This manual is for reference and historical purposes, all rights reserved.
This page is copyright© by M. Butkus, NJ.
This page may not be sold or distributed without the expressed permission of the producer
I have no connection with any camera company

On-line camera manual library
This is the full text and images from the manual. This may take 3 full minutes for the PDF file to download.

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

This will allow me to continue to buy new manuals and pay their shipping costs.
It'll make you feel better, won't it?
If you use Pay Pal or wish to use your credit card,
click on the secure site on my main page.

www.orphancameras.com

ROLLEIFLEX GUIDE



ROLLEIFLEX ORIGINAL
ROLLEIFLEX BABY
ROLLEIFLEX SPORTS
ROLLEIFLEX STANDARD
ROLLEIFLEX STANDARD NEW
ROLLEIFLEX AUTOMATS
ROLLEIFLEX 2.8 - 2.8C - 2.8D
ROLLEIFLEX 4 x 4
ROLLEI 3.5E, E2, E3, F
ROLLEI 2.8E, E2, E3, F
ROLLEIFLEX T
TELE-ROLLEIFLEX
WIDE ANGLE ROLLEIFLEX
ROLLEIMAGIC I, II

CONTENTS

	Page
The Rolleiflex Camera	5
Rolleiflex Evolution	6
The 4×4 cm. Rolleiflex Models	10
Handling the Rolleiflex	12
Holding	12
Carrying	14
The Reflex Finder	14
Viewing	14
Parallax Compensation	16
Focusing	17
Shooting	18
Loading and Unloading	19
Loading	19
Unloading	22
Films and Filters	23
Black-and-White Film	23
Colour Film	24
Colour Reversal Film	26
Colour Negative Film	27
Colour Film Speeds	27
The Choice of Colour Film	28
Filters for Black-and-White	29
Filters for Colour Film	30
The Polarizing Screen	30
Exposure	31
Aperture and Speed	31
Choosing the Combination	32
Time Exposures	35
The Self-Timer	35
Using an Exposure Meter	35
Shutter Speeds and Movement	39
Aperture and Depth of Field	40
Zone Focusing	58
Flash Photography	59
How to use Flash	60
Exposure Guide Numbers	62
Camera Care in Tropical Climates	63
Facts and Figures	64
Conversion of Feet and Inches into Metric Units	64
Zone Focusing	64
Daylight Exposure Values	65
Shutter Speeds to Arrest Movement	66
Apertures with Clear Flash Bulbs	66
Apertures with Blue Flash Bulbs	67
Close-ups with $2\frac{1}{4}\times 2\frac{1}{4}$ in. Rolleis	67
Close-ups with $1\frac{5}{8}\times 1\frac{5}{8}$ in. Rolleis	67
Conversion of Film Speed Systems	68
Black-and-White Filter Data	68
Colour Correction Filters	69
Black-and-White Films	70
Colour Films	71
How to . . . What is Where?	72

www.orphancameras.com

The Green Section between pages 24 *and* 25 — *Page*

THE ROLLEIFLEX: MODEL BY MODEL

The Rolleiflex F and E Series **3**
Loading **6** – Unloading **8** – Shooting **8** – Using the Rolleiflex E Exposure Meter **10** – Installing the Exposure Meter **11** – Special Controls **11**

The Rolleiflex T **14**
Loading **14** – Unloading **16** – Shooting **16** – Using the Rolleiflex T Exposure Meter **18** – Installing the Exposure Meter **18** – Special Controls **19**

The Rollei-Magic I, II **20**
Loading **0** – Unloading **2** – Shooting **2** – Special Controls **3**

The Rolleiflex 4×4 .. .. **25**
Loading **5** – Unloading **5** – Shooting **25** – Special Controls **6**

The Rolleiflex Automat Series **29**
Loading **30** – Unloading **30** – Shooting **30** – Special Controls **34**

Early Rolleiflex Models **36**
Loading **38** – Unloading **38** – Shooting **38** – Special Controls **39**

Lens Attachments and Accessories **40**
Tele and Wide-angle Work with the Rolleiflex **40** – Close-up Work with the Rolleiflex **40** – Earlier Close-up Lens Sets **4** – Soft Focus Lenses **4** – The Lens Hood **43** – The Rolleilux **43** – Filters **43** – The Rollei Micro Adapter **44**

Viewing Accessories **45**
The Binocular Focusing Hood **45** – The Eye-level Prism Finder **45** – The Rolleigrid **45** – Rolleiclear Screen **45** – The Rolleimeter **46** – The Extension Focusing Knob **46**

Camera Cases and Holding Accessories **48**
Ever-Ready Cases **48** – The Metal Ever-Ready Case **48** – The Rolleifix Tripod Head **50** – The Pistol Grip **50** – The Panorama Head **50** – The Stereo Slide **50** – The Rollei Marin Underwater Housing **5** – The Rolleimat **5**

Alternative Picture Sizes **53**
The Rolleiflex Mask Set **53** – The Plate Adapter **53** – The Rolleikin Cine Film Adapter **54** – The Rolleikin II **54** – Installing the Release Knob **56** – Assembling the Rolleikin II **56** – Loading **56** – Film Transport **58** – Rewinding **58** – The Rolleikin I **58** – Assembling the Rolleikin I **58** – Film Loading and Transport **60** – Rewinding **60** – Early Designs of Rolleikin **62**

Some items of equipment or certain materials mentioned in this book may not be freely available in every country. Import and marketing conditions vary widely, and are outside the control of the photographic retailer.

1967 Edition
© Focal Press Ltd., 1959
Printed 1967 in Great Britain by Staples Printers Limited, Rochester, Kent

www.orphancameras.com

THE ROLLEIFLEX CAMERA

The Rolleiflex is the original rollfilm, twin-lens reflex camera design, from which virtually all other cameras of this type are derived. It takes 12 exposures $2\frac{1}{4} \times 2\frac{1}{4}$ in. (6×6 cm.) on standard 120 rollfilm or 24 exposures on 220 film with specially adapted models. A "baby Rolleiflex 4×4 cm. for 12 exposures on 127 rollfilm is also available.

Two lenses—matched for focal length—are mounted one above the other on a common panel. The upper lens projects an image of the subject via a mirror to a focusing screen in the top of the camera, while the lower one projects a similar image on to the film. The focusing screen image, therefore, shows at all times the full size picture—upright but reversed left to right—as it will appear on the film. To compensate for any parallax between the viewing and taking lens a mask is built into the viewing camera below the focusing screen.

The focusing screen on top of the camera is protected in the closed position by the folded-down finder hood. When opened, this forms a light excluding hood $2\frac{1}{2}$ in. high; it carries a magnifier for critical focusing. A frame finder for eye-level direct vision use is built into the hood.

The hood on current models is removable and can be replaced by a pentaprism, which permits eye-level focusing, showing the image upright and right-way-round.

The finder lens in all models is faster than the taking lens and cannot be stopped down. This ensures a bright focusing screen image and, having rather less depth of field than the taking lens, allows for very critical focusing.

The interior of the camera body is fitted with light baffles which effectively avoid scatter of light and enhance the brilliance of the picture.

The Rolleiflex is focused by a large focusing knob on the side of the camera. This is geared to the front panel and smoothly and simultaneously controls both lenses. A depth of field indicator is incorporated.

Current models are available with a built-in photo-electric

exposure meter which in most cases is coupled to the aperture setting.

A film type indicator is built into the film transport knob.

Film transport is effected by a crank situated on the side of the camera. It locks when the correct amount of film has been wound on to bring each new frame of film into position. A counter registers the number of exposures made.

A tripod bush is located in the centre of the camera base.

The back of the camera hinges open for the insertion and removal of films and can also be removed. It carries a substantial spring-loaded pressure plate.

Transporting the film automatically tensions the shutter. The shutter is released by a body release knob on the front of the camera. When not in use, it can be locked to prevent accidental release. The shutter cannot be released until the film has been wound on, thus preventing double exposures. To avoid blank frames, the film cannot be wound on until the previous frame has been exposed.

The shutter on most current models is a Synchro-Compur with speeds from 1 sec. to 1/500 sec. as well as B. It has built-in delayed action and is flash synchronised.

Both the taking and finder lenses together with the shutter are enclosed in a dustproof casing, which has peep windows at the top showing shutter speeds and apertures.

A wide range of accessories is available for the Rolleiflex.

Both finder and taking lens carry bayonet rings for fitting filters, close-up lenses and similar attachments.

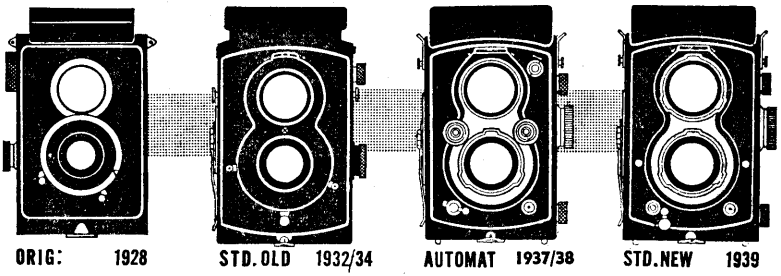
The Rolleiflex is about $5\frac{1}{2}$ in. high, $3\frac{3}{4}$ in. wide and $3\frac{3}{4}$ in. deep. Its weight is about $34\frac{1}{2}$ ozs. The body is an aluminium alloy casting.

The Rollei Magic models have a few different features which are detailed in the green pages.

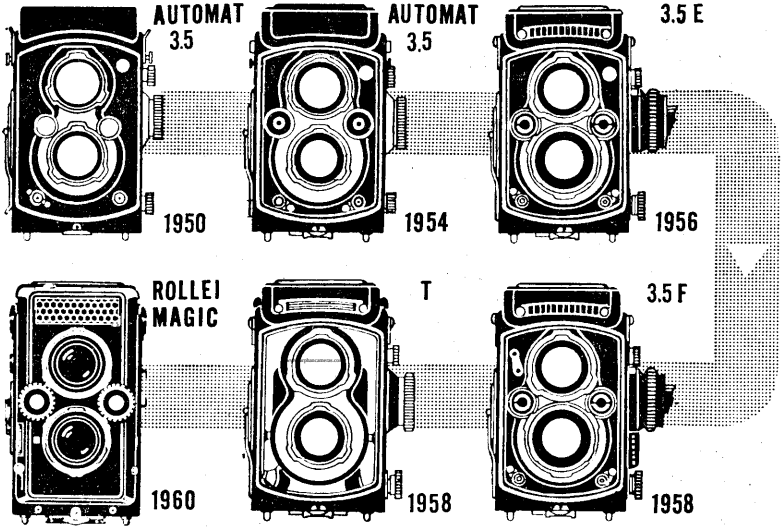
Rolleiflex Evolution

The original Rolleiflex was introduced in 1928. It took six exposures $2\frac{1}{4} \times 2\frac{1}{4}$ in. on 117 film, which is now discontinued. It can be converted to take 12 exposures $2\frac{1}{4} \times 2\frac{1}{4}$ in. on size 620 film. A film transport knob advances the film, exposures are counted in a red window. It is fitted with a 70 mm. Tessar *f* 4.5 lens in a Compur shutter (1 to 1/300 sec.

www.orphancameras.com



The first Rolleiflex of 1928 started the basic system of the twin-lens rollfilm reflex. The standard model of 1932 to 1934 already incorporated the transport crank and lenses mounted on a common panel, while the Automat from 1937 onwards had aperture and speed setting wheels and automatic loading features. The Standard New of 1939 is a simpler version of the Automat of that time.



The post-war Automat 3.5 models featured a redesigned finder hood and flash synchronised shutters. From 1954 onwards exposure value shutters were built in, and—since 1956—exposure meters. On the model 3.5F of 1958 the meter is coupled with the aperture and speed setting. In the same year a simpler model T appeared, while the Rollei Magic of 1960 has the exposure meter coupled with a fully programmed shutter for automatic control.

B, T). The finder hood has a built-in mirror for eye-level reflex focusing. Parallax is compensated by reduction of the reflex picture. The taking lens mount diameter, 24 mm. In 1929 the same camera, but with a 75 mm. Tessar *f* 3.8 was marketed; the finder lens aperture is *f* 3.1.

Rolleiflex Standard of 1932 has a 75 mm. Tessar *f* 4.5 or *f* 3.8 lens in Compur shutter (1 to 1/300 sec., B and T). The lens mount diameter is 28.5 mm. Finder lens aperture is *f* 3.1. Finder hood has a frame finder. Parallax is compensated by reduction of the reflex picture. Takes 12 exposures on 120 or 20 film. Film transport by lever crank. First exposure set by red window, thereafter by automatic counter. In 1934, the same model appeared with a 75 mm. Tessar *f* 3.5 and Compur Rapid shutter to 1/500 sec. B and T.

The Rolleiflex Automat 1937 has a 75 mm. Tessar *f* 3.5 in Compur Rapid shutter (1 to 1/500 sec., B, but not T) with built-in delayed action release. The taking-lens has bayonet mount to accept bayonet mounted attachments. The *f* 2.8 finder lens has push-on mount (later also fitted with bayonet mount). Finder hood contains mirror for eye-level reflex focusing, also automatic parallax compensation. Film transport is by a lever crank, coupled with the shutter setting. This makes double exposures impossible. Film feed is automatic, there is no red window.

The Rolleiflex Standard New of 1939 has a 75 mm. Tessar *f* 3.5 in Compur Rapid shutter (1 to 1/500 sec., and B), but no delayed action release. It has a window for setting the first exposure, the automatic film counter then takes over. Film transport is coupled with shutter setting. Finder lens (also with bayonet mount like the taking lens) is *f* 3.1.

The Rolleiflex Automat of 1945 has a 75 mm. Tessar or Xenar *f* 3.5 and bayonet mounts on both lenses; other features are the same as on the 1937 model.

The 1950 model has a coated 75 mm. Tessar or Xenar lens in a Compur Rapid shutter (1 to 1/500 sec., B), and built-in flash contact. The redesigned finder hood has both an eye-level reflex finder mirror and direct vision frame finder. In the same year, a second model of the same camera appeared with an 80 mm. Tessar *f* 2.8 and a larger Compur shutter with a top speed of 1/400 sec.

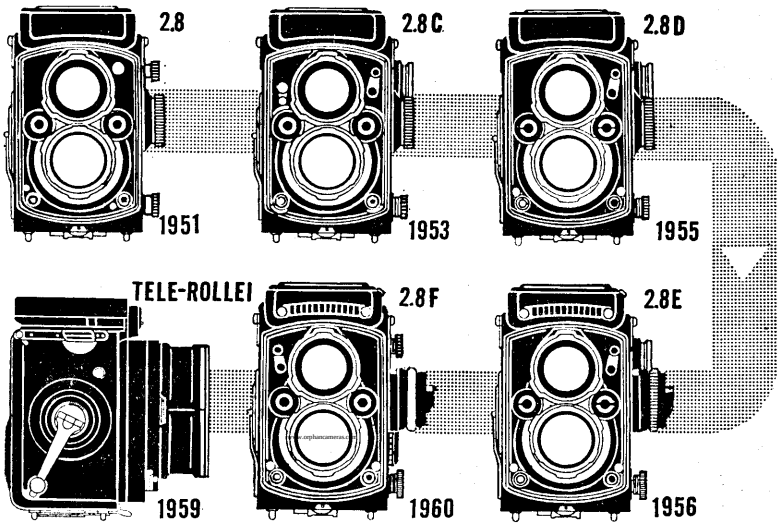
In 1951 both the *f* 3.5 and the *f* 2.8 lens models appeared with a Synchro-Compur shutter with MX-synchronisation, and a time exposure lock.

Th Rolleiflex 2.8C of 1953 with 80 mm. Xenotar or Planar *f* 2.8 lens incorporates various improvements over the 1951 model: internal baffles to eliminate stray light, an extra large focusing knob with built-in film indicator, an adjustable focusing magnifier, self-locking shutter speed and aperture settings, and a fitted counter knob for the Rolleikin accessories. The coupling of film transport and shutter setting can be disconnected to permit intentional double exposures.

The Rolleiflex Automat 3.5 of 1954 has a Synchro-Compur shutter with exposure value scale, internal baffles and a larger focusing knob

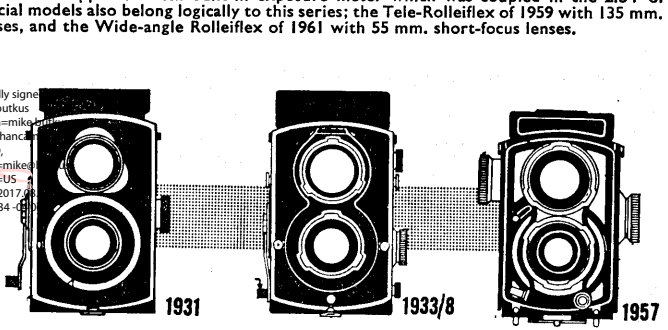
www.orphancameras.com

ROLLEIFLEX EVOLUTION



Special models with an f 2.8 lens appeared from 1951 onwards. These became progressively more elaborate and in 1956 appeared with built-in exposure meter which was coupled in the 2.8 F of 1960. Two special models also belong logically to this series; the Tele-Rolleiflex of 1959 with 135 mm. long focus lenses, and the Wide-angle Rolleiflex of 1961 with 55 mm. short-focus lenses.

mike butkus
Digitally signe
mike butkus
DN: cn=mike
o=orphanc
ou=29,
email=mike@
org, c=US
Date: 2017.
11:08:34 -0



In addition to the 2¼ × 2¼ in. Rolleiflex models small-size Rolleiflexes also were made from time to time. The first of these, the Baby Rolleiflex of 1931 and the Sports Rolleiflex from 1933 onwards were scaled-down versions of the current standard models. The Rolleiflex 4 × 4 of 1957 is in many respects a counterpart of the larger model T, but has a transport knob instead of a winding crank.

with built-in film indicator. Models since 1955 have an improved aperture-speed coupling system with a coupling release button.

The Rolleiflex 2.8D of 1955 has a Synchro-Compur shutter with exposure value scale. The XM synchronising lever is combined with the self-timer setting lever. A coupling release button on the aperture wheel disengages the aperture-speed coupling for independent settings when required.

The Rolleiflex 2.8E of 1956 is similar to the 2.8D model but has built-in photo-electric exposure meter and automatic depth of field indicator. It is fitted with an 80 mm. Planar or Xenotar *f* 2.8 lens.

The Rolleiflex 3.5E of 1956 is similar to the Rolleiflex Automat of 1955, but has built-in photo-electric exposure meter and automatic depth of field indicator. It is fitted with a 75 mm. Planar *f* 3.5 lens and was also available with Xenotar *f* 3.5 lens but without exposure meter. Subsequent installation of the meter is possible on the latter model.

The Rolleiflex 2.8E2 of 1959 is similar to the Rolleiflex 2.8E but fitted with a detachable hood and improved extra bright focusing screen.

The Rolleiflex F of 1958 with *f* 3.5 Planar or Xenotar lens is like model 3.5E but has the meter coupled to the stop-speed setting, is fitted with a detachable hood, and an improved extra bright focusing screen.

Rolleiflex 3.5E3 of 1962 is a Rolleiflex F without the built-in exposure meter. It was replaced in 1967 by the Rolleiflex F (both with *f* 3.5 and *f* 2.8 lens) without exposure meter. The meter can be built in and coupled to shutter speed and aperture settings.

The Rolleiflex T of 1958 has a 75 mm. *f* 3.5 Tessar, detachable hood and improved extra bright screen and facilities for changing the format from $2\frac{1}{4} \times 2\frac{1}{4}$ to $2\frac{1}{4} \times 1\frac{5}{8}$ or $1\frac{5}{8} \times 1\frac{5}{8}$ in.; models prior to 1962 not fitted for the 35 mm. Rolleikin outfit. A single lever (instead of the familiar wheels) controls exposure values, stops and shutter speeds. An exposure meter is fitted or can be installed by the user.

The Tele-Rolleiflex, introduced in 1959, is a special model with 135 mm. Sonnar *f* 4 long-focus lenses for professional and feature photography. It has disengageable speed/stop coupling. An exposure meter is not fitted, but can be installed by the user. The back is fitted with a glass film plane.

The Wide-angle Rolleiflex of 1961 is a special model with 55 mm. Distagon *f*4 short focus lenses for wide-angle photography. It is otherwise similar to the Tele-Rolleiflex in all other control features.

The Rolleiflex 2.8F of 1960 with Planar or Xenotar *f* 2.8 is like the model 2.8E/2 but has the meter coupled to the speed-aperture settings. (Except for the faster lenses, this camera is identical with the model 3.5F.)

The Rolleiflex 3.5E3 and 2.8E3, 1963 are similar to the 3.5F and 2.8F but without exposure meter. Aperture and shutter speed are cross-coupled and indicate exposure values.

www.orphancameras.com

The Rolleiflex F models have also been available without exposure meter, since 1964.

The Rollei-Magic of 1960 has a built-in photo-electric meter which automatically sets aperture-speed combinations on the built-in scaleless Prontormat shutter.

Rolleiflex 2.8E3 of 1962 is a Rolleiflex 2.8F without the built-in exposure meter.

Rollei-Magic II of 1962 is a Rollei MAGIC I, but fitted with a shutter which permits in addition to fully-automatic operation also individual setting of speeds (1/30 to 1/500 sec.) and apertures.

The Rollei-Magic II, 1963 also permits manual exposure setting. In this case the exposure meter indicates exposure values, which can be set on the shutter.

All Rolleiflex models $2\frac{1}{4} \times 2\frac{1}{4}$ in. supplied since late 1964 are fitted with the Rolleiclear Focusing Screen with split-image rangefinder wedge.

24-exposure 220 Film

A 220 film has been introduced, primarily designed for the professional user, giving 24 exposures $2\frac{1}{4} \times 2\frac{1}{4}$ in. on one roll. Special versions of the current Rolleiflex $2\frac{1}{4}$ in. models are made (at extra cost) accepting 120 and 220 film.

The 4 × 4 cm. Rolleiflex Models

The Sports Rolleiflex of 1931 (the first few models were called Babyflex) takes 12 exposures $1\frac{5}{8} \times 1\frac{5}{8}$ in. (4 × 4 cm.) on standard vest pocket (size 127 or 27) film. It has a 60 mm. Tessar *f* 3.5 or *f* 2.8 lens, and a Compur shutter (1 to 1/300 sec., B and T). The lens mount diameter is 28.5 mm., the finder lens *f* 2.8. The finder hood has an eye-level frame finder. Parallax is compensated by reduction of finder picture. A lever crank advances the film. One lever sets and releases the shutter by a two-way action. The first exposure is set in the red window, thereafter by automatic counter. Push-on filter and other attachments.

In 1933 this camera appeared with peep windows above the finder lens. In 1934, a 60 mm. *f* 2.8 Tessar in a Compur Rapid shutter (1 to 1/500 sec., B and T) replaced the previous lens and shutter, and double bayonet mount on both lenses was added in 1938. All these models were discontinued in 1940.

The Rolleiflex 4 × 4 of 1957 has a 60 mm. Xenar *f* 3.5 lens in Synchro-Compur exposure value shutter (1 to 1/500 sec., XM synchronised, with self-timer). The finder hood incorporates an eye-level frame finder and the shutter cannot be fired while the hood is folded. Film transport is by winding knob on the right-hand side; exposure counting is automatic.

HANDLING THE ROLLEIFLEX

In order to simplify the description and handling of the Rolleiflex camera without being confused by different features of individual models, this guide has been divided into a general section which applies to all Rolleiflex models while the requirements and consequently different handling of each model are found on the green pages.

For convenience, a symbolic reference system is also used in the general section. Wherever the sign ■ appears, further details will be found in the camera pages of the green section for each camera type. Similarly, the sign ● refers to accessory sections. The appropriate pages are marked accordingly in the bottom left- or right-hand corner.

Holding

Hold the camera as steady as possible, as the slightest shake, even if its effect is not visible in the negative, will become apparent in the enlargement. Always stand with your legs apart for extra steadiness.

When working with the reflex finder at chest-level, place the camera in the palm of the right hand, with right index finger on the release on the front while thumb and index finger of the left hand rest on the focusing knob.

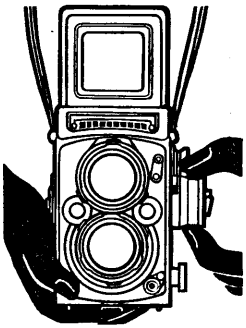
When using the eye-level finder or pentaprism hold up the camera so that the eye is level with the back sight in the focusing hood or the eyepiece of the prism. Grip the body with both hands, placing the index finger of the right hand on the release. Press the camera body against nose and forehead to give it additional support.

To release the shutter, press the button with the right hand index finger. Use finger pressure only, keeping the grip steady. The pressure must be slow and smooth. The slower the exposure time, the smoother must be the release, as the risk of camera shake is greater.

For slow speed exposures in the hand at chest-level, hold the breath and release smoothly to avoid shake.

When using long exposures while holding the camera at eye-level, rest the camera against some support, or at least

www.orphancameras.com

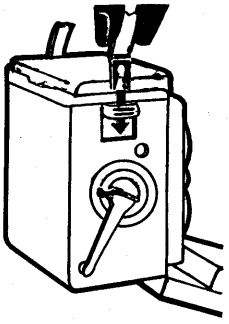


Left: Support and steady the camera with your right hand, thumb on the release button, while operating the focusing knob.

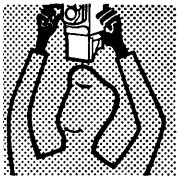


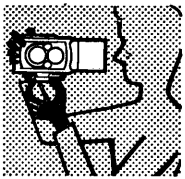
The ideal body stance. Sling the camera round your neck, supporting it against the chest, and stand with your feet slightly apart.

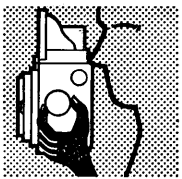
Right: The ever-ready case protects the camera, yet keeps it instantly ready for use. The special neck strap, pushed through the eyelets of the camera protruding from the case, holds the camera securely in its ever-ready case as well as providing a steady support.

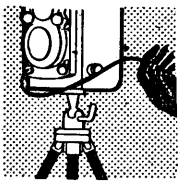












Although the standard hold for the Rolleiflex is the steadiest, various alternatives are possible in special situations. You can hold the camera above your head to shoot over crowds, etc. (*left*); you can shoot round the corner (*centre left*); or for action subjects you can use the eye-level finder (*centre right*), or the pentaprism finder. For time exposures mount the Rolleiflex on a tripod (*right*) and release the shutter with the aid of the cable release.

lean against something stable. In this way 1/8 sec., or more, can be risked without incurring camera shake.

A tripod is necessary when taking exposures of 1/15 sec. or longer with the delayed action release.

Carrying

However elegant it may be to carry the camera on a long strap from the shoulder, this is quite unsuitable for quick action. A better method is to carry it on a short strap around the neck at chest-level—ready for work.

The ever-ready case enables the Rolleiflex to be used without removing it and there is a holding screw which prevents the camera from falling out.

The Reflex Finder

The reflex finder is a viewing-cum-focusing device. It consists of a focusing screen on top of the camera, a plastic screen incorporating millions of minute refracting optical elements. This gives an extremely bright image right to the edges, and high colour brilliance, without any noticeable pattern.

The $2\frac{1}{4}\times2\frac{1}{4}$ Rolleiflex models since 1964 have a focusing screen with split-image rangefinder centre, the two halves of which are lined up to get sharp definition. This 'Rollei-clear' screen can be fitted to some earlier models.

The image entering the camera through the finder lens is reflected on to it by a mirror. This reflex image remains visible even during and after the exposure.

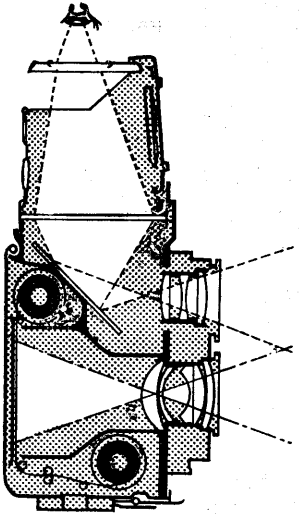
Its purpose is first to show the exact picture area, and secondly to help in getting the picture sharp on the film.

Viewing

The picture on the screen appears upright but reversed left to right. Movements are also reversed left to right. To follow a moving object the camera must be turned against the apparent movement. A finder hood extension is available to keep stray light from the screen and so makes the image appear brighter.

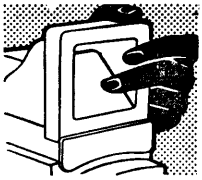
On the Rolleiflex models since 1960 the focusing hood is removable and can be replaced by an eye-level pentaprism

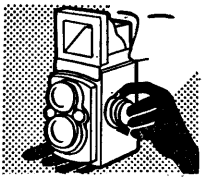
www.orphancameras.com

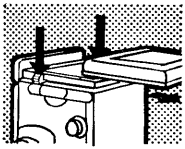


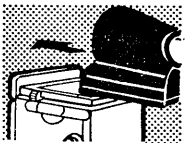
Left: The standard method of viewing with the Rolleiflex is to look straight down on the ground glass screen in the top of the camera. A large hinged magnifier in the hood swings out to enlarge the whole screen area. You can thus judge the image sharpness really accurately (p. 42).

Below: To use the eye level frame finder (e.g. for sports subjects) push in the front panel of the focusing hood (*left*) and look through the upper aperture in the back of the hood (*right*). On the Automat 1954/1958 this also brings down a second mirror in the hood, enabling you to watch the ground glass screen through the magnifier in the lower aperture at the back of the hood (*bottom right*).

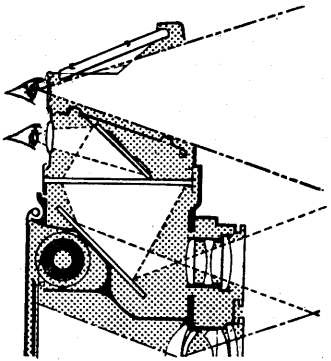








The hood of current Rolleiflex models is removable on pressing the two catches at the side (*left*). The hood can then be lifted off and replaced by a pentaprism unit for eye-level focusing and viewing. To mount either unit, place over the focusing screen and slide forward to make the catches engage.



giving an upright and right-way-round image even if the camera is turned sideways or upside down.

With the frame finder built into the focusing hood you can also follow movement—it shows an upright and right-way-round image. The frame finder of the Rolleiflex (since 1950) has below its viewing eyepiece a second eyepiece with a built-in magnifier. Using the lower eyepiece, you can focus the image which is reflected by a mirror from the ground glass and then, by slightly lifting the eye, switch over to the frame finder. This enables you to focus and view at eye-level, if not simultaneously so, at least with a minimum of time lag.

When using the frame finder, do not attempt to turn the camera to the right or left away from the eye, nor try to move the eye from the centre of the back sight. This "spying round the corner" is deceptive, as only that section will appear on the negative which you see in the finder looking straight ahead with the eye close to and in the centre of the opening.

Although one is likely to hold the camera reasonably level, make sure that vertical lines of the picture run parallel with the grid, or on earlier models with the sides of the focusing screen frame. You can tilt the camera intentionally but see that the effect does not look like an accidental tilt.

Parallax Compensation

All Rolleiflex models produced since 1937 have a mask built into the camera below the focusing screen. This moves automatically with the distance setting to compensate the viewing error on the screen which would occur on account of the different position of viewing and taking lens. Your Rolleiflex is in consequence free from any parallax error when using the reflex screen, either directly, or via the pentaprism.

The frame finder, however, yields a view of its own as it views from a point away from the lens. The greater the distance between the two, the bigger the difference of this point of view, i.e. the parallax. Parallax hardly counts when viewing and taking something at a reasonable distance, as the difference of viewpoint is negligible as compared with the distance between camera and subject.

www.orphancameras.com

But if we photograph anything at close quarters—take a portrait for example—the parallax may show. The image as seen through the frame finder may include all of, say, a hat worn by the subject of your portrait, while quite a portion of it may be cut off in the picture taken.

So do not use the frame finder at close quarters. If you must use it, make allowances by including in the frame finder view a strip on the top you can do without in the picture. That strip must be the wider the closer you are to the subject.

Focusing

The second purpose of the reflex finder—obtaining the best possible definition—is at the same time one of the most important means to ensure good results.

The less experienced user of the reflex screen is apt to accept, all too hastily, a seemingly sharp impression of the image for satisfactory definition. There are, however, different degrees of sharpness and you can make use of these very differences to find the best possible setting.

Turn the focusing knob to and fro while observing how the main object to be focused becomes more and more sharp up to a point beyond which it will again lose definition.

At this "beyond" stage reverse the movement of the focusing knob. Slowly narrow down the degree of to and fro movement of the focusing knob until you unmistakably arrive at the point of the very best definition.

You encircle, as it were, the point which you want absolutely sharp by going over and over again its neighbourhood, all of which will appear reasonably sharp. Before or beyond the point of maximum definition the image still appears sufficiently sharp, but do not be deceived by this fact—the image is not good enough for enlarging.

When watching the screen at waist-level, swing the built-in magnifying glass into position; this will help to check critical sharpness. The camera is best raised near to the eye when using the magnifier. When you have finished with it, lower it again, otherwise—with the magnifier in front of the screen—you may get excellent definition, but may lose sight of the picture as a whole. The magnifying lens can be changed and users with defective eyesight can obtain alternative lenses with correction of +3 to −3 diopters.

The frame finder cannot be used for focusing, apart from the quick change arrangement of the models since 1950 (not on Rollei Magic, T and 4×4).

This procedure is unsuitable for photographing moving subjects. The frame finder is, however, more effective with zone focusing methods (p. 58). These ensure that all subjects within a certain depth of field will be recorded sharp. This last method of focusing is, in fact, preferable to any other when dealing with rapidly moving subjects in front of a reflex camera. It is almost impossible to catch and shoot fast motion when you are looking down with your attention fixed on the mirror that shows directions and movement the wrong way round. With a frame finder, it is quite easy to follow everything and keep the other eye on the subject before it comes into the field of the finder.

Alternatively for action shots you can pre-focus the camera at a distance at which the subject will be at a given moment, or focus on a spot which the subject has to pass.

With subjects liable to react self-consciously (e.g. children), focus on some object which is the same distance from the camera as your real subject, but in a different direction. When the range is found, swing the camera round and shoot.

Shooting ■

Practise the following operations first with an empty camera until you can do them practically automatically.

1. **Work the film transport.** This advances the film counter and tensions the shutter.
2. **Set the exposure.** Adjust the shutter for the right amount of light for the subject conditions (p. 31). On Rolleiflex models with built-in photo-electric exposure meter, the meter indicates the setting or even sets the controls.
3. **Select the aperture-speed combination** you want to use; smaller aperture for greater depth of field (p. 31) or faster speed to arrest movement (p. 39).
4. **Focus and determine the picture area** to obtain a sharp picture and the view you want.
5. **Release** the shutter gently.

www.orphancameras.com

LOADING AND UNLOADING

The Rolleiflex uses the standard size 120 rollfilm. It gives 12 exposures $2\frac{1}{4}\times2\frac{1}{4}$ in. (6×6 cm.). The Rolleiflex 4×4 uses the size 127 rollfilm for 12 exposures $1\frac{5}{8}\times1\frac{5}{8}$ in. (4×4 cm.). These are film spools which are loaded into the camera in daylight. Avoid loading or unloading the camera in brilliant sunlight. Choose a shady spot or do it in the shadow of your own body if nothing better is available.

Loading

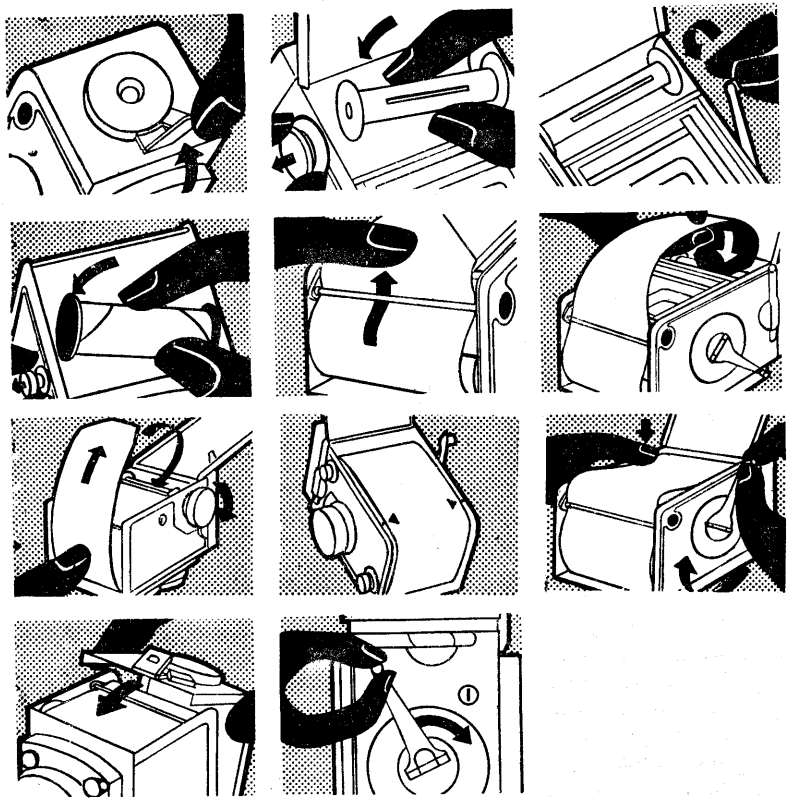
1. **Open the camera back** by holding the camera upside down, turn the safety lock with arrow engraved on it in the direction of the arrow. Then press the projecting end of the latch away from camera body. Now grip the back panel by the two side nipples and pull up.

   It is important to check that the two position pressure lock has the inscription "$2\frac{1}{4}\times2\frac{1}{4}$" visible below the film pressure plate in the side of the back panel when rollfilm is used. If a 35 mm. film has previously been used and the pressure lock shows "$1\times1\frac{1}{2}$", press the pressure plate against the camera back and push it up until it stops. When released it must spring forward into its normal position.

2. **Insert the film.** The empty spool in the bottom chamber has to be transferred into the top chamber. Pull out the spring-knob on the camera side wall and turn it a little, so that it locks in the out position. Remove the empty spool and insert it into the top chamber. For this purpose, pull out the spring knob of top chamber, and turn to fix it in the open position. Place the empty spool with the grooved end towards the film transport into the top chamber so that the groove engages in the film transport cross bar. Now allow the spring catch to spring back by turning it back into its original position: this will engage the empty spool in the chamber.

   Insert the roll of film in the bottom chamber after

LOADING



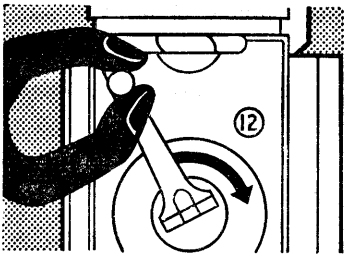
Top row: Unlock and open back latch (*left*); open back and insert empty spool in take-up chamber (*centre*); turn crank to make the wide slot in spool face outwards (*right*).

Second row: Insert full spool of film in the feed chamber (*left*); feed end of backing paper through the feeler rollers (*centre*); pull paper over picture aperture and thread into the take-up spool slot (*right*).

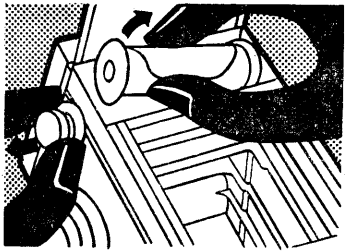
Third row: On Rolleiflex T, Rollei Magic II, 4 × 4 and early models without feeler rollers, draw backing paper off feed spool and thread straight into take-up spool slot (*left*); on model T and Rollei Magic II, wind until arrows on backing paper are opposite marks on the film channel (*centre*); on all models, tighten backing paper by winding the film slightly (*right*).

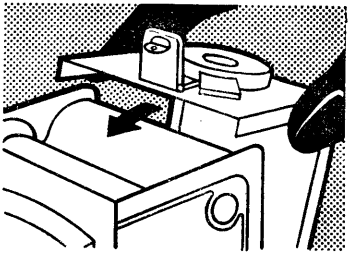
Bottom row: Close and lock camera back (*left*); wind on until film counter shows No. 1 (*right*).

www.orphancameras.com









Top left: When all twelve exposures have been taken, the crank can be turned freely Wind off the end of the paper on to the take-up spool. On the Rolleiflex 4×4 turn the winding knob.

Top right: Unlock and open the latch, swing open the camera back.

Bottom left: Remove the full take-up spool from the camera, taking care not to unroll the film.

Bottom right: Close the camera or reload with a new film.

breaking the seal so that the pointed end of the backing paper points upwards towards the empty spool. Turn back the spring knob, it will engage and hold the roll of film in its correct position.

Draw the paper end *between* the two feeder rollers over the film aperture to the empty take-up spool. Insert the wedge-shaped end of the paper into the wide slot of the take-up spool.

3. **Close the camera** by pushing the back panel against the camera body until the latch engages. Now turn safety lock back against the direction of the arrow engraved there.
4. **Get the film ready** for the first exposure by cranking the film handle until it comes to a definite stop shortly after a slight resistance has been overcome. Now turn the handle anti-clockwise back to the stop and fold it over into rest position. The film counter will have set itself automatically, showing No. 1 in the window.
5. **Set the film speed and type.**

Unloading

After all 12 exposures have been taken, the film transport can be cranked freely. The film counting window shows a white circle in place of a number.

1. **Wind off the paper** by turning the crank five times.
2. **Open the camera back.**
3. **Remove the exposed film,** then close camera back or reload with a new film.

www.orphancameras.com

FILMS AND FILTERS

There are two kinds of films available for the Rolleiflex: black-and-white and colour.

Black-and-White Film

This produces a negative in which the colours and brightness range of the subject are translated into black and white. From it, prints or enlargements on paper (or, in special cases, black-and-white transparencies) can be made.

The black-and-white film used normally is panchromatic, that means that it is sensitive to all colours. There is a choice of several types differing mainly in sensitivity as well as certain other characteristics.

SLOW FILMS are of low sensitivity, requiring comparatively great exposure. Their main advantage is the extremely fine grain, permitting a high degree of enlargement without its granular structure becoming unpleasantly visible. Such films also yield images of the greatest sharpness. On the other hand, these slow films are not very suitable for coping with fast movement in other than exceptionally good lighting, nor for general work in poor light. Such films are rated at 40–80 ASA or 17–20 DIN.

MEDIUM SPEED FILMS still yield a reasonably fine grain with good gradation. They are the most suitable material for all-round photography, other than in poor light. These films are rated at 80–160 ASA or 20–23 DIN.

FAST FILMS with somewhat coarser grain (still acceptable for reasonable degrees of enlargement) will cope with most light conditions including poor light and interiors in favourable conditions. This is the right film for the photographer who wants to be prepared for the unusual, to arrest fast movement with high shutter speeds, as well as shots in poor light. The speeds are 200–400 ASA or 24–27 DIN.

ULTRA FAST FILMS are primarily intended for high-speed sports shots in dull weather, interior snapshots in poor light, night photography and ill-lit stage pictures. These

films are specialist types for conditions where normal materials are totally inadequate. They should not be used for general photography. The high speed is achieved at some cost in definition and graininess. Speed ratings range from 500–1600 ASA or 28–33 DIN.

The above speed figures are based on the latest ASA Standard for film speeds (and on the BS and DIN Standards under revision). These figures, when used on the exposure meter, give minimum correct exposures, to make the most of the versatility of the film and of the image quality. They are also the figures quoted by most film manufacturers. Sometimes films are, however, still rated according to earlier standards which in effect incorporated a generous safety factor against underexposure—by the simple process of overexposing films about 100 per cent (well within the exposure latitude of most black-and-white films). So you may come across films apparently only half as fast as others of similar type, because of this difference in ratings. The table on p. 70 indicates the current film speeds to be used with the exposure meter, even if the film packing gives a lower rating. This applies to *black-and-white negative* materials only; speed rating methods have not changed for colour films.

There is a wide range of different makes of films in all speeds on the market. Their characteristics, apart from speed, vary slightly from make to make. It is safe to say that all well-known brands are reliable and good. The best film is the one you are used to. Professional photographers and advanced amateurs may find one or the other characteristics of a particular make—i.e., its gradation, granular structure, acutance, etc.—of particular value for specific jobs.

Colour Film

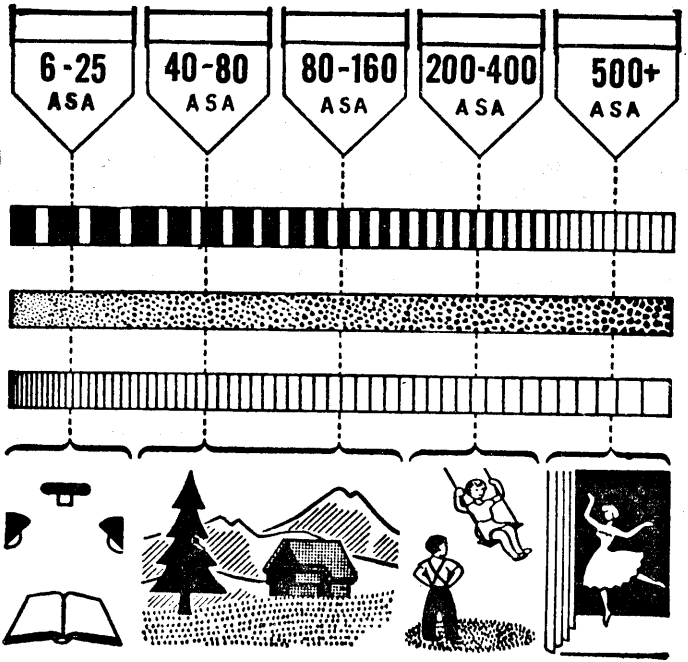
These films produce an image in colour after appropriate processing, corresponding directly or indirectly to the natural colours of the subject. From the practical point of view, colour film is as easy to use as black-and-white film but needs a little more care in exposure. Processing is more complex and is often carried out by the film-maker or specially appointed processing laboratories.

There are two basic types of colour film: reversal and negative.

(continued on page 26 after the green section)

www.orphancameras.com

FILM SPEED, CONTRAST, GRAIN, RESOLVING POWER



Generally speaking, low speed goes with **greatest** contrast, finest grain, and highest resolving power, and vice versa. The film speed in the *top row* points to the corresponding contrasts, grain, and resolving power. The contrast row (*from left to right*) shows how high contrast becomes medium and low with the faster films. The grain row shows (*from left to right*) how fine grain becomes progressively coarser with increasing speed, while the resolving power row indicates the gradual decrease in maximum resolution with the fastest films. The bottom row indicates the type of subject for which films of the various speeds are best; copying (special document films), general views and pictures of people (fine grain and medium speed films), high-speed action (high-speed films) and poor light conditions (ultra-speed films).

(*continued from page* 24 *before the green section*)

Colour Reversal Film

This produces a colour transparency on the actual film exposed in the camera. This transparency held up to the light shows a positive image with all parts of the subject in their original colours. It can be viewed in a suitable transparency viewer with a magnifier or it can be projected in a slide projector to give a large and brilliant picture on a screen.

There is little doubt that the projected image is the most natural and best for showing colour.

Although the colour transparency is an end product, it can still be used to make:

(*a*) duplicate positive colour transparencies,
(*b*) a black-and-white negative which can then be used to produce black-and-white prints or enlargements,
(*c*) a colour negative for making colour prints and enlargements, as from colour negative film (described below),
(*d*) direct colour enlargements on colour reversal paper.

Colour prints on paper invariably show a loss of colour quality as compared with the original positive transparency.

For correct colour rendering, colour reversal films have to be carefully matched to the light by which they are to be exposed. Accordingly, most makes are available in two or more of the following types:

(*a*) daylight colour film (type D or T) which will give correct colour reproduction in daylight or with blue-tinted flash bulbs,
(*b*) artificial light type colour film which will give correct rendering by photoflood illumination (type A or K), or high-power tungsten light,
(*c*) artificial light type colour film (type B) which will give correct rendering with the high-power studio lamps.

Colour films made for one kind of light may often be used under different light conditions with the aid of a conversion filter as recommended by the manufacturer.

Different makes of colour film may yield transparencies of a slightly different characteristic colour quality, colour

www.orphancameras.com

saturation and colour contrast. Which you prefer is very much a matter of personal taste, and you can only be recommended to try various makes to find the one which suits you best.

Colour Negative Film

On processing, this produces a colour negative which shows a negative image of the subject in its complementary colours—e.g., blue appears yellow, red appears blue-green, and so on. These colours may sometimes be hidden under an overall orange or reddish tint.

The main purpose of the colour negative is the production of colour prints on paper. The quality is generally higher than that obtained from a positive transparency.

From the colour negative you can make:

(*a*) any number of colour prints in varying sizes,

(*b*) direct black-and-white prints or enlargements, in the same way as from a black-and-white negative,

(*c*) positive colour transparencies for viewing or projection.

Most colour negative films are suitable for exposure by any type of light—e.g., daylight, flash or photofloods. The necessary adjustment of the colour rendering is carried out during the printing stage. Manufacturers sometimes recommend conversion filters even with colour negative films. These mainly serve to simplify the subsequent correction needed in printing.

Colour Film Speeds

The majority of colour films, reversal and negative, are rated between 25 and 64 ASA or 15–19 DIN, corresponding to a slow to medium speed for black-and-white material. A few films go up to 160 ASA or more for poor light conditions. Others may be as slow as 10 ASA or 11 DIN.

As with black-and-white films, the slower types tend to yield improved image detail, especially with negative colour film, while the fastest emulsions may show slightly reduced colour saturation and image sharpness.

The Choice of Colour Film

Making your choice between colour reversal or negative film (in spite of the various uses that can be made of either type of material) remains an individual question.

First there is the way you want to see the result, as a colour print or as a colour transparency. The print has no doubt much to commend itself. It is easily shown, stored and carried about. The transparency calls for the aid of a viewer or projector.

Next, the cost of a colour print is about three times that of the transparency. This may at times be mitigated by the fact that from unsuitable negatives no colour prints need or can be made. The transparency user, however, has additional outlay in the form of a viewer or projector with screen (in most cases both).

Rolleiflex transparencies made on size 120 film need projecting in a large-size projector which takes $2\frac{3}{4} \times 2\frac{3}{4}$ in. slides. Alternatively, you can cut down the transparency to fit 2×2 in. miniature slide frames ($1\frac{5}{8} \times 1\frac{5}{8}$ in. super slides). Certain Rollei models (■) can yield $1\frac{5}{8} \times 1\frac{5}{8}$ in. transparencies directly. With the Rolleikin outfit (●) and 35 mm. film you get 24×36 mm. transparencies for mounting in 2×2 in. standard frames.

A final point to consider is the quality. The transparency will record each colour and its brilliance in full. Held to the light or projected on a screen, the brightness range, which may be 100 : 1, is fully or almost fully retained. It shows colours brilliant with great depth and realism. The colour print can at its best only reflect four-fifths of the light falling on it and even the darkest tones reflect about one-twentieth to one-tenth, so that the full range is no more than 16 : 1. While the colour print is, by necessity, duller than the transparency, it is only fair to say that the eye soon adjusts itself to the reduced brightness range, and subjects without great contrasts will be very satisfying.

From the point of view of convenience, reversal film has the advantage that it directly gives finished colour pictures of high quality and is still capable of producing colour prints

www.orphancameras.com

as well. For the maximum versatility and control in print making, however, negative film is superior.

Filters for Black-and-White Film

By its nature, a black-and-white film can only translate colour values of the subject into tones of lighter or darker grey. Mostly these correspond fairly closely to the brightness of the colours, but do not, of course, differentiate between them. In certain cases the difference between the brightness of two colours may be so slight that both record in almost the same tone of grey.

There a filter helps by modifying the depth of one or the other colour, and so making it show up lighter or darker than it would normally.

The commonest example is the blue sky in a landscape, with white clouds. The blue is so brilliant (and the film is often excessively sensitive to it) that the clouds do not show up against it. By putting a yellow filter in front of the camera lens we can subdue or "hold back" the blue, so making it record darker in the final print. We can even go further and over-emphasize the effect progressively with an orange or red filter; these darken the blue so much that the sky looks almost black for a really dramatic effect.

The same considerations hold for other filter effects. For instance, the film renders a red rose in the same tone of grey as the green leaves of the rose bush. With the colour contrast gone, the rose disappears in its surroundings. A green filter makes the rose darker and the leaves lighter; conversely, a red filter will show up the rose as light against dark foliage. Scientifically, both filters falsify the tone rendering, but produce a more acceptable pictorial result.

In all these cases a filter *lightens objects of its own colour and darkens objects of its complementary colour*. Apart from isolated instances in pictorial photography, such contrast control is very valuable in copying and scientific work (e.g., photomicrography).

All filters cut out some part of the light and thus, as a compensation, an increase in exposure time is necessary

when using them. This is stated on most filters in the form of a filter factor indicating by how much (e.g., 2 times, 3 times) the exposure must be increased with that filter. The factors are approximate for they depend not only on the nature of the filter but also on the exact colour sensitivity of the film and on the colour of the prevailing light.

Filters for Colour Film

The normal yellow, orange and other filters for black-and-white film must never be used with colour films as they would give the colour picture a strong overall colour tint.

In daylight and with daylight type film, only a haze filter is required. It is almost colourless but for a slight straw tinge. It is usefully employed on hazy days and in high altitudes to avoid excessive bluishness of the colour picture, especially with distant landscapes, seascapes and near water. This filter does not call for any change in exposure. It is also useful for colour photography with electronic flash as it produces somewhat warmer tones.

The Planar, Xenotar, Sonnar and Distagon lenses have the inherent characteristics of the haze filter, so that no such filter needs to be used with these lenses.

Conversion filters are used if a colour film, balanced for one type of light, should be used in another type of light.

The Polarizing Screen

Highly-polished subjects may reflect glare which obscures the detail. This can be overcome by the polarizing screen.

It has the special property of suppressing so-called "polarized" light. Light reflections from glass, china, enamel, polished wooden surfaces, water, to a large extent are polarized and can, therefore, be almost extinguished by placing the polarizing filter in proper position over the lens.

The filter must be rotated in front of the finder lens to find out its best position and then transferred to the camera lens in this position. The filter has a 3× factor.

The polarizing screen is, in addition, particularly useful in colour photography where it darkens a blue sky.

www.orphancameras.com

EXPOSURE

Exposure means—to expose the film in your camera to light. The dose of light any film needs to produce the right sort of image depends on how sensitive that film is to light. A fast film is more sensitive than a slow film.

Once your choice of film is settled, the basic condition of exposure is settled with it. You are now left with the problem of scaling the light you find in front of your camera to the amount your film needs.

Your job is to judge the light reflected from the subject you are about to photograph. Your grandfather as an amateur photographer used to take into account his geographical position, the time of the year, the hour of the day, the state of the sky, as well as the tone of the subject itself, and by so adding one thing to another size up the light reflected from the subject. The experienced professional, of course, hardly ever worked that way. He just had a look and he knew.

Today a light meter or exposure meter does the same for any photographer. It takes a look, it measures the light and it lets you know.

In fact, it does more than that. It translates the light measured straight into terms of photographic exposure. It does so by presenting you with the choice of aperture numbers and shutter speeds, sorting them out in pairs.

Aperture and Speed

The aperture number or *f* stop controls the *amount of light* allowed to enter through the lens. These numbers run in a series: 2–2.8–4–5.6–8–11–16–22. Each higher stop number lets through half the light of the next lower number (next larger stop).

The shutter speed controls the *length of time* for which the lens is kept open to light. Shutter speed figures represent fractions of a second: 2 = $\frac{1}{2}$ second, 4 = $\frac{1}{4}$ second . . . 500 = 1/500 second.

The actual exposure is a product of these two: "how

much" and "how long". A large amount of light striking the film for a short time may produce an image similar to that produced by a small amount of light striking the film for a long time. Hence the free choice from a series of balanced aperture-shutter combinations offered by your exposure meter: more or less open apertures paired with more or less quick shutter speeds, and more or less stopped down apertures paired with more or less slow shutter speeds.

Cameras of recent vintage combine these pairs, made up of aperture stops and shutter speeds, into single figures which are then called exposure values or light values. Once you set the exposure value suggested by the exposure meter both the aperture and the shutter speed move up and down in step against each other, and so keep the resulting exposure right at every combination.

With exposure meters built into the camera and coupled to cross-linked aperture-speed controls you set the right exposure without looking up the number either on the meter or the camera. You set the exposure visually by following the swing of the needle in the meter and matching it with a pointer or a circle on the spot where the needle comes to rest.

Certain shutters (e.g. Prontormat) are linked to the exposure meter in such a way that the meter automatically selects and sets a correct aperture-speed combination an instant before release. In that case, no choice of alternative settings is available; simpler operation is obtained at some sacrifice of versatility. This applies to Rollei-Magic I but not the Model II.

Choosing the Combination

But whether you work out the right exposure from an elaborate table or chart;

whether you are presented with a series of exposure values or pairs of aperture figures and shutter speeds;

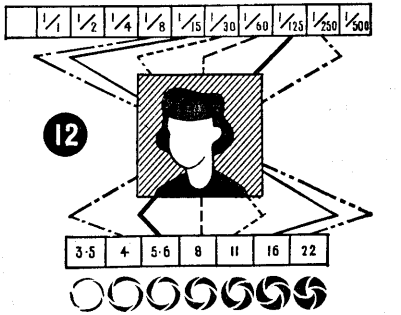
whether you just set the exposure to the point shown by the needle in your meter;

you still have one decision to face: which aperture-shutter combination to choose for any given shot. Paradoxically

www.orphancameras.com



The exposure value system works by assigning a single setting, one of a series of plain numbers, to the exposure. A low exposure value corresponds to a great exposure, progressively higher exposure values correspond to correspondingly decreased exposures. Thus, if an exposure value of 12 yields a correctly exposed negative, settings of 11 or 10 yield over-exposed negatives, settings of 13 or 14 under-exposed ones. Every exposure value yields double the exposure (twice as much light reaching the film) of the next higher value, and half the exposure obtained with the next lower value. Intermediate settings are also possible. On Rollei cameras with exposure value scale the exposure values are set either on one of the setting wheels of the camera, or in a special window, or on a ring on the side of the viewfinder lens or taking lens.



Every exposure value corresponds to a series of aperture and shutter speed combinations, each combination yielding the same exposure. Thus an exposure value of 12 would cover settings of 1/250 second at *f*4, 1/125 second at *f*5.6, 1/60 second at *f*8, and so on. The aperture and speed controls of an exposure-value shutter are cross-coupled so that setting a slower shutter speed at the same time stops down the lens accordingly, and setting a larger aperture in turn adjusts the shutter speed to keep the exposure constant.

enough, they all are right yet one is better than the other.

Why should it be so?

Because both the aperture and the shutter also have secondary functions and effects.

The aperture not only controls the amount of light that is allowed to pass the lens—it also has a bearing on how much of the image will be sharp.

The shutter, in controlling the length of time for which the light strikes the film, will inevitably record any movement that happened during that time as a slight or greater blur.

So you are left with three things to think of:

How fast is the action you want to catch?

How much of the scene in front of the lens has to be sharp?

Is the light good enough to go by either?

If there is fast action you have to choose and pre-set an appropriately fast shutter speed (p. 39) and then pair it with the stop you get by the cross-coupled controls or from your meter.

If the scene is to be sharp from a point close to the lens to some other point well away from it, you should choose the stop that will yield the necessary depth of field (p. 40) and then pair it with the shutter speed necessary for the correct exposure.

If the light is very poor, the chances are that you may not be able to cope with either extremely fast or particularly deep subjects.

Yet your choice in putting shutter speed or depth of field first should still be governed by what you value most about the picture you propose to take.

Exposure nowadays is no problem at all. You can arrive at the right exposure by guessing it, measuring it, or just leaving it to the camera. But to hit it off in such a way that it will produce the picture *you* want is still a matter of intelligent judgment. Only the fully automatic shutter relieves you even of this decision (with some sacrifice of versatility).

www.orphancameras.com

Time Exposures

When the light is very weak, especially when you have to use a small stop, even the slowest shutter speed may be too short. In that case, you need time exposures. Set the shutter to B and press the release button. The shutter now remains open for any length of time until you let go of the release button.

For such time exposures, the camera must be mounted on a firm support such as a tripod.

It is safest to release the shutter with the help of a cable release to avoid shaking the camera. This release screws into the release button.

For long time exposures, where the shutter is to remain open for longer than you can conveniently keep the release depressed, use a cable release with a lock. To make the exposure set the shutter to B, press the cable release plunger with the locking plate lifted. The shutter will now remain open until the locking plate is depressed. On cable releases with locking screws, tighten the screw on pressing the plunger and undo the screw to close the shutter.

The Self-timer

The Rolleiflex carries a delayed-action release or self-timer. This is controlled by the same lever as the flash synchronization. When you press the release button with the self-timer in operation, the shutter only goes off after a delay of 8–10 seconds and you have time to take your place in your own picture. The camera must, of course, be mounted on a tripod.

Using an Exposure Meter

To get the best results an exposure meter has to be used intelligently. This may look like a contradiction, since we have already said that it is an accurate light-measuring instrument. But light from all parts of the subject—highlights, shadows and middle tones—falls on the meter, so the reading it gives us is an average one for the whole subject area.

Meters are scaled to suit typically average subjects—i.e., subjects with average areas of light, dark and middle tones. So if you point the meter at a subject of this kind, the exposure reading will be correct.

But if the subject is not average—if there are large highlight areas and little shadow, or large shadow areas with few highlights—then you have to modify the exposure reading to obtain the best results.

So there is more to using a meter than just pointing it at the subject and accepting without question the reading indicated.

The usual method of using a meter is to point it directly at the subject. This gives the correct exposure reading provided the subject has an average mixture of highlights, shadows and middle tones. But if there is a large bright area, or a large dark area, the best method is to go near to the main subject and take a close-up reading. For example, if the subject is a figure against a white or dark background, by going closer you will reduce the amount of background affecting the meter and therefore get a reading in terms of a more average subject, which is what you want.

For some subjects you can take a reading from really close up, aiming the meter at the part of the subject that you want to make sure has optimum exposure. For instance, many photographers take a close-up reading of the sitter's face in portraiture; out of doors you can take the reading from the back of your hand instead of going up to the subject.

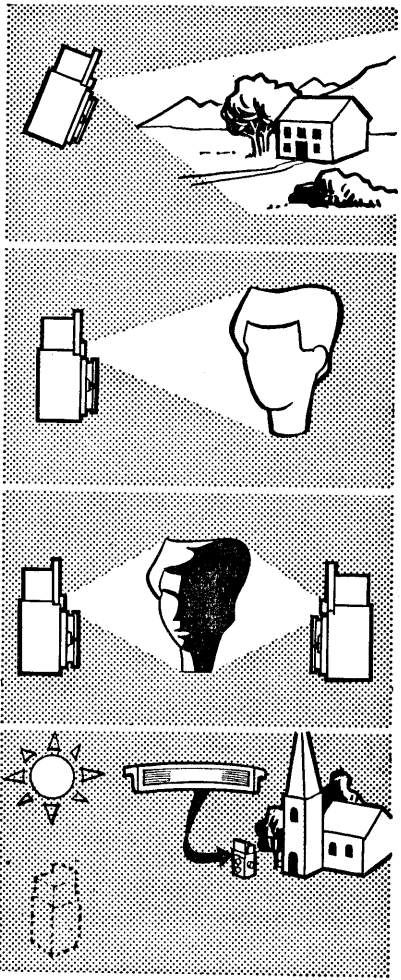
If you cannot go close up to a subject that needs a close-up reading, then try to find something near at hand that is similar in tone to the subject and take a reading from this.

When taking readings of general scenes including a good deal of sky, you have to tilt the meter down slightly to reduce the area of sky "seen" by the meter. The sky is a bright highlight, and by tipping the meter down to exclude some of it, the subject becomes "average" in tone range.

Open views, such as distant landscapes, usually have very light shadows, so you can give a shorter exposure than the

www.orphancameras.com

EXPOSURE METER MEASUREMENT



For normal readings point the camera with the exposure meter at the subject by observing the latter on the screen. With outdoor scenes point the camera slightly downwards to exclude excessively bright sky areas.

For more accurate readings, especially of figures against a very light or very dark background, go close to the subject so that the meter takes in just the subject tself.

With very contrasting subjects with unpredictable proportions of very bright and very dark areas, take separate close-up readings of the light and dark parts. The correct exposure is a mean of the two.

For incident-light readings—especially with colour film—point the camera with the meter from the subject towards the camera position to be used for the exposure. For this reading fit the diffusing screen supplied with the camera over the exposure meter cell. With a separate exposure meter there is of course no need to carry the camera around for such incident-light readings.

meter indicates. It is usual to give half the exposure—i.e., use double the shutter speed, or use one stop smaller.

INCIDENT LIGHT MEASUREMENT. Another method of assessing exposure is to measure the strength of the light falling on the subject instead of that reflected by it. But if you point the meter straight at the light you get a much higher reading than if you point it at the subject. So the light has to be cut down for the meter to indicate the correct exposure. This is done by fitting a white diffuser supplied with the meter over the honeycomb cell. The diffuser is designed to reduce the light by just the right amount. It also serves another important purpose, and this is to ensure that the meter includes all the light falling on the subject over an angle of almost a full 180°.

The incident light method is particularly useful for reversal colour films, and for subjects with contrasty backgrounds when it is impossible to take a close-up reading.

To take a reading, the method is simply to turn your back on the subject and point the meter in exactly the opposite direction. If the main light—say the sun—is coming from the side, don't just partly turn round and point the meter at this; turn round completely, and let the main light strike the meter at the same angle at which it strikes the subject.

If the light on the subject is different from that on yourself at the camera position (say if the subject is in the shade, and you are in the sun), you must then go up to the subject and take the reading, pointing the meter towards the camera position.

AGAINST THE LIGHT subjects are extreme cases of non-average tone range. The main lighting becomes a very bright highlight in the field of view, so if you point the meter straight at the subject it will indicate too short an exposure and give you a silhouette effect in the final picture.

This is all right if you want a silhouette. But if you want correct exposure for the subject, you should either take a close-up reading, or take a reflected light reading from the

www.orphancameras.com

camera position and give four to eight times the exposure indicated.

COLOUR FILMS have little exposure latitude, so particularly careful reading is advisable. The meter is used in the same way as for black-and-white films.

Because of the importance of the highlights, if you are using a meter from the camera position for an against-the-light shot, it is best only to double the reading, and not multiply it four to eight times as recommended for black-and-white negative films.

Shutter Speeds and Movement

The actual shutter speed you need within a series of available aperture combinations is governed by considerations of camera steadiness as well as of subject movement.

An unsteady camera hold results in camera shake. Even the slightest shake will result in inferior definition of the negative. Practical experience goes to show that 1/125 sec. is safe, while you have to hold the camera particularly steady when using 1/60 or 1/30 sec. Where lighting conditions make even longer exposure times essential and there is no subject movement, either support the camera on a tripod or look round for extra support for your elbows and hands —e.g. a wall, railing, etc.

The shutter speed required to arrest movement depends of course primarily on the speed with which the subject moves. Remember, however, that parts of the subject (e.g. the legs of a runner) may move faster than the subject as a whole; you may sometimes have to compromise and show such parts slightly unsharp. Often that is not a serious fault, as slight blurring—provided the main part of the subject is sharp—helps to emphasize the impression of movement.

Other factors to consider are the distance of the subject—the farther away, the less noticeable the movement blur; the focal length of the lens—a long-focus lens in effect brings the subject nearer; and the direction of the movement. Objects moving across your field of view blur more than if

they are approaching or receding.

The most convenient way of allowing for all these factors is with the aid of a simple table (p. 66).

Aperture and Depth of Field

When you focus the camera on a given object, the image of that object will be really sharp on the film. Things nearer or farther away will be gradually less and less sharp, until they are noticeably blurred. The range of distances over which objects are still acceptably sharp, before you do notice the loss of definition, is known as the depth of field.

You can control the extent of this sharp zone by the lens aperture. As you stop down the lens, the zone of sharpness grows in both directions; as you open up the lens, its depth decreases.

You can obtain the actual zone of sharpness at various apertures and distances from depth tables, but in practice the most convenient way is to use the depth of field indicator. This exists in two types. On some Rolleiflex models it is a special scale of aperture numbers marked opposite the distance scale. There are two sets of such numbers from the largest stop (*f*2.8) to the smallest (*f*22) on each side of the focusing index (the mark that indicates the distance to which you have set the lens).

At any distance setting, the distance figures opposite each pair of aperture numbers on the depth of field scale give the near and far limits of sharpness. For example, at 10 ft. you may find the two stop values 5.6 on the scale (*f*5.6) opposite about 8 and 11 ft.—so you have a sharp zone from 8 to 11 ft. At *f*2.8, the distances opposite the stop values 2.8 may be $9\frac{1}{2}$ and $10\frac{1}{2}$ ft. respectively; at *f*11 you might get a sharp zone from 7 ft. to 15 ft.

You will also notice that the depth of field is greater at far distances than at near ones. At 5 ft. and *f*5.6 the sharp zone only covers from about $4\frac{1}{2}$ to $5\frac{2}{3}$ ft.—less than $1\frac{1}{2}$ ft. altogether—against nearly 3 ft. at the 10 ft. setting.

Other Rolleiflex models have an automatic depth of field indicator consisting simply of an extending white strip.

THE ROLLEIFLEX: MODEL BY MODEL

These green pages deal with the individual Rolleiflex cameras in detail.

Self-contained sections for each group of model cover points of loading, unloading, shooting, and specific controls.

For a fuller explanation of aspects common to all Rolleiflex cameras, compare these sections with the main text under the same headings.

The Rolleiflex F and E Series

Loading 6
Unloading 8
Shooting 8
Using the Rolleiflex E Exposure Meter 10
Installing the Exposure Meter 11
Special Controls 11

The Rolleiflex T

Loading 14
Unloading 16
Shooting 16
Using the Rolleiflex T Exposure Meter 18
Installing the Exposure Meter 18
Special Controls 19

The Rollei-Magic I, II

Loading 20
Unloading 22
Shooting 22
Special Controls 22

The Rolleiflex 4 × 4

Loading 25
Unloading 25
Shooting 25
Special Controls 26

The Rolleiflex Automat Series

Loading 29
Unloading 30
Shooting 30
Special Controls 34

Early Rolleiflex Models

Loading 38
Unloading 38
Shooting 38
Special Controls 39

Lens Attachments and Accessories

Tele and Wide-angle 40
Close-up Work 40
Earlier Close-up Lens Sets 42
Soft Focus Lenses 42
The Lens Hood 43
The Rolleilux 43
Filters 43
The Rollei Micro Adapter 44

Viewing Accessories

The Binocular Focusing Hood 45
The Eye-level Prism Finder 45
The Rolleigrid 45
Rolleiclear Screen 45
The Rolleimeter 46
The Extension Focusing Knob 46

www.orphancameras.com

Camera Cases and Holding Accessories
Ever-Ready Cases 48
The Metal Ever-Ready Case 48
The Rolleifix Tripod Head 50
The Pistol Grip 50
The Panorama Head 50
The Stereo Slide 50
The Rolleimarin Underwater Housing 52
Rolleimot, remote control 52

Alternative Picture Sizes
The Rolleiflex Mask Set 53
The Plate Adapter 53
The Rolleikin Cine Film Adapter 54
The Rolleikin II 54
Installing the Release Knob 56
Assembling the Rolleikin II 56
Loading 56
Film Transport 58
Rewinding 58
The Rolleikin I 58
Assembling the Rolleikin I 58
Film Loading and Transport 60
Rewinding 60
Early Designs of Rolleikin 62

Note: Various items of equipment mentioned in the following pages are no longer manufactured. These items are denoted by the sign O

THE ROLLEIFLEX F and E SERIES

THE ROLLEIFLEX 3.5F is equipped with either the 3 in. (75 mm.) Zeiss Planar or the O3 in. (75 mm.) Schneider Xenotar *f* 3.5 lens with an angle of view of 56°. The viewing lens is a 3 in. (75 mm.) Heidosmat *f* 2.8. The camera has a built-in photo-electric exposure meter (coupled) to aperture and shutter speed controls with control wheels permitting individual adjustment of both settings. Filter factor correction can be fed directly into the meter. This model is also available without its built-in meter, which can be easily fitted at any time. The shutter is the Synchro-Compur MXV. The camera further has an automatic depth of field indicator, film feeler, and double exposure lock with provision for intentional double exposures. The camera back has a two-position pressure plate. In addition to the position for $2\frac{1}{4} \times 2\frac{1}{4}$ in. pictures there is a second one for 35 mm. film when used with the Rolleikin II attachment. The focusing hood is removable and can be replaced by an eye-level pentaprism unit. An optical glass film plane can be fitted with a three-position pressure plate, to obtain absolute flatness of the film. A back for single exposures on plates or cut film can be fitted. The Rollei-Marin 4 underwater housing is designed for use with this Rolleiflex model for underwater photography. The finder hood is interchangeable for an eye-level pentaprism. This model takes size II bayonet accessories (filters, close-up lenses, lens hood) to fit the bayonet lens mount.

O THE ROLLEIFLEX 3.5E3 is similar to 3.5F but has no exposure meter built in. It has cross-coupled aperture and speed scale with exposure values. However the exposure meter as in Rollei T can be installed later (see ■ ***18 T***).

THE ROLLEIFLEX 2.8F is equipped with the $3\frac{1}{2}$ in. (80 mm.) Zeiss Planar or O Schneider Xenotar *f* 2.8 lens and is otherwise the same as the Rolleiflex 3.5F. No Rollei-Marin underwater housing is available so far for this model. It takes size III bayonet accessories (filters, close-up lenses, lens hood) to fit its bayonet lens mount.

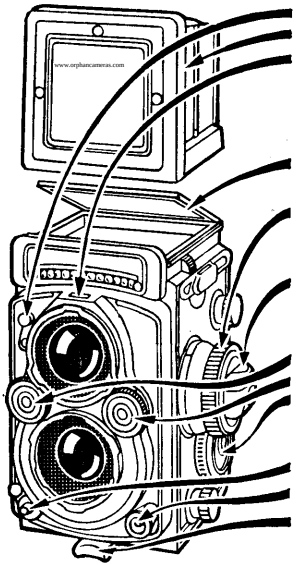
O THE ROLLEIFLEX 2.8E3 is similar to the 2.8F but has no exposure meter built in. It has cross-coupled aperture and speed scale with exposure values. However the exposure meter as in Rollei T can be installed later (see ■ ***18 T***).

O THE ROLLEIFLEX 2.8E/2 is similar to the Rolleiflex 2.8F but the built-in photo-electric exposure meter is not coupled to the aperture-speed setting. The shutter has an exposure value scale. The same accessories are usable on it as for the 2.8F and the camera also takes size III bayonet accessories. A special film counter and film release knob is built in for use with the Rolleikin II outfit.

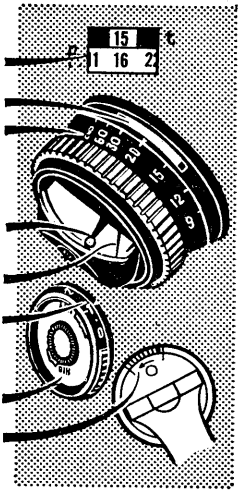
THE TELE-ROLLEIFLEX is basically the same as the Rolleiflex 2.8E/2 in design and handling. The taking lens is a $5\frac{3}{8}$ in. (135 mm.) Zeiss Sonnar *f* 4, with an angle of view of 33°. The viewing lens is also a $5\frac{3}{8}$ in. (135 mm.) Zeiss Sonnar *f* 4. The exposure meter is either built in,

www.orphancameras.com

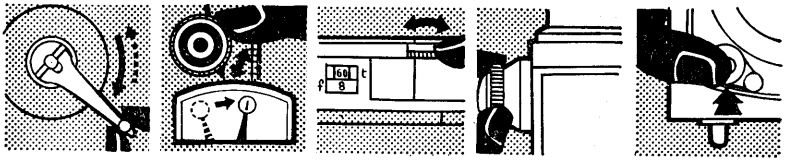
THE ROLLEIFLEX 3.5F



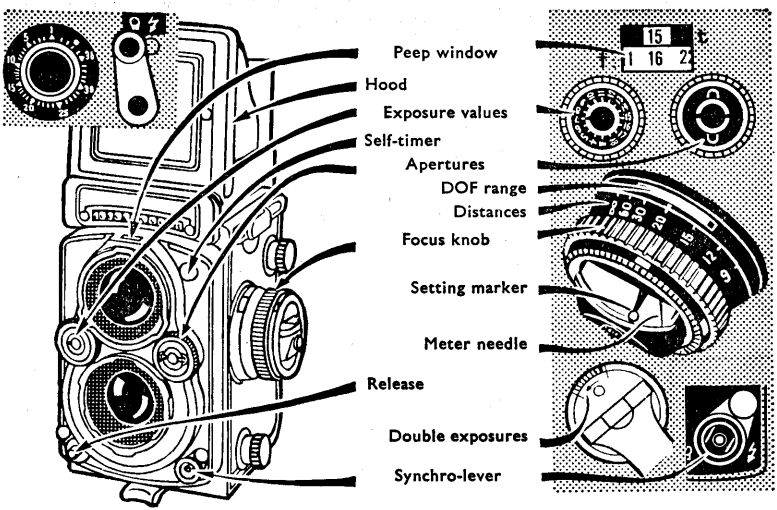
Synchro-lever
Hood
Peep window
DOF range
Distances
Screen
Focus knob
Setting marker
Meter needle
Filter factors
Shutter speeds
Apertures
Film speeds
Double exposures
Release
Flash socket
Back block



The *synchronizing lever* selects flash settings and tensions the self-timer. The *focusing hood* is removable. The *peep window* indicates the shutter speed and aperture set. The *depth of field indicator* automatically shows the sharp zone opposite the *distance scale*, and is coupled with the *aperture control*. The *focusing knob* moves the whole lens panel forwards and backwards. Lining-up the *setting marker* with the *meter needle* sets the correct exposure. A separate knob carries *filter factor corrections* and *film speed settings*. Cross-coupled wheels set the apertures and shutter speeds. The *transport crank* incorporates a *double exposure release*. The *release button* with cable release socket also carries a safety and time exposure lock.
The above details apply to the Rolleiflex 3.5F; apart from the larger diameter of the lenses, the Rolleiflex 2.8F is identical.



Shooting with the Rolleiflex 3.5F. *From left to right:* Swing the crank to advance the film; turn the aperture wheel to line up the setting marker and meter needle while taking an exposure reading; select an alternative aperture-speed combination if required; focus the image on the screen; press the release to expose.



The *peep window* indicates the apertures and shutter speeds actually set. The *focusing hood* incorporates a mirror for eye-level viewing, but is not removable. The *shutter speed wheel* carries an exposure value scale and is cross-coupled with *aperture wheel*. The automatic *depth of field indicator* shows the zone of sharpness at all distances and is coupled with the aperture control. The *exposure meter* controls in the *focusing knob* comprise the *setting marker* and the *meter needle*. Super mposing the two yields correct exposure values. The *release button* incorporates a cable release socket, and a release and time lock. The *film transport crank* carries a *double exposure release*. The *synchronizing lever* surrounds the flash socket and is combined with the retaining catch for the flash cable.
These details apply to the Rolleiflex 3.5E; the features of the 2.8E are similar, except for the provision of a film counter knob for 35 mm. films and a combined synchronizing lever and self-timer (*inset, top*). The 2.8E/2 model is similar to the 2.8E, but has a removable focusing hood like the 3.5F (*opposite page*).



Shooting with the Rolleiflex 3.5E. *From left to right:* Advance the film and tension the shutter with the transport crank; set the exposure value with the aperture wheel uncoupled; select alternative aperture-speed combinations if necessary with the shutter speed wheel; focus the image on the screen; press the release button to expose.

www.orphancameras.com

or the camera is pre-wired for its subsequent installation. The optical glass film plane with appropriate 3-position pressure plate is a standard fitting. The Tele-Rolleiflex takes the same accessories as the 2.8F and it accepts size III bayonet mount attachment. The focusing range is from infinity to 8½ ft. and a special Rolleinar 0.35 near lens set in hinged-on mount is available extending the near range to 5 ft. and a 0.7 Rolleinar set further extending it to 3.3 ft. These lenses can be used in conjunction with the standard Rolleinar close-up lenses.

THE WIDE-ANGLE ROLLEIFLEX is basically the same as the Tele-Rolleiflex in design and handling. The taking lens is a 2⅛ in. (55 mm.) Zeiss Distagon, 4 with an angle of view of 71°. The viewing lens is also a 2⅛ in. (55 mm.) Zeiss Distagon. It takes the same accessories as the 2.8F and accepts size IV bayonet mount attachments. The focusing range is from infinity to 2 ft.

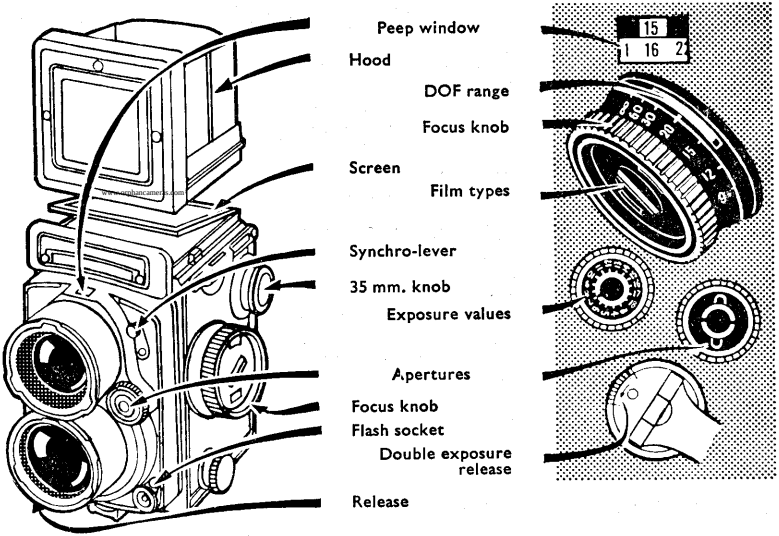
O THE ROLLEIFLEX 2.8E is similar to the Rolleiflex 2.8E/2 but the hood is not interchangeable. In place of the ultra fine focusing screen a normal ground glass screen is fitted. This model is available also without the built-in meter, but fitted suitably wired for subsequent installation of the meter if required. No facility for installation of an optical flat glass accessory is available but the camera can be used with the Rolleikin II for 35 mm. film, also the plate back. It accepts size III bayonet accessories.

O THE ROLLEIFLEX 3.5E is similar to the 2.8E but has a 3 in. (75mm.) Planar *f* 3.5 or Xenotar *f* 3.5 lens. It can be used with the Rollei-Marin 3 underwater housing. It accepts size II bayonet accessories.

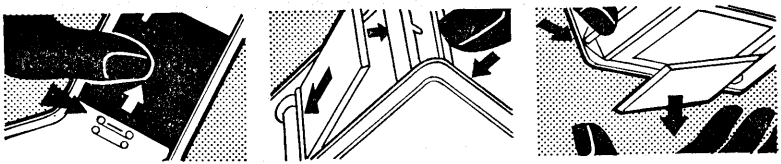
ACCESSORIES FOR ALL THE ABOVE MODELS include filters for black-and-white and for colour films, lens hood, close-up lens sets with parallax compensation, soft focus lenses, flash guns, a micro attachment, a plate and cut film adaptor, Rolleikin 35 mm. film outfit, the Rolleifix quick-release tripod head, pistol grip, panorama head and binocular extension hood. All models—with the exception of the Tele and Wide-angle models—can be used with the attachment lenses for tele and wide-angle effect.

Loading

1. **Open the camera back.** Check that the pressure plate is correctly adjusted. For models with three-position pressure plate, note the two different positions for 2¼×2¼ in. When working without the optical flat glass, use the centre position which exposes a pictorial symbol of a rollfilm. When working with the optical flat glass, push the pressure plate up so that a symbol of a rollfilm with a flat plate becomes visible.
2. **Insert the film.**
3. **Close the camera.**
4. **Get the film ready** for the first exposure.
5. **Set the film speed and type.** To set the film speed on cameras with coupled exposure meter (2.8F, 3.5F) gently press and turn the milled ring in the centre of the film speed disc until the speed of the



This model has a pair of 135 mm. long focus lenses and is available with or without a built-in meter; the latter can be fitted subsequently by the owner. The *peep window* indicates the aperture and shutter speed actually set. The *focusing hood* is removable. The automatic *depth of field indicator* is coupled with the *aperture control*. The *focusing knob* incorporates a *film-type indicator* or (when the exposure meter is fitted) the meter controls. The *synchronizing lever* selects X or M synchronization and tensions the self-timer. The *35 mm. knob* acts as a film counter when using the 35 mm. conversion outfit. The *shutter speed* wheel carries an *exposure value scale*, and is cross-coupled with the aperture wheel. The flash socket incorporates a cable lock. The *film crank* advances the film and tensions the shutter. It has a special *double exposure release* to permit tensioning without advancing the film. The release button incorporates a safety and time exposure lock.
The Wide-angle Rolleiflex is closely similar, but has a pair of 55 mm. short-focus lenses instead.



Using the glass film plane. *Left:* Set the pressure plate in the back to the appropriate position. *Centre:* Insert the glass in the film plane, let it snap into position, and press the retaining bar to secure it. *Right:* To remove the glass, press the retaining bar and let the plate drop out.

www.orphancameras.com

film used appears in the appropriate DIN or ASA window. The filter factor indicator on the outside rim of this disc should be set to "0". If, however, a filter is used, set the correction factor (in minus exposure values) to the black arrow head. The exposure meter then automatically allows for the exposure increase required.

To set the film speed on the cameras with uncoupled exposure meter (3.5E, 3.8E, Tele and Wide-angle Rollei) turn the serrated outer rim of the meter control (the outermost ring of the focusing knob) until the speed of the film loaded into the camera appears in the appropriate DIN or ASA window. Intermediate values are indicated by dots.

The film type indicator is in the centre of the exposure meter knob. Turn the milled button until the appropriate film type appears in the small window, pan, ortho, artificial light colour or daylight colour. This acts as a reminder.

On cameras without exposure meter, set the film indicator in the focusing knob by turning the small cross-bar. Turn in one direction until the appropriate film speed appears in the ASA or DIN window, then turn in the appropriate direction to bring the required film type into the centre window.

Unloading

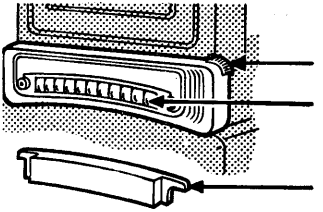
1. **Wind off the film.**
2. **Open the camera back.**
3. **Remove the exposed film.** Then close camera back or reload.

Shooting

1. **Advance the film.** Swing out the crank and turn it forward with one continuous swing until it stops. Then swing back again to stop. This operation tensions the shutter, advances the film to the next frame and advances the film counter.
2. **Set the exposure.** *On the Rolleiflex* 2.8*F and* 3.5*F* pre-select a shutter speed by turning the right-hand setting wheel between the two lenses (with the camera held in the shooting position). The shutter has speeds of 1, $\frac{1}{2}$, $\frac{1}{4}$, $\frac{1}{8}$, 1/15, 1/30, 1/60, 1/125, 1/250, 1/500 sec. and B. The shutter speed appears in the peep window on top of the camera front. The values 1, 2, 4, 8, etc., to 500 are fractions of seconds and stand therefore for 1, $\frac{1}{2}$, $\frac{1}{4}$, $\frac{1}{8}$, etc., to 1/500 sec. Then with the camera pointing at the subject (for a reflected light reading) turn the left-hand setting wheel to line up the meter needle and setting marker. These are visible in the small window on top of the focusing knob. This sets the camera to a correct exposure for the prevailing light. You can select alternative aperture-speed combinations (see step 3 below).

On models with non-coupled meter or without meter (2.8E/2, 2.8E, 3.5E Tele and Wide-angle) the shutter has an exposure value scale.

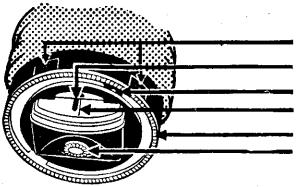
ROLLEIFLEX E EXPOSURE METER



Range switch or bright and dim light.

Exposure meter cell.

Incident light diffuser.



Exposure value readings for bright and dim light.

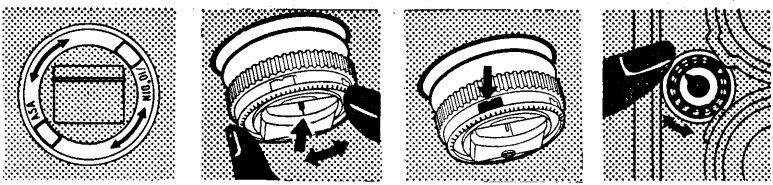
Setting pointer.

Film speed setting.

Meter needle.

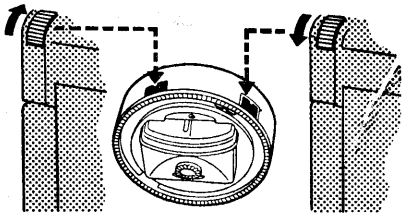
Meter setting ring.

Film type indicator. ← ASA set.?



To use the meter, first set the film speed (*left*), then point the camera at the subject, and turn the setting ring to bring the setting pointer into coincidence with the meter needle (*centre left*). Read off the exposure value in the appropriate window (*centre right*) and set the camera to this exposure value (*right*)

The exposure meter has two measuring ranges controlled by a switch at the top of the meter cell. With the switch pushed upwards, the meter reads exposure values in bright light; the appropriate exposure value is read off in the front exposure value window (*left*). In poor light conditions push the switch downwards and read off the exposure value in the rear window on the rim of the focusing knob (*right*).



www.orphancameras.com

This is marked on the front of the right-hand setting wheel. To set the exposure value, depress the centre of the left-hand setting wheel and turn either or both wheels until the arrow head in the centre points to the required exposure value (from 3 to 18). You obtain the correct exposure value from a separate meter reading. Then let go of the centre of the left-hand setting wheel; the aperture-speed controls interlock again.

3. **Select the aperture-speed combination.** Both speed and aperture are controlled by the right-hand setting wheel. To change the shutter-aperture combination, just move this wheel until the window above the finder lens shows the required aperture or shutter speed.

On the Rolleiflex models with non-coupled meter you can turn either setting wheel. While normally the speed and aperture controls are fully coupled, there is an interlock release in the centre of the aperture (left-hand) wheel. To disengage the coupling, depress the centre of the aperture wheel and turn the centre so that the two black index marks are at right-angles to the loops engraved on the outer rim. Turning the button so that the index marks point to the loops again, restores the aperture-speed coupling. Make certain that the coupling has engaged by turning either or both of the wheels, and see that the button is in the correct position.

4. **Focus and determine the picture area.** To open the reflex hood push up with one finger. To close, push in the sides, on E models pull down the hood.

Turn the focusing knob while watching the image on the screen, until the subject appears sharp. Check with the magnifier.

To bring the magnifier in position gently press in the front panel of the opened hood. To close, press the magnifier back. On E models pull up the small catch in the top of the hood. To close, gently press the magnifier.

To use the direct vision sports finder push in the front panel of the opened hood until it clicks into position. To close, lightly press the sides of the hood. On E models push in the front of the opened hood; to close, press down gently on the magnifier. For eye-level viewing you can also use the pentaprism (see page ● 45)

5. **Release the shutter gently** by pressing the release button. The release has a safety lever. Swing this downwards to unlock the release, and up to lock it against accidental exposures.

Using the Rolleiflex E Exposure Meter

The photo-electric exposure meter built into the Rolleiflex 2.8E, Rolleiflex 3.5E and Tele-Rolleiflex has two measuring ranges. On the top left-hand corner of the name plate a switch operates the high or low ranges. The measuring indicator is built into the focusing knob on the left-hand side of the camera.

1. **Set the film speed** by turning the adjusting ring until the correct speed appears in the cut-out above the indicator mark for ASA or DIN. Dots indicate intermediate values.

2. **Set the measuring range.** In bright light outdoors, turn the measuring range switch on the top left-hand corner of the "Rolleiflex" name plate upwards so that the red dot is covered. In poor light and indoors, turn the measuring range switch downwards so that the red dot is uncovered.
3. **Measure the exposure value.** Turn the finely serrated ring to line up the red pointer with the black meter needle. With the range switch turned upwards (red dot covered) read off the correct exposure value in the forward window of the knob. In poor light, with the range switch turned downwards (red dot uncovered), read off the exposure value in the rear, red window. The figures are full exposure values, the dots indicate half-values.
4. **Set the exposure value** on the shutter speed wheel.

Installing the Exposure Meter

The Tele and Wide-angle Rolleiflex and some Rolleiflex E models, which are supplied without exposure meter, are pre-wired for subsequent installation of the meter.

1. **Fit the meter cell** by unscrewing the camera name plate with the special pin supplied with the separate meter. Replace the name plate by the photo-cell and replace the screws.
2. **Insert the meter control unit** into the focusing knob. Remove the three screws at the retaining ring of the film indicator dial and let the dial drop out. Loosen the retaining screw below the film type indicator window of the meter control unit as far as it will go. The control unit is now inserted into the focusing knob with the red indicator window on top, pushed gently inwards and turned clockwise until it locks. Tighten the retaining screw again.
3. **Zero calibration.** When the photo cell is completely covered up, the black pointer should be in zero position, pointing to the short green line. If the black pointer does not point to the green line, turn the retaining screw as far as it will go, turn the meter control unit to the left to disengage it from its bayonet socket and remove it. Adjust the screw in the upper centre of the back of the control unit until the black indicator needle points to the green index mark. Reinsert the control unit into position and tighten the retaining screw.

   The meter is now ready for use and is handled in the same way as the E meter (described above).

Special Controls

TIME EXPOSURES with the Rolleiflex 3.5F and 2.8F are indicated by green figures in full seconds. After lining up the exposure meter pointers, the green numbers indicate the number of seconds the shutter has to be kept open. At any of the green figures and also at intermediate values (but in the green field only) the shutter will remain open as long

www.orphancameras.com

as the release is depressed and closed on letting the release go. For long time exposures, use a cable release. This screws into the centre of the release button. Swing the safety lever upwards; the shutter will now remain open after pressing.

With Rolleiflex models 3.5E, 2.8E, 2.8E/2 and Tele and Wide-angle Rolleiflex, time exposures are made with the shutter set to B, and released as above. There are no green numbers.

FLASH SYNCHRONIZATION. For X synchronization, set the flash lever (beside the finder lens on the 3.5F, 2.8, and W.A. models) to the flash symbol (a zig-zag arrow), for M synchronization to the bulb symbol. While the camera will accept the standard 3 mm. co-axial plug, a special Rolleiflex flash plug with lead is available to connect to the flash socket on the base of the front of the camera. This special plug locks into position and can only be removed by pressing the lever protruding on the side of the flash socket. On the Rolleiflex 3.5E this lever is also the synchronizing lever.

SELF-TIMER. A self-timer (delayed action) is built in, which permits the photographer to appear in the picture. Place the camera on a rigid support, best a tripod. Tension the self-timer, which is at the same time the flash setting lever, by pulling forward the button on it, and pressing down the lever in the direction of the arrow engraved on it. *Advance the film* first to tension the shutter. On pressing the shutter release, the shutter will open after a delay of approximately 10 seconds. The self-timer can be used with flash shots, but only on X synchronization.

On the 3.5E the self-timer is a button above the finder lens. After advancing the film, push this button in the direction of the arrow to start the mechanism. Both M and X synchronized flash shots are possible with this model.

INTENTIONAL DOUBLE EXPOSURES. The film transport and shutter are coupled to prevent double exposures, but the shutter can also be tensioned independently for intentional double exposures. To tension the shutter without advancing the film, press the disc below the film crank in the direction of the arrow, and turn the crank backwards through one revolution.

CHANGING THE FOCUSING MAGNIFIER. Both the upper magnifier and the rear magnifier can be changed to correct faulty vision.

To change the upper magnifier on Rolleiflex 2.8F, 3.5F, 2.8E/2. 3.5E, Tele and W.A. Rolleiflex, grip the lens from above and below, swing it up, pull it back and then lift it up and out. To insert, push the magnifier forward against retaining spring and let it snap into place. To clean it, fold down the magnifier with the direct viewfinder open.

To change the rear magnifier, open the focusing hood. Grip the two retaining clips on either side of the rear peep window with both thumbs from the inside of the rear wall and pull back the retaining lever. After changing the magnifier, push the retaining spring forward until it snaps into place.

On the Rolleiflex 2.8E remove the upper magnifier by pulling back the ring mount against the retaining spring and lift out. To insert, put the magnifier into position with its back first, pull back against the spring and snap down.

To remove the rear magnifier push in slightly at top and lift out. To insert, slip the magnifier with its white dot uppermost between the retaining springs and push down until it snaps into place.

USING THE GLASS FILM PLANE. While the film is normally kept flat by the accurate machining of the film channel combined with the pressure plate, the optical glass film plane ensures plate-like flatness of the film when extremely critically sharp negatives for extreme enlargements are required. It is a standard fitting of the Tele and Wide-angle Rolleiflex and is also available for Rolleiflex models 3.5F, 2.8F and 2.8E/2 in conjunction with a special back.

To insert the glass plate, open the camera back and tilt forward. Slide the glass with bevelled edge under the upper retaining bar of the film gate. Let the glass plate snap into position and secure by pressing the bar. The bevelled edges are held by the retaining bars of the film gate. To remove, turn the camera upside down, press the retaining bar and let the glass drop into your hand.

Handle the glass by the edges only. Keep it absolutely clean, in particular keep both sides free from dust and lint. Store the plate, when not in use, in the compartment provided in the ever-ready case.

Remember to adjust the pressure plate (see *Loading*).

www.orphancameras.com

THE ROLLEIFLEX T

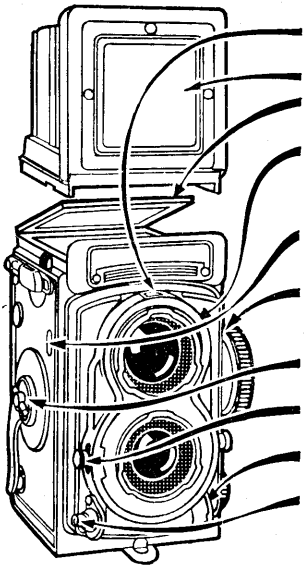
This is a comparatively simplified Rolleiflex without some of the trimmings of the more advanced models. It has a 3 in. (75 mm.) Zeiss Tessar *f* 3.5 lens in Synchro-Compur shutter, and is available with or without dual range exposure meter. The model without meter is pre-wired for subsequent installation of the meter. The focusing hood is removable (for replacement by the pentaprism), but no eye-level mirror is fitted. A single lever controls exposure values and aperture-speed selection, with facility for individual adjustment. The self-adjusting film counter is suitable for 12 exposures or for 16 pictures with a special masking set. A back for single exposures on plates or cut film can be fitted. Cameras with serial Nos. above 2,151,000 are fitted with the dual-size camera back and can be used also with the 24 × 36 mm. Rolleikin. Models of lower serial Nos. can be converted together with the ever-ready case. The camera takes all optical accessories with size I bayonet mount; filters, hood, close-up, soft focus and attachment lenses for tele and wide-angle effect, etc., may be used. Other accessories include the Rolleifix tripod head, Rollei pistol grip, panorama head, extension hood, flash guns, and micro attachment.

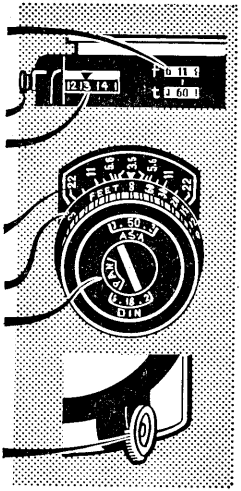
Loading

1. **Open the camera back.**
2. **Insert the film.** First transfer the empty spool in the bottom chamber to the top chamber. Pull out the film retaining knob, remove the empty spool and insert it in the top chamber after pulling out the corresponding retaining knob. The grooved end of the spool should engage the cross bar of the film transport peg.

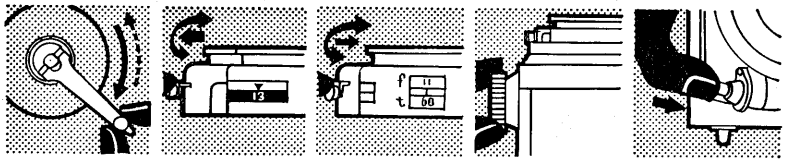
   Insert the film roll into the bottom chamber after breaking the seal. Draw the pointed paper end over the two glide rollers into the wide slot of the top spool. Tighten the paper on this spool. Now wind the transport crank until the triangular marks (or arrows) on the backing paper are opposite the red dots on either side near the base of the film aperture.
3. **Close the camera.**
4. **Get the film ready** for the first exposure by turning the transport lever crank till it comes to a definite stop. Then turn it back and fold over to the rest position. The exposure counter sets itself automatically to No. 1.
5. **Set the film speed and type.** *On the Rolleiflex T without exposure meter,* set the film speed indicator by turning the bar in centre of focusing knob to the right until the DIN or ASA speed appears in the appropriate cut out. Set the film type to ortho, pan, artificial light colour or daylight colour, by turning the same bar to the left.

   On the Rolleiflex T with built-in exposure meter, set the speed by turning the serrated outer rim of the meter beyond the left or right stop until the speed of the film loaded into the camera appears in





The *peep windows* above the finder lens indicate the aperture and shutter speed set. Another window at the side shows the *exposure values*. All the settings are controlled by a single *exposure lever*. The *film counter* shows the number of exposures taken and automatically switches over from 12 to 16 exposures on fitting the 16-exposure mask. The *focusing knob* carries the distance scale which moves past a *depth of field scale*. It also incorporates a *film indicator*, or (when a meter is built in) the meter controls. The *transport crank* advances the film and tensions the shutter. No double exposures are possible. The *synchronizing lever* sets X or M synchronization, or tensions the self-timer. The *flash socket* incorporates a cable lock. The *release button* carries a cable release socket and a safety and time exposure lock.



Shooting with the Rolleiflex T. *From left to right:* Advance the film and tension the shutter by turning the transport crank; set the exposure value; select alternative aperture-speed combinations if required; focus the image on the screen; press the release to expose.

www.orphancameras.com

the appropriate DIN or ASA window. Intermediate values are indicated by dots. The film type indicator is here in the centre of the exposure meter knob. Turn the milled centre button ring until the appropriate film type appears.

Unloading

1. **Wind off the film.**
2. **Open the camera back.**
3. **Remove the exposed film,** then close the camera or reload.

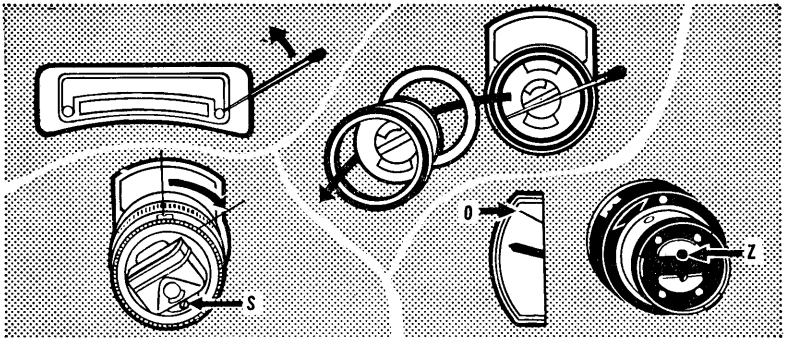
Shooting

1. **Advance the film,** swing out the crank and turn it forward with one continuous swing until it stops, and back again to stop. This operation tensions the shutter, advances the film to the next frame and advances the film counter.
2. **Set the exposure value.** The exposure value is ascertained from either the built-in exposure meter (see below), a separate meter, or the table on the back of the camera. To set it, pull out the button of the lever at the left-hand side of the lens and move it up or down until the required value is opposite the pointer in the exposure value window on the left of the finder lens.
3. **Set the aperture speed combination.** Each exposure value represents a range of shutter speed-aperture combinations covered by a single setting, which are interlocked. You can choose any shutter speed or aperture without changing the exposure. Move the lever at the left of the taking lens, without pulling out its button, until the desired aperture-speed combination appears in the peep window on top of the finder lens. The Synchro-Compur shutter has speeds of 1, $\frac{1}{2}$, $\frac{1}{4}$, $\frac{1}{8}$, 1/15, 1/30, 1/60, 1/125, 1/250, 1/500 sec. and B. The values 1, 2, 4, 8, etc., to 500, are fractions of seconds and stand, therefore, for 1, $\frac{1}{2}$, $\frac{1}{4}$, $\frac{1}{8}$, etc., to 1/500 sec.

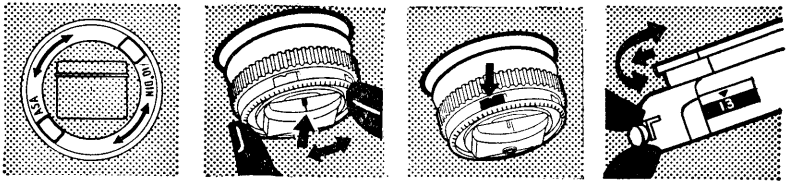
   To set the aperture and shutter speed independently, set first the shutter speed (if necessary go back over the scale) by moving the left-hand lever, then pull out its button and set the aperture.
4. **Focus and determine the picture area.** To open the reflex hood lift up the back edge of the hood. To close it, fold in both sides and pull back the front. To raise the magnifier, press the front panel of the opened hood gently inwards. To close the magnifier, push it downwards.

   Turn the focusing knob to get the image sharp.

   To use hood as direct vision sports finder press in the front panel of the open hood as far as it will go. To close, gently tap both sides of the hood. For eye-level viewing you can also use the pentaprism (see page ● *45*).
5. **Release the shutter gently** by pressing the release button. Swing out the shutter release first.

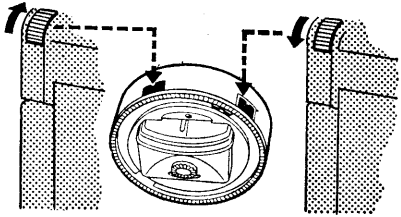


To fit the meter first unscrew the lugs of the name plate with the needle in the outfit (*upper left*) and replace the name plate by the meter cell. Unscrew the screws of the retaining ring of the film indicator (*upper right*) and remove the assembly. Unscrew the screw S below the film indicator window of the meter control unit and insert the latter in the focusing knob (*lower left*), turning it to the right to engage the bayonet lock. Tighten the retaining screw S. For zero calibration (*lower right*) the meter needle should be in line with the calibration mark O when the cell is completely covered. If this is not the case remove the meter control unit again and adjust the setting screw Z in the back.



To use the meter first set the film speed (*left*), then point the camera at the subject and turn the setting ring to line up the setting pointer with the meter needle (*centre left*). Read off the exposure value in the appropriate window (*centre right*), and set the camera to this exposure value (*right*).

The exposure meter has two measuring ranges controlled by a switch at the top of the meter cell. With this switch pushed upwards, the meter reads exposure values in bright light; the appropriate exposure value is read off in the front window (*left*). In poor light push the switch downwards and read off the exposure value in the rear window on the rim of the focusing knob (*right*).



www.orphancameras.com

Using the Rolleiflex T Exposure Meter

The photo-electric exposure meter has two measuring ranges. On the top left-hand corner of the name plate, a switch operates the high or low ranges. The measuring indicator is built into the focusing knob on the left-hand side of the camera.

1. **Set the film speed** by turning the adjusting ring until the correct speed appears in the cut-out above the indicator mark for ASA or DIN. Dots indicate intermediate values.
2. **Set the measuring range.** In bright light out-of-doors, turn the measuring range switch on the top left-hand corner of the "Rolleiflex" name plate upwards so that the red dot is covered. In poor light and indoors turn the measuring range switch down so that the red dot is uncovered.
3. **Measure the exposure value.** Turn the finely serrated ring to line up the red pointer with the black meter needle. With the range switch turned upwards (red dot covered) read off the correct exposure value in the forward window of the knob. In poor light, with the range switch turned down (red dot uncovered) read off the exposure value in the rear red window. The figures are full exposure values, the dots indicate half-values.
4. **Set the exposure value** on the shutter (see above, Shooting No. 2).

Installing the Exposure Meter

The Rolleiflex T, even when without exposure meter, is pre-wired for subsequent installation of the meter.

1. **Fit the meter cell** by unscrewing the camera name plate with the special pin supplied with the separate meter. Replace the name plate by the photo-cell and replace the screws.
2. **Insert the meter control unit** into the focusing knob. Remove the three screws at the retaining ring of the film indicator dial and let the dial drop out. Loosen the retaining screw below the film type indicator window of the meter control unit as far as it will go. The control unit is now inserted into the focusing knob with the red indicator window on top, pushed gently inwards and turned clockwise until it locks. Tighten the retaining screw again.
3. **Zero calibration.** When the photo-cell is completely covered up, the black pointer should be in zero position, pointing to the short green line. If the black pointer does not point to the green line turn the retaining screw as far as it will go, turn the meter to the left to disengage it from its bayonet socket and remove it. Adjust the screw in the upper centre of the back of the control unit until the black indicator needle points to the green index mark.

   Reinsert the control unit, lock into position and tighten the retaining screw.

   The meter is now ready for use.

Special Controls

TIME EXPOSURES. With the shutter speed lever set to B or to any of the green numbers, the shutter opens on pressing the release button and stays open until you let go. The values in green indicate the required time in full seconds if you change from a large aperture with a slow shutter speed to a small aperture at the same exposure value setting. These figures thus serve for calculation only and the actual exposure must be made by counting the seconds while keeping the release depressed. To keep the shutter open for a long time, depress the release and lock the release guard for the required time. Alternatively use a cable release—preferably with lock.

FLASH SYNCHRONIZATION. For X synchronization, set the flash lever (on the right of the taking lens) to the flash symbol (a zig-zag arrow) for M synchronization to the bulb symbol. While the camera will accept the standard 3 mm. co-axial plug, a special Rolleiflex flash plug with lead is available to connect to the flash socket on the left side of the camera. This special plug locks into position and can only be removed by pushing down the locking lever on the side of the flash socket.

THE SELF-TIMER. A self-timer (delayed action) is built-in, which permits the photographer to appear in the picture. Place the camera on a rigid support, best a tripod. Pull out the self-timer lever (which is at the same time the flash lever) and move it to the position marked "V". *Advance the film* first. On pressing the shutter release, the shutter will open after a delay of approximately 10 seconds.

INTENTIONAL DOUBLE EXPOSURES are not possible with this model.

www.orphancameras.com

THE ROLLEI-MAGIC I, II

O THE ROLLEI MAGIC I is the most automatic Rollei. It has a 3 in. (75 mm.) Xenar *f* 3.5 lens. A focusing wheel on the camera front works the combined front cell focusing movement of taking and finder lens. An automatic exposure control system consists of a built-in photo-electric meter geared to the continuous-range Prontomat S shutter. Flash and time exposures with individual aperture selection are possible. An automatic filter factor control adjusts the exposure meter when filters are used. The brilliant focusing screen has a removable folding hood with magnifier and frame finder.

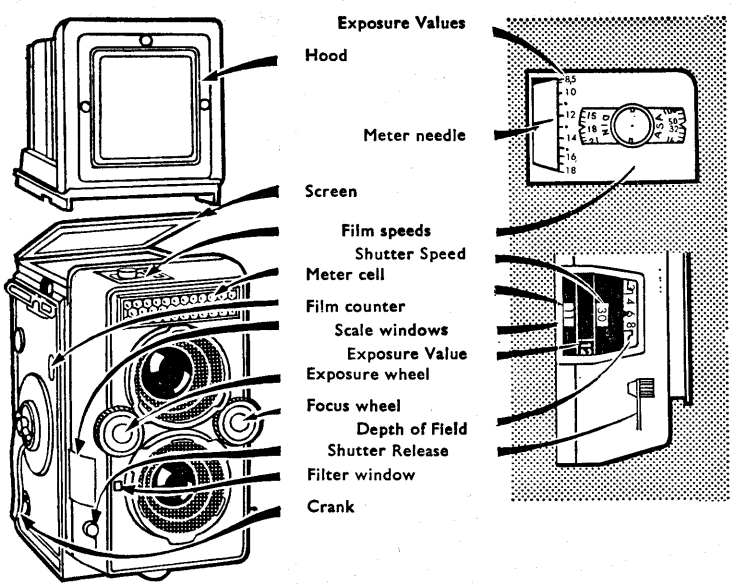
With the 16-exposure mask set, 16 exposures $2\frac{1}{8} \times 1\frac{5}{8}$ in. or $1\frac{5}{8} \times 1\frac{5}{8}$ in. (super slide size) are possible in place of the standard 12 exposures $2\frac{1}{4} \times 2\frac{1}{4}$ in. The film counter automatically switches over according to the frame size selected. The Rollei-Magic takes a special Rolleiflash M gun which fits into the camera accessory shoe on the side without use of a cable. Accessories further include the pentaprism, Rolleifix tripod head, panorama head, and all optical accessories in size II bayonet mount (filters, lens hood, close-up, soft focus and tele and wide-angle attachment lenses). Neither the plate back nor the 35 mm. Rolleikin outfit can be used.

THE ROLLEI MAGIC II has, in addition to the automatic operation of shutter/aperture, the choice of manual control of shutter speeds from 1/30 to 1/500 sec. and aperture of *f* 3.5 to *f* 22. The exposure meter is additionally calibrated in exposure values and can be used when the camera is set for manual operation. In all other respects, including range of accessories, model II is the same as Rollei Magic I.

Loading

1. **Open the camera back.**
2. **Insert the film.** First transfer the empty spool in the bottom chamber to the top chamber. Press the black metal end of the rectangular plate on the camera side, remove the empty spool and insert it by a similar action into the top chamber. The grooved end of the spool should engage the crossbar of the film transport peg.

   Insert the film roll into the bottom chamber after breaking the seal. Draw the pointed paper end over the two glide rollers into the wide slot of the top spool. Tighten the paper on this spool. Now wind the transport crank until the triangular marks (or arrows) on the backing paper are opposite the red dots on either side of the film aperture.
3. **Close the camera.**
4. **Get the film ready** for the first exposure by turning the transport crank until it comes to a definite stop. Then turn it back and fold over to the rest position. The exposure counter sets itself automatically to No. 1.



The *focusing hood* is removable and incorporates an eye-level frame finder. The *meter needle* indicates whether the light is good enough for an automatic exposure. The *film speed setting* controls the meter range. The *film counter* switches over from 12 to 16 exposures on fitting the mask set in the camera. The *scale window* shows the focusing scale as well as the aperture scales when the camera is not set for automatic operation. The *exposure wheel* controls the apertures and exposure ranges. The *focusing wheel* sets the correct distance. The *filter window* shows the filter factor set on the automatic exposure control. The *transport crank* advances the film and tensions the shutter.



Shooting with the Rollei-Magic. *From left to right:* Advance the film with the film crank; check the meter needle to make sure that the light conditions are adequate for an automatic exposure; focus the image sharply on the screen; press the release to expose.

www.orphancameras.com

5. **Set the film speed** in the cut out window in the top of the camera front. Depress the milled button and turn it to bring the speed of the film in the camera opposite the appropriate ASA or DIN mark.

Unloading

1. **Wind off the film.**
2. **Open the camera back.**
3. **Remove the exposed film.** Then close camera or reload.

Shooting

1. **Advance the film.** Swing out the crank and turn it forward until it stops, and back again to stop. This operation tensions the shutter, advances the film to the next frame, and sets the exposure counter.
2. **Focus and determine the picture area.** Open the hood by lifting up the back edge. To close it, fold in both sides and pull back the front. To raise the magnifier, press the front panel of the open hood gently inwards. To close, push the magnifier down.

   Turn the focusing wheel with the left thumb to get the image sharp on the screen. A distance scale alongside the setting range scale (below) shows the forward distance.

   To use the hood as direct vision sports finder press in the front panel of the open hood as far as it will go. To close, tap the sides of the hood gently. For eye-level viewing you can also use the pentaprism.
3. **Check the setting range and meter needle.** Look at the window in the right-hand side of the camera (above the release lever) to check that the indicator in the rear window points to "A" for automatic working, or, in Rollei Magic II that it is set to "Auto".

   If the camera has previously been used for time or flash exposures or, in Rollei Magic II, for manual operation, turn the right-hand wheel on the camera front until it clicks into the "A" position in the window.

   Watch the pointer in the centre on top of the camera front. If the white needle is visible between the two red bands, there is sufficient light to take the picture.

3a. **Manual Operation** of speed and aperture on Rollei Magic II.

(a) **Determine the exposure value.** After pointing the camera at the subject you can read off the exposure value to the right of the pointer position. Intermediate positions between two index lines correspond to intermediate values.

(b) **Set the exposure value** by first disengaging the automatic setting: turn the click-stop wheel until No. 18 exposure value appears, bring it into the centre of the window; then depress the locking button in the centre of the wheel and turn wheel until the exposure value shown by the meter appears in the window—the middle of the three lower windows. This provides the combinations of shutter speeds and apertures, each of which will give the correct exposure.

(c) **Select speed/aperture combination.** On turning the wheel to the shutter speed required, it clicks into position in the middle of the top of the three lower windows; the corresponding aperture sets itself at the same time to give correct exposure. The procedure can be reversed by setting with the wheel the aperture required and the shutter speed will set itself automatically for correct exposure.

The range of combinations is exhausted when you go to 1/30 sec. or beyond *f* 22.

The top scale in the window below the distance to which the lens has been set indicates the depth of field for the aperture selected.

5. **Release the shutter gently** by pressing the release lever on the lower right-hand side of the camera. On Rollei Magic I, and Rollei Magic II when set to "Auto", this also sets the correct aperture and shutter speed immediately before the exposure.

Special Controls

TIME EXPOSURES. For time exposures on Rollei Magic I, press the short protruding button on the left side of the camera front, near the base. At the same time turn the right-hand wheel on the camera front until the *green* coloured band with aperture numbers appears in the window in the side above the release. In this position, the automatic control is disengaged and the shutter will remain open as long as the release lever is depressed. The aperture required is set opposite the index mark in the green field. Use a cable release; this screws into the socket in the grey rim near the release lever.

On Rollei Magic II set "B" (in green) into the shutter speed window by turning the setting wheel; select aperture by turning wheel with the centre button depressed.

FLASH. A standard 3 mm. co-axial plug is fitted into the centre of the accessory shoe in the left-hand side of the camera. The camera is X-synchronized. To use flash on Rollei Magic I, press the button on the left side of the camera front near the base and turn the right-hand wheel on the camera front until the *red* coloured band with aperture figures appears in the window above the release lever. In this position, the automatic control is disengaged and the shutter works with a fixed speed of 1/30 sec. (suitable for flash bulbs and electronic flash). The aperture required is set in the red field against the index mark.

On Rollei Magic II set shutter speed to 1/30 sec. (with electronic flash 1/30 to 1/500 sec. can be used) and set aperture by turning wheel with centre button depressed.

FILTER FACTOR SETTING. The exposure increase required when using filters can be set automatically. Mount the filter on the taking lens and rotate it clockwise until the appropriate factor (in minus exposure values—as engraved on the filter rim) appears in the cut-out on the left of the lens mount.

www.orphancameras.com

CHANGING THE FOCUSING MAGNIFIER. On the Rollei-Magic, both the upper magnifier and the rear magnifier can be changed to correct faulty vision.

To change the upper magnifier, open the hood and grip the lens from above and below. Pull it back and then lift it up and out. To insert, push the magnifier forward against the retaining springs and let it snap into place. To clean it, hold down the magnifier with the direct viewfinder flap open.

To change the rear magnifier, remove and open the focusing hood. Grip the two retaining clips on either side of the rear peep window with both thumbs from the inside of the rear and pull back the retaining lever. After changing the magnifier, push the retaining spring forward until it snaps into place.

THE ROLLEIFLEX 4 × 4

This is the $1\frac{5}{8} \times 1\frac{5}{8}$ in. (4 × 4 cm.) model of 1957. (Earlier Rolleiflex 4 × 4 models are described in the section on early models.) It has a $2\frac{3}{8}$ in. (60 mm.) Xenar *f* 3.5 lens in a Synchro-Compur shutter. A single setting ring controls the cross-coupled aperture and shutter speed setting and the self-locking exposure value scale. The shutter release is locked while the hood is closed. The camera has a fine grain polished field lens type ground glass screen in the fixed (not removable) finder hood.

This model accepts size I bayonet mounted optical accessories (filters, lens hood, close-up and soft focus lenses) and the Rolleifix tripod head, panorama head, micro-attachment, and pistol grip.

Loading

1. **Open the camera back.**
2. **Insert the film.** Transfer the empty spool in the bottom chamber to the top chamber. Press the red arrow on the tab in the lower chamber and remove spool. Pull out the film wind knob of the top chamber and insert the spool, with its slotted end towards the film knob.

   Insert the film roll into the bottom chamber and push the spool inwards. Break the seal and draw up the paper over the two rollers into the wide slot of the empty spool. Stop the full film spool from unrolling with the thumb. Turn the transport knob two to three times to anchor the paper leader securely.
3. **Close the camera.**
4. Get **the film ready** for the first exposure by turning the film knob until it locks. The film counter will now show No. 1.
5. Set **the film speed indicator** by pressing the milled button in the centre of the focusing knob, and turning to bring the desired value into the DIN or ASA cut-out.

Unloading

1. **Wind off the film end** by turning the transport knob through five or six turns (more does no harm) after the last exposure.
2. **Open the camera back.**
3. **Remove the exposed film,** then close the camera or reload.

Shooting

1. **Advance the film** by turning the film knob until it locks. This operation tensions the shutter, advances the film to the next frame, and sets the film counter.
2. **Set the exposure value.** The exposure value is ascertained from

www.orphancameras.com

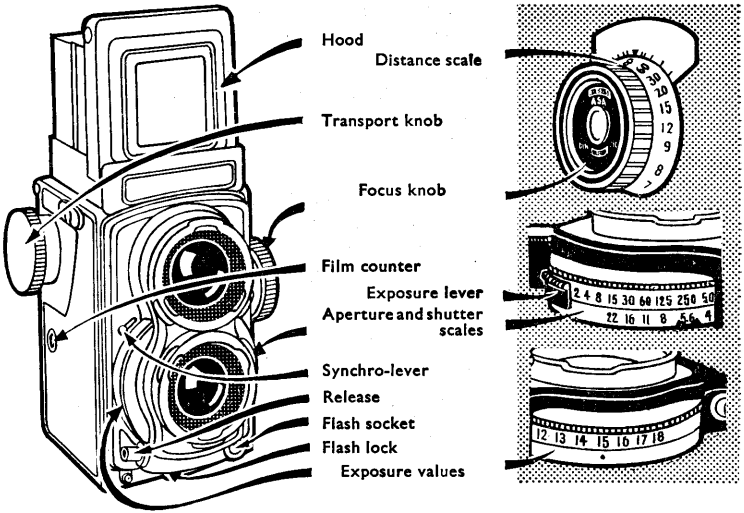
either an exposure meter, or the table on the back of the camera. To set it, press back the small serrated lever at the left-hand side of the lens and move it up or down until the required exposure value is opposite the red dot on the right-hand side of the lens. If the exposure value cannot be reached, re-engage the lever and move back a short distance; then repeat the original procedure.

3. **Select the aperture/speed combination.** Each exposure value represents a range of shutter speed/aperture combinations covered by a single setting. You can choose any shutter speed *or* aperture without changing the exposure.
Press the aperture lever to the left of the taking lens firmly against the shutter speed ring, and turn the two together to bring the desired aperture/speed combination opposite the arrow head (top left of the taking lens).
The Synchro-Compur shutter has speeds of 1, $\frac{1}{2}$, $\frac{1}{4}$, $\frac{1}{8}$, 1/15, 1/30, 1/60, 1/125, 1/250, 1/500 sec. and B. The values 1, 2, 4, 8, etc., to 500, are fractions of seconds and stand, therefore, for 1, $\frac{1}{2}$, $\frac{1}{4}$, $\frac{1}{8}$, etc., to 1/500 sec.
To set the aperture and shutter speed independently, set first the shutter speed (if necessary, first move the aperture lever in the opposite direction). Then disengage the aperture lever and move it separately.
4. **Focus and determine the picture area.** To open the reflex hood, lift up the back edge of hood. To close, press the sides inwards, simultaneously pulling down the top. The shutter release is locked when the hood is closed.
Bring the magnifier into position by pressing against the open finder front panel. To close, fold down the magnifier.
Turn the focusing knob to get the image sharp on the screen.
To use the hood as a direct viewfinder, press the front panel of the open hood inwards as far as it will go. To close, gently press on the right-hand panel; the front panel will then spring back.

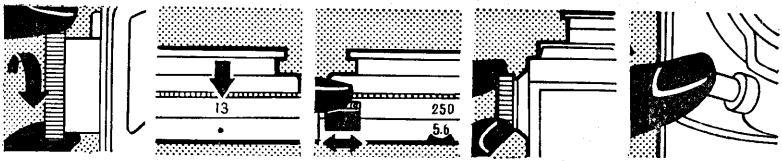
Special Controls

TIME EXPOSURES. With the shutter speed set to B, the shutter opens on pressing the release button and stays open until you let go. The values in the green section of the shutter speed scale indicate the required time in full seconds if you change from a large aperture with a slow shutter speed to a small aperture at the same exposure value setting. These figures thus serve for calculation only and the actual exposure must be made by setting the shutter to B and counting the seconds while keeping the release depressed.

FLASH SYNCHRONIZATION. Before adjusting the synchronizing control, press in the small button below the taking lens. This unlocks the lever. For X synchronization set the flash control (to the right of the taking lens) to the electronic flash symbol (a zig-zag arrow), for M synchronization set to the bulb symbol. While the camera will



The *focusing hood* is not removable, but has to be opened before the release is free. The *distance scale* on the focusing knob moves past a depth of field scale. The *focusing knob* itself incorporates a *film indicator*. The *transport knob* advances the film from frame to frame and automatically locks. The *film counter* shows the number of exposures already made. The *exposure value lever* selects exposure values on the appropriate scale and can also change the aperture/speed combination. The *synchronizing lever* selects X or M synchronization and tensions the self-timer; it can only be moved on releasing the *flash lock* underneath the taking lens. The *release button* incorporates a cable release socket.



Shooting with the Rolleiflex 4×4. *From left to right:* Advance the film; set the exposure value; select the appropriate aperture/speed combination; focus the image on the screen; press the release to expose.

www.orphancameras.com

accept the standard 3 mm. co-axial plug, a special Rolleiflex flash plug with lead is available to connect to the flash socket. This is just below the lens on the left of the camera front. The plug locks into position and can only be removed by turning the locking rim at the base of the flash socket.

THE SELF-TIMER. A self-timer (delayed action) is built-in, which permits the photographer to appear in the picture. Place the camera on a rigid support, best a tripod. Unlock the synchronizing button as for X or M synchronization (above) and move the control to "V". *Advance the film first.* On pressing the shutter release, the shutter will open after a delay of approximately 10 seconds.

CHANGING THE FOCUSING MAGNIFIER. Open the hood and magnifier and push in the front flap. Grip the magnifier lens from above and below, and pull it towards the rear of the hood, pressing down at the same time. To insert the lens, push it forward against the spring and let it engage.

°ROLLEIFLEX AUTOMAT SERIES

These are the Rolleiflexes with automatic loading feature (originally introduced in 1937), setting wheels for aperture and shutter speed, but no exposure meter.

THE ROLLEIFLEX 2.8D has a 3½ in. (80 mm.) Planar or Xenotar *f* 2.8 lens in a Synchro-Compur shutter with exposure value scale. The focusing magnifier in the fixed hood is adjustable but not interchangeable. A 35 mm. film counter knob is built into the camera for use with the 35 mm. attachment. Aperture and shutter speed are coupled to each other; the coupling can be disengaged. A depth of field scale is opposite the focusing scale. A double exposure release is fitted into the transport crank. A film speed and type indicator is built in, but no exposure meter.

THE ROLLEIFLEX 2.8 Chas 3½ in. (80 mm.) Planar or Xenotar *f* 2.8 lens in Synchro-Compur shutter without exposure value settings. The speed range is slightly different from that of the model 2.8D, and so are the release lock and flash cable lock. Special locking rims prevent inadvertent changing of the aperture and shutter speed settings.

THE ROLLEIFLEX 2.8 is basically a Rolleiflex Automat 3.5 (see below) fitted with a 3½ in. (80 mm.) Tessar *f* 2.8 lens in a Compur-Rapid (later version: Synchro-Compur) shutter with a highest speed of 1/400 sec. Only the latest models have an adjustable pressure plate (for 35 mm. Rolleikin II) and the XM synchronization. The camera is handled in the same way as the Rolleiflex Automat 3.5, except for the self-timer, which is a separate lever as on the Rolleiflex 2.8C.

The Rolleiflex 2.8D and 2.8C accept size III, and Rolleiflex 2.8 size II, bayonet-mounted accessories: filters, lens hood, close-up and soft focus lenses. The Rolleiflex 2.8D takes the model II Rolleikin 35 mm. attachment; the Rolleiflex 2.8C takes the Rolleikin I attachment. Other accessories are the plate back for single exposures on plates or sheet film, flash attachment, Rolleifix tripod head, pistol grip, binocular extension hood, panorama head, micro attachment, also the Rolleimeter (an optical rangefinder to be used in conjunction with the frame finder).

THE ROLLEIFLEX AUTOMAT 3.5, produced between the years 1937 and 1955, underwent a number of changes in design.

The lens is a Tessar 3 in. (75 mm.) *f* 3.5 (Xenar *f* 3.5 on a few models) in a Synchro-Compur shutter (1–1/500 sec.) with built-in delayed action. Earlier models have a Compur-Rapid shutter. The finder hood of earlier models contains an eye-level reflex mirror, but no frame finder. The finder lens of the first (1937) version has a 28.5 mm. push-on mount, while the taking lens has a size I bayonet mount. Later on, both finder and taking lens have size I bayonet mounts.

The latest version of the Rolleiflex Automat 3.5 has a Synchro-Compur shutter with exposure value scale, coupled aperture and shutter speed

www.orphancameras.com

settings, and XM synchronization. Models before 1951 are X synchronized, those before 1949 have no flash contact. The focusing knob of versions after 1954 has a built-in film indicator, and these models also incorporate a double exposure release.

All Rolleiflex 3.5 models take size I bayonet-mounted filters, lens hood, close-up and soft focus lenses. Other accessories include the Rolleikin I or II (according to the serial No. of the camera), 35 mm. film attachment, plate back for single exposures on plates or sheet film, Rollei-Marin housing for underwater photography (cameras up to No. 1,427,999 use the Rollei-Marin 1, cameras above this No. use the Rollei-Marin 2), panorama head, micro attachment, binocular extension hood and (synchronized models) the Rollei flash. The models since 1950 can be used with the Rolleimeter, an optical rangefinder, which transforms the frame finder into a focusing frame finder. The last Rolleiflex 3.5 model of 1955 will also accept the Rolleifix tripod head and pistol grip.

Loading

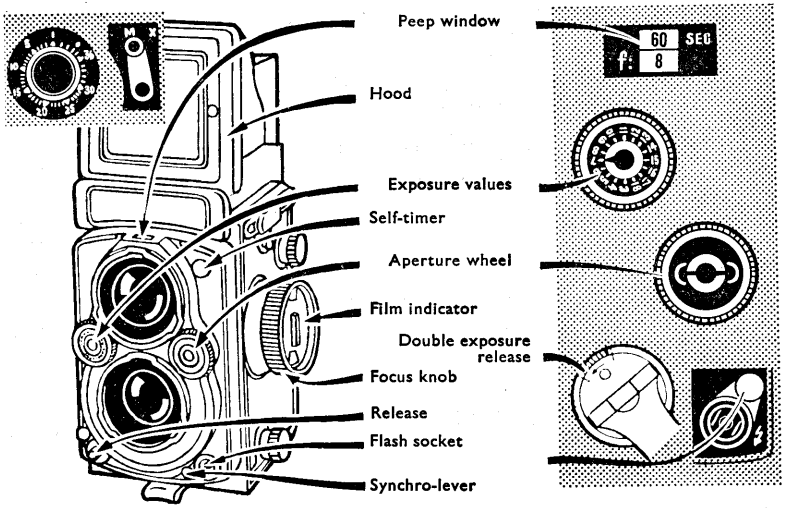
1. **Open the camera back.** On models with adjustable pressure plate check that the pressure plate is correctly set so that the symbol of a roll film is visible.
2. **Insert the film.**
3. **Close the camera back.**
4. **Get the film ready.**
5. **Set the film speed and type** on Rolleiflex 2.8C, 2.8D and later Automat 3.5 models. Turn the centre bar of the focusing knob clockwise until the speed of the film loaded into the camera appears in the appropriate DIN or ASA window, then turn it anti-clockwise to uncover the type of film used in the cut-out.

Unloading

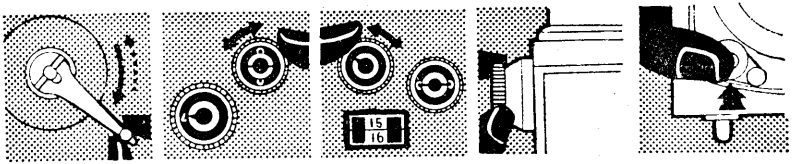
1. **Wind off the film.**
2. **Open the camera back.**
3. **Remove the exposed film,** then close the camera or reload.

Shooting

1. **Advance the film.** Swing out the crank and turn it forward with one continuous swing until it stops, then back again to stop. This operation tensions the shutter, advances the film to the next frame, and sets the film counter.
2. **Set the exposure value** of the cameras with exposure value scale. The exposure value is engraved on the shutter setting wheel in numbers from 4 to 18. To set it, depress the centre of the aperture wheel and at the same time turn the shutter speed wheel until the index in the speed wheel points to the exposure value required.



The *peep window* shows the aperture and shutter speed settings actually in use. The fixed *focusing hood* incorporates a folding magnifier and an eye-level mirror. The *exposure value scale* is on the shutter speed wheel; the latter is cross-coupled with the *aperture wheel*. The *self-timer* operates independently of the flash *synchronizing lever*. The *focusing knob* incorporates a *film indicator*. The *release button* with cable release socket, incorporates a time exposure and safety lock. The synchronizing lever surrounds the *flash socket*. The film transport crank incorporates a *double exposure release* for intentional double exposures.
The above details apply to the Rolleiflex 3.5; the features of the model 2.8D are similar, except for the larger lenses, a different synchronizing lever incorporating the self-timer lever (in the position of the self-timer on the model 3.5), and a film counter for 35 mm. films (*see inset top left*).



Shooting with the Rolleiflex 3.5. *From left to right:* Wind the crank to tension the shutter; set the exposure value; select the aperture/speed combination; focus the image on the screen; press the release to expose.

www.orphancameras.com

Each exposure value presents a range of shutter speed/aperture combinations covered by a single setting, which are interlocked.

On cameras without exposure value scale, set the shutter speed by turning the shutter speed knob until the required speed appears in the peep window on top of the camera front. The values given (1, 2, etc., to 500) are fractions of a second and stand, therefore, for 1 sec., $\frac{1}{2}$ sec., 1/50 sec., etc.

On the Rolleiflex 2.8C the shutter speed (and aperture) setting wheel can only be moved by pressing the shiny rim surrounding the top of the wheel.

The shutter built into the later Rolleiflex Automat is the Synchro-Compur, with speeds of 1, $\frac{1}{2}$, $\frac{1}{4}$, $\frac{1}{8}$, 1/15, 1/30, 1/60, 1/125, 1/250 and 1/500 sec. and B (for brief time exposures). Earlier Rolleiflex Automats are fitted with the Synchro-Compur or Compur-Rapid shutter, giving exposures of 1, $\frac{1}{2}$, 1/5, 1/10, 1/25, 1/50, 1/100, 1/250 and 1/500 sec. (1/400 sec. on the Rolleiflex 2.8C and first 2.8) as well as B.

3. **Set the aperture or aperture/speed combination.** *On models with exposure value scale* both speed and aperture are controlled by the shutter speed wheel. To change the shutter/aperture combination, just move the shutter speed setting wheel until the window shows the required aperture or shutter speed respectively. Incidentally, intermediate light values can also be set, e.g., $5\frac{1}{2}$, $6\frac{1}{2}$, etc. While normally the speed and aperture controls are fully interlocked, the centre of the aperture wheel can be depressed and the aperture and shutter speed may be set independently. On the first models with exposure value scale, the aperture wheel changes only the aperture (and exposure value) without any locking catch. In that case set the shutter speed first for independent settings, and then the aperture.

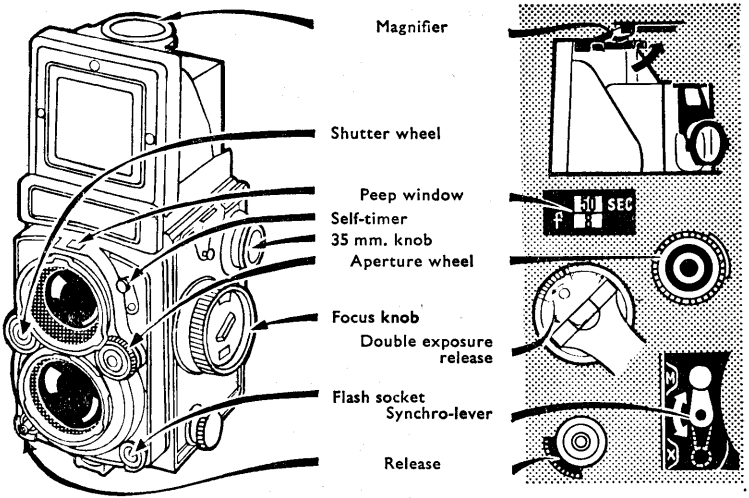
   On models without exposure value scale, set the aperture by turning the aperture wheel to bring the required figure into the peep window.

4. **Focus and determine the picture area.** Open the reflex hood of the Rolleiflex Automat 3.5 by pushing back the rear catch. The hinged magnifier can be folded upwards for use. To close, fold down. To close the hood, pull it down backwards.

   On the Rolleiflex 2.8C and 2.8D, open hood by pushing it up with one finger. The magnifier is brought into position by pulling up the small catch in the top of the hood. To close it, press the magnifier. Close the hood by pulling it down.

   Turn the focusing knob (with all models) to get the image sharp on the screen.

   To use the eye-level frame finder of the Automat models after 1949 push in the front panel of the open hood. This also brings down a second mirror in the hood for focusing through the lower eyepiece in the back. Models before 1949 have no frame finder,



The *focusing magnifier* in the hood is adjustable (but not interchangeable) for individual eyesight variations. The *shutter speed wheel* and the *aperture wheel* carry locking ledges immediately behind to prevent accidental displacement of any setting. The *peep window* above the finder lens shows the actual aperture and shutter speed set. The *self-timer* lever tensions the delayed action release. The *35 mm. film knob* serves as a film counter and film release when using 35 mm. film. The *focusing knob* incorporates a film indicator. The film transport crank is coupled with the shutter tensioning movement and has a *double exposure release*. The *flash socket* incorporates a flash cable lock. The *synchronizing lever* selects X or M synchronization. The *shutter release* has a cable release socket and incorporates a time exposure and safety lock.



Shooting with the Rolleiflex 2.8C. *From left to right:* Advance the film and tension the shutter with the transport crank; select the shutter speed; select the aperture; focus the image on the ground glass screen; press the release to expose.

www.orphancameras.com

but permit eye-level focusing by a mirror in the hood. To use this mirror, pull back the lever at the side of the hood.

The built-in magnifier of Rolleiflex 2.8D and 2.8C is adjustable to correct for faulty eyesight. Swing the magnifier outwards until the lines on the ground glass screen can be clearly seen.

5. **Release the shutter gently** by pressing the release button. The release of the Rolleiflex 2.8D, 2.8C and later Automats 3.5 has a safety catch which can be locked.

Special Controls

TIME EXPOSURES are made with the shutter set to B. On depressing the release, the shutter will remain open until the pressure on the release is removed. For long time exposures use a cable release; this screws into the centre of the release button (or into a socket on the camera front, in the case of the earliest models).

FLASH SYNCHRONIZATION. Rolleiflex models 2.8D, 2.8C and later Rolleiflex Automats are XM-synchronized. For X-synchronization, set the synchronizing lever (next to the flash socket or—on the 2.8C—between the lenses) to X, for M-synchronization to M. On the model 2.8D the lever is next to the finder lens. Earlier Rolleiflex Automats have no setting lever and are permanently X-synchronized; the first models are not synchronized at all.

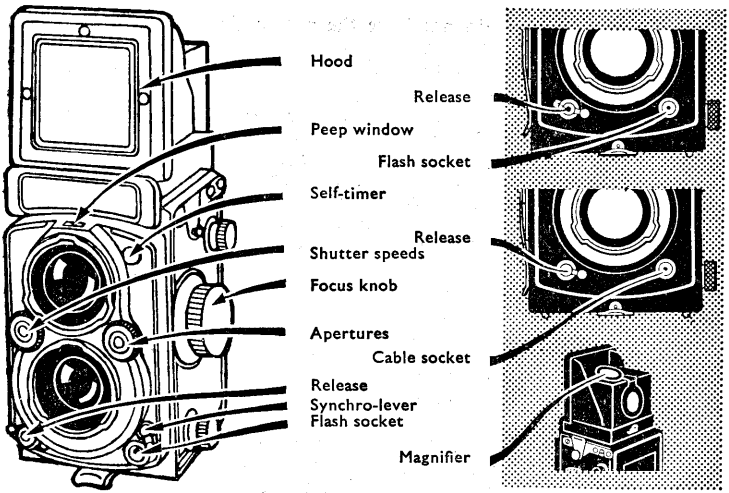
While all synchronized cameras will accept the standard 3 mm. co-axial plug, a special Rolleiflex flash plug is designed for the later models with a lead to connect to the flash socket on the base of the camera front. This plug locks into position and can only be removed on pressing the lever surrounding the flash socket.

A DELAYED ACTION RELEASE (self-timer) is built into Rolleiflex Automat and is automatically tensioned on advancing the film. It is thus always ready for use. To bring it into action, push the delayed action release button on top of the camera front in the direction of the arrow. After a delay of about 10 seconds, it will then automatically release the shutter.

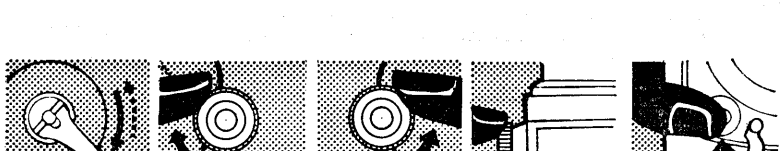
With the 2.8C and D, the self-timer is worked by a lever on the top right of the front panel. This lever is not linked with the film transport and must be tensioned separately before use (move in the direction of arrow marked "V" on model 2.8D).

DELIBERATE DOUBLE EXPOSURES are possible with the 2.8C, 2.8D and the last 3.5 models. The control is a milled segment below the film crank. To tension the shutter a second time (after an exposure) without advancing the film, push this segment in the direction of the arrow and turn the crank backwards through one revolution

EARLIER ROLLEIFLEX AUTOMATS



The *peep window* shows apertures and shutter speeds, as set by the *aperture* and *shutter speed wheels* respectively. The *flash socket* is simpler than on later models and carries no cable lock. The *self-timer* operates independently of the *synchronizing lever*. The *release* incorporates a *cable release socket*, except on the pre-war Automat models. There is also a time exposure and safety lock, except again on pre-war models which simply have a protective cap that swings over the release button. The above details refer to the Rolleiflex Automat 3.5 of 1951. Earlier models from 1950 onwards are similar, but have no synchronizing lever, the shutter being X-synchronized (*top in panel*). Models before 1945 have no flash synchronizing outlet at all, the cable release socket being in the position of the flash socket of later models (*panel, centre*). Models before 1950 have a different type of hood with the magnifier attached to the rear, and with an eye-level mirror but no frame finder (*panel, bottom*). The first Automat models of 1947 have a bayonet filter mount only on the taking lens.



Shooting with the Rolleiflex Automat. *From left to right:* Work the transport crank to advance the film and tension the shutter; set the shutter speed; set the aperture; focus the image on the screen; press the release to expose.

www.orphancameras.com

°EARLY ROLLEIFLEX MODELS

These cameras do not have the automatic loading feature (feeler rollers) of the Automat and subsequent models, nor are the film transport and shutter tensioning interlocked, except on one model. Apertures and shutter speeds are set by levers.

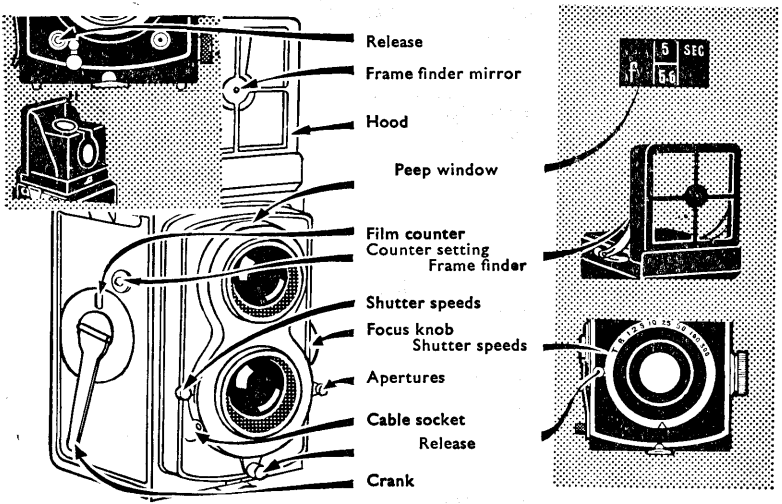
THE ROLLEIFLEX STANDARD NEW resembles the earlier Automat models in appearance. It has a 3 in. (75 mm.) Tessar *f* 3.5 lens, Compur-Rapid shutter (1–1/500 sec.), but no self-timer. The film transport crank also tensions the shutter; the release button is on the front of the camera. The viewing and taking lenses take size I bayonet-mounted accessories. The finder hood has an eye-level mirror, but no frame finder. Reduction of the screen area compensates for parallax.

THE ROLLEIFLEX STANDARD (also known as the lever wind) has a 3 in. (75 mm.) Tessar *f* 4.5, *f* 3.8 or *f* 3.5 lens. Early models have a Compur shutter (1 to 1/300 sec., B and T), later ones a Compur-Rapid (1–1/500 sec., B and T). The lens mount takes 28.5 mm. push-on accessories. The finder lens aperture is *f* 3.1. The finder hood has a framefinder but no mirror. Parallax is compensated by reduction of the reflex picture. The film transport is a lever crank; this does not tension the shutter.

ALL STANDARD MODELS can be used with the Rolleikin I 35 mm. attachment, plate back for single exposures on plates or sheet film, panorama head and extension hood.

THE ROLLEIFLEX 4×4 (pre-1939). This model was originally known as the Baby Rolleiflex, then renamed Sports Rolleiflex, and is a scaled-down Rolleiflex Standard fitted with a $2\frac{3}{8}$ in. (60 mm.) Tessar *f* 3.5 or *f* 2.8 in a Compur or Compur-Rapid shutter, for 12 exposures $1\frac{5}{8} \times 1\frac{5}{8}$ in. (4×4 cm.) on 127 size film. Several versions exist; they are handled in the same way as the large size Rolleiflex cameras of the same period. The early Rolleiflex 4×4 models have 28.5 mm. push-on lens fittings and aperture and shutter scales marked around the taking lens. Later models take size I bayonet-mounted accessories and have a peep window for exposure settings. The cameras accept the same accessories as the Rolleiflex Standard (except the plate back and 35 mm. Rolleikin back).

THE ORIGINAL ROLLEIFLEX (Vintage 1928-1929) takes six exposures $2\frac{1}{4} \times 2\frac{1}{4}$ in. (6×6 cm.) on B1 (size 117) film. It can be converted to take 12 exposures $2\frac{1}{4} \times 2\frac{1}{4}$ in. on 620 film. The film transport is a winding knob, exposures are counted in a red window. It is fitted with a $2\frac{3}{4}$ in. (70 mm.) Tessar *f* 4.5 or *f* 3.8 in a Compur shutter (1 to 1/300 sec., B and T). The finder hood has a built-in mirror for eye-level reflex focusing. The parallax is compensated by reduction of the reflex picture. The taking lens mount diameter is 24 mm. (push-on fitting). The only accessories made for this model are filters, lens hood and Proxar close-up lenses.



The *release* on the Standard New model carries a protective guard. The *frame finder mirror* serves to line up the eye centrally behind the finder frame of the partly folded *hood*. The *peep window* indicates aperture and shutter speed settings. The *film counter* is coupled with the *transport crank;* at the beginning of every film a special button resets the counter to No. 1. The shutter speeds and apertures are set by *levers* to each side of the taking lens. The *release lever* is used both to tension and to release the shutter.

The above details apply to the $2\frac{1}{4} \times 2\frac{1}{4}$ in. Rolleiflex Standard made between 1932 and 1938. The Standard New has the film transport coupled with the shutter tensioning and has the shutter release as a button on the front panel; this model also has a different type of hood as used on the later Automat (*inset, top left*).

The Sports Rolleiflex largely follows the design of the Standard Rolleiflex. Early models, however, have the shutter not encased with the speeds set on a ring and the apertures by a separate lever (*bottom of right-hand panel*).



Shooting with the Rolleiflex Standard. *From left to right:* Work the transport crank to advance the film; set the shutter speed; set the lens aperture; focus the image on the ground glass screen; tension (1) and release (2) the shutter to expose.

www.orphancameras.com

Loading

1. **Open the camera back.** Pull the latch down and swing the back open. There is no locking latch, except on the Standard New.
2. **Insert the film** by drawing the paper end over the two glide rollers above and below the film aperture, and into the wide slot of the take-up spool. A three-quarter turn on the crank will tighten the film and prevent the paper end from slipping out of the slot. Make sure the paper runs straight from spool to spool. On the original Rolleiflex simply turn the transport knob enough to tighten the film and see that it runs straight.
3. **Close the camera.** On the Standard New do not close the second locking latch at this stage.
4. **Get the film ready for the first exposure.** Crank the film until a hand, then a sequence of four dots, and finally the No. 1 appears in the red window. Now close the window as it has fulfilled its purpose. Turn back the handle until it stops and fold it over into the rest position. Then depress the pin above the transport crank base, which will cause the counting mechanism to spring back to No. 1 in the automatic film counting window. The camera is ready for the first exposure.

   Early Standard Rolleiflex models have a second window in the centre of the camera back. This window, marked "B1", was for the now discontinued 117 film, and should be ignored.

   With the Rolleiflex Standard New, crank until No. 1 appears in the window before turning the locking catch of the back lock. The camera is ready for the first exposure.

   On the original Rolleiflex wind the film transport knob until No. 1 appears in the window on the camera back.

Unloading

1. **Wind off the film.**
2. **Open the camera back.**
3. **Remove the exposed film,** then close the camera or reload.

Shooting

1. **Advance the film.** Swing out the crank and turn it forward with one continuous swing until it locks. Then turn back again to stop.

   On the original Rolleiflex wind the film transport knob until the next number on the film backing paper appears in the red film window.
2. **Set the shutter speed.** The shutter is a Compur or Compur-Rapid with speeds 1, $\frac{1}{2}$, 1/5, 1/10, 1/25, 1/50, 1/100, 1/300 sec. (on Compur-Rapid 1/250, 1/500) B and T. Set the shutter speed by moving the shutter speed lever until the required speed appears in the peep window on top of the camera front. The values given 1, 2, 5, 10, etc.

represent fractions of seconds and stand, therefore, for 1, ½, 1/15, 1/10 sec. etc. The shutter requires tensioning by first pulling the release lever to the right (the same lever is then pushed to the left to release).

On early 4×4 models and in the original Rolleiflex turn the shutter speed ring to bring the required speed opposite the index mark.

On the Rolleiflex Standard New, the shutter is automatically tensioned on transporting the film.

3. **Set the aperture** by moving the aperture lever on the right of the camera front (as seen from above) until the required aperture value appears in the peep window on top of the camera front.

   The original Rolleiflex and early 4×4 models have an aperture lever, which has to be moved to the chosen aperture engraved around the shutter front.

4. **Focus and determine the picture area.** Open the focusing hood by releasing the catch at the back (on the Standard New by pushing the rear of the hood up). Swing up the magnifier, and focus the image on the screen.

   The folding focusing hood of the Standard New and original Rolleiflex has an eye-level reflex finder. This consists of a mirror in the hood, and can be swung into position. On the other models the hood can be folded down so as to leave only the front frame erect. This is used as a sports finder with the aid of a special sighting mirror in the centre of the frame. To sight the subject, place your eye behind the frame so that you see the eye reflected in the mirror.

5. **Tension and release the shutter** gently by pushing the release lever to the right, and then to the left. On the original Rolleiflex and early 4×4 models tension by pulling the lever up and release by pushing down. The shutter of the Standard New needs no tensioning; release by pressing the button.

Special Controls

FOR TIME EXPOSURES on the B setting, the shutter remains open as long as the release lever remains pressed to the left (or down). For long time exposures, set the shutter to T. On releasing, the shutter will then open and remain open. On releasing the shutter a second time, it will close again. The shutter does not need tensioning for time exposures or B or T. The Standard New has no T setting.

Use of a cable release is advisable for time exposures; it screws into a socket on the shutter rim or camera front.

www.orphancameras.com

LENS ATTACHMENTS AND ACCESSORIES

Many of the Rollei accessories are lens attachments to fit directly to the bayonet mount of the taking (and sometimes also viewing) lens. They include Tele, wide-angle and close-up lenses, filters, lens heads and the micro-adapter.

Tele and Wide-angle work with the Rolleiflex

For the Rolleiflex models with 45-mm. separation between taking and finder lens: Models 3.5F, 2.8F, 3.5E3, 2.8E3 and also for the models with 42 mm. separation, (this excludes only the 4×4, Tele and Wide-angle Rolleiflex models of the current series) the Zeiss MUTAR attachments can be used.

MUTAR 0.7 is a 4-component, wide-angle attachment increasing the angle of view by one third and is therefore suitable for interiors, architecture and street scenes where a wider angle of view is desired.

MUTAR 1.5 is a 5-component, tele attachment which brings distant subjects 50 per cent nearer and is therefore suitable for portraits, long-range and architectural-detail photography.

The Mutars are interchangeable double-lens attachments fitting over finder and taking lens and are fixed to the front bayonet. They are available in the bayonet sizes I, II, III, according to the camera lens There is no change in exposure when using these lenses. When used with the 42-mm. finder-taking lens separation, slight vignetting of the finder image occurs, which however does not extend to the taking lens nor does it affect accurate focusing.

Close-up Work with the Rolleiflex

The unaided Rolleiflex can focus down to about 2¾ ft. and covers at this distance a subject field of about 22×23 in.

Work at still shorter distances is possible with close-up supplementary lenses. Two identical lenses, i.e. exactly matched in focal length, are required, one for the finder lens, the other for the taking lens, so that the modification is equally performed by both lenses and the reflex image shows what the taking lens photographs.

These close-up lens sets, called Rolleinars, do not require any change in exposure, but it is advisable to stop down in order to increase the depth of field, which is relatively small at such short distances.

The current Rolleinar sets contain a built-in prism for extra parallax compensation at this close range. The Rolleinar with the thicker mount incorporates the prism. This lens has to be placed over the viewing lens with its red dot at the top of the mount. Three sets are made:

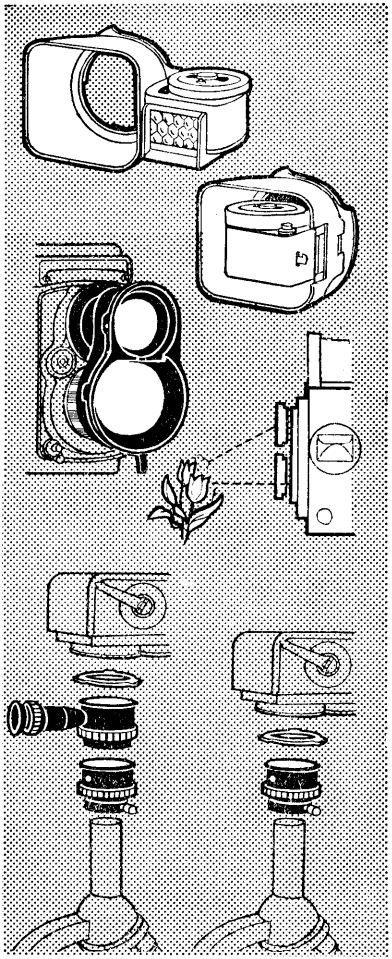
Rolleinar set 1 for distances from 17¾ to 39½ in.
Rolleinar set 2 for distances from 12½ to 19¾ in.
Rolleinar set 3 for distances from 9½ to 12½ in.

The Rolleilux exposure meter consists of a miniature meter attached to a special lens hood. The latter fits over the front of the taking lens; when not in use the meter can be swung inwards (*right*).

Current Rolleiflex models (except the 4×4 and Tele and Wide-angle Rolleiflex) can use the Zeiss Mutar attachments for Wide-angle and Tele work. They fit over finder and taking lens and are available in three bayonet sizes, according to camera lens.

The Rolleinar lenses for close-ups (*right*) fit in front of the finder and taking lens of the camera. The Rolleinar for the finder incorporates a glass wedge to compensate for close-up parallax. (Earlier close-up lens sets used a separate Rolleipar attachment in front of the finder lens.)

The micro-attachment consists of an adapter tube to go over the microscope eye piece, a beam-splitting viewing device, and a bayonet ring to connect to the taking lens of the camera. The unit can also be used without the beam-splitting viewer (*right*), in which case the attachment is mounted on the finder lens and then moved to the taking lens immediately before the exposure.



www.orphancameras.com

The focusing range of the Tele-Rolleiflex is different from that of the standard Rolleis. Two additional Rolleinar sets in twin mounts are available for this camera. They can be combined with any of the regular Rolleinars to cover the entire focusing range without interruption.

Rolleinar 0.35 (Tele-Rolleiflex): range from 9 ft. to 4ft. 5 in.

Rolleinar 0.7 (Tele-Rolleiflex): range from 4 ft. 6½ in. to 3 ft. 0½ in.

The bayonet-mounted Rolleinar lenses are made in four sizes.

Size I for Tessar and Xenar (except on the Rollei-Magic) *f* 3.5 lenses.

Size II for Planar and Xenotar *f* 3.5 lenses and the Xenar *f* 3.5 of the Rollei-Magic.

Size III for Planar and Xenotar *f* 2.8 and Sonnar *f* 4 lenses.

The focusing range of the wide-angle Rolleiflex, which entends to 2 ft., can be further increased with Rolleinar 2, to cover the whole range down to 9½ in.

Size IV for Distagon *f* 4 lenses.

For use, lock the Rolleinars securely on the inside of the bayonet-socket of both lenses by turning them to the right until they snap into position.

Earlier Close-up Lens Sets

The Rolleiflex close-up sets issued prior to 1939 were called Proxars (in 1945 Curtars, and since 1947 Rolleinars). The performance and field of application of all these lenses is the same. Prior to the above detailed Rolleinar sets with parallax compensating wedge built into one lens, sets were supplied without the built-in wedge. A separate wedge, the Rolleipar prism, is used which fits the bayonet mount in the Rolleinar on the viewing lens.

The Rolleipar I works in conjunction with the Rolleinar set I and the Rolleipar II with the Rolleinar set II. Rolleipar lenses are available with either bayonet or push-on mount. The former fits on top of those Rolleinar finder lenses which are equipped with a bayonet fitting.

Having attached the two Rolleinar lenses on the camera, mount the corresponding Rolleipar on top of the Rolleinar finder lens. Make sure the double arrow engraved on the mount is properly centred at the top.

Sets with a bayonet-mount on one and push-on mount on the other Rolleinar lens are to be used with those Rollei cameras which are provided with a bayonet fitting on the taking lens, whereas the finder lens has a push-on mount.

Sets with a push-on mount on both Rolleinar lenses are designed for the Rollei models not equipped with bayonet fittings at all. If necessary, adjust the springs of push-on mount until they fit over camera lenses.

Soft Focus Lenses

The Rolleisoft lenses, supplied in bayonet mounts of same series as the filters, are designed to soften critical definition, producing a diffused,

halo-like effect, particularly with back lighting. Their particular field of application is in portrait photography.

The Rolleisoft 0 is for slight softening effects and contrasting lighting. It is best used at full aperture. Full exposure increases the effect.

The Rolleisoft 1 is for stronger soft-focus effects and for use in soft lighting. Stop down to *f* 5.6 for decreased softness.

The softening effect can be observed on the ground glass screen by mounting the Rolleisoft on the finder lens.

The Lens Hood

Exposures against the light give fascinating light effects. Use a lens hood to protect the lens from the direct rays of the sun. Use it for all your pictures, in fact, because it will engance the brilliance of the image. Further it is useful for night photography, as it prevents stray side light from reaching the lens and causing disturbing reflections. It affords excellent protection of the lens from rain or snow.

The Rolleiflex lens hood is made in the four sizes of bayonet mount to fit the different Rollei models. The hood is mounted over the outer rim of the bayonet socket of the taking lens and turned until it locks.

For earlier models with push-on mount, a 28.5 mm. push-on lens hood was available with an excenter clip to fix the hood securely to the lens rim. On the inside of the hood a filter rim will accept the special Rollei push-on filters which are held by a second clip.

The Rolleilux

This is a lens hood with photo-electric exposure meter attached. It fits all Rolleiflex models with series 1 bayonet mounts. The bayonet mount can be rotated through 180 degrees to suit various camera models. The tiny meter folds inside the hood when not in use. To measure exposure, it hinges out to the left and covers the same angular field as the Rolleiflex lenses. With the hood fitted over the lens, it is read from above, with the camera in the normal taking position. A hinged translucent flap can be swung up from underneath for incident light measurement. The meter is calibrated in ASA and DIN film speed ratings and reads in exposure values and speed-stop combinations. A leather case with loop to fit the camera neck strap is designed for use as an ever-ready case for the meter when not fitted on the camera.

Filters

Rolleiflex filters are available in the four bayonet sizes. Size I for Tessar and Xenar (except Rollei-Magic) *f* 3.5 lens, size II for Planar and Xenotar *f* 3.5 lenses and also the Xenar *f* 3.5 of the Rollei-Magic. Size III for Planar and Xenotar *f* 2.8 lenses and Sonnar *f*4. Size IV for Distagon *f*4 lenses.

There are two groups of filters: for black and white and for colour photography respectively. The tables at the end of this guide list the

www.orphancameras.com

filters available together with their purpose and exposure increase expressed also in exposure value adjustments.

The Rolleipol is supplied in four sizes for bayonet fitting cameras (p. 30). For use fix it in front of the finder lens, rotate the Rolleipol until the effect is right, and transfer it in the same position (note white markings) to the bayonet mount of the camera lens. The Bernotar is an earlier version of the polarizing filter in push-on mount 28.5 mm. to fit the early Rolleiflex models (except Original Rolleiflex).

The Rollei Micro Adapter

This permits photography through the microscope with the Rolleiflex utilizing the full circle of the $2\frac{1}{4}\times 2\frac{1}{4}$ in. and 4×4 cm. negative size.

The attachment consists of a micro-tube to clamp the camera to the microscope and a micro prism with focusing eyepiece for observation of the object. Both attachments are fitted with interchangeable bayonet rings to connect to the bayonet mount of the camera lens.

The micro-tube can be used by itself to photograph static subjects. Fix the tube first to the finder lens for focusing and then transfer to the taking lens. Adding the prism attachment permits photomicrographs of moving subjects as the micro-subject can be observed through the prism even during the exposure. In this case the prism unit fits between the micro-tube and the camera. The latter must always remain focused at infinity.

VIEWING ACCESSORIES

The accessories in this group are mainly intended as aids to viewing and focusing, especially (in some cases) for the older models which lack some of the refinements built into current Rolleiflexes.

The Binocular Focusing Hood

This is a folding leather hood which can be fitted over the camera hood and is equipped with a binocular and a viewing magnifier. This extension hood shuts out extraneous light to increase the brightness and clarity of the focusing screen image. At the same time it permits observation of the image with both eyes and two times enlarged. Both magnifiers can be adjusted individually, and snap into position on opening the hood.

An earlier model extension hood was made without magnifier.

The Prism Finder

The Rolleiflex pentaprism attachment is suitable for all Rollei models with detachable hood. It replaces the reflex hood to permit eye-level viewing and focusing. The eye-level position is a great asset for all action photography, sports, press, flash work, particularly when used with the pistol grips. The image seen in the pentaprism is upright and the right-way-round. An adjustable rubber eyepiece eliminates reflection. The standard model is for viewing without spectacles. Eye-sight correction lenses are available. The Penta B special eye-piece model is universal, for the normal eye and for wearers of distance spectacles who will see the full finder image perfectly sharp.

With the pentaprism the camera can be turned upside down to photograph over heads in crowds.

To fit the pentaprism, first remove the focusing hood by pressing the spring catches on either side of the hood and sliding the latter off backwards. Place the pentaprism over the screen, press down, and slide forward until it locks into position. To change back to the hood, proceed in the same way.

O *The Rolleigrid*

This is a field lens, which can be used to brighten the screen image on older models, where it facilitates viewing and focusing. The lens is a thin square plate and is placed over the ground glass screen, embossed side downwards.

Rolleiclear Screen

This screen, fitted to the $2\frac{1}{4} \times 2\frac{1}{4}$ models since 1964, can be incorporated into some earlier models. It is an extra bright screen with a wedge rangefinder in its centre. The two halves of the centre circle are lined up to be certain of pin sharp definition.

www.orphancameras.com

○ *The Rolleimeter*

The Rolleimeter is a coupled optical rangefinder which transforms the direct viewfinder of the Rolleiflex Automat (1950 and later models) and Automat 2.8 into a focusing frame finder, permitting simultaneous viewing and focusing at eye level. This is specially useful when taking sports shots—rapid action is easier to follow in the frame finder than on the screen—or when working in poor light where the screen image is difficult to observe clearly.

The Rolleimeter is attached by means of a simple clamping screw to the name plate of the camera. Focusing the camera causes the moving front panel to actuate a lever which, in turn, transmits the motion to the rangefinder. A vertical glass plate with a semi-silvered spot in the middle, is located in the centre of the frame finder at 45° to the plane of the front frame. This provides the means for viewing the two clearly distinguishable focusing images. On turning the focusing knob of the camera the two images fuse into one when the camera is correctly focused.

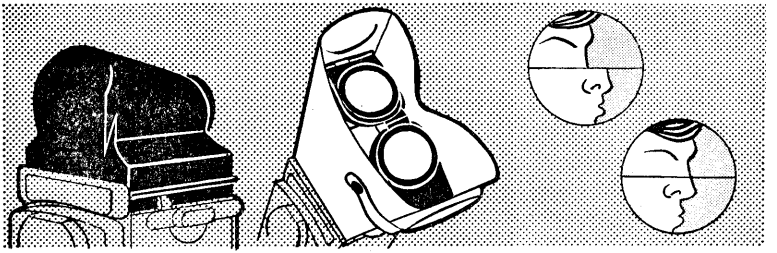
Before using the Rolleimeter for the first time, a simple infinity (∞) adjustment of the instrument to coincide with the camera is required. A protective cap is provided over the adjustment screw to secure the setting permanently. A special model Rolleimeter C is available for use with the Rolleiflex 2.8 series.

The Rolleimeter is supplied in a leather case, which may be fastened to the strap of the ever-ready camera case. It is not usable for the Rolleiflex models E, F, T, Magic or 4×4.

○ *The Extension Focusing Knob*

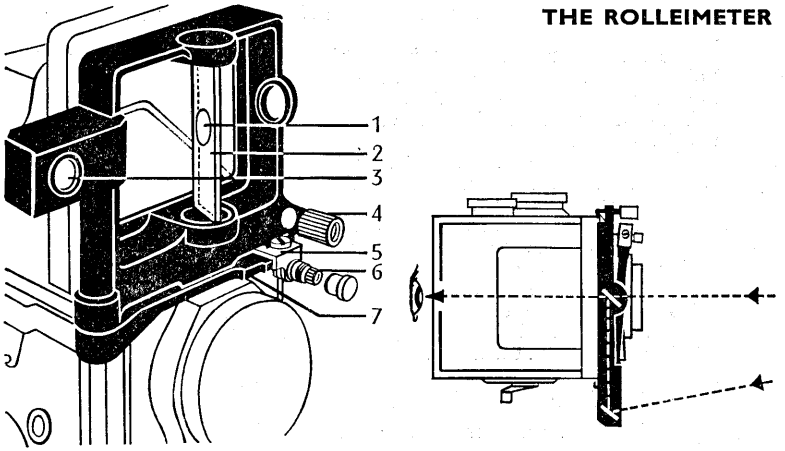
The Rolleiflex Automats since 1954 and the later models have a large focusing knob, designed for focusing under adverse conditions, e.g. when wearing gloves, or when the camera is in its case. For the pre-1954 Automats an extension focusing knob is available. The extension knob is bigger than the original focusing knob, and easier to grip. To fit the extension knob press in the spring-loaded outer disc and attach the knob by its three claws over the focusing knob. The extension knob also carries a double film indicator to show the type and the speed of the film in the camera.

The extension knob is available calibrated in either feet or metres. The knob will fit all but the earliest Rolleis.



Left: The pentaprism finder can be used with all Rollei models having a removable hood, and provides an upright and right-way-round view of the screen at eye-level. *Centre:* The binocular focusing hood clips over the standard hood and completely shuts out all stray light. *Right:* The Rolleiclear has a split image centre. Lining it up produces sharp definition on $2\frac{1}{4} \times 2\frac{1}{4}$ models.

THE ROLLEIMETER



The Rolleimeter is an optical coupled rangefinder which can be attached to the Rolleiflex and is used with the built-in frame finder. It contains a glass strip **2** set at 45° to the front of the frame finder, with a semi-silvered spot **1** in the middle. This reflects an image reflected by the pivoted mirror **3** which is coupled to the movement of the camera lens panel by the arm **7**. When this reflected image coincides with the image seen *directly through* the glass strip, the camera is correctly focused. To fit the Rolleimeter on the camera hook one end round the edge of the name plate, and fix the other end with the clamping screw **4**.

Before using the Rolleimeter for the first time, adjust it to the infinity setting of the camera by means of the screw **6** underneath its protective cap. The whole setting screw assembly can also be moved on slacking off the screw **5**; this compensates for deviations in the focal length of the lens from the nominal focus, but is important only at close distances.

www.orphancameras.com

CAMERA CASES AND HOLDING ACCESSORIES

Ever-Ready Cases

Leather ever-ready cases are available for each Rolleiflex model for full protection of the camera while retaining quick shooting facility. On opening the top and front in one action, the camera can shoot while in its case. The carrying strap acts as neckstrap for the camera without case. The front of the current cases can also be removed by a single action, if the case is intended to form a camera carrying and holding cradle.

A covering flap which protects the exposure meter knob is available as an extra.

The case for Rolleiflex 3.5F, 2.8F, 2.8E/2 and T opens from the back and the whole top with front swings down. To remove the front pull down the clip below the camera. To remove the camera from the case swing down the holding latches on either side and pull out the camera.

The camera strap is fitted by pushing its prongs into the strap holders on either side of the camera until they engage. To remove them press together the prongs and pull out the strap.

The case for the Rolleiflex 3.5E and 2.8E is similar, but the front is not detachable.

The original case for the Rolleiflex 4×4, 1957, is plastic, opening down at the front and rear. To insert the camera put it into the case from the rear. To close the case swing up the two sections. The 1965 version of this case is of the same design as the $2\frac{1}{4}\times 2\frac{1}{4}$ ones.

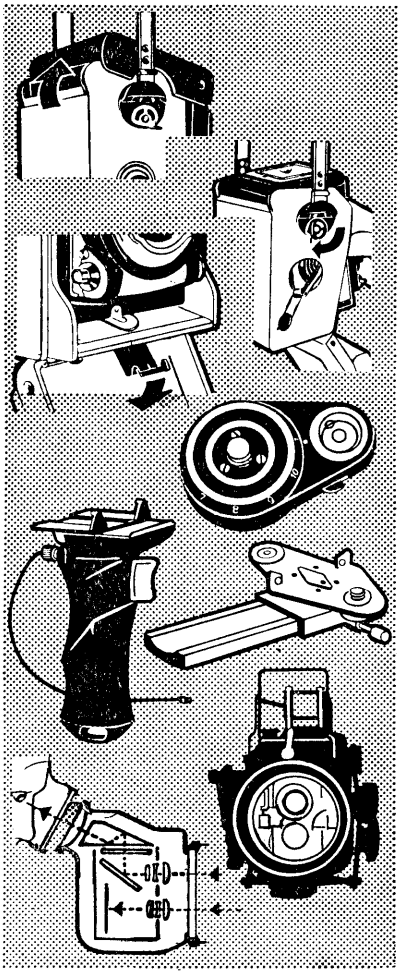
The cases for the earlier Rolleiflex models are of somewhat simpler design. To secure the camera in position, clips are fitted to either side which engage in the strap holder of the camera.

To accommodate a Rolleiflex with the 35 mm. exposure counter permanently fitted, bend back the tabs around the film knob inside the case and lift out the insert.

The Metal Ever-Ready Case

This is a light-weight metal case which totally encloses the camera thus giving complete protection in all weather conditions. It is designed for use with all Rolleiflex cameras having a grooved tripod base plate. A special model is made for the Rolleiflex 4×4, 1957.

The case is air-tight and water-tight and has a pivoted camera mount so that it can be opened and the camera swung up quickly into the shooting position. For protection of the camera against excessive humidity in tropical climates clips are provided inside the case to hold a desiccant cartridge. This consists of silica gel crystals contained in a heat-proof glass tube.



The ever-ready case opens up from the rear, with the front falling down. The front can be removed altogether by unhooking the clip (*lower left*). To remove the camera from the case open the latches at the side and pull out the camera from the front (*right*).

The panorama head (*upper right*) is designed for taking panoramic picture series. It takes the Rolleiflex camera and permits rotation of the camera through fixed and exact intervals to cover a view of any width. The pistol grip (*left*) provides a handy way of holding the camera and releasing it even with one hand. The cable release screws into the camera release button and is then operated by the trigger on thegrip. ❍ The stereo slide (*right*) automatically provides the correct separation for stereo pairs of pictures taken by successive exposures.

The Rolleimarin underwater housing is a water-tight pressurized case for underwater photography. The camera controls are operated from the outside and a prism viewing system provides an almost eye-level view of the picture on the focusing screen.

www.orphancameras.com

The Rolleifix Tripod Head

The Rolleifix head screws on to the tripod or flashgun bracket and is left in position. To fix the Rolleiflex it is only necessary to slide the camera on to the head and lock it fast by means of a lever. All Rolleiflexes with a grooved tripod base plate will fit the Rolleifix.

The Rollei Pistol Grip

This is a pistol-type grip shaped to fit the right hand. It allows a very comfortable steady hold for hand-held exposures. It embodies a Rolleifix attachment for fitting to all cameras with a grooved edge on the tripod mount. A trigger releases the shutter via a cable release which screws into the release button. The latest version is fitted with a release lock. A thread is also incorporated for attaching on the flash gun bracket. Since 1965, it has a locking device against unintentional release.

The Panorama Head

This is designed for taking panoramic picture series, 10 exposures covering the entire 360° horizon.

The panorama head can be used in conjunction with the tripod head (see above) or can be directly screwed into the tripod bush of the camera. After mounting the camera with head on a tripod, the camera can be rotated by the correct amount by pressing the self-locking button on the head.

An earlier version of the panorama head has two locating pins. To use this model insert the screw of the panorama head into the tripod socket of the camera without, however, tightening up completely. Leave the base plate just movable. Now press the sockets of the base plate against the two pins located on either side of the back latch until they take a firm hold. After that tighten the screw completely. When turning to the right a ratchet stops the head at each section.

O *The Stereo Slide*

With the help of the stereo slide (now discontinued) the Rolleiflex can be used like a stereo camera, producing three-dimensional pictures.

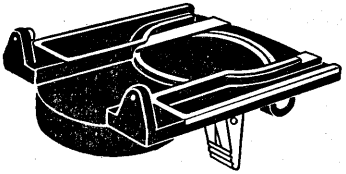
The necessary separation of the stereo pair (65 mm., the normal separation of the eyes) is mechanically attained.

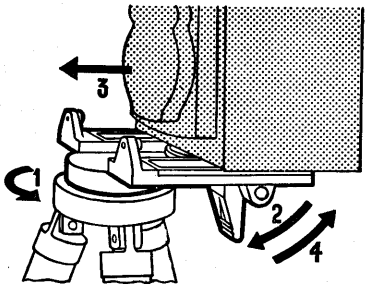
Subjects with plenty of foreground are particularly effective.

The stereo attachment must be used on a tripod.

1. **Screw the stereo attachment on the tripod.**
2. **Fix the camera.**
3. **Adjust the case level.**
4. **Push the camera as far as it will go to the left and fasten the screw.**
5. **Make the first exposure; wind on the film.**
6. **Loosen fitment screw, push camera to the right and tighten screw.**
7. **Make the second exposure.**

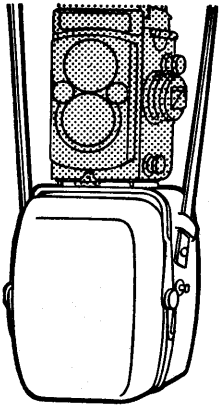
THE ROLLEIFIX TRIPOD HEAD

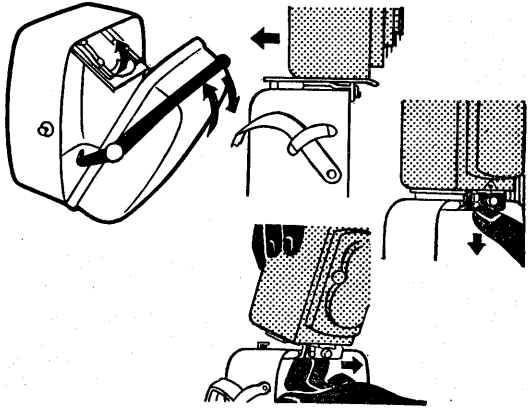




This attachment permits quick mounting and release of the camera on and from the tripod. It is suitable for all Rolleiflex models with a grooved edge on the socket surrounding the tripod bush. To use: 1. Screw the Rolleifix to the tripod. 2. Push down the catch underneath. 3. Slide the Rolleiflex into the Rolleifix from behind. 4. Push the catch up to secure the camera in place. To remove the camera pull the catch down again and slide the Rolleiflex off towards the rear.

THE METAL EVER-READY CASE





This is suitable for all Rolleiflex models with a grooved edge on the socket surrounding the tripod bush. In use the camera sits on top of the case; for carrying it simply swings downwards into the open case and after locking the latter, is protected against dust and water.
To fit the camera, raise the handle of the case to open it (*centre left*) and swing up the camera holder. Push the camera base with the tripod socket into the retaining guides of the camera holder (*upper centre right*). To swing the camera into the case pull forward the camera holder from behind (*lower centre right*) swing the camera down, and close the case. To remove the camera from the camera holder (*right*), press down the locking button on the front of the holder and pull the camera forward out of the holder.

www.orphancameras.com

The two separate exposures must both be made with the same shutter speed and as quickly as possible in succession. Persons in the picture must not move during the exposures.

Stereo pictures are most effective when printed as transparencies on lantern plates 6×13 or 4.5×10.7 cm. For printing any printing frame with a glass plate will do, as long as it is large enough.

Stereo viewers are needed for viewing the stereo pictures.

The Rolleimarin Underwater Housing

This is a camera container for underwater photography with the Rolleiflex Automat *f* 3.5. It is pressure proof, and tested to a depth of 330 ft. It is fitted with a prism and a viewing magnifier for ground glass screen focusing and has in addition a parallax compensated direct vision viewfinder. The casing is finished in a corrosion resistant lacquer.

Transporting the film, setting shutter speed and aperture, and focusing are possible under water on large easily readable scales, with the housing in shooting position. A built-in filter turret permits change of filters. There is provision for fitting a flash unit.

Rolleiflex Automat cameras with serial Nos. up to 1,427,990 require use of the Rolleimarin model 1, while for Nos. above that up to 1,739,999 the Rolleimarin 2 is suitable. For Rolleiflex models fitted with Planar *f* 3.5 or Xenotar *f* 3.5 lenses or those with numbers 1,740,000–1,870,000, Rolleimarin 3 should be used. Rolleimarin 4 is designed for Rolleiflex 3.5 (above No. 2,250,000).

The Rolleimot

This is an electric remote control release for the $2\frac{1}{4} \times 2\frac{1}{4}$ Rolleiflex and Rollei Magic cameras. It transports the film and releases the shutter from distances up to 650 ft. and re-tensions it again via the transport crank. It is suitable for single shots as well as for series of pictures.

The Rolleimot consists of a base for the camera which contains the motor, accumulater (or 4 U2 batteries) and transport mechanism, and an electric cable with switch for remote release.

ALTERNATIVE PICTURE SIZES

The Rolleiflex Mask Set

The mask set is designed exclusively for the Rolleiflex T and Rollei-Magic, it will not fit other models. It enables 16 pictures, either $2\frac{1}{8} \times 1\frac{5}{8}$ in. (5.5×4 cm.) or the popular "superslide" size $1\frac{5}{8} \times 1\frac{5}{8}$ in. (4×4 cm.), to be taken on 120 rollfilm.

A single mask for $2\frac{1}{8} \times 1\frac{5}{8}$ in, and $1\frac{5}{8} \times 1\frac{5}{8}$ in. fits into the film aperture in the camera back. The mask defines the larger size and the $1\frac{5}{8} \times 1\frac{5}{8}$ in. format is indicated by notches in the top and bottom edges, which show on the rebate of the film. On inserting the mask, the film counter mechanism is automatically switched from 12 to 16 frames. A white "12" or "16" below the frame numbers in the counter window shows whether the mask is in place.

The focusing screen and the sports finder each have a separate mask for each format. The focusing screen masks fit under the screen which is removable together with the hood. The masks move with the focusing knob, giving automatic parallax correction. The sports finder masks clip over the opening in the focusing hood.

The Plate Adapter

Plates offer advantages in all cases where individual treatment of single negatives is essential or desirable. Technical photographs of all kinds, portraits and reproductions, for example, are generally produced on special negative material in limited numbers only, and usually necessitate immediate, individual development. Here, plates are the ideal negative material.

The advantages of plates can be enjoyed by using the plate adapter. This is attached in place of the normal camera back.

The Rolleiflex $2\frac{1}{4} \times 2\frac{1}{4}$ in. (6×6 cm.) uses $2\frac{1}{2} \times 3\frac{1}{2}$ in. (6.5×9 cm.) plates, while a special model O for the Rolleiflex $1\frac{5}{8} \times 1\frac{5}{8}$ in. (4×4 cm.) uses $1\frac{3}{4} \times 2\frac{1}{4}$ in. (4.5×6 cm.) plates. The actual picture size, however, is unaffected and remains the same as for rollfilm.

To use the plate back

1. **Remove the normal camera back** by lifting the lock of the hinge of the back (on early models by pushing the sprung hinge outwards).
2. **Remove the take-up spool from camera.**
3. **Attach the plate adapter back** without plate holder.
4. **Insert the plate holder** by pushing it down the grooves on the adapter back after having swung out the swing catch on the left-hand side top.
5. **To expose,** withdraw the slide, lift up the lever on the back of the plate holder, give it a quarter turn and let it slide forward into the focal plane.
6. **Remove the plate holder** after reversing procedure under 5 (above).

www.orphancameras.com

To load the plate holder

1. **Withdraw the slide.**
2. **Lift up the locking lever** on the back of the plate holder.
3. **Give the lever a quarter turn** and let it slide in.
4. **Slide the plate** or sheet film (with sheet film holder underneath) into the camera.
5. **Reverse steps 3 and then 2.**
6. **Insert the slide.**

A focusing screen holder is available to permit focusing directly on the back of the camera, for example, with close-ups where parallax operations are critical. To use it:

1. **Insert the closed holder.**
2. **Withdraw the slide.**
3. **After use re-insert slide** and then remove holder.

The Rolleikin Cine Film Adapter

The cine film equipment makes it possible to take up to 36 exposures on 35 mm. cine film combined with all the advantages offered by the Rolleiflex. It is not suitable for the Rollei Magic or 4×4 models but can be used with an adaptor on early Rolleiflex T models.

It also permits the use of types of colour film which are only available in 35 mm. size.

The image obtained is upright; for horizontal photographs, view the finder sideways as when photographing round the corner. Alternatively, use the eye-level pentaprism or frame finder in horizontal camera position.

The Rolleikin equipment is further useful for picture sequences. In conjunction with the reduced picture size the focal length of 3 in. of the Rolleiflex produces the effect of a long focus lens, which is a welcome feature in portraits, flower and still-life studies.

Film transport takes place automatically as with the full size $2\frac{1}{4} \times 2\frac{1}{4}$ in. exposures, by turning the crank.

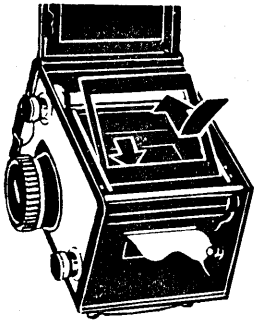
The Rolleikin II

This model is suitable for current Rolleiflex cameras where the camera back has a two or three-position pressure plate (engraved 24×36 mm.). It is also suitable for the Rolleiflex models with serial No. 1,100,000 to approx. 1,160,000, but for these a new back is required, suitable for both $2\frac{1}{4} \times 2\frac{1}{4}$ in. and 35 mm.

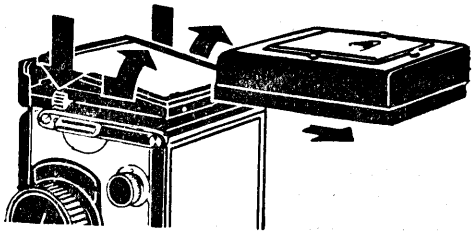
The Rolleikin II consists of:

(1) Metal or leather case;
(2) Film guide frame;
(3) Take-up spool;
(4) Release knob with film counter;
(5) Extension spindle for rewind knob;

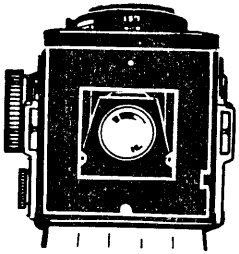
ROLLEIFLEX 3.5T AND ROLLEI-MAGIC MASK SET



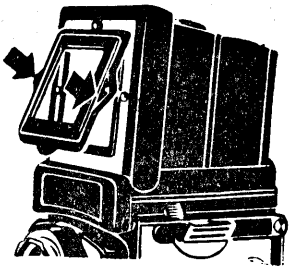
insert the film mask behind the film aperture, spring loaded edge first, towards the bottom of the camera. Then slide the mask up under the top of the aperture.



Press both spring catches either side of the hood, slide it backwards and lift off. Replace by inserting hood in the guides and pressing forward until it locks. Remove the screen by pressing backwards and lifting off.



Drop the ground glass mask into place so that the notch and punched holes fit over the studs provided.



Slip the top edge of the sports finder mask under the lip of the top button on the hood. Press the side pins into the bushes either side of the hood. Remove by lifting the bottom tab on the mask.

www.orphancameras.com

(6) Inner spool knob;
(7) Focusing screen mask;
(8) Frame finder mask; O
(9) Lens hood mask.

Installing the Release Knob

The release knob accepts 35 mm. and size 120 film and is already built into the Rolleiflex models 2.8C, D, E, Tele, and Wide-angle Rolleiflex. On the other models:

1. **Remove the top film knob by unscrewing the three countersunk screws.**
2. **Fasten the release knob tightly by means of the three screws supplied.**
3. **Remove protective lining from the gummed insert and paste it on the release knob.**

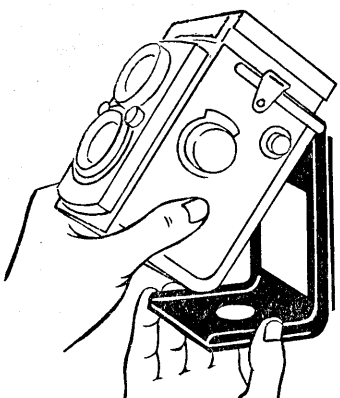
Assembling the Rolleikin II

1. **Adjust the film pressure plate.** Press the pressure plate down, and slide it towards the bottom of the camera, till the inscription 24×36 ($1 \times 1\frac{1}{2}$ in.) becomes visible.
2. **Insert the take-up spool.** Pull out the release knob, fit the take-up spool into the winding key on the right, and push the spool home.
3. **Insert the rewind parts.** Screw the extension on the rewind knob by rotating the latter. Push the intermediate knob over the opposite spool bearing pin (slipping the metal tongue between the film feeder rollers of the Rolleiflex).
4. **Insert the film guide frame.** Press the spring-actuated clamp-bar at a flat angle against the bottom of the film gate and insert completely. To remove, push the frame downward (against the clamp bar) and lift out.
5. **Place the focusing screen mask into the focusing hood.** On the 2.8F, 3.5F, 2.8E/2 and Tele-Rolleiflex remove the focusing hood, fold up the screen, and drop the mask with its holes over the two small pegs. Then close the screen and replace the hood. On cameras with fixed hood, drop the screen mask into the hood with the lettering "Rolleikin" legible and on the latest model press the ledge at the rear of the finder hood to let the catch engage the mask. Snap the direct finder mask on the two snap fasteners on front of the hood.
6. **Push the 35 mm. frame finder mask** over the press studs on the front of the hood (now discontinued).

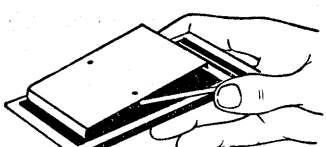
Loading

1. **Insert the film cassette.** Open the camera back, pull out the rewind knob and fit in the full film cassette in the feed chamber.
2. **Thread the film.** Introduce the film leader which first passes between the film feed rollers into the double slit of the take-up spool, against the right-hand edge. Tighten by giving the spool a short turn.
3. **Close the camera.** Make sure the mouth of the cassette points

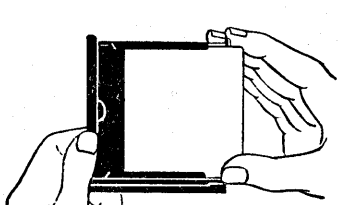
THE ROLLEI PLATE ADAPTER



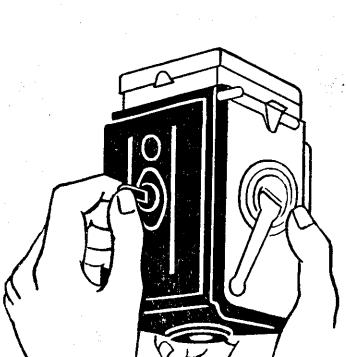
The plate adapter takes the place of the normal hinged camera back.



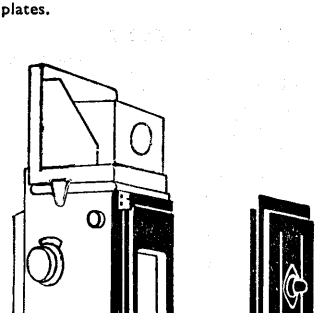
To load the plate holders, first release the plate carriers inside.



Sheet films are first loaded into stiff film holders and then treated like plates.



Before exposure, give the handle at the back of the plate holder a quarter turn. This brings the plate into the correct plane of focus.



For special purposes a ground glass slide can be fitted for back focusing.

www.orphancameras.com

straight ahead in line with the film leader, then close the camera back.

4. **Set the film counter.** Press and release the release knob until the red dots of the Rolleikin counter face each other. Disregard the counter for rollfilm. To set the Rolleikin counter for the first exposure, advance the counter dial to No. 1 by pressing the release knob and actuating the film transport three times.

Film Transport

1. **Press and release the release knob before actuating the film transport. The film counter advances automatically to the next number.**
2. **Advance the film as usual to the stop with the crank.**

Rewinding

1. **After the last exposure press down the release knob.**
2. **Simultaneously rotate rewinding knob clockwise.**

The rewind also permits the removal of only partially exposed films. In order to prevent the film lead from slipping into the cassette when rewinding, be sure to thread the film backward, i.e. against the winding direction into the double slit of the take-up spool when loading.

When reloading a partially exposed cassette, advance the film two frames beyond the last exposure (skipping one frame for safety).

Always adjust the film pressure plate in accordance with the type of film used, in order to ensure perfect registry. (A certain sign of incorrect adjustment when using the Rolleikin: camera back will not close.)

The Rolleikin I

This model of the 35 mm. attachment is designed for Rolleiflex Standard New and Automat models with serial Nos. from 200,000 to 1,100,000.

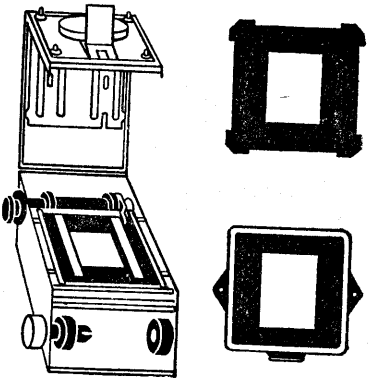
It consists of the following parts:

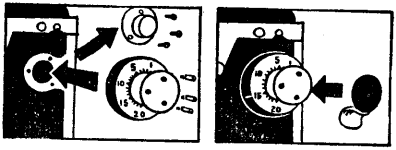
(1) Rolleikin back panel;
(2) Film guide frame;
(3) Take-up spool;
(4) Release knob;
(5) Rewind knob with
(6) Extension spindle (to be unscrewed);
(7) Spool knob;
(8) Screen mask.

Assembling the Rolleikin I

1. **Replace the standard film knobs by the release and rewind knob.** Replace the standard film knobs mounted on the camera by release and rewind knobs. Unscrew the countersunk screws and remove the two knobs. In their place, screw in firmly the release knob and rewind knob.

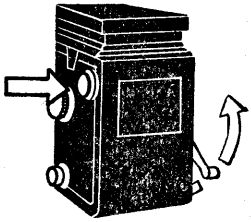
The Rolleikin II (*right*) consists of a take-up spool and film guide frame as well as a counter release knob, fittings for the feed spool chamber, and a screen mask and O frame finder mask. It is used with the Rollei Universal back with adjustable pressure plate for 35 mm. and rollfilm.



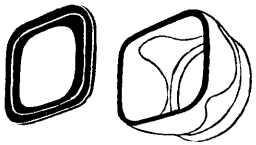


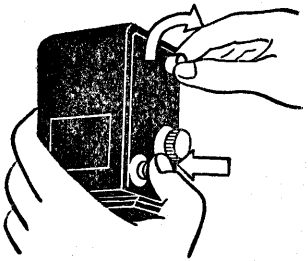
Replace the top film knob by the release knob with the Rolleikin counter. (Not on Rolleiflex 2.8C, D or E or Tele-Rolleiflex or Wide-angle.)

After loading outfit, press and release the release knob until the red dots of the Rolleikin counter face each other. Then press and work the film transport three times to get the film ready for the exposure.



After the last exposure keep the release knob pressed down and at the same time rotate the rewind knob (*below right*).





The lens hood mask increases the efficiency of the lens hood when used with the Rolleikin (any model) The mask is simply pushed into the front of the hood.

www.orphancameras.com

2. **Replace the standard back panel by the Rolleikin panel.** Fully open and remove the standard back panel by turning the small lever near the top. Put the Rolleikin back panel in its place.
3. **Insert take-up spool.** Insert the take-up spool while pulling out the release knob and holding it in that position.
4. **Mount rewind knob.** Screw the extension spindle on to the thread of the rewind knob by turning the latter. Press down the spool knob on the fixed spool bearing pin of the camera.
5. **Insert the film guide frame.** Place the film guide frame in the film window by means of the spring rail, and press down firmly. The slot in the guide plane should be pointing downwards.
6. **Insert the screen mask.** The screen mask reduces the focusing screen to cine film size. After opening the focusing hood, place it over the ground glass screen so that the engraved lettering "Rolleikin" is the right way up.

   On Rolleiflex Automat cameras since 1950 a special frame finder mask for the cine size can be fitted to the two buttons in front of the focusing hood. This arrangement simplifies view-finding for horizontal photographs with the Rolleikin.

Important: Both the release and rewind knobs are so designed as to take also the standard '120' size spool, so that they can permanently remain on the camera. The film knobs on camera models since 1950 are suitable for Rolleikin and need not be replaced.

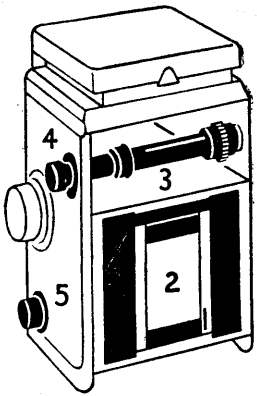
Film Loading and Transport

1. **Insert the film cassette.** Insert a standard 35 mm. film cassette into the bottom chamber.
2. **Draw out the film end and fix to the take-up spool** by pushing it in its slot. The film has to pass *between* the two feeler-rollers.
3. **Close the camera back.** Set the counting mechanism of the Rolleikin equipment first to zero by turning the milled wheel, ignoring the counter in the side of the camera which does not apply to cine film. To wind on the film, first depress the locking knob of the back panel after each exposure, release it and then turn the crank up to the next stop. To make the camera ready for the first exposure, work the film transport in this way until No. 1 appears in the window of the Rolleikin counter.
4. **Set the film counter.**

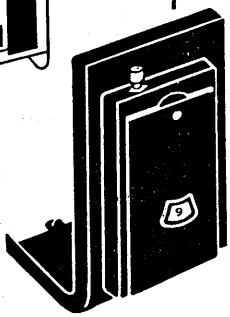
Rewinding

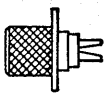
Disengage the transport. Press down the release knob and lock by a short turning movements

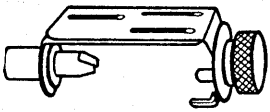
Rewind film. The rewind knob can then be turned clockwise until the whole of the film has been re-wound into the cassette, using the Rolleikin counter as a check.



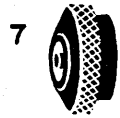








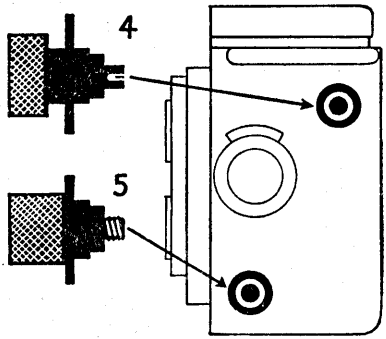




In the earlier Rolleikin models the rewinder knob **5** is of a different design, while the extension spindle **6** and spool knob **7** are replaced by a cassette holder.

The parts of the Rolleikin equipment are: **1.** Cine back; **2.** Film guide frame; **3.** Take-up spool; **4.** Release knob; **5.** Rewind knob; **6.** Extension spindle; **7.** Spool knob; **8.** Focusing screen mask.

The release knob **4** and the rewind knob **5** take the place of the corresponding knobs on the camera. Once fixed, they can be left in place for rollfilms too. The knobs fitted to Automat 1950 are also suitable for the Rolleikin and need not be replaced.



www.orphancameras.com

Early Designs of Rolleikin

OLD ROLLEIKIN I. It is designed for the same camera models, but has in place of the rewind knob with separate extension spindle a different rewind knob and spool holder.

Assembly is the same as described for the Rolleikin I.

To load, slide the spool holder apart and insert the cartridge so that the mouth of the cartridge coincides with the red dot on the spool holder. Push the spool holder together and place it in the bottom spool chamber with the film end pointing towards take-up spool.

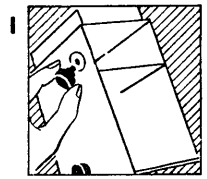
The rest of the manipulation is as before.

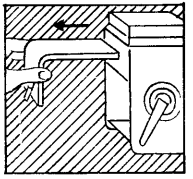
ORIGINAL ROLLEIKIN. The first model of cine adapter designed for the Rolleiflex Standard consists of: back panel with counter and cutting knife, film mask, screen mask, one spool holder.

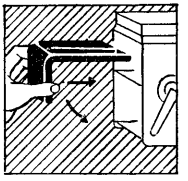
Assembly and handling is as follows:

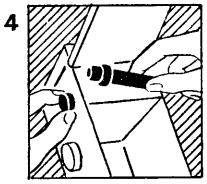
1. **Remove the rollfilm back** by lifting it up, and pressing it slightly to one side. The two lock-levers close to the strap slots must be pushed upwards. Now the cine back can take its place.
2. **Insert the film mask** by pushing it into the negative aperture. slot must be at the bottom.
3. **Insert the screen mask** over the focusing screen so that the engraved name (Rolleiflex) is the right way up and upright.
4. **Insert the 35 mm. film cassette** into the bottom chamber just like a rollfilm.
5. **Fix the film end** to the centre spool of an empty cassette to be used as take-up spool, close it and insert this take-up cassette into the spool holder, taking care that the winged key of the film transport fits into the slot in the spool holder. The film runs now from the full cassette at the bottom into the empty one at the top.
6. **Close the back panel** and make four blind exposures by four times alternately winding the transport and pressing the catch on top left of the cine back.
7. **Set the film counter** by turning the milled wheel to No. 1. You are now ready for the first exposure.
8. **After each exposure,** press the catch and transport the film until all exposures are made. Four more turns will wind the film end into the take-up cassette, so that the back can be opened and the film removed.
9. **The built-in film cutting knife** permits cutting off of exposed film parts. Make two blind exposures after the last picture, and fully pull out the knife. The camera can now be opened in diffused daylight and the take-up cassette with the exposed film removed for processing. The rest of film in the loaded cassette can be re-inserted with a total loss of approximately 6 frames.

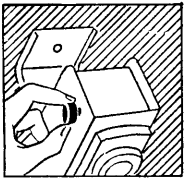
ASSEMBLING AND LOADING THE ROLLEIKIN I

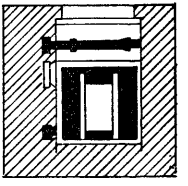


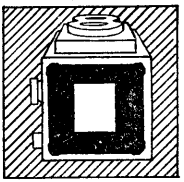




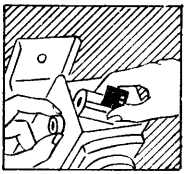


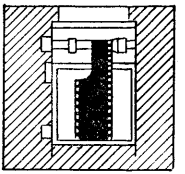


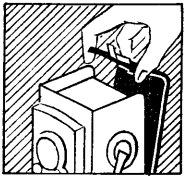


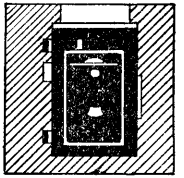


1. Replace standard film knobs by release and rewind knobs. **2.** Remove camera back. **3.** Fit Rolleikin back. **4.** Insert take-up spool. **5.** Mount rewinder. **6.** Insert film guide frame. **7.** Insert focusing screen mask.

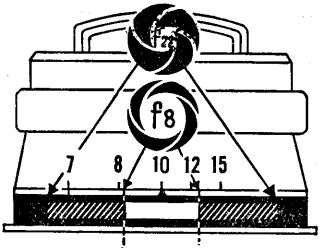


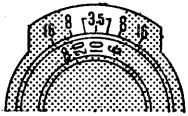


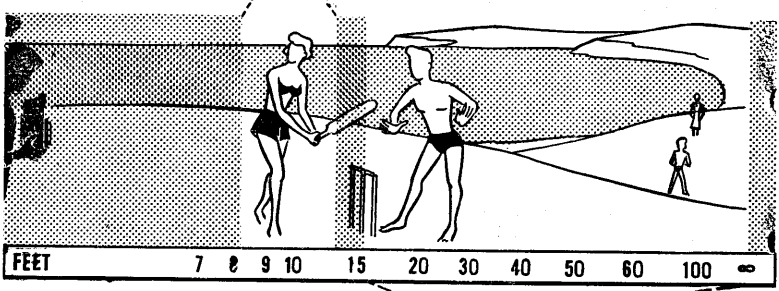


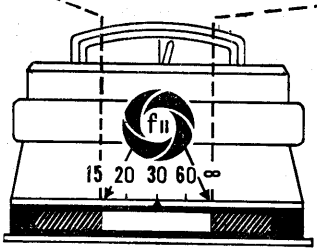


1. Insert film cassette. **2.** Draw out film and fix to take-up spool. **3.** Close camera back. **4.** Set film counter.









The automatic depth of field indicator fitted to current Rolleiflex models consists of a white strip next to the distance scale on the focusing knob. The length of this strip indicates the extent of the depth of field available as shown on the distance scale. The strip automatically shortens on opening up the lens aperture, and gets longer on stopping down. The larger the aperture, therefore, the shallower the zone of sharp focus. Thus with the camera focused on 10 ft., the depth at *f*8 will extend from about 8 to just beyond 12 ft.; at *f*22 it will cover a range from about $6\frac{1}{2}$ ft. to infinity. Far focusing distances also yield greater depth of field (*bottom*).
Some Rolleiflex models have a depth of field scale engraved on the body panel next to the distance scale. This indicates the depth of field by means of index lines numbered to correspond to the lens aperture (*top right*)

www.orphancameras.com

This is coupled to the aperture control and directly shows the near and far limits of sharpness without reference to aperture numbers.

Two more points on depth of field.

First, the depth obtained depends also on the focal length of the lens. Short focus lenses yield more depth and tele lenses less depth. As the lens of the Rolleiflex is fixed we can ignore this point.

Secondly, the sharp zones obtained by the indicator or tables are based on a somewhat arbitrary assumption of how much blurring is acceptable. So depth of field data for different cameras with the same lens may not always agree, and you are also quite safe in rounding off figures obtained from such data. And if you intend to make really big enlargements from your negatives, you can use stricter standards of sharpness by simply stopping down the lens by one stop.

Zone Focusing

With action subjects and similar occasions where you want to shoot quickly, determining sharp zones even with the depth of field indicator wastes too much time. There you need prepared settings covering given near and medium distance ranges that you can easily memorize and set on the camera. The focusing zone table (p. 64) gives such settings; then you only have to worry about keeping the subject within that zone while you shoot.

With landscapes and views you sometimes need depth from infinity to the nearest possible point. Thus by stopping down to *f* 11 and focusing on 25 ft. you get a really extended zone from infinity down to about 12 ft. But don't use this setting if you want the maximum sharpness in the far distance; in that case focus on infinity (∞).

FLASH PHOTOGRAPHY

Flash is an efficient light source where no or insufficient daylight is available such as at night, indoors, etc. In the flashlight you carry your own private "sun" with which you can illuminate your subject or scene at any time and place.

THE FLASH BULB is similar to a small electric bulb. However, when current passes through it, it lights up in an intense flash lasting usually about 1/40 to 1/60 sec. Each bulb will flash only once and has to be discarded afterwards.

The flash bulb is inserted in a flash gun and the current of the battery fires the bulb, while a reflector fixed behind the bulb makes sure that all the light is directed towards the subject. Most flash guns incorporate a capacitor unit which increases the reliability of firing, even when the battery is nearly exhausted. The shutter speed, provided it is slower than 1/50 sec., has no effect on exposure, since the flash is shorter than the exposure time.

Popular-size flash bulbs are now being made only in the blue-tinted variety. These can be used for black-and-white or colour (negative or reversal) photography. either as the sole light source or as fill-in lighting by daylight. Clear glass bulbs used to be recommended for negative colour films but this is no longer the case.

ELECTRONIC FLASH UNITS utilize the discharge of a high-tension capacitor through a flash tube. The power is derived from an accumulator or battery (there are also models working from the mains electricity supply). The electronic flash outfit is rather bigger and heavier than the flash bulb outfit, its comparative light output equals a small flash bulb and its initial cost higher. On the other hand, anything from 10,000 to 25,000 flashes are obtained from one tube. The flash duration is extremely short (1/700 to 1/2000 sec.) and will arrest the fastest movements. The cost of an individual exposure is negligible.

Electronic flash is suitable for black-and-white and negative colour film and also for daylight type, reversal colour films. It can also be used for fill-in lighting by daylight.

www.orphancameras.com

How to use Flash

The Rolleiflex shutters are internally synchronized for use with flash bulbs and electronic flash. The cable from the flash gun is plugged into the flash socket of the camera. On releasing the shutter, an electric circuit is automatically closed through the flash socket, setting off the flash at this moment.

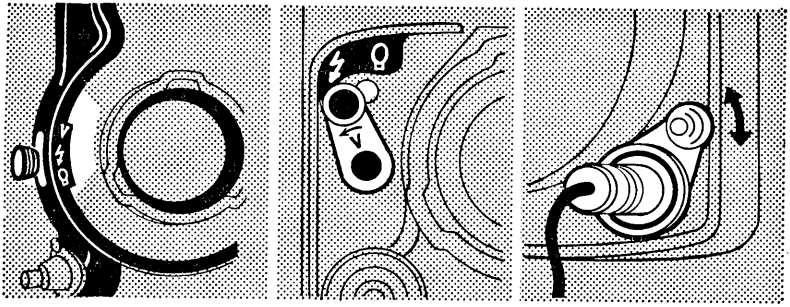
The shutters of the Rollei-Magic II and earlier Rolleiflex models have a non-adjustable flash contact which has the characteristics of the X-synchronization described below. On all other shutters the synchronizing lever can be set to X or M.

The Rolleiflex models prior to 1950 are not synchronized for flash but they can be fitted with an internal flash contact and are then handled as explained for X synchronization.

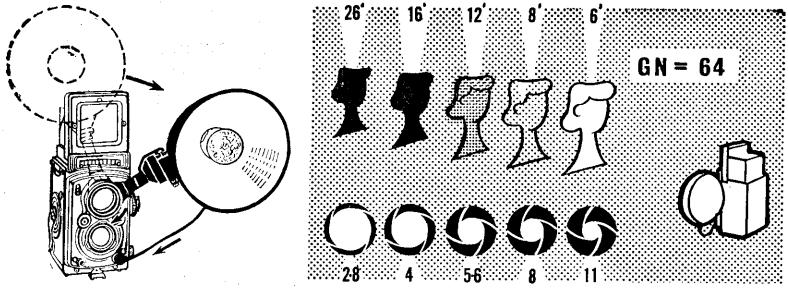
WITH THE SYNCHRONIZING LEVER SET TO X the shutter closes the flash circuit at the moment when the blades are fully open. Therefore, electronic flash is synchronized at any shutter speed to 1/300 or 1/500 sec. This setting may also be used with flash bulbs with short firing delay (i.e. bulbs which require only 4–6 milliseconds—thousands of a second) to reach the peak of their light output with the shutter set to 1/60 sec. With other bulbs, the fastest usable speed is 1/30 sec.

WITH THE SYNCHRONIZING LEVER SET TO M the shutter closes the flash circuit 16–18 milliseconds before the shutter blades open to allow for the firing delay of most average flash bulbs. This setting is suitable for normal flash bulbs at all speeds up to 1/300 or 1/500 sec. The M-setting will not synchronize electronic flash or short-delay bulbs.

WITH THE SYNCHRONIZING LEVER SET TO V (not on Rollei-Magic II and early Rolleiflex models) the delayed action release for self-portraits is brought into action. At the same time the shutter works with X-synchronization. This means that you can work with delayed action and flash at X-synchronization; delayed action with M-synchronization is not possible. (Many earlier Rolleiflex



Modern Rollei models have a synchronizing lever to select different types of flash synchronization. With the lever set to the symbol of a lightning flash, the camera is synchronized for electronic flash at all shutter speeds, or for flash bulbs up to 1/30 second. When set to the symbol of a flash bulb, all speeds up to 1/500 second can be used with flash bulbs, but not with electronic flash. Moving the lever to V tensions the self-timer (page 35). To move the lever pull out the button at the end first. The flash cable from the flash gun plugs into the socket on the camera (*right*); a lock holds the plug securely in position. To release the plug, pull the lever surrounding the socket (*right*).



The Rolleiflash gun, specially designed for the Rollei models, has a bracket with a bayonet ring which fits over the finder lens of the camera. That holds the flash gun firmly on the camera (*left*). Flash exposures can conveniently be worked out by guide numbers, which are the product of the *f*-number and flash-to-subject distance for correct exposure. To obtain the correct lens opening divide the guide number by the distance. For example, with a guide number of 64 (*right*) and a flash 8 feet from the subject, the correct aperture is 64/8=*f*8. Similarly with a flash at 16 feet the correct aperture would be *f*4, and so on.

www.orphancameras.com

models have a separate self-timer system which is independent of flash synchronization.)

Exposure Guide Numbers

There is a convenient way of working out exposures with flash, and this is by means of a guide number. When you buy flash bulbs you will always find the guide number for any speed of film printed on the packet.

To find the correct aperture to use, divide the guide number by the distance between the flash and the subject. For instance, suppose you find that the guide number of the bulb with the film in use is 160. If you then want to take a photograph at a distance of 10 ft. from the subject, divide $160 \div 10 = 16$. Therefore, the correct aperture to use is *f* 16. Alternatively, if you want to use an aperture of *f* 8 for any reason, then the correct flash distance is $160 \div 8 = 20$. So the flash must be 20 ft. from the subject.

So far we have assumed that the exposures have been for average shots without much subject movement. For these a shutter speed of 1/30 sec. is long enough to utilize all the light emitted from the bulb. On the other hand, to arrest fast movements a faster shutter speed is required, such as 1/125, 1/250 or even 1/500 sec. With each of these speeds a different guide number is needed (usually printed on the flash bulb packet) to determine the correct exposure. They allow for a wider aperture to compensate for the fact that at fast shutter speeds some of the light emitted from the bulb is lost.

CAMERA CARE IN TROPICAL CLIMATES

High and widely varying temperatures with low humidity, as occur in desert regions and dry seasons, and very high humidity in rainy seasons, call for special precautions to protect the life and continued good performance of the camera. These conditions also cause the growth of moulds on organic matter. Sand, dust and insects may present problems.

The camera should be kept dry and clean. Leather parts should be wax polished, metal parts lightly greased. Never leave the camera unnecessarily exposed to heat. Always keep it in its case. A water-tight metal ever-ready case (●) is available for most models for complete protection from air, dust, water. The lens should be covered with a lens cap when not in use. Outer lens surfaces have to be kept clean, dirt and grit removed with an air-blower and by tapping. Wipe the lens surface with cotton wool or open mesh fabric (butter muslin) when required.

Store photographic equipment in an airtight metal box or a tin which should be sealed with adhesive (e.g. medical) tape. In a humid atmosphere, add some desiccating agent, e.g. silica gel.

Condensation on the lens may occur when the camera is moved from a cool place into humid heat; this has to be removed before use and the whole camera carefully wiped before re-storing.

Films should not be kept longer than six months in their original airtight tins (tropical packing) at continual temperatures of 90°F (32°C). At continual 100°F (38°C), the life of most films is limited to a month or two. Keep films for as short as possible a time in the camera.

Films should be processed as soon as possible after exposure—within a week or two or, in very hot humid climates, within a few days. Keep the film in an airtight container with desiccant (to absorb moisture). If possible, keep in a refrigerator, but only if you can dry out the exposed film and the container is sealed.

www.orphancameras.com

FACTS AND FIGURES

This section gives the more important exposure, close-up, zone focusing, film, etc., data for the Rolleiflex in handy tabular form for easy reference.

CONVERSION OF FEET AND INCHES INTO METRIC UNITS

Many cameras are marked only in either the metric or British system, while most of the tables in this book are also given in only one system. The table below shows at a glance equivalent lengths

British to Metric		*Metric to British*	
$\frac{1}{8}$ in.	0.32 cm.	0.5 cm.	$\frac{3}{16}$ in.
$\frac{1}{4}$ in.	0.64 cm.	1 cm.	$\frac{3}{8}$ in.
$\frac{1}{2}$ in.	1.27 cm.	2 cm.	$\frac{13}{16}$ in.
1 in.	2.54 cm.	3 cm.	$1\frac{3}{16}$ in.
2 in.	5.08 cm.	4 cm.	$1\frac{9}{16}$ in.
3 in.	7.62 cm.	5 cm.	$1\frac{15}{16}$ in.
4 in.	10.2 cm.	6 cm.	$2\frac{3}{8}$ in.
5 in.	12.7 cm.	7 cm.	$2\frac{3}{4}$ in.
6 in.	15.2 cm.	8 cm.	$3\frac{1}{8}$ in.
7 in.	17.8 cm.	9 cm.	$3\frac{1}{2}$ in.
8 in.	20.3 cm.	10 cm.	$3\frac{15}{16}$ in.
9 in.	22.9 cm.	12 cm.	$4\frac{3}{4}$ in.
10 in.	25.4 cm.	15 cm.	$5\frac{7}{8}$ in.
11 in.	27.9 cm.	20 cm.	$7\frac{7}{8}$ in.
1 ft.	30.5 cm.	25 cm.	$9\frac{13}{16}$ in.
2 ft.	61.0 cm.	30 cm.	$11\frac{3}{4}$ in.
3 ft.	91.4 cm.	40 cm.	$15\frac{3}{4}$ in.
4 ft.	1.22 m.	50 cm.	$19\frac{3}{4}$ in.
5 ft.	1.52 m.	60 cm.	$23\frac{5}{8}$ in.
6 ft.	1.83 m.	80 cm.	$31\frac{1}{2}$ in.
7 ft.	2.13 m.	100 cm.	$39\frac{1}{2}$ in.
8 ft.	2.44 m.	1.5 m.	4 ft. 11 in.
9 ft.	2.74 m.	2 m.	6 ft. 7 in.
10 ft.	3.05 m.	2.5 m.	8 ft. 3 in.
15 ft.	4.57 m.	3 m.	9 ft. 10 in.
20 ft.	6.10 m.	4 m.	13 ft. 2 in.
30 ft.	9.14 m.	5 m.	16 ft. 5 in.
40 ft.	12.20 m.	10 m.	33 ft. 0 in.
50 ft.	15.24 m.	15 m.	49 ft. 2 in.
100 ft.	30.48 m.	20 m.	66 ft. 0 in.

ZONE FOCUSING

Zone	*Stop*	$2\frac{1}{4}\times2\frac{1}{4}$ *Rollei* *Distance Setting*	*Depth from–to*	4×4 *Rollei* *Distance Setting*	*Depth from–to*
Near	*f* 8	10 ft.	$7\frac{1}{2}$–15 ft.	6 ft.	5–$7\frac{1}{2}$
Intermediate ...	*f* 8	20 ft.	12–57 ft.	15 ft.	10–30
Far	*f* 8	30 ft.	15–∞	30 ft.	15–∞

DAYLIGHT EXPOSURE VALUES

For Rolleiflex models without exposure meter add up the respective figures in tables 1, 2 and 3. The result is the exposure value to be set. On models without exposure value scale use table 4 to get aperture-speed combinations (set the shutter to nearest marked speeds if necessary—e.g. 1/25 sec. for 1/30 sec.).

1. *Subject and weather*

	Clear sun	*Cloudy light*	*Cloudy med.*	*Cloudy dull*
Distant land or seascape without foreground	13	12	11	10
—with light foreground	12	11	10	9
Open streets, squares, light buildings	11	10	9	8
Figures, groups in open, near objects without heavy shade	10	9	8	7
—in shade	9	8	7	6
Average interiors, diffused light ...	3	2	1	0

2. *Month and time*

	May June July	*Aug. April*	*Sept. March*	*Oct. Feb.*	*Nov. Dec. Jan.*
11 a.m. to 2 p.m.	3	3	3	2	2
9 a.m. to 11 a.m. 2 p.m. to 4 p.m.	3	3	2	2	1
4 p.m. to 6 p.m.	2	2	1	1	0

3. *Film Speed*

ASA ...	10°	16–20°	25–32°	50–64°	100–125°	200–250°	400–500°	800
DIN ...	21	13–14	15–16	18–19	21–22	24–25	27–28	30
	$2\frac{1}{2}$	$-1\frac{1}{2}$	−1	0	+1	+2	+3	+4

4. *Exposure Values and Aperture-Speed Combinations*

Exp. Value	*f* 2.8	*f* 4	*f* 5.6	*f* 8	*f* 11	*f* 16	*f* 22
3 ...	1	2s	4s	8s	15s	30s	60s
4 ...	1/2	1	2s	4s	8s	15s	30s
5 ...	1/4	1/2	1	2s	4s	8s	15s
6 ...	1/8	1/4	1/2	1	2s	4s	8s
7 ...	1/15	1/8	1/4	1/2	1	2s	4s
8 ...	1/30	1/15	1/8	1/4	1/2	1	2s
9 ...	1/60	1/30	1/15	1/8	1/4	1/2	1
10 ...	1/125	1/60	1/30	1/15	1/8	1/4	1/2
11 ...	1/250	1/125	1/60	1/30	1/15	1/8	1/4
12 ...	1/500	1/250	1/250	1/60	1/30	1/15	1/8
13 ...	—	1/500	1/250	1/125	1/60	1/30	1/15
14 ...	—	—	1/500	1/250	1/125	1/60	1/30
15 ...	—	—	—	1/500	1/250	1/125	1/60
16 ...	—	—	—	—	1/500	1/250	1/125

www.orphancameras.com

SHUTTER SPEEDS TO ARREST MOVEMENT

Subject	Distance between Camera and Object				
	10 ft. 3 m.	20 ft. 6 m.	40 ft. 12.5 m.	80 ft. 25 m.	160 ft. 50 m.
Swimmer	1/60	1/30	1/15	1/8	1/4
Walker	1/125	1/60	1/30	1/15	1/8
Runner	1/250	1/125	1/60	1/30	1/15
Cyclist	1/500	1/250	1/125	1/60	1/30
Skater	—	1/500	1/250	1/125	1/60
Horse galloping	1/500	1/250	1/125	1/60	1/30
„ trotting	1/250	1/125	1/60	1/30	1/15
„ walking	1/125	1/60	1/30	1/15	1/8
Racehorse	—	1/500	1/250	1/125	1/60
Waves	1/500	1/250	1/125	1/60	1/30
Heavy waves	—	—	1/300	1/150	1/75
Boats making 10 knots ...	1/250	1/125	1/60	1/30	1/15
„ „ 20 knots ...	1/500	1/250	1/125	1/60	1/30
Tramcar	1/500	1/250	1/125	1/60	1/30
Motor car on road	—	1/500	1/250	1/125	1/60
Slow train	1/500	1/250	1/125	1/60	1/30
Fast train	—	—	1/500	1/250	1/125
Aeroplane	—	—	—	1/500	1/250

The shutter speeds as listed above are applicable to motion which cuts right across the direction in which the lens and the photographer look.

If the motion photographed is at an acute angle with the direction in which the lens points the exposure time can be longer, say 1/30 second instead of 1/60.

If the subject moves directly towards the lens (or for that matter away from it) the exposure time can be three or four times longer, say 1/8 of a second instead of 1/30.

Where the above table shows speeds not marked on the shutter use the next faster speed.

APERTURES WITH CLEAR FLASH BULBS (80-100 ASA FILMS)

Distance	*G.E., Mazda, G.E.C. No. 1 Philips: PF 1*	*Mazda, G.E., G.E.C.: No. 5 Philips: PF 5 Sylvania: Press 25*	*Philips: PF 38 Sylvania: Press 40 G.E.: No. 11*	*Philips: PF 60 G.E.: No. 22 Sylvania: No. 2*
16 ft. (2 m.)	16	—	—	—
18 ft. (2.5 m.)	12.5	—	—	—
10 ft. (3 m.)	10	16	—	—
22 ft. (3.6 m.)	8	16	16	—
25 ft. (4.5 m.)	6.3	11	12.5	16
20 ft. (6 m.)	4.5	8	10	12.5
25 ft. (7.5 m.)	4	6.3	8	11
30 ft. (9 m.)	3.5	5.6	6.3	9

In bright rooms (kitchen, bathroom) or with films faster than 100 ASA, use next smaller aperture. In very large rooms, at night outdoors or with slower 40–64 ASA film use next larger aperture.

The *Focal Flash Chart* gives exposures for all types of flash as well as for flash combined with daylight. It further contains a list of all flash bulbs with their use and performance, also information on "colour and flash" and much additional flash data.

APERTURES WITH BLUE FLASH BULBS

(For 32 ASA Daylight Type Colour Film)

Distance	PF 1/B No. 1B	PF 60/97 No. 22B
3½ ft. (1 m.)	f 16	—
5 ft. (1.5 m.)	f 11	f 22
7 ft. (2.2 m.)	f 8	f 16
10 ft. (3 m.)	f 5.6	f 11

CLOSE-UPS WITH 2¼ × 2¼ in. ROLLEIS (75-80 mm. LENS)

	Lens-to-Subject Distance (in.) 31	23	19	15	13	10
Rolleinar needed ...	No. 1	No. 1	No. 1 or 2	No. 2	No. 2 or 3	No. 3
Subject field (in.)	22 × 22	16½ × 16½	13⅜ × 13⅜	11 × 11	8⅝ × 8⅝	6⅝ × 6⅝
Scale of reproduction ...	1 : 10	1 : 75	1 : 6	1 : 5	1 : 4	1 : 3
Depth of field (in.)						
f 8	28¼–33¾	21¾–24¾	18–20⅝	14⅜–15¾	12⅝–13⅜	9¾–10¼
f 11	27½–34½	21⅛–25½	17⅜–20½	14⅜–16⅛	12⅜–13⅝	9½–10⅜
f 16	26¼–37¼	20⅜–26¾	17–21¼	13⅞–16½	12½–13¾	9⅜–10½
f 22	24¾–41½	19½–28¼	16⅛–22½	13½–17⅜	12–14⅛	9⅛–10⅜

CLOSE-UPS WITH 1⅝ × 1⅝ in. ROLLEIS (60 mm. LENS)

	Lens-to-Subject Distance (in.) 31	23	19	15	13	10
Rolleinar needed ...	No. 1	No. 1	No. 1 or 2	No. 2	No. 2 or 3	No. 3
Subject field (in.)	20⅞ × 20⅞	15⅜ × 15⅜	13 × 13	10⅝ × 10⅝	7⅞ × 7⅞	6 × 6
Scale of reproduction ...	1 : 13	1 : 9.5	1 : 8	1 : 6.5	1 : 5	1 : 3.7
Depth of field (in.)						
f 8	27⅞–34½	21½–25⅛	17⅜–20¼	14¼–16	12⅝–13⅝	9⅜–10¼
f 11	27–36⅛	20⅜–25⅞	17⅜–20⅞	13¾–16⅜	12½–13¾	9½–10⅜
f 16	25½–39¼	20–27	16⅜–21⅜	13⅜–17	12–14⅛	9⅜–10⅜
f 22	23⅞–43½	19⅛–29⅜	16⅛–23⅛	13–17¾	11⅝–14½	9⅛–11

The actual subject distance, plane of maximum sharpness, etc., are determined on the focusing screen. The above tables give values at selected distances for general guidance.

www.orphancameras.com

CONVERSION OF FILM SPEED SYSTEMS

ASA & BS Arith. (New)	ASA Log (New)	DIN	BS Log
3		6	16°
6	1°	9	19°
12	2°	12	22°
25	3°	15	25°
50	4°	18	28°
100	5°	21	31°
200	6°	24	34°
400	7°	27	37°
800	8°	30	40°
1600	9°	33	43°

BLACK-AND-WHITE FILTER DATA

Rollei Filter	Exposure Value Adjustment	Exposure Increase	Application and Effect
Light yellow Medium yellow	−1 −1.5	2× 3×	Landscapes, snow, clouds. Renders yellow and green lighter, blue darker
Light green Green	−1 −1.5	2× 3×	Landscapes, snow, clouds. Renders green lighter, red (complexion) and blue darker
Orange	−1.5 to −3	3–7×	Hazy distant views. Renders yellow-red lighter, blue darker, distant objects clearer
Light red	−2 to −3.5	4–10×	Hazy distant views. Renders red lighter, blue-green darker. Gives stronger effects than orange filter
Light blue	−0.5	1.5×	Artificial light. Renders red darker. For extra red-sensitive pan emulsions
UV	−0.5	1.5×	High altitudes above 6,000 ft. Seascapes. Eliminates ultra-violet rays which reduce contrast
Infra-red*	Exposure depends on the type of emulsion used and must be determined by tests		Special filter for infra-red emulsions. Transmits dark red above 700 mμ and infra-red

* Infra-red filters marked with R engraved on the mount have ground-in focus compensation. Focusing is done in the usual way, on the ground glass.

COLOUR CORRECTION FILTERS

Film balanced for	*Used with*	*Filter*	*Exposure value Adjustment*	*Exposure increase*
Daylight (Reversal) (Type D or T)	skylight filter haze correction	R1	0	0
	overcast daylight	R2	–0.5	1.5
	reduction of excessive red	B1	0	0
	electronic flash	R2	–0.5	1.5
	average daylight and blue flash bulbs	none	—	—
	clear flash bulbs	B2+B5	–1.5	3
	photofloods	B11	–1.5	3
	studio lamps (3200K)	B2+B11	–2	4
Flash (Reversal) (Type F)	overcast daylight	R11	–1	
	electronic flash	R2+R5	–1	2
	average daylight and blue flash bulbs	R2+R5	–1	2
	clear flash bulbs	none	—	—
	photofloods	B2	–0.5	1.5
	studio lamps (3200K)	B5	–1	
Photofloods (Reversal) (Type A)	blue flash bulbs and average daylight	R11	–1	2
	clear flash bulbs	R2	–0.5	1.5
	photofloods	none	—	—
	studio lamps (3200K)	B2	–0.5	1.5
	household lamps	B2+B5	–1.5	3
Daylight (Negative) (Type D or T)	daylight, electronic flash, and blue flash bulbs	none	—	—
	clear flash bulbs, photofloods and studio lamps (3200K)	B5	–1	2
Artificial light (Negative) (Type A)	daylight, electronic flash and blue flash bulbs	R5	–0.5	1.5
	clear flash bulbs, photofloods and studio lamps (3200K)	none	—	—

www.orphancameras.com

BLACK-AND-WHITE FILMS

Make	Type	Speed in ASA	Speed in DIN	Grain	Available as
Adox—					
Adox KB 14	P.	40	17	uf.	rm
Adox KB 17	P.	80	20	ef.	rm
Adox KB 21	P.	200	24	mg.	rm
Adox KB 25	P.	500	28	mg.	r
Adox UKB 17 Reversal	P.	80	20	ef.	m
Agfa—					
Isopan F	P.	80	20	ef.	rm
Isopan FF	P.	32	16	uf.	rm
Isopan ISS	Pr	200	24	mg.	r
Isopan Ultra	Pr.	500	28	mg.	rm
Isopan Record	Pr.	1600	33	mg.	rm
Ansco—					
Super Hypan	P.	500	28	mg.	rm
All weather pan	P.	125	22	fg.	r
Ferrania—					
P.30	P.	80	20	ef.	m
P.33	Pr.	160	23	fg.	m
P.36	Pr.	320	26	mg.	rm
Gevaert—					
Gevapan 27	P.	64	19	ef.	rm
Gevapan 30	P.	125	22	fg.	rm
Gevapan 33	P.	250	25	fg.	rm
Gevapan 36	P.	500	28	mg.	rm
Dia-Direct 26 Reversal	P.	25	15	ef.	m
Infra-Red †	IR.	100	21	fg.	m
Ilford—					
Pan F	P.	50	18	uf.	m
F.P.3	P.	125	22	ef.	rm
H.P. 3	Pr.	400	27	mg.	rm
H.P. 4	P.	400-650	27-29	fg.	r
H.P.S.	Pr.	800	30	mg.	rm
Kodak—					
Panatomic X	P.	40	17	ef.	rm
Plus X	P.	160	23	fg.	m
Tri-X	P.	400	27	mg.	rm
Royal X Pan	P.	1250	32	mg.	r.
ORWO-Wolfen—					
NP 10	P.	8	10	uf.	rm
NP 18	P	50	18	ef.	rm
NP 22	P.	125	22	fg.	rm
NP 27	P.	400	27	mg.	rm
Perutz—					
P 14	P.	40	17	uf.	m
P 21	Pr.	200	24	fg.	rm
P 25	Pr.	500	28	mg.	rm
P 17	P.	80	20	ef.	rm
Miniature Reversal ...	P.	25	15	ef.	m

The ASA speeds are the minimum correct exposure ratings (page 25). Some manufacturers may, however, still be quoting their speeds according to the older system to give more liberal exposure.

TYPE: P=panchromatic; Pr.=panchromatic with increased red sensitivity; IR=infra-red.

GRAIN: uf.=ultra fine grain; ef.=extra fine grain; fg.=fine grain; mg.=medium grain.

† With deep red filter.

AVAILABLE AS: r=roll film size, m=miniature (35 mm.) film size; the latter can be used only in conjunction with the Rolleikin cine film back.

Film	Type	Speed in ASA	Speed in DIN	Processing	Available as
Agfacolor Neg.	Universal (Type CN14)	20	14	U	rm
Agfacolor Neg.	Universal (Type CN17)	40	17	U	rm
Agfacolor Rev.	Daylight (Type CT18)	50	18	M	rm
Agfacolor Rev.	Artificial Light (Type CK20)	80	20	M	rm
Ansco 50 Rev.	Daylight	50	18	M	rm
Ansco 100 Rev.	Daylight	100	21	M	m
Ansco T100 Rev.	Artificial Light	100	21	M	m
Ansco 200 Rev.	Daylight	200	24	M	m
Ektachrome Prof. Rev. E3	Daylight	50	18	U	r
Ektachrome X Rev.	Daylight	64	19	U	rm
H.S. Ektachrome Rev.	Daylight	160	23	U	m
H.S. Ektachrome Rev.	Artificial Light (Type B)	125	22	U	m
Ferraniacolor Rev.	Daylight	20	14	U	rm
Ferraniacolor Rev.	Artificial Light	20	14	U	rm
Ferraniacolor Dia. 28	Daylight	50	18	M	rm
Gevacolor Neg.	Universal (Type N5)	25	15	L	rm
Gevacolor Rev.	Daylight (Type R5)	40	17	M	rm
Ilford Colorslide	Daylight	32	16	M	m
Ilford Super Colorslide	Daylight	64	19	M	m
Ilford Colorprint	Universal	64	19	M	m
Kodachrome X Rev.	Daylight	64	19	M	m
Kodachrome II Rev.	Daylight	25	15	M	m
Kodacolor Neg. X	Universal	80	20	U	rm
Perutz Color Rev.	Daylight (Type C18)	50	18	M	rm

PROCESSING: M=films processed by the maker; L=films can be processed only by an approved laboratory through a photographic dealer; U=films can be processed by the user by means of special processing kits.

Available as: r=rollfilm size, m=miniature (35 mm.) film size; the latter can be used only in conjunction with the Rolleikin cine film back.