator marks on both sides of the film aperture (2). Check to see that film pressure plate is in correct position and wind film evenly, using thumb as a brake.

Close the back, and lock.

Engage double exposure prevention lock.



Advancing Film

Turn winding knob until it stops (3). (The shutter tensioning and release lever thereby remains in "rest" position.)

Removal of the Film

After the 12th exposure: wind off the film with some six complete revolutions of the winding knob (4).

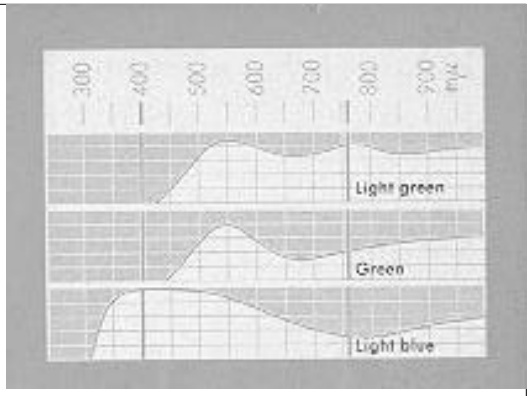
Removal: open back in shady spot, pull out take-up spool knob and lift film out from left side (5). Fold under a good portion of the backing paper (for easy opening when developing) and seal with tape (6). Put the exposed film back into the light-proof protective cover of the original package!

Never change film in direct sunlight! Utilize, at least, the shadow of your own body.

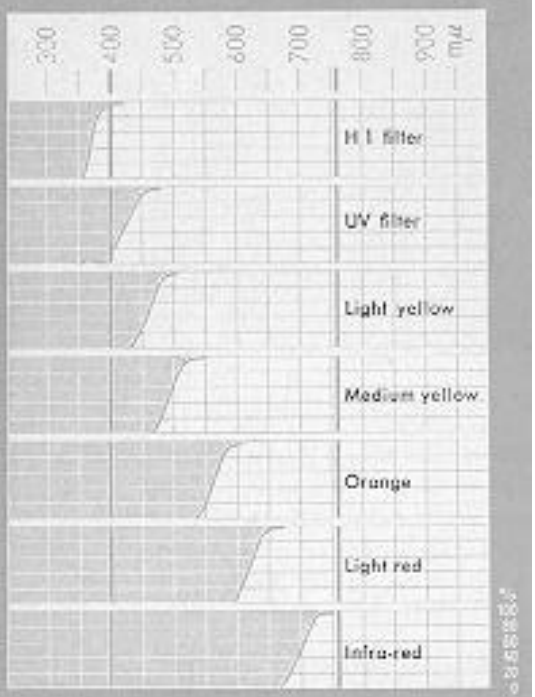
2. Haze and mist: the blue filter, useful for pictorial effects, increases hazy effect. The orange or red cut through and improve the clarity of distant views. The blue filter reduces contrast, the red or orange increases brilliance. Maximum penetration of light haze is obtained with infra-red film and infra-red filter (700 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 considerable amount of moisture in the air.

3. Sea, Beach, Mountains: strong ultra-violet rays must be absorbed through use of U.V. filter. Results will otherwise be dull. The H1 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 gives the most impressive pictures.



The filter curves show the absorption of the various Rollei filters in the spectral ranges ultra-violet, visible spectrum blue to red (approximately 400-760 mu), and infra-red. The 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 increase from 0 to 100%. While the H1 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.



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 suntanned 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.

Portraits

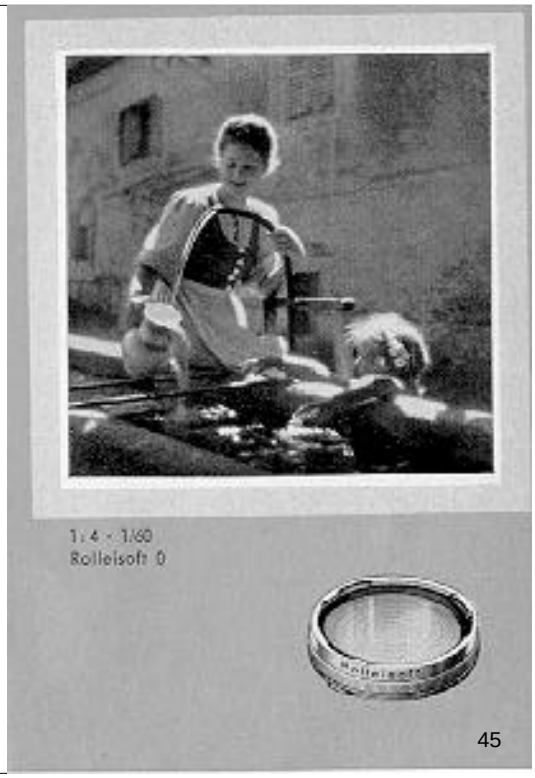
Large heads: do not work closer than 40 inches to avoid possible perspective distortion. If necessary, enlarge from a smaller section or use Rolleikin. Focus on the eyes. Use quiet, neutral colored backgrounds and do not stop down too much (f:5.6) so as to keep backgrounds from intruding. If possible, move subject away from background. Out of doors, try using sky only as 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 for 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 shadow, approximately 1/30th second. 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 "glamour": Rollei soft diffusion disk 0 or 1 (stronger) over lens. Use larger diaphragm openings and backlight for sunny effects.

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 snapshots technique outdoors and flash indoors. Low viewpoints and close-up effects are best.

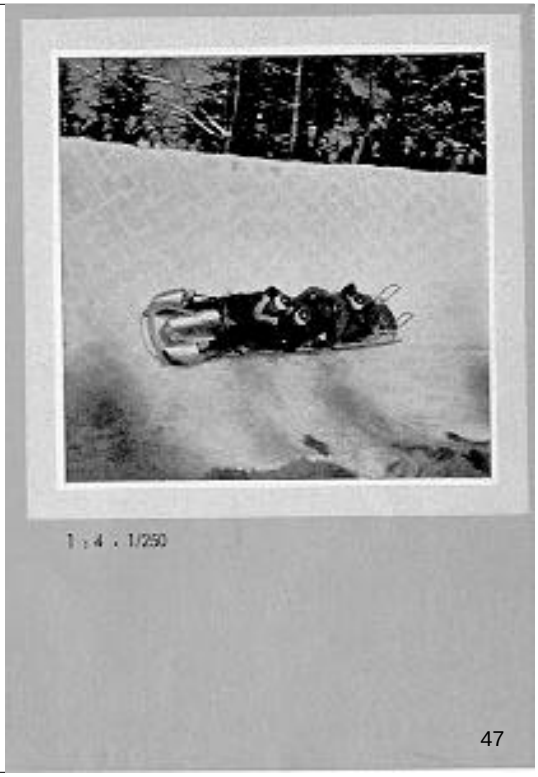
Animals

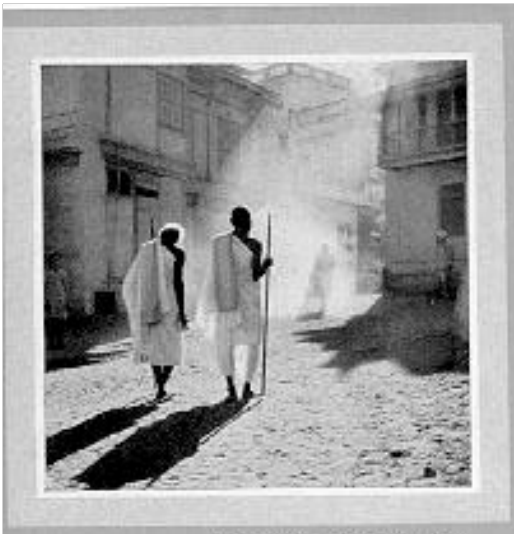
Patience, quietness and familiarity with the animal and its peculiarities are great assets. Close-up pictures are most rewarding; use portrait technique. Make use of natural light effects such as backlighting. Action pictures: use snapshot or sport technique (with flash, if needed). Rolleinars are often 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.



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 the other directions (see table page 23). If the action is very fast or takes place 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 second. 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 oval and greater film capacity.





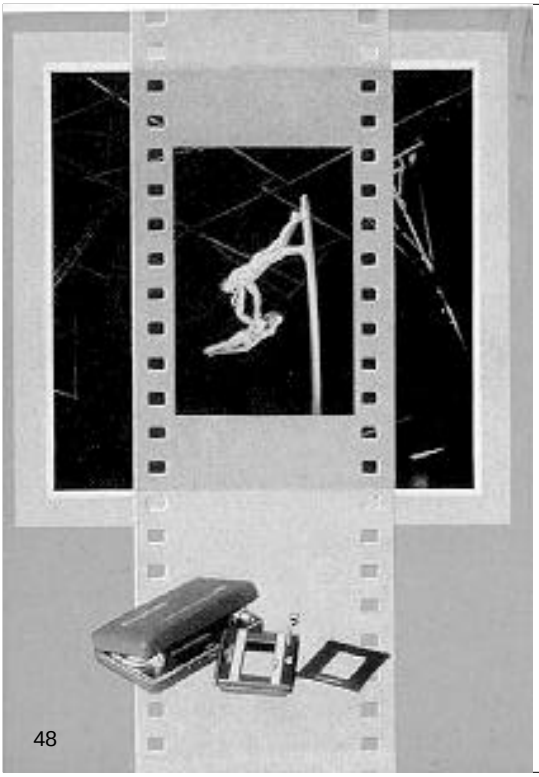
1:11 • 1/60 • filter light yellow

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 approximately 9 to 18 ft.	Medium distances approximately 13 to 33 ft.	Long distances approximately 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 on of the above settings. This snapshot technique is especially useful with the direct view finder. Variation of the values (see table, p.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 oo for snapshots of scenes. Chief uses for this technique: groups in motion, sport scenes, playing children, reportage, sports.



Theater and Music Hall

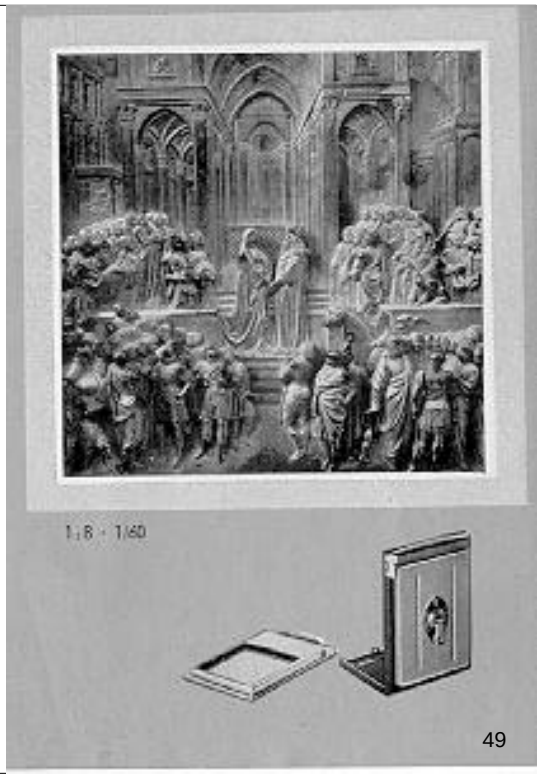
At longer distances only a section of the film is generally used hence this is a good field for using the Rolleikin. Do not depend on footlights but concentrate on spotlighted performers or features. Exposures of 1/30th second are generally adequate under the strong lights with fast pan film. to take 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 overexposure 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 Rolleinars. 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 $2^1/_4$ x $2^1/_4$ contact prints. Small objects (small machine parts, assembly pieces) may be handled similarly to copying. A spot-light can often be an additional aid in this case. Shadowless lighting effect are facilitated by placing object on suspended glass plate. Reflections from fine glassware or other highly reflecting 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.

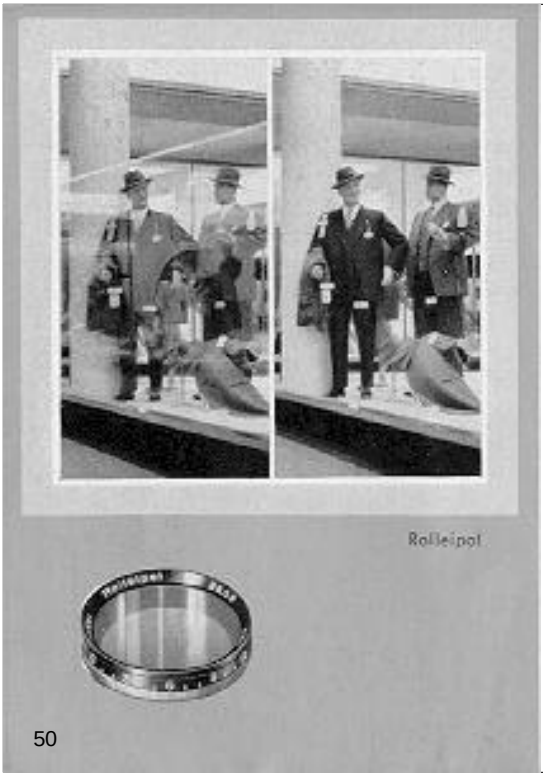


Plants

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 semicircular 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.



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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 test 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.

Pictures Through the Microscope

When a microscope is focused by someone with normal eye-sight, 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 $2^1/_4 \times 2^1/_4$ 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.

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Care of the Rolleicord

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 chocks. Deep 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 Rolleicord

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 Rolleicord V

Code:	Ever Ready Case for Rolleicord V
Becor	Lens Hood
Baobe	Rollei Yellow Filter, light
Baihe	Rollei Yellow Filter, medium
Baimi	Rollei Green Filter, light
Balin	Rollei Green Filter
Baeen	Rollei UV Filter
Basky	Rollei Orange Filter
Baora	Rollei Red Filter, light
Baubi	Rollei Blue Filter, light
Babla	Rollei H 1 Filter (UV Filter for Daylight
Bahaz	Color Photography)
	Rollei Infra-Red Filter
Bafir	Rolleisoft 0
Batnu	Rolleisoft 1
Baton	Rolleipol
Batar	Rolleinar Lenses, set 1 (40-18 in.)
Bapun	Rolleipar Lens 1
Baken	Rolleinar Lenses, set 2 (20-12 in.)
Baodo	Rolleipar Lens 2
Bakdu	Leather Case containing: 1 Lens Hood,
Etcom	2 Sets of Rolleinar Lenses, 2 Rolleipar Lenses and your choice of 5 filters
	Leather Case Only
Etlee	

Code:	Leather Case containing: 1 Lens Hood
Etset	and your choice of 2 Filters
	Leather Case only
Etsof	Complete Plate Adapter Equipment
Focom	comprising: 1 Plate Adapter, 3 Slides 1 Focusing Screen Slide, 1 Leather Case for 2 Slides
	Plate Adapter
Foapt	Slide
Fosli	Cut-Film Sheath
Fopla	Leather Case for 2 Slides
Focas	Focusing Screen Slide
Fofoc	Rolleikin 2
Rolki	Panorama Head
Foead	Extension Hood
Fohod	Rolleigrid Lens
Fogri	Body Release
Corel	Rolleiflash Attachment
Basyn	Boxin Case for 1 Rolleiflash
Boxin	+ 1 Rolleiflash-Comb.
	Extension Cord for Flash-Attachment 10 ft.
Cekab	Extension Flashholder Rolleiflash-Comb.
Flaco	with Connecting Cord 80 in.
	Extension Cord for Rolleiflash-Comb. 10 ft.
Trika	Flash connecting Cord 32 in.
Blika	

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

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

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.	31 in.
Field-Size (in inches) $2^{1}/_{4}x2^{1}/_{4}$	22 x 22	$13^{3}/_{4}$ x $13^{3}/_{4}$	$8^{3}/_{4}$ x $8^{3}/_{4}$
Field-Size (in inches) Rolleikin	9 x $12^{1}/_{8}$	$5^{1}/_{2}$ 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)		$31^{1}/_{2}$	$23^{1}/_{2}$	$19^{3}/_{4}$	$15^{3}/_{4}$	5.6	8	11	16	22
Depth of Field (in inches)	from	$29^{1}/_{2}$	$22^{1}/_{2}$	$18^{7}/_{8}$						
	to	$33^{1}/_{2}$	$24^{3}/_{4}$	$20^{1}/_{2}$						
	from	$28^{3}/_{4}$	$22^{1}/_{4}$	$18^{3}/_{4}$	$15^{7}/_{8}$					
	to	$34^{1}/_{4}$	$25^{1}/_{4}$	$20^{7}/_{8}$	$16^{1}/_{2}$					
	from	28	$21^{5}/_{8}$	$18^{1}/_{8}$	15					
	to	$35^{3}/_{4}$	26	$21^{1}/_{4}$	$16^{7}/_{8}$					
	from	$26^{3}/_{4}$	$20^{7}/_{8}$	$17^{3}/_{4}$	$14^{5}/_{8}$					
	to	$38^{1}/_{4}$	$27^{1}/_{4}$	22	$17^{1}/_{4}$					
	from	$25^{1}/_{4}$	20	$16^{7}/_{8}$	$14^{1}/_{4}$					
	to	$41^{3}/_{4}$	$28^{3}/_{4}$	$23^{1}/_{4}$	$18^{1}/_{8}$					

Rolleikin

$2^{1}/_{4}x2^{1}/_{4}$

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) = f/1000. For increased sharpness further stopping down is required.

Table of Rollei Filters

The filter factors indicate average values which, however, may be changed according to the particular type and make of film used and the light conditions.

Rollei Filter	Use	Filter Factor Ortho	Filter Factor Pan
Light yellow	Landscapes, snow, clouds, Renders yellow and green lighter, blue darker.	3 x	2 x
Medium yellow		4 x	3 x
Light green	Landscapes, snow, clouds, Renders green lighter, red (complexion) and blue darker. For pan emulsions.	3 x	2 x
Green		4 x	3 x
Orange	Hazy distant views. Renders yellow-red lighter, blue darker, distant objects clearer.		3-7 x
Light red	Hazy distant views. Renders red lighter, blue-green darker. Gives stronger effects than Orange Filter.		4-10 x
Light blue	Artificial light. Renders red darker. For ultra-pan emulsions.	1.5 x	1.5 x
U V	High altitudes above 6000 feet. Seascapes. Eliminates ultra-violet rays which reduce contrast.	1.5 x	1.5 x
Infra-Red	Special filter for infra-red emulsions. Transmits dark red above 700 mu and infra-red.	*)	
H 1	UV-Filter, espeically 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 emultion used and must be determined by tests.