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VARIOUS MODELS OF THE MODERN ROLLEIFLEX AND ROLLEICORD

At the beginning, of the post-war period, the models described on pages 29 and 30 with the exception of the 4x4 Sports Model were still in regular production, in spite of serious shortages of raw materials, greatly depleted staffs and a partly demolished factory. Undeterred by difficult conditions, the manufacturers immediately started to produce improved models, but their plans were not allowed to materialize until 1951. Meanwhile, small improvements began to creep into what can only be described as 'intermediate' models. First came the coated or 'bloomed' lenses, both in the Zeiss Tessars and Triotars, and then in the Xenars, made by Schneider - newcomers to the Rollei -range. Already well known, the Schneider lenses proved to be so successful that they are now retained as four element alternatives for the Rolleiflex and standard equipment in the Rolleicord. The next important introduction was the flash contacts built into the shutter. The outlet plug was first located in a central position on the camera front, midway between the shutter release and the cable release aperture. After these intermediate models came the Rolleicord III, IV, V and VA, the Automat II, the 1954 Improved Model, and the Automat 2.8, the Light Value Models, the Exposure Meter Models and the Coupled Exposure Meter Models. For the sake of accuracy this order is therefore retained in the following detailed instructions for the modern cameras.

The Rolleicord III and IV

These models appeared in 1951 and 1953 respectively and followed closely the lines of the earlier Rolleicords II and IIA but with several additional refinements. The most important introductions were the f/3.5 Schneider Xenar four-element lens, a well-known system of proved quality over many years: both this and the viewing lens are hard coated to give freedom from inter-lens reflections, greater contrast, and the ability to pass more light both to screen and to film. There was an improved method of loading the film, which made it virtually automatic, a new focusing hood, with direct vision tinder and the addition of the base lock and safety catch of the Automat. Various other small improvements, including a flash synchronized shutter, and built in cine film back, have also been incorporated.

Focusing Hood

The focusing hood is now entirely re-designed, and, as in the Automat II, there is no locking catch; to open it, all that is needed is a little upward pressure on the thumb marks at the back of the hood (Fig. 24.1 No. 1) and after being erected a little way by hand, the hood then springs into the vertical position on all four sides. A large focusing magnifier is brought into position over the center of the screen as soon as light pressure is applied with the finger to the top or front plate of the hood (No. 15). A little further pressure on this same plate, pushing it inwards and upwards until it clicks into the horizontal position, now reveals a new type open frame tinder with a sighting window on the back flap. This is a return to the highly successful frame tinder of the Rolleicord I and IA. On the outside of the back flap, a small chrome plated button (No. 6) is located and a light pressure on this releases the top plate, which at once flies back into position to allow focusing again on the fully hooded screen.

Focusing

As in the earlier model Rolleicords, focusing is effected by turning the large milled knob (Fig. 24.1 No. 8) at the right side and towards the front of the lens panel of the camera, when viewed from the normal operating position. By observing the screen through the magnifier mentioned above and turning this knob forward and back, the subject will appear sharp at one particular setting. This is easiest if some fine detail is chosen on which to focus. Because of the wider aperture of the viewing lens than of the taking lens, depth of field (see Fig. 24.9) will be greater on the negative than it is on the screen and this, of course, always ensures needle sharp focusing.

Depth Scale

The focusing knob (Fig. 24.1 No. 8) is engraved in either feet or meters, according to the market for which it was designed, and it is rotated against a depth of focus scale (see Fig. 24.10) from which the focal depth can be read off at a glance. It is only necessary to notice which measurements are included between the two like apertures shown at either side of the central position (see page 365).

Shutter Speeds

The shutter speeds and lens apertures appear in the peep windows on the upper sides of the taking lens cover and these can be seen from the normal operating position above the camera. The shutter speeds appear in the right hand window (No. 17) below it. The following range of speeds are available: I second, 1/2 second, 1/5th, 1/10th, 1/50th, 1/100th, 1/250th, 1/500th second; 'T' for Time exposures (Rolleicord III only) and 'B' for Bulb or Brief time. Intermediate speeds can be judged and used between any of the marked values except between 1 / 250th and 1/25th second and also between 1,1250th and 1/500th second. The model IV, however, has no 'T' position.

Fig. 24.1

Rolleicord III, front view:

- (1) Hood erecting thumb marks;
- (2) Neck strap eye and anchor;
- (3) Back hinge;
- (4) Film numbering- peep window;
- (5) Frame stop release button;
- (6) Film wind knob.
- (7) Depth of field scale;
- (8) Focusing knob;
- (9) Focusing scale;
- (10) Flash socket;
- (11) Locating studs;
- (12) Base clip;
- (13) Double action shutter set and release lever,
- (14) Focusing hood;
- (15) Direct vision finder collapsing panel;
- (16) Cine film frame finder studs
- (17) Shutter speed and lens aperture peep windows;
- (18) Double bayonet lens mounts;
- (19) Shutter speed and lens aperture setting levers;
- (20) Cable release socket.

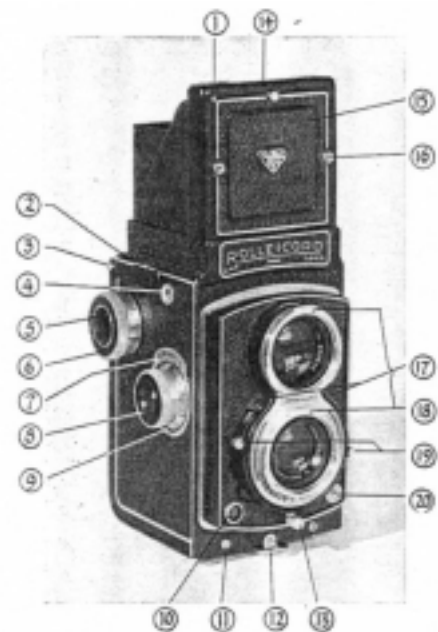


Fig. 24.2

Rolleicord IV, front view:

- (1) Hood erecting marks;
- (2) Back hinge;
- (3) Neckstrap eye and anchor;
- (4) Film numbering peep window;
- (5) Film wind knob;
- (6) Depth of field scale;
- (7) Focusing knob;
- (8) Focusing scale;
- (9) Shutter speed window;
- (10) Shutter speed setting lever;
- (11) Flash socket;
- (12) Locating studs;
- (13) Base clip;
- (14) Shutter setting and release lever;
- (15) X and M flash adjusting lever;
- (16) Cable release socket;
- (17) Lens aperture setting lever;
- (18) Lens aperture window;
- (19) Optional double exposure release;
- (20) Double bayonet lens mounts;
- (21) Cine film frame finder studs;
- (22) Direct vision finder collapsing panel.

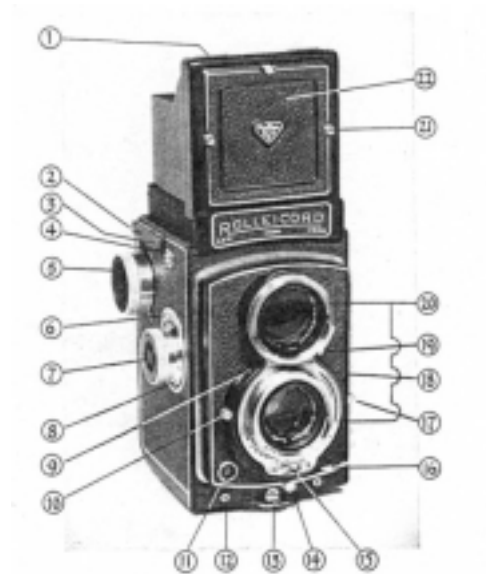


Fig. 24.3

Rolleicord V, front view:

- (1) Thumb grips;
- (2) Back hinge;
- (3) Neckstrap eye and anchor;
- (4) Film number peep window;
- (5) Depth of field scale;
- (6) Focusing knob;
- (7) Film speed reminder;
- (8) Flash and delayed action setting lever;
- (9) Focusing scale;
- (10) Speed dial and light value scale adjusting lever;
- (11) Flash cable lock;
- (12) Flash plug;
- (13) Shutter setting and release lever;
- (14) Locating studs;
- (15) Cable release socket;
- (16) Aperture setting lever;
- (17) Speed, aperture and light value peep windows;
- (18) Double exposure release;
- (19) Double bayonet lens mount;
- (20) Eye level finder collapsing frame;
- (21) Cine finder mask studs
- (22) Focusing hood.

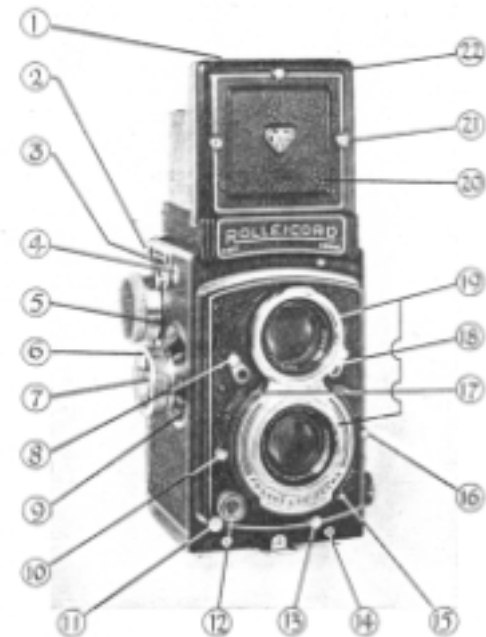
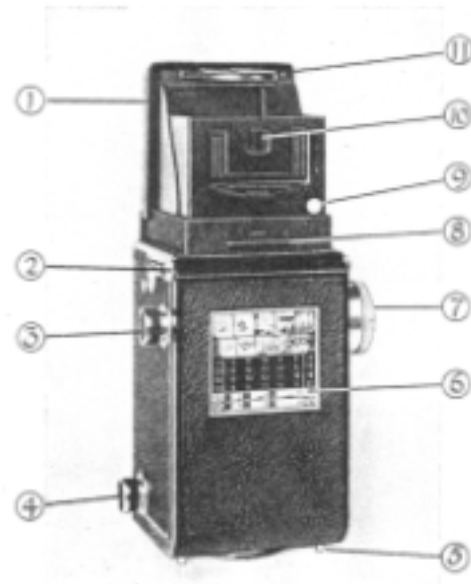


Fig. 24.4**Rolleicord IV and V, back view:**

- (1) Focusing hood
- (2) Back hinge and release
- (3) Take-up spool retaining knob
- (4) Feed spool retaining knob
- (5) Levelling feet
- (6) Light value table
- (7) Film wind knob
- (8) Screen accessory retaining clip
- (9) Collapsing panel release button
- (10) Eye level direct vision window
- (11) Screen magnifier

*Lens Apertures*

These appear in the left hand peep window (No. 17) and are changed by the lever (No. 19) beneath it. These are marked $f/3.5, 4, 5-6, 8, 11, 16, 22$. Any intermediate stop can be used on the occasion demands. Whichever aperture may be selected for use in taking the picture, the viewing lens always uses the widest aperture of which it is capable.

Loading the Camera - Opening the Back

Whenever possible, a position away from bright sunlight should be chosen, but if this is not feasible, then some shade should be provided with the body. The lens cap should always be in position during this operation. Place the camera back down on a flat surface or alternatively on its head, and looking at the base of the camera (Fig. 24.13) turn the safety catch (No. 2) to the left in the direction of the arrow, then lift the catch (No. 1), swing up the back so that it rests against the hinge or in the latter case swing it down so that it rests on the flat surface.

Inserting the Spool

Now that the back is open turn the winding knob (Fig. 24.1 No. 6) in a clockwise direction until the winding key (Fig. 24.11 No. 2) is in a vertical position. Pull out the retaining knob (No. 8) at the other end of the spool chamber and give it half a turn. It will then remain fixed in the 'out' position. Take an empty spool from a No. 120, 20 or B-2 film and insert it with the key way vertical and to the right so that it engages the winding key of the camera, then let the spool fall comfortably into the spool chamber, give the retaining knob (No. 8) another half turn until it drops back into position and engages the other end of the empty spool.

Inserting the film

The feed spool chamber is located at the opposite end of the open camera. Take a spool of film, size 120, 20 or B-2 and with the seal still unbroken, insert it with the key way to the left, on to the pivot inside the right hand corner of the spool chamber. Pull out the retaining knob (No. 10) and push the roll into a horizontal position against the leaf spring (No. 11) letting the knob then return right home, when it will engage the end of the roll. Now break the film seal, remove all traces of the gummed paper and pull out a few inches of paper leader.

Now lead the end pennant over the 'gate' and over both rollers and insert the end into the wide slot of the take-up spool. Push it right through until it appears in the narrow slit at the other side of the spool and then turn the winding knob (Fig. 24.1 No. 6) at the same time centering the film between the shoulders of the take-up spool so that it lies comfortably and does not ride up at one side. Turn it a few inches further until the arrows or triangles printed on the backing paper appear opposite the two red dots at the side of the gate (Fig. 24.11 No. 1).

Closing the Camera. Winding to 'No. 1'

Now swing the back into the closed position. Push home the clip (Fig. 24.13 No. 1) and fasten the safety lock No. 2 by turning it to the right against the direction of the arrow and pressing it right home. Turn the camera to its normal operating position and continue turning the film wind knob in a clockwise direction until a definite stop is felt. At this point No. 1 will be seen to have appeared in the film counter window at Fig. 24.1 No. 4. The starter trip of the earlier model has now been omitted as has the red window in the base, which is no longer necessary.

Shutter Operation Rolleicord III

The Rolleicord III is now ready for action and to operate the shutter choose a convenient speed in the peep window (No. 17) (other than 'T' or 'B'). With the camera in the normal operating position, pull the shutter setting lever (No. 13) to the limit of its travel towards the right with the right forefinger (see Fig. 3.3). The shutter is now cocked and ready for release at once or at a later time as required. To make an exposure, press this same lever gently but firmly to the left until a definite click is felt when the exposure is made. The film winding knob can now be turned to the next definite stop by pressing in the center of the winder knob, and bringing the next frame of film into the gate. Proceed in like manner through the remaining eleven exposures and after No. 12 has been exposed it will be found that no stop will be encountered and the film can be wound right off.

Loading the Rolleicord IV

This camera is also loaded, the film and spools inserted and the film wound to number one, as in the Rolleicord III. After this the new interlock comes into operation. This is actuated by a small stud (Fig. 24.2 No. 19) located over the aperture scale between the two lenses. When in the upper position, a small silver spot can be seen below this stud and in this position the film wind is interlocked with the shutter mechanism. Once the film has been wound to No. 1 in the peep window at (No. 4) the shutter is operated as described above for the Rolleicord III.

Provision for Double Exposures

At any stage during the run of the film through the model IV, double or multiple exposures can be made by depressing the stud (No. 19) so that a small red spot appears over it. In this position the shutter setting lever (No. 14) can be set and released as many times as required without the necessity of winding on the film. However, as soon as an adequate number of trick exposures have been made, the lock should again be engaged by clicking up the stud (No. 19), having first of all wound the film to the next frame. Now further single exposures can be made

until a double exposure is again required. In both cases, after the 12th frame has been reached, the film wind knob should be turned until the click of paper against the metal indicates that all the backing paper has been wound on to the take-up spool. The film is, of course, removed from the camera as for the previous model III.

Time and Brief Time Exposures

For exposures of longer duration than one second, the shutter scale should be set at 'B' and for this it is still necessary to cock the shutter. After this, push the shutter release lever to the left, hold it there for the required length of time and then allow it to return to its normal position when the shutter blades will close. In some of the 'Cord 111's there is a 'T' position and for long time exposures of say half a minute or longer, set the shutter to 'T' and in this position the blades are opened at one pressure of the release lever to the left, they will then remain open until a second pressure is given in the same direction. This may be some time afterwards, perhaps even an hour in the case of night photographs at a small aperture. For both these speed settings, a cable release should be screwed into the socket at Fig. 24.1 No. 20 and the camera placed on a tripod or other firm support. There is however no 'T' setting on the Rolleicord IV.

Removing the Exposed Film

When the film has been wound off, open the camera back again as described on page 366, pull out the retaining knob (Fig. 24.11 No. 8) at the same time steadying the roll with the finger, withdraw it first from the left side, and seal down the film with the adhesive paper provided. (Occasionally this sealing strip may be caught up behind the pressure plate.

Synchronized Shutter

The Compur shutter of the Rolleicord III is internally synchronized for flash photography (see Chapter Ten, Part II, 'Flash Photography'), and the standard outlet (Fig. 24.1 No. 10) to accommodate the normal Compur coaxial plug is situated at the bottom left of the focusing panel when looking at the camera from the front; electronic flash can be used at all shutter speed settings, short delay flash bulbs of the S.M. type can be used on all speeds up to 1 / 1 00th second, and long delay bulbs of the Philips' PF Series, or the Sylvania Press Series can be used up to 1/25th second. With these later types, 1/50th second can be used, but only part of the light output of the flash bulb will be utilized. The Rolleicord IV is fitted with full X and M synchronization allowing all type of flash to be used on all speeds. The change over lever can be seen in Fig. 24.2 No. 15.

Cine Film Equipment

On the front of the open frame finder mentioned on page 352 are three locating studs (Fig. 24.1 No. 16 and Fig. 24.2 No. 21) which accommodate the direct vision tinder mask for use with the Rolleikin II Cine Film Equipment (see page 297). To use 35 mm. cine film, it is no longer necessary to fit a separate back as the new combination back fitted to this model contains a special adjustable pressure plate (Fig. 24.31 No. 7). As in the Automat II, this has two positions which can be changed by pressing it down against its springs and then in a horizontal direction. When in one position, the figures 2 1/4 ' x 2 1/4" (6 x 6 cm.) are shown and in the

other, 1' x 11/2' (24 x 36 mm.) are revealed. It follows, of course, that the necessary film size in figures must be visible when that particular film stock is used. The lower of the existing film spindles now serves a double purpose, and for cine film only the upper spindle needs to be changed, the lower one acting as a rewind knob.

Changing the Back

Removal of the camera back for cleaning or for fitting the Plate Back Adaptor (see page 285) is effected by placing the camera on its face, swinging up the back to the limit, then raising the left back hinge (Fig. 24.1 No. 3) with the finger nail about 1/10th of an inch, lifting the back out at this side, allowing the hinge to fall back into position again, then the camera back will come away from the second hinge. To replace it, it is only necessary to reverse these actions.

Cable Release

In the model IV the cable release socket has been repositioned. It is now in the base of the shutter housing under the aperture setting lever. It points downwards and slightly outward and, therefore, does not interfere with any lens accessory.

Ever-Ready Case

These models use the later type ever-ready case described on page 342 and illustrated at Fig. 23.4. There is a removable panel in this, around the take-up spool retaining knob which can be taken out when the new Rolleikin 11 is fitted, and this will then expose the new cine film exposure counter dial.

Size and Weight

These models measure approximately 5 1/2" high by 3 3/4" wide by 3 3/4" deep (14,2 x 9,7 x 9,9 cm.) and weighs 1 lb. 13 1/2 oz. or 830 grammes.

THE ROLLEICORD V AND VA

Early in 1955 appeared the Rolleicord V and in July 1957 the VA, the most advanced designs in the lower priced 'twins' (Figs. 24.3, 24.4, 24.5 and 24.6). These are now so automatic in operation that they are rapidly catching up with the fully automatic Rolleiflex. These two models are similar in most external features to their predecessor, the Rolleicord IV, having the same focusing hood and direct vision finding arrangements, the same back and focusing method, but the 1959 version of the VA contained the new brilliant screen of the Rolleiflex 'T' (see page 389).

The main differences in the model V lie in the shutter which has now been fitted, and in the VA the provision of interchangeable formats.

The shutter in both cases is now the X.M. Synchro Compur with Exposure Value Scale, having interlinked speed and apertures. This shutter, as well as having, X. and M. synchronization, has also a delayed action device incorporated. A new enlarged focusing knob has been fitted similar to the Rolleiflex, and similar neck strap and back hinges are used, but in

the VA the focusing knob has been repositioned on the left of the camera when viewed from the operating position. The cameras are loaded in exactly the same manner as the Rolleicord IV and the arrangement of take-up and feed spools is identical. The film spool retaining pivots have been slightly re-designed, as can be seen from Figs. 24.4 and 24.6.

The optional double exposure release has also been slightly redesigned and instead of being a sliding button, it is now a lever which rotates on a pivot, although the upper and lower positions correspond to the previous model, i.e. in the upper position the film is interlocked with the shutter mechanism, and double exposures can only be carried out when in the lower position (Fig. 24.3 No. 18). Shutter setting and release is exactly as for the Rolleicords III and IV, as described on page 356.

The interchangeable formats are fitted in the VA by removing the set screw of the numbering panel (Fig. 24.5 No. 6), removing the numbering plate and replacing it by one of 16 or 24 frames from the appropriate Small Picture Accessory Set, which also includes film gate and viewfinder masks in a leather container (see page 302 'Small Picture Accessories'). The model VA was available from the Factory with 12, 16 or 24 exposure counting mechanisms already installed as standard.

Flash Synchronization and Delayed Action

At the other side of the lens panel between the two lenses, a new control lever has been fitted which changes over the X. and M. flash settings (Fig. 24.3 No. 8). This has a third position which is marked 'V' and which introduces for the first time into the Rolleicord series a delayed action mechanism in the shutter. This is set automatically when the shutter is cocked by the cocking lever which is in the usual position underneath the shutter housing (No. 13). Delayed action can also be used with flash on the 'X' position only, by setting the lever at 'V', lugging in the flash socket in the usual way and releasing the shutter. Not only can the photographer take up his position in the picture, but at the same time, as the shutter is released, the flash will take place.

The flash plug (No. 12) is now situated at the bottom left of the camera front and incorporates a plug, lock. To open the lock it is merely necessary to flick up the locking lever (No. 11).

Light Value Scale

The previous exposure table at the back of the camera has been replaced by the light value table which operates in the same manner as that of the 1954 Improved Rolleiflex Automat described on page 372. The operation of the new 10-speed Compur shutter is fully described on page 373 and the use of the exposure value table on page 45. The exposure value scale is controlled by the speed setting lever (No. 10) and the numbers appear with the lens aperture in the peep window at No. 17. Operation of the aperture setting lever is quite free and independent.

Film Speed Reminder Panel

This is incorporated in the front of the focusing knob and indicates the Din and A.S.A. speeds by turning the small central button. Size and weight of the camera is just as for the Rolleicord IV and described on page 358.

Fig. 24.5

Rolleicord VA, front view:

- (1) Thumb grips
- (1) Back hinge and lock
- (3) Neckstrap fixing;
- (4) Film numbering window;
- (5) Film wind knob;
- (6) Interchangeable film size panel;
- (7) Flash and delayed action selector;
- (8) Shutter speed selector lever;
- (9) Flash plug
- (10) Flash plug release;
- (11) Base lock;
- (12) Locating studs;
- (13) Shutter setting and release lever;
- (14) Cable or button release socket
- (15) Focusing hood with screen magnifier
- (16) Collapsing panel;
- (17) Accessory framefinder studs;
- (18) Optional double exposure release
- (19) Double bayonet mounts;
- (20) Aperture selector lever.

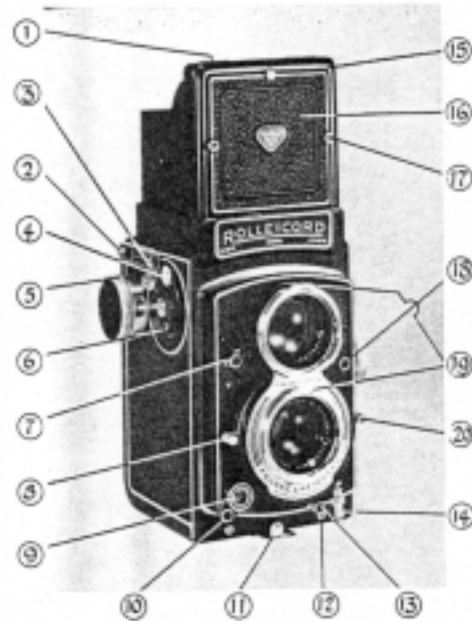


Fig. 24.6

Rolleicord VA, back view:

- (1) Depth of field indicator;
- (2) Focusing knob
- (3) Film speed reminder panel;
- (4) Film speed adjuster;
- (5) Feed spool retaining knob and cine rewind knob;
- (6) Grooved base hub
- (7) Light value table;
- (8) Focusing hood;
- (9) Focusing magnifier;
- (10) Eye-level folder window;
- (11) Collapsing panel release button;
- (12) Take-up spool retaining knob.

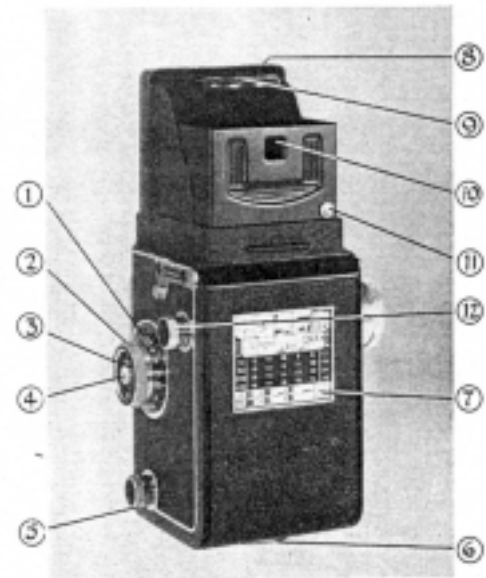


Fig. 24.7

Rolleiflex Automat II, front view:

- (1) Hood erecting thumb marks;
- (2) Back hinge and release catch;
- (3) Neck strap eye and anchor;
- (4) Film numbering peep window;
- (5) Crank handle
- (6) Crank handle stowage;
- (7) Shutter release;
- (8) Shutter release guard;
- (9) Cable release socket;
- (10) Base clip;
- (11) Focusing hood;
- (12) Direct vision finder collapsing panel;
- (13) Cine film finder mask studs;
- (14) Shutter speed and lens aperture peep window;
- (15) Delayed action release;
- (16) Double bayonet lens mounts;
- (17) Shutter speed and lens aperture setting wheels;
- (18) X and M flash adjusting lever;
- (19) Flash socket;
- (20) Locating studs.

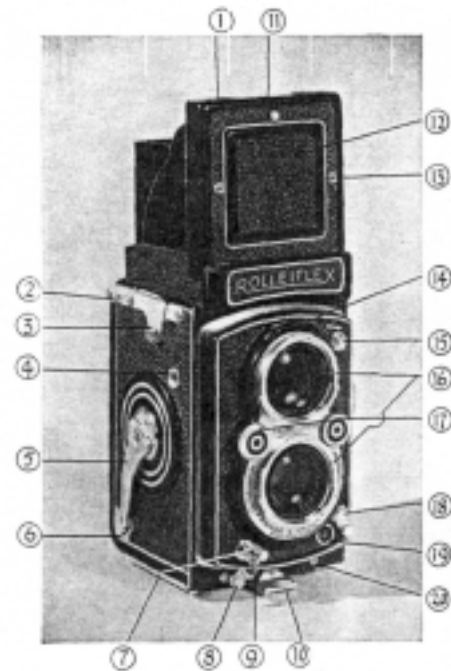
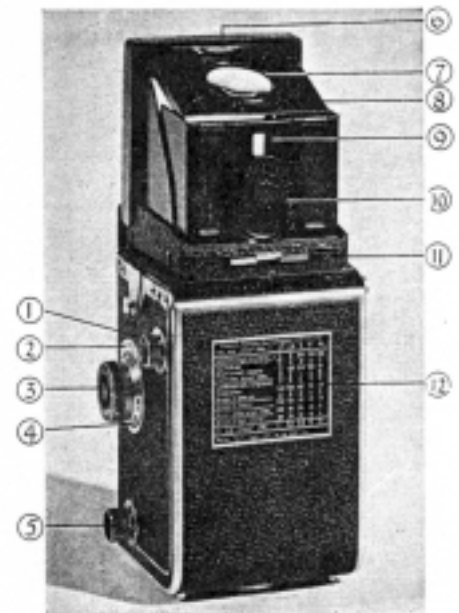


Fig. 24.8

Rolleiflex Automat II f/3-5 and 2 8, back view:

- (1) Take-up spool retaining knob;
- (2) Depth of field scale;
- (3) Focusing knob;
- (4) Focusing scale;
- (5) Feed spool retaining knob, and cine film rewind knob;
- (6) Screen magnifier erection stud;
- (7) Screen magnifier;
- (8) Light deflector plate;
- (9) Direct vision finder peep window;
- (10) Eye level focusing magnifier;
- (11) Screen accessory retaining clip;
- (12) Exposure chart.



THE MODERN ROLLEIFLEX AUTOMAT

This model sometimes known as the Automat II, although not officially designated so by the makers, marks the culmination of their war-time ideas. A small number of these, produced during 1950/51 appeared with synchronized shutters but without the variable delay of the 'X.M. Synchro Compur' shutter with which all modern Automats are equipped. There are many small improvements and innovations in this Series and a number of major changes. Among these latter can be counted the improved light-trapping arrangements of the camera back, a new focusing hood which ensures completely trouble-free erection, a larger magnifier with light shade, an eye level direct vision finder with eye level focusing window adjacent to it, built-in cine film accessories and the before-mentioned fully synchronized shutter. The lens is either the $f / 3.5$ 75 mm. Zeiss Tessar or Schneider Xenar, both of which are factory coated. Another improvement in this camera is the introduction of anti-reflection light baffles inside the taking chamber, similar to those incorporated in the specialists' 2.8C Model, described later in this chapter. These were installed as from camera No. 1287500 (approx.).

Since late 1953 the base hub of the camera has been redesigned and now has a deep groove milled from its outer periphery. This is to accommodate the new mating device called the Rolleiflex which is designed to remove the danger of the small single point tripod fixing screw in a camera of principally vertical distribution of weight (see page 346).

Bayonet Mounting of Accessories

As in the Automat I and the Rolleicord IIA, both viewing and taking lenses are equipped with a double bayonet fitting, to accommodate various accessories. The lens hood is used on the outer bayonet and the Rollei filters, etc. on the inner bayonet. Full details of the method of attachment of these accessories are given in the chapters on the Accessories on pages 314 and 318.

Viewing System

At a pressure of the thumb on the ridges which appear at the rear of the folded hood cover (Fig. 24.7 No. 1) the front is raised a little and then a strong spring takes over and erects the whole of the hood on all four sides, so exposing the ruled ground-glass screen. A large focusing magnifier is stowed at the inside of the front flap (Fig. 24.8 No. 7) and this is erected by inserting the fingertip under the small chromium plate at No. 6. A light upward pressure flicks the large magnifier into a horizontal position over the center of the screen. This is incorporated in the center of a top flap, which keeps out stray light and helps to give a very bright screen image under all conditions. A further downward pressure on this top flap clips it again into the stowed position.

Direct Vision Finder

With the magnifier erected, the center of the front flap (Fig. 24.7 No. 12) collapses inwards at a light pressure of the finger, and on being pushed a little further, it clips into position at a 45-degree angle. At the same time, it pulls down the top flap to close a roof over what has become a new eye-level, direct-vision finder. The peep window for this is now located at the upper part of the back flap (Fig. 24.8 No. 9). Below this, another magnifier can be seen (No. 10) and

on sighting through this the image can be focused at eye level on the center of the field through a 45-degree angle mirror which had also been erected by the simple operation mentioned above. This mirror reflects to the eye the view seen on part of the ground-glass screen of the camera. Light pressure on the top flap will release the mirror, close the D/V finder and return the screen magnifier to the horizontal position at a touch.

Focusing

As in the first Automat, focusing is effected by turning the knob at Fig. 24.8 No. 3 located on the left side of the camera body (when it is in the normal operating position). For this operation the left hand is, of course, used. This knob should be turned forward and back until the subject, when seen on the ground-glass screen through the focusing magnifier, appears as sharp as possible. Fine contrasty detail is always the easiest to focus upon.

Because of the wider aperture of the viewing lens than of the taking lens, depth of field (see Fig. 24.9) will be greater on the negative than it is on the screen and this, of course, always ensures needle sharp focusing.

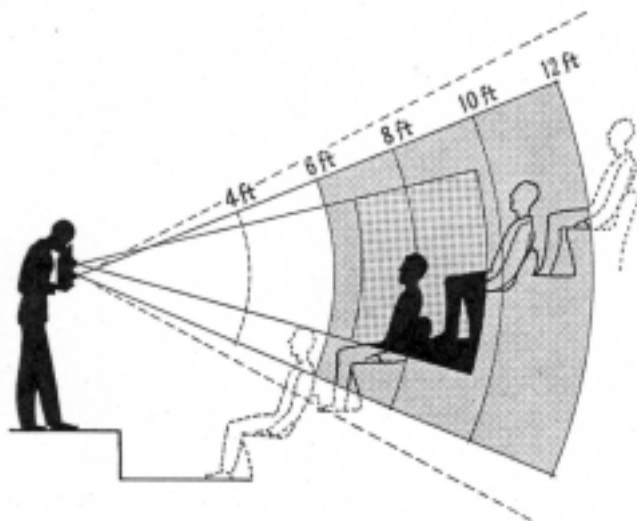


Fig. 24.9

This shows how the viewing lens has a much smaller depth of field than the taking lens. The solid area shows the depth of field as seen on the viewing screen, and the shaded area shows how the depth of field recorded on the film is much greater at any

average working aperture.

Depth Scale

The focusing knob (Fig. 24.8 No. 3) is engraved in either feet or meters and it is rotated against a depth of focus scale (Figs. 24.8 and 24.10) from which the focal depth can be roughly read off at a glance. It is only necessary to notice which measurements are included between the two like apertures shown at either side of the central position (see page 365).

Shutter Speeds

These are shown as figures, which appear in the top, peep window (Fig. 24.7 No. 14) situated above the viewing lens. Those nearest to the camera body are the shutter speeds and are indicated as fractions of a second, except the figure '1' which represents an exposure of one second duration. The speeds available are 'B' for Bulb or Brief Time, 1 second, 1, 1/5th, 1/10th, 1/25th, 1/50th, 1/100th, 1/250th, 1/500th second. These speeds are varied by turning the milled knob at the right or crank handle side of the camera towards the front of the lens panel (No. 17).

Intermediate speeds can be judged and used between any of the marked values except between 1/10th and 1/25th second also between 1/250th and 1/500 second. A special warning is given in the case of the 1/500th second which cannot be engaged after the shutter has been cocked (see page 33). This shutter is only fitted with a Brief Time mechanism and for long time exposures a time-lock cable release must be screwed into the cable release socket at No. 9 and the lock engaged.

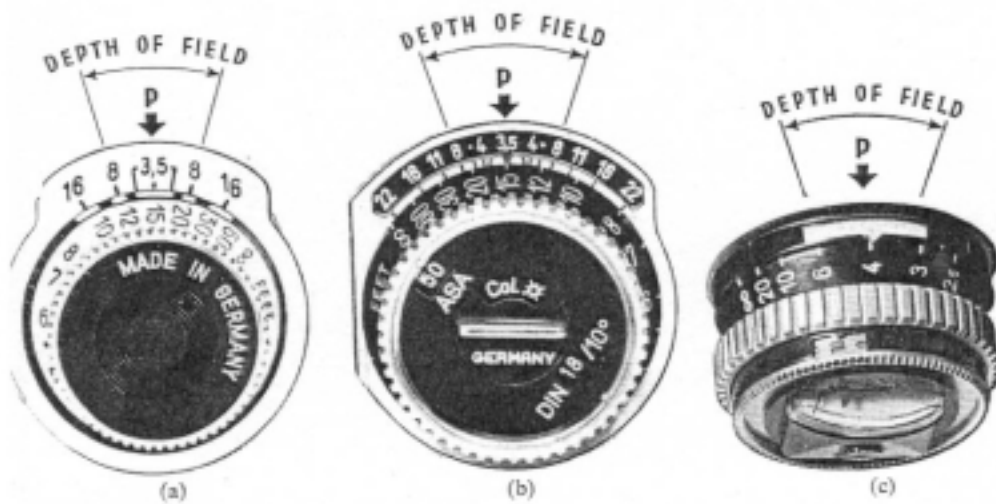
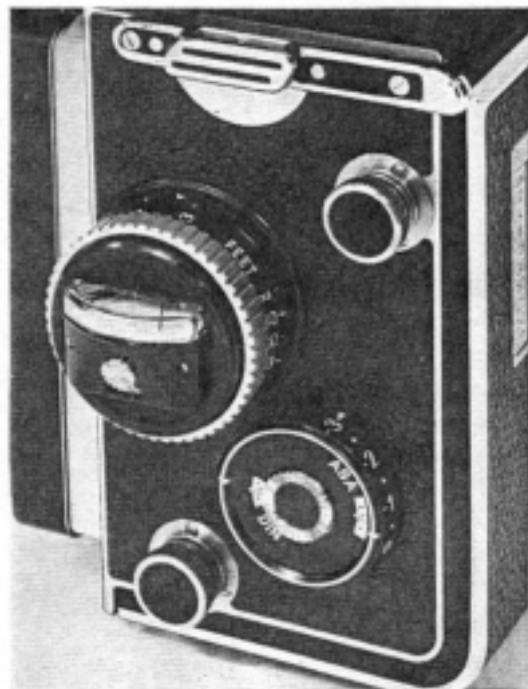


Fig. 24.10

Focusing knobs and depth of focus scales on (a) the Rolleicord IV and earlier 'Flex and 'Cord models, (b) on the Rolleiflex Automat, 2-8C and D and Rolleicord V, (c) on the Exposure Meter Models. (d) Focusing knob and exposure control on Rolleiflex 3-5F.

Point P shows the actual point of focus, and depth of field at and aperture can be read off between any two like apertures.



Lens Apertures

The left hand milled knob (No. 17) on the focusing side of the camera is used for setting the apertures which appear in the front part of the same peep window mentioned above. These are marked f/3.5, 4, 5.6, 8, 11, . . . , 22. The aperture f/ 16 has been omitted because of lack of space for engraving but is indicated by a dot (.). Any intermediate position can be used and although any one of these apertures can be utilized as the occasion demands, wide aperture lenses like those fitted to the Automat give their finest definition between f/5.6 and f/11. Whichever aperture may be selected for use in taking the picture, the viewing lens always uses the widest aperture of which it is capable.

Loading the Camera: Opening the Back

Whenever possible choose a situation away from bright sunlight or studio lights but if this is not possible then provide some shade with the body and retain the double lens cap in position during this operation. Place the camera face down on a flat surface or on its head for this important procedure. Looking at the camera base (Fig. 24.13) turn the safety catch (No. 2) to the left in the direction of the arrow, then lift the catch No. 1. Swing up the back until it rests against the hinge or if on its head, swing it down until it rests on the flat surface. Make quite certain that the adjustable pressure plate is in the correct position and that the inscription 214' x 2k' (6 x 6 cm.) can be seen (see page 358).

Inserting the Spool

Now that the back is open, turn the crank handle (Fig. 24.7 No. 5) in a clockwise direction until the winding key (Fig. 24.11 No. 2) is in a vertical position. Pull out the knob (No. 8) at the other end of the spool chamber and a half turn will hold it in the out position. Take an empty spool from a No. 120, 20 or B-2 film and insert it with the key-way vertical and to the right, so that it engages the winding key of the camera, then let the spool fall comfortably into the take-up chamber, give the retaining knob (No. 8) another half turn until it drops back into position and engages the other end of the empty spool.

Fig. 24.11

Interior view, with the back of the Rolleicord IV in the open position:

- (1) Film loading indicator points
- (2) Film wind key;
- (3) Base Lock;
- (4) Levelling feet;
- (5) Base catch;
- (6) Tripod bush;
- (7) Dual purpose adjustable pressure plate;
- (8) Take-up spool retaining knob;
- (9) Film gate;
- (10) Feed spool retaining knob and cine film rewind knob;
- (11) Pressure leaf spring;
- (12) Feed spool pivot;
- (13) Light baffles.

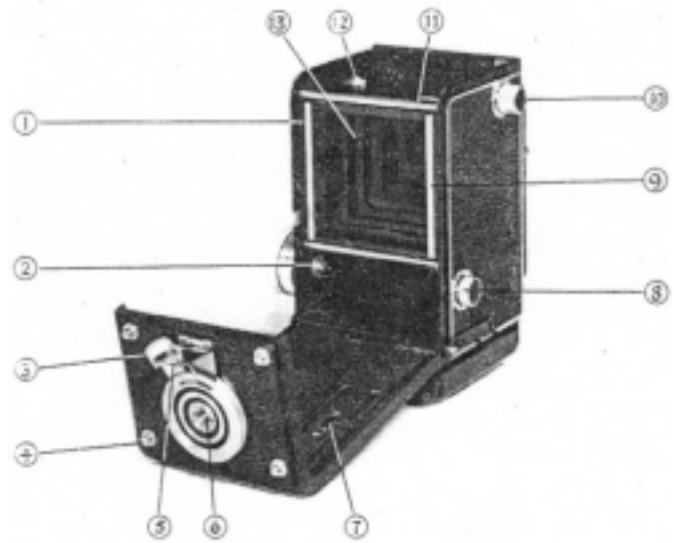
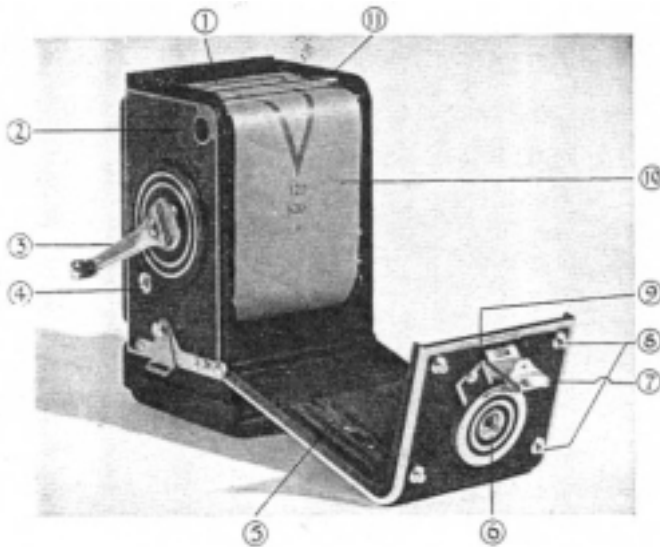


Fig. 24.12

Interior view of the Rolleiflex Automat II, with the back in the open position and film correctly threaded:



- (1) Feed spool;
- (2) Crank handle stowage;
- (3) Crank handle;
- (4) Film numbering peep window;
- (5) Dual purpose adjustable pressure plate;
- (6) Tripod bush;
- (7) Base clip;
- (8) Levelling feet;
- (9) Base lock;
- (10) Film backing paper threaded over gate;
- (11) Measuring roller. N.B. -Backing paper *must* always be threaded *under* this roller otherwise the automatic numbering mechanism will not function.

Inserting the Film

The feed spool chamber is located at the opposite end of the open camera. Take a spool of film, size 120, 20 or B-2 with the seal still unbroken and insert it (key-way to the left this time) on the pivot inside the right hand corner of the feed spool chamber. Press it down against the leaf spring (No. 11) whilst pulling out the retaining knob at No. 10. Then allow this to return to its normal position, when it will engage the aperture at the other end of the spool. Now break the seal of the film, remove all loose gummed paper and pull out a short length of the backing paper. There is no danger of the film unwinding as it is firmly held by the leaf spring.

Threading the Film

Bring the paper leader *underneath* the roller (Fig. 24.12 No. 11) then over the film gate rollers and the film gate itself and insert the end in the wide slot of the empty take-up spool. Push it right through until it appears in the narrow slit on the other side of the spool and then turn the crank handle slowly until one complete revolution of the take-up spool has been made, at the same time centring the backing paper so that it rides comfortably between the shoulders of the

spool and is not riding up on one side and leaving a space at the other. Close attention should be given to this operation as it is quite contrary to the loading of any other camera to which the photographer may have become accustomed as in these, the film is always led *over* all existing rollers. Unless this point is carefully followed the film will not stop automatically at the first exposure but instead it will be wound uselessly right through to the end and will be wasted.

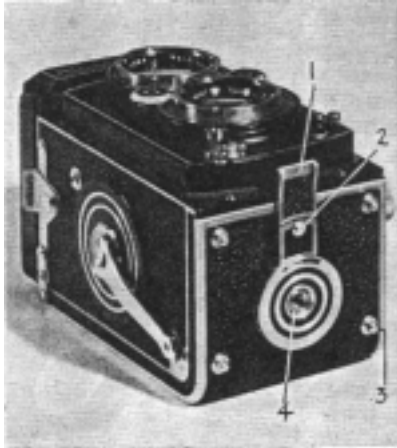


Fig. 24.13

Base view of camera:

- (1) Base clip;
- (2) Base lock, which is opened in the direction of the arrow;
- (3) Levelling feet;
- (4) Tripod bush.

Closing the Camera

Swing the camera back into the closed position, push home the clip Fig. 24.13 No. 1 and fasten the safety lock No. 2 by turning it to the right against the direction of the arrow and push it home. Now turn the camera again to its normal handling position and wind the crank handle in a clockwise direction until a definite stop is felt. Do not be deceived by the first gentle pressure as this is the point at which the feeler mechanism is encountering the double thickness of film and backing paper and brings the automatic mechanism into operation. This halts the film some three inches further on at No. 1, which is indicated in the peep window at Fig. 24.7 No. 4.

Shutter Setting

As soon as a definite stop is felt, reverse the crank handle in an anti-clockwise direction until a second stop is felt - this cocks the shutter and prepares the camera for the first exposure. You may now turn the crank handle over on its hinge and stow it in the space provided at Fig. 24.7 No. 6. The camera is now ready for action and the shutter speed knob (No. 17) should be turned to show an appropriate speed in the peep window (No. 14). (The fastest speed of 1/500th second must not be engaged at this stage, see below.) To make an exposure, press the shutter release at No. 7 after first removing the safety catch (No. 8) by swinging it downwards, and then repeat the forward and backward wind of the crank handle to a definite stop in each direction. This will bring a new frame of film into position in the gate, set the shutter for the next exposure, bring the No. 2 into the peep window at No. 4 and interlock the shutter against double or missed exposures. Now continue in this manner right through the roll of film until the twelfth exposure has been made when it will be found that the crank handle can be wound without a stop for several turns; this will take all the backing paper on to the take-up spool. A clicking sound of paper trailer against metal will indicate this.

The Top Speed of 1/500th Second

It has been mentioned above that as soon as the crank handle is wound and reversed the shutter is cocked and once in this position the top speed cannot be engaged. Under no circumstances should any attempt be made to force the speed adjustment from 1/250th to 1/500th once the shutter has been set. To engage the fastest shutter speed, this must be moved into position in the peep window at No. 14 *before* the crank handle is wound and reversed. Similarly it cannot be disengaged and a slower speed brought into position except when the shutter is free and uncocked. If it is necessary to use the 1/500th and if, for example, the 1/100th second is already in position and the shutter cocked, then a single frame of film must be wasted by pressing the release, the speed dial re-adjusted to 1/1500th and then the crank wound and reversed and the shutter reset for this speed.

Delayed Action

The delayed action release button (Fig. 24.7 No. 15) which allows 12 seconds delay before actually firing the shutter, permits the photographer himself to be included in the picture. This control is situated at the right hand top corner of the front panel and as the crank handle winds the film and cocks the shutter, so the delayed action mechanism is preset every time and is therefore always ready for action.

For use, place the camera on a tripod, or towards the front edge of a steady table. Adjust the shutter speed and diaphragm setting, to the prevailing light conditions and push the button (No. 15) towards the right, i.e. in the direction of the engraved arrow, and a burring sound will be heard as pinion wheels are actuated by a strong spring mechanism. The photographer should immediately take up his position as prearranged and pre-focused, and he has twelve seconds in which to reach his position. At the end of this time, the tell-tale click of the shutter will indicate that the exposure has been made.

Removing the Exposed Film

When the film has been wound off, open the camera back again as described on page 63, pull out the knob (Fig. 24.11 No. 8) at the same time steadying the roll with the finger, withdraw it first from the left side, and seal down the film with the adhesive paper provided. (Occasionally this sealing strip may be caught up behind the pressure plate.)

Flash Synchronization

The stud at Fig. 24.7 No. 19 takes the standard Compur co-axial plug which is fitted to the Rollei flash gun or is found on the majority of guns. The flash control button at No. 18 has two positions, 'X' and 'M'. The 'X' position is normally used for electronic flash, or for the short delay flash bulbs of the S.M. type, and these can be synchronized on all speeds up to 1/100th second. Electronic flash can be used on any speed. The 'M' position is used for the longer delay bulbs of the Philips' P.F. type, and synchronization can be obtained up to 1/500th second. Full details of flash synchronization are given in the chapter on Flash Photography.

Cine Film Equipment

On the front frame of the direct vision finder (the top of the camera), can be seen three locating studs (Fig. 24.7 No. 13). These accept the finder mask of the Cine Film equipment provided in the Rolleikin 11 outfit (see page 297). This model is also fitted with a dual purpose pressure plate in the back which makes it unnecessary to have a special back for use with cine film. By pressing on this ribbed pressure plate (Fig. 24.11 No 7) both downwards and horizontally, the figures 1' x 1 1/2' (24 x 35 mm.) are exposed. A further pressure on the pad in the reverse direction will again bring the figure 2 1/4' x 2 1/4' (6 x 6 cm.) into position and the film indicated can then be used.

The lower (feed spool) chamber film retaining knob (Fig. 24.8 No. 5) is now larger and cannot remain fixed in the 'out' position as in the Automat 1. This is now a double action retaining knob both for standard roll film and for the Rolleikin equipment, and in the latter case it acts as a rewind knob. In this model, the screen mask for the 1' x 1 1/2' (24 x 36 mm.) size is retained by a spring catch at No. 11 which controls two small size lugs which hold the mask in position over the screen.

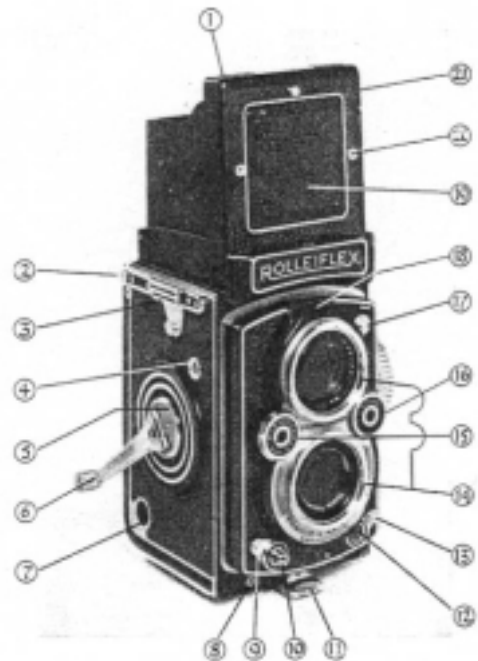
1954/56 IMPROVED MODELS

The Automat II underwent various slight changes in 1954 which, in effect, are some of the more popular features of the Automat 2.8C described on page 375. The general design and operation of the camera remains exactly as described above, but it has several additional features.

Fig. 24.14

Rolleiflex Automat with Light Value Scale, front view:

- (1) Thumb grips;
- (2) Back hinge;
- (3) Neckstrap eye and anchor;
- (4) Film numbering peep window;
- (5) Interlocked film wind release lever (for double exposure);
- (6) Crank handle;
- (7) Crank handle stowage;
- (8) Locating studs;
- (9) Shutter release lock;
- (10) Shutter release;
- (11) Base clip;
- (12) Flash socket;
- (13) X and M flash adjusting lever;
- (14) Double bayonet lens mounts;
- (15) Shutter speed adjusting wheel with light value scale;
- (16) Lens aperture and light value adjusting wheel;
- (17) Delayed action release;
- (18) Speed and aperture peep window;
- (19) Collapsing panel;
- (20) Cine film frame finder studs;
- (21) Focusing hood.



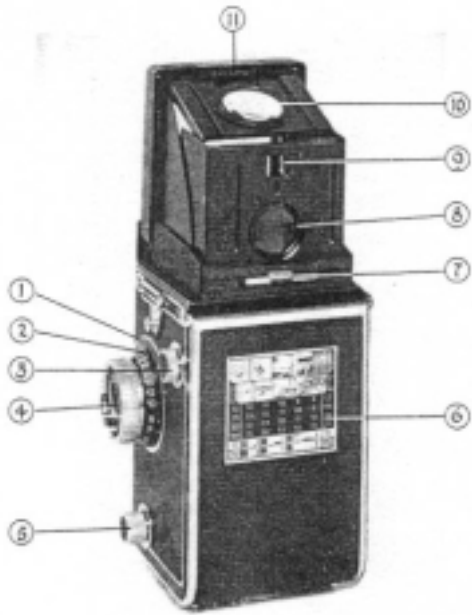


Fig. 24.15

Rolleiflex Automat with Light Value Scale, back view:

- (1) Depth of field scale;
- (2) Focusing scale;
- (3) Take-up spool retaining knob;
- (4) Focusing knob with film speed and type reminder panels;
- (5) Feed spool retaining knob and cine film rewind knob;
- (6) Light value table;
- (7) Screen accessory retaining clip;
- (8) Eye level focusing magnifier;
- (9) Eye level viewing window;
- (10) Screen magnifier;
- (11) Screen magnifier erecting clip.

Multiple Exposure Release

Although, as usual, the film wind is interlocked against double exposures, many workers demand the ability to make double or multiple exposures for use in photomontage, etc. and this is provided for in this model. On the hub of the winding knob (Fig. 24.17) a knurled wheel has been incorporated, which, on being turned forward in the direction of the arrow, allows a second exposure to be made on the same frame of film. To cock the shutter for the second exposure, the film wind crank is given a reverse turn only. The interlock mechanism will now operate normally unless the release wheel is again turned forward. This is also an invaluable feature in the event of a flash bulb failing to fire, when it is only necessary to release the interlock mechanism and re-cock the shutter in the same way.

Focusing Knob

As in the Automat 2-8C and following the success of the auxiliary focusing knob accessory, a new enlarged knob has now been incorporated (Fig. 24.15 No. 4) embodying the same easily read silver figures on a black ground, both on this and on the depth scale adjacent to it (No. 1). This knob also embodies the film type and speed reminder panels as in the extension knob, but it is actuated by one single control. When this is turned anti-clockwise it allows the film type to be shown in the inner aperture at No. 4. This reads: Pan, Ortho, Daylight Color, Artificial Light Color. When it is turned clockwise it permits the film speed to be seen in the outer aperture in both ASA and DIN speed ratings. This second movement does not upset the first movement described above. For B.S. and European Scheiner speeds, add 10 to the DIN speed.

Neck Strap and Back Hinge Plate

This part of the camera has also been redesigned, and is now equipped to accommodate a neck strap with clips that permit easy removal and insertion into the special eyepieces provided (Fig. 24.14 No. 3). The special strap is supplied with the camera, and is firmly attached when the slip-locks on the strap ends are pushed down and they still allow the neck strap to ride back and forth in the space provided so that the camera always hangs in a level focusing position. To fasten the strap, hook the metal loop on the anchor button, pull locking slide down and push it into the strap holder slot as far as it will go. These new side plates end in the new type hinge, which facilitates the removal of the camera back by simply turning the catch at No. 2 upwards and clockwise. With this fitting there is no danger of accidentally releasing the back panel. The film spool retaining knobs are automatically locked in position when the camera is closed so that they cannot be accidentally withdrawn, causing misalignment of the film.

Shutter Release and Guard

A new shutter release guard (Fig. 24.14 No. 9) has been devised which is enclosed within the front panel. It is only necessary to turn the chromium stud in a clockwise direction to lock the shutter release, which will ensure against accidental exposures. It can also be used to keep the shutter open for time exposures when set to 'B'. First depress the release half way, then turn the lock and press the release the rest of the way, when the blades will remain open until the lock is released.

The shutter release of this model has been specially balanced to open only after overcoming a slight but distinct resistance. The exact instant of exposure can, therefore, be gauged very accurately by feel. At the other side of the camera front, the flash plug with M and X positions (Fig. 24.14 No. 9) has been redesigned and now incorporates a lock mechanism in the change-over lever. When in the vertical position midway between M and X, the lock is open, and turning it in either direction locks it.

Exposure Value Scale

This development in exposure control is engraved on the shutter speed-setting wheel (No. 15). It actuates the speed and the aperture dials together so that an increase in aperture is automatically compensated by a shorter exposure and vice versa. Speed settings, however, can be adjusted separately by holding the aperture wheel and turning the speed wheel. In the later versions of this model the speeds and apertures are permanently in mesh until the center of the aperture wheel is depressed, when both become free. In 1956 this feature was again modified to allow permanent unmeshing when required. To release, it is only necessary to depress the central boss and then turn it out of register with the lines engraved upon the milled wheel (see Fig. 24.16). To re-engage the Exposure Value Scale, the engraved lines should again be placed in register.

Once set to the correct number, the speeds and apertures are altered together by turning the speed adjusting wheel. This is now equipped with click stops making it impossible to set intermediate positions between the marked shutter speeds. This is of special importance in color photography where it is often necessary to repeat the same exposure to a high degree of accuracy.



Fig. 24.16

The front of the modern Automat showing light value scale engraved on speed adjusting wheel at left. The arrow in the center is rotated by the aperture setting wheel at right. The center of this wheel can be depressed to allow independent settings of speed and aperture. Turning it out of mesh with the engraved marks uncouples the light value interlinkage.



Fig. 24.17

The Modern Rolleiflex film wind crank showing the optional double exposure release lock on the boss. The milled part is pushed in the direction of the arrow once for each extra exposure required on one frame of film.

New Compur Shutter

In order to correlate the light values, the shutter has been redesigned to give a range of speeds, each one of which is half the preceding speed and the following are now obtainable with this shutter, 1 second, 1/2, 1/4, 1/8, 1/15, 1/30, 1/60, 1/125, 1/250 and 1/500th second. The slight differences between the 1/15th second and the correct 1/16th second and the 1/240 and 1/250th second, are so slight as to make no material difference in exposure, even with color film.

Flash Plug

For use with the Rolleiflash or with the special connecting plug available, the lock (Fig 24.14 No. 12) avoids any possibility of accidentally pulling it out. To open the lock and withdraw the plug, swing the lever (No. 13) to the central position. In either the M or X position, the plug can be inserted, but not withdrawn. For use of the M and X positions see page 370 and Chapter 10.

Size and Weight

These models measure 5 1/2" high, 3 1/4 wide, 3 1/4 deep overall (14.3 x 9.4 x 9.5 cms.) and weigh 2 lb. 2 1/2 oz. (1 kilogram without their ever-ready case.

THE ROLLEIFLEX AUTOMAT F/2.8 MODELS

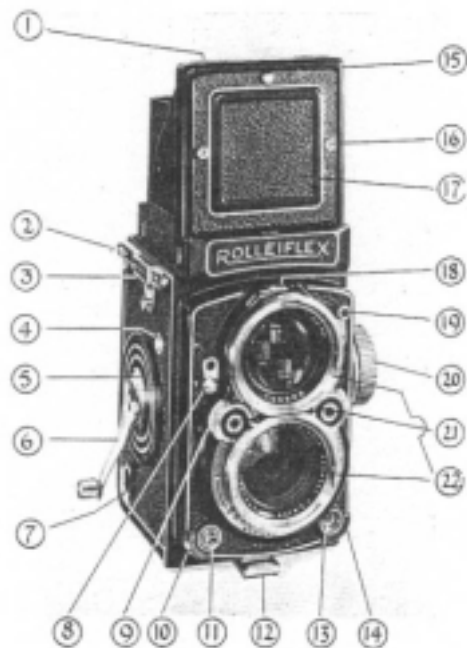
About 1950 a new model appeared, fitted with an f/2.8 Zeiss Opton Tessar lens and later with Zeiss Jena Biotetar and various other minor differences. The Tessar, however, was taken out of production after only a very short existence due to the extreme difficulty experienced in producing lenses of the necessary high quality. The Biotetar, though a fine lens, was not generally available from the Jena works.

The bayonet lens mounts on these models are of larger diameter and special size 11 accessories are provided in lens hoods, filters etc. Those for the Tessar and Biotetar, however, are of a different size to those for the f/2.8 Xenotar and Planar, which use size III. A few other minor alterations in design were made and these include the substitution of a lever in place of the usual delayed action release button. The camera is heavier than the standard model but its operation is exactly as for the Automat II described on pages 360 to 372.

Fig. 24.18

Rolleiflex Automat 2.8c, front view:

- (1) Thumb grips;
- (2) Back hinge;
- (3) Neck strap eye and anchor;
- (4) Film numbering peep window;
- (5) Interlocked film wind release lever;
- (6) Crank handle;
- (7) Crank handle stowage;
- (8) Flash setting lever;
- (9) Speed setting wheel lock release;
- (10) Shutter release lock;
- (11) Shutter release and cable socket;
- (12) Base clip;
- (13) Flash plug;
- (14) Flash connector lock;
- (15) Focusing hood;
- (16) Cine film viewfinder mask studs;
- (17) Eye level finder collapsing frame;
- (18) Lens aperture and shutter speed peep windows;
- (19) Delayed action lever;
- (20) Focusing-knob;
- (21) Speed and aperture setting wheels;
- (22) Large size double bayonet lens mounts.



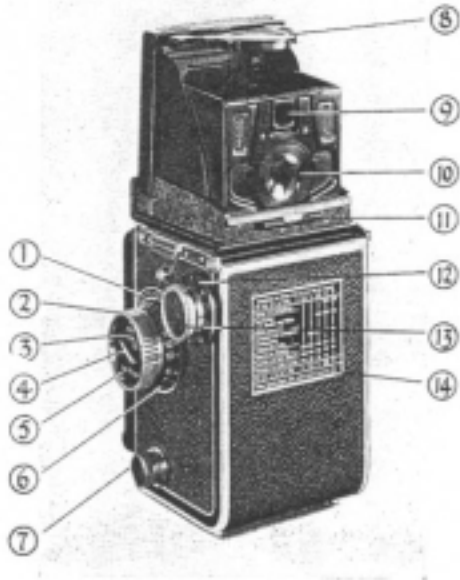


Fig. 24.19

Rolleiflex Automat 2.8c, back view:

- (1) Depth of field scale;
- (2) Focusing knob;
- (3) Film type reminder panel;
- (4) Film type and film speed reminder setting lever;
- (5) Film speed reminder;
- (6) Focusing scale;
- (7) Feed spool retaining knob, and cine film rewind knob;
- (8) Adjustable focusing screen magnifier;
- (9) Eye level viewfinder peep window;
- (10) Eye level focusing adjustable magnifier;
- (11) Screen accessory retaining clip;
- (12) Cine film counter;
- (13) Take-up spool retaining knob and cine film release knob;
- (14) Exposure indicator.

Fig. 24.20

Rolleiflex Automat 2.8D, front view:

- (1) Thumb grips;
- (2) Back hinge and lock;
- (3) Neckstrap eye and anchor;
- (4) Film numbering window;
- (5) Interlocked film wind release;
- (6) Crank handle;
- (7) Speed setting wheel with light value scale;
- (8) Crank handle stowage;
- (9) Leveling feet;
- (10) Shutter release lock;
- (11) Shutter release and cable thread;
- (12) Base lock;
- (13) Locating studs
- (14) Flash socket;
- (15) Focusing hood:
- (16) Collapsing panel;
- (17) Cine frame finder studs;
- (18) Speed and aperture peep window-
- (19) Delayed action and flash adjusting lever;
- (20) Lens aperture and light value adjusting wheel;
- (21) Light value uncoupler;
- (22) Double bayonet mounts;
- (23) Flash plug release.

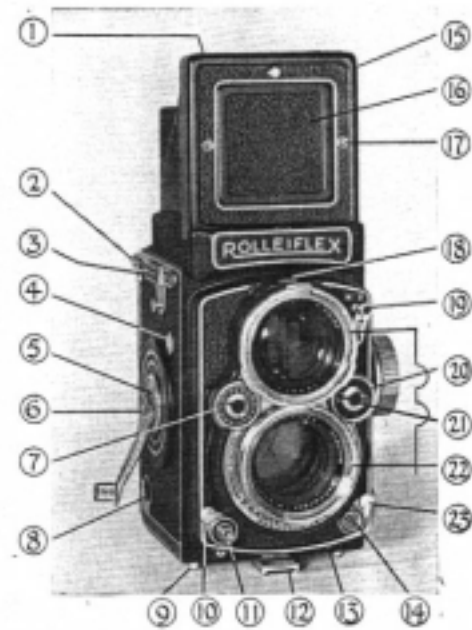
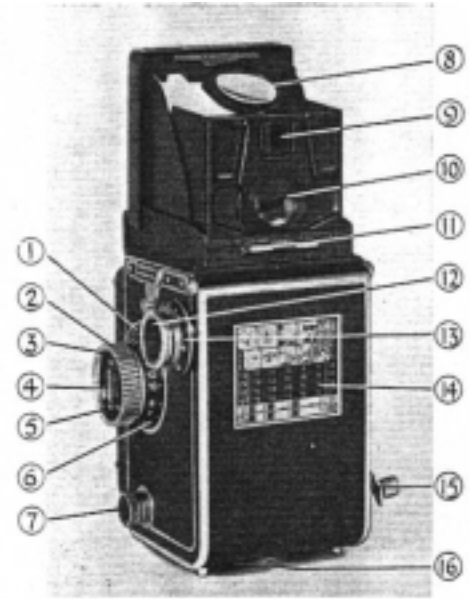


Fig. 24.21

Rolleiflex Automat 2.8D, back view:

- (1) Depth of field scale;
- (2) Focusing knob;
- (3) Film speed reminder;
- (4) Film speed and film type adjustment;
- (5) Film type reminder;
- (6) Focusing scale;
- (7) Feed spool retaining knob and cine film rewind knob;
- (8) Screen magnifier;
- (9) Eye level viewing window;
- (10) Eye level focusing magnifier
- (11) Screen accessory retaining clip;
- (12) Take-up spool retaining knob and cine film release knob;
- (13) Cine film counter;
- (14) Light value table;
- (15) Crank handle;
- (16) Base hub with tripod bush.

*Automat 2.8C and D*

In 1953 the 2.8C fitted with f/2.8 Schneider Xenotar lens appeared and this model includes many new advantages and refinements. This Xenotar lens at last satisfied the high standard set by the makers themselves and because of its new and interesting design (see Fig. 1.8) it is worthy of special mention. The previous four-element f / 2.8 Tessar type lens begins to sacrifice definition at the expense of the wide aperture in an objective of 80 mm. focal length covering a 6 x 6 cm. field. But the construction of this new objective of the Gauss type, using five elements and three air spaces gives a highly satisfactory performance even at wide open aperture. In 1954, the Carl Zeiss Planar of similar focal length and aperture, also of Gauss type construction, was introduced as an alternative (Fig. 1.7(b)).

The 2.8D, of similar design, appeared late in 1955 and is essentially the same as the 2.8C except that it includes the Exposure Value Scale 10 speed shutter described on pages 374 and 45, the optional linked or unmeshed Exposure Value Scale shutter and flash lock and shutter release lock as incorporated in the 1956 f./3.5 Automat (see page 375).

Operation

The general handling and operation of the model is exactly as for the Automat 11 and loading and unloading of the film is carried out in the same manner. The larger lens mounts require the use of the special Type III accessories. It is therefore only necessary to describe the new and additional features incorporated in the new models.

Camera Body

The interior of the camera body has been redesigned to prevent internal reflections and a series of light baffles are cast into the inside walls of the body.

The film spool retaining knobs are automatically locked in position when the camera is closed so that they cannot be accidentally withdrawn, causing misalignment of the film.

Multiple Exposure Release

Although like all automats, the film wind is interlocked against double exposures, many serious workers demand a camera on which double or multiple exposure montages can be made. On the hub of the winding knob (Fig. 24.17) a knurled wheel has now been incorporated which, on being turned forward in the direction of the arrow allows a second exposure to be made on the same frame of film. To cock the shutter for the second exposure, the film wind crank is given a reverse turn only. The interlock mechanism will then operate normally unless the release wheel is again turned forward. This is an invaluable feature in the event of a flash bulb failing to fire, and can save a wasted frame when changing from 1/500th second to a slower speed by simply covering the lens and bringing the double exposure device into operation. This, of course, does not apply to the model D which has the new 10-speed shutter and in which there is complete freedom of movement between the 1 / 500th sec. and any other speed.

The flash control for X and M settings are at the upper left of the camera front (Fig. 24.18 No. 8) and the delayed action button replaced by a lever (No. 19).

Shutter and Diaphragm Setting Wheels

These milled wheels in the model C are equipped with a locking device or automatic arresting slide so that once set, they cannot be accidentally moved from their positions. To change the setting, it is merely necessary to turn the knurled wheel (No. 21) whilst depressing the arresting slide (No. 9) simultaneously. Once the finger is removed, this will fall back into a locked position opposite whichever setting has been chosen. This feature is not, of course, necessary in the Light Value Scale shutter of the model D.

Delayed Action

The delayed action lever (No. 19) on all f / 2-8 models must be independently cocked each time it is used by turning it from a vertical to a horizontal position in a clockwise direction. The model D has a safety lock at the top of this lever. As soon as it has been cocked the shutter can be released for delayed action pictures.

Magnifying Eye Pieces

The screen magnifier on the top of the hood (Fig. 24.19 No. 8) and the eye level focusing magnifier (No. 10) are adjustable and can be accommodated to all eyes, but the users should not wear spectacles during operation, especially if these are equipped with negative lenses. It is merely necessary to pull the magnifying eyepieces forward or back, up or down, to suit individual eyesights.

Focusing Knob

Following the success of the auxiliary focusing knob, a new enlarged knob has been incorporated (Fig. 24.19 No. 2) embodying the same easily read silver figures on a black ground, on both this and the depth scale adjacent to it (No. 1). This knob also embodies the film type and speed reminder panels as in the extension knob, but it is actuated by one single control (No. 4). When this is turned anti-clockwise it allows the film type to be shown in the inner aperture at No. 3

and when it is turned clockwise it allows the film speed to be shown in the outer aperture at No. 5 in both American and European speed ratings. This second movement does not upset the first movement described above.

Cine Film Exposure Counter

The take-up spool retaining knob (Fig. 24.19 No. 12) embodies the film exposure counter normally supplied with the Rolleikin II Outfit and this accessory is no longer needed and therefore ensures a quicker change-over to the cine film size.

Neck Strap and Back Hinge Plate

The camera is equipped to accommodate a neck strap with clips that permit easy removal and insertion into the special eye pieces provided (Fig. 24.18 No. 3). The special strap is supplied with the camera and is firmly attached when the slip-locks on the strap ends are pushed down and still allow the neck strap to ride back and forth in the space provided so that the camera always hangs in a level focusing position. To fasten the strap, hook the metal loop on the anchor button No. 3, pull locking slide down and push it into the strap holder slot as far as it will go. These new side plates end in the new type hinges which facilitate the removal of the camera back by simply turning the catch at No. 2 upwards and clockwise. With these fittings there is no danger of accidentally releasing the back panel.

Shutter Release Guard

The shutter release guard (Fig. 24.18 No. 10) on the model C is enclosed within the front panel. It is only necessary to turn the milled wheel in a clockwise direction to lock the shutter release, which will ensure against accidental exposures. It can also be used to keep the shutter open for time exposures when set to 'B'. The cable release socket threaded into the plunger can still, however, be used. On the model D this has been replaced by the standard f/3.5 type lock described on page 373.

Flash Plug

The flash plug connector of the model C locks into the camera once it is inserted into the socket at No. 13 by turning the small milled flange No. 14 upwards slightly while the plug is being inserted and then releasing it. It is then positively locked into position and will not accidentally pull out. To release flash socket press up the milled flange when it can easily be withdrawn. The model D incorporates the f / 3.5 type flash plug and this is described on page 375.

Pressure Point Shutter Release

The shutter release of these models has been specially balanced to open only after overcoming a slight but distinct resistance. The exact instant of exposure can, therefore, be gauged very accurately by feel.

Accessories

All accessories for these models are of the extra large diameter bayonet now known as Type 111, but a new Rolleinar close-up accessory has been designed for them. This is known as the

Heidosmat Rolleinar for the upper or viewing lens and incorporates a built-in Rolleipar for parallax correction - soon to become universal for all models. These new close-up lenses are all hard coated for the elimination of reflections.

THE 1956 EXPOSURE METER MODELS 3.5 AND 2.8E

Late in 1956 the standard Automat f/3.5 model, as described on pages 372 to 375, and the 2.8D, described above, both equipped with the Exposure Value Scale, were modified further to include a built-in photo electric exposure meter (see Figs. 24.22 and 23). For the first time, the f/3.5 model is equipped with a five-element Gauss type objective similar in all other respects to that fitted to the f/2.8 models. This is an f/3.5 Carl Zeiss Planar of extremely fine performance and combines all the advantages of a high performance, fully color-corrected, lens of perfect covering power and correct light transmission for color photography. There are also one or two other small improvements, which are enumerated below. The same camera, however, is available with f/3.5 Xenotar five-element lens, but without exposure meter. All parts and necessary wiring are already in position so that the meter and photocell can be added at a moment's notice. The 2.8E is equipped with either the f/2.8 Planar or Xenotar just as the previous 2.8 models.

The exposure meter is calibrated in exposure values only; to correspond with the setting of the Exposure Value Scale, and this combination makes correct exposure an extremely simple operation. The use and operation of these cameras is exactly as described above for their predecessors, but with the following additions.

Fig. 24.22

Rolleiflex Automat 3.5E front view:

- (1) Thumb grips;
- (2) Back hinge and lock;
- (3) Neckstrap fixing;
- (4) Film numbering window
- (5) Interlocked film wind release lever.
- (6) Crank handle;
- (7) Speed setting wheel with light value scale;
- (8) Crank handle stowage;
- (9) Shutter release lock;
- (10) Shutter release with cable thread;
- (11) Base lock;
- (12) Locating studs;
- (13) Flash socket;
- (14) Focusing hood with screen magnifier erected;
- (15) Collapsing panel;
- (16) Cine frame finder studs;
- (17) Exposure meter baffle release;
- (18) Exposure meter photo cell;
- (19) Speed and aperture peep window;
- (20) Delayed action release;
- (21) Lens aperture and light value adjusting wheel,
- (22) Light value uncoupler;
- (23) Double bayonet mounts;
- (24) Flash plug release.

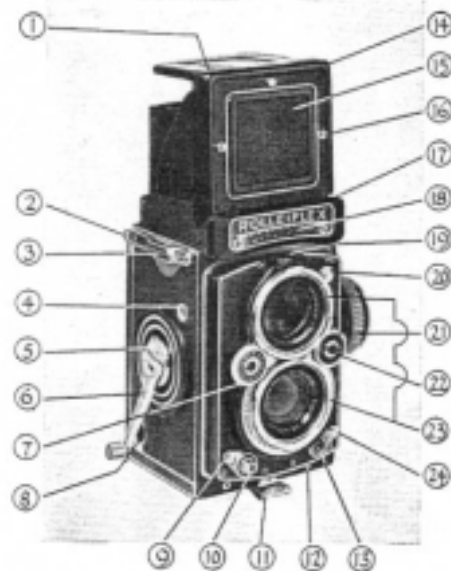
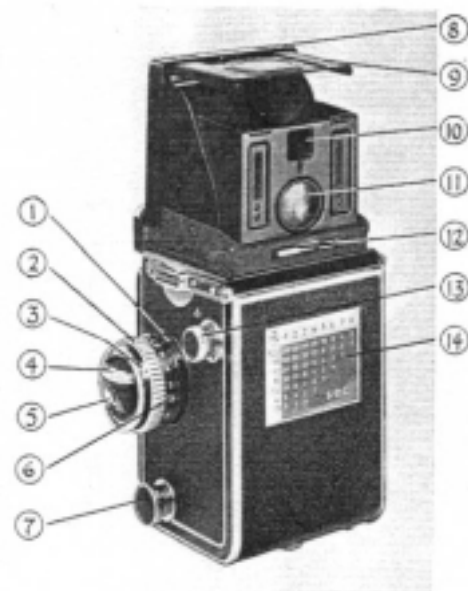


Fig. 24.23

Rolleiflex Automat 3.5E, back view:

- (1) Depth of field indicator;
- (2) Focusing knob;
- (3) Exposure meter light value indicator;
- (4) Exposure meter scale and needle;
- (5) Film speed reminder;
- (6) Focusing scale;
- (7) Feed spool retaining knob and cine film rewind knob;
- (8) Focusing hood;
- (9) Focusing magnifier;
- (10) Eye level finder window;
- (11) Eye level focusing window;
- (12) Screen accessory retaining clip;
- (13) Take-up spool retaining knob;
- (14) Long exposure calculator.

*Built-in Exposure Meter*

The photocell of this accessory is built into the nameplate on the camera front (Figs. 24.22 and 24.24 No. 18) and for normal outdoor operation is used in the closed position. For interiors or dull lighting conditions, a front interior baffle can be raised which gives a fifty-times more sensitive meter than with it closed. In some meters this is done by means of a 'booster' cell, but in the Rolleiflex this is already very sensitive and is, in fact, masked down to one-fiftieth of its normal sensitivity for standard use out-of-doors.

To raise the baffle for indoor use, press down the lever on the front right edge of the nameplate (Figs. 24.22 and 24.24 No. 17) when a red dot will show. In this position all readings on the meter must be taken from the red scale. For use as an incident light meter, a white plastic diffuser fits over the photocell and is accommodated in the camera case when not in use.

Focusing Knob

A new focusing knob has now been designed which not only performs all the previous functions, but, in fact, now contains the meter portion of the photo-electric exposure meter. Apart from its normal use of focusing the camera and acting as a film type reminder panel, it contains a needle working against a scale on the front of it (Figs. 24.23 and 24.25 No. 4) and an extra scale calibrated in light values round its periphery. A further extra scale in DIN and A.S.A. supplies the film speed to the meter and also acts as a reminder of the speed of film in use.

To use the meter, first set the film speed in A.S.A. or DIN (for Scheiner or B.S. add 10 to the DIN speed) by turning the outer milled edge to the limit of its free travel, then forward for a higher speed or back for a lower speed, and continue turning until the necessary film speed has

been reached. Now point the camera at the subject to be photographed and turn the same milled edge round the front periphery until the red needle on the meter is opposite the datum line. This can be seen through the top transparent plastic housing. The light value indicated can now be read off on the black scale.

In dull lighting conditions or indoors, when it is necessary to remove the baffle by pressing the lever No 17 described above, the same operations are necessary, except in this case the light values will be read from the red scale on the meter.

Depth of Field Indicator

Previous models of the Rolleiflex have used a depth scale around the focusing scale, as shown in Fig. 24.10 (a) and (b). In these new models the depth scale has been omitted and in its place are a pair of black louvers, which expose a small white central area almost like the camera iris itself. As the aperture setting wheel (No. 21) is altered to give a wider aperture, so these black covers move inwards towards the center showing a smaller patch of white. The extent of this can now conveniently be read off against the distance scale marked on the focusing knob, thus giving the depth of field automatically at every aperture (see Fig. 24.10 (c)).

Focusing Hood

This is unaltered in the f/3.5 models, but in the 2.8E the previous 2.8 hood width adjustable magnifiers has been discontinued in favor of the f / 3.5 type magnifier with large light-excluding baffle.

Neckstrap

A new neckstrap has been designed and is fitted to these models only. This has a fork-type lock, which, on being pushed into the eyelet and over the button, locks automatically on entry. To release the neckstrap, the two sides of the fork must be pressed together, and ensures against accidental release. This accessory has now been hinged just above the fork so that the camera can be allowed to swing in any direction without damaging the camera due to scratches, etc. This strap is also used as a case strap, the new type case having none (see Fig. 23.6).

Back Plate

A new plate now replaces the Exposure Value Scale chart on the back of the camera. This permits setting of the Exposure Value Scale shutter for longer exposures than 1 second which are not catered for in the Light Value Scale, but may be necessary when longer exposures are indicated by the exposure meter, when the "B" shutter setting is used.

Shutter Release Guard

This is exactly the same as the previous model, but a visual indication of when it is locked and when it is unlocked is now shown by the new symbols, which shows that the shutter cannot be used and which shows that the shutter is free.

Flash Synchronization

This is exactly as the previous models, but new symbols have been used to indicate the "X" and "M" settings. The "X" setting is now visually shown by a flash or lightning mark, and the "M" setting is shown by a representation of a bulb.

Cine Film Rewind Knob

This has been slightly modified in these models so as to form a larger operating surface (No. 7) and facilitate the winding of the cine film back into the cassette.

ROLLEIFLEX 2.8E2

Late in 1959 a slightly modified version of the 2.8E appeared with very minor improvements. These are the incorporation of the new screen and hood as fitted to the 3.5F Model described on page 393, and provision for the optional glass pressure plate of the Tele-Rolleiflex described on page 397. This latter is not normally included, but can be supplied on request.

ROLLEIFLEX 4x4

During 1957 a new model appeared called the Rolleiflex Automatic 4 x 4 (Fig. 24.26) which is very similar to the Sports model last produced in 1939 and illustrated on page 24 (Fig. 2.13). As the previous model, this new camera uses 127 (A-8) film on which 12 exposures, each 1" x 1 (4 x 4 cm.) are taken. The essential differences are in the method of film winding and the focusing hood. The lens fitted is now an f / 3.5 Schneider Xenar of 60 mm. focal length in an Exposure Value Compur Rapid shutter with X.M. synchronization and delayed action built in. The camera is finished in two tones of gray.

Fig. 24.26

Rolleiflex 4x4, front view

- (1) Thumb grips
- (2) Back hinge;
- (3) Neckstrap fixing;
- (4) Film wind knob;
- (5) Delayed action and flash selector lever;
- (6) Film numbering peep window;
- (7) Film speed adjusting ring;
- (8) Shutter release;
- (9) Locating studs;
- (10) Base catch;
- (11) Flash plug;
- (12) Focusing hood with screen magnifier;
- (13) Collapsing panel;
- (14) Double bayonet mounts;
- (15) Light value, speed and aperture indicator;
- (16) Light value lock release.

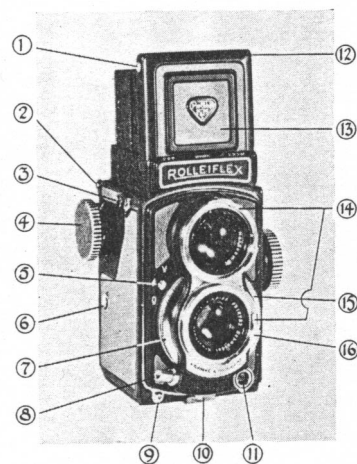
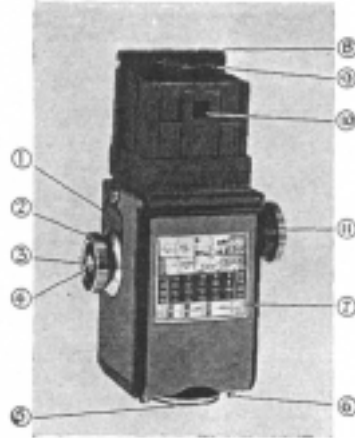


Fig. 24.27

Rolleiflex 4 x 4, back view:

- (1) Depth of field indicator;
- (2) Focusing knob;
- (3) Film speed reminder panel;
- (4) Film speed adjuster;
- (5) Grooved base hub,
- (6) Leveling feet;
- (7) Light value table;
- (8) Focusing hood;
- (9) Focusing magnifier;
- (10) Eye-level finder window;
- (11) Film wind knob.

*Focusing Hood*

This differs from other recent Rollei types in that it does not collapse into the body of the camera, but lies entirely over the focusing screen, which, in this model, is of the piano convex type with matted under-side. The hood is of 'concertina' construction and folds inwards at both side and back and is in fact the forerunner of all new models. To erect the hood it is merely necessary to pull up the back portion as in other modern Rolleis already described. There is a direct vision aperture in the rear portion, and the front center portion collapses for use with it as in the normal Rollei hood. A magnifier is built into the front portion and is erected at the first gentle push of the collapsing center panel. When this is pushed in a little further, it locks in the horizontal position leaving clear the open frame finder. To return the hood to screen focusing, it is only necessary to press lightly on the right-hand side panel, when the collapsible front will return to the vertical position.

Focusing

This is effected by turning the large milled knob at the left side of the camera as in the modern standard model Rolleiflex, and both the knob and the depth of field scale are similar to that fitted to the Rolleicord VA with film speed reminder panel built into the vertical face.

Shutter

The shutter fitted to this model is the standard 10-speed, Exposure Value Compur Rapid shutter, but the exposure value and the aperture are adjusted by pressing and turning, the metal release on the left-hand side of the shutter housing when seen from the normal viewing position. To alter the shutter speed, the outer milled ring of the shutter is turned in either direction until the required speed comes into position, whilst holding the above-mentioned metal release in the free (depressed) position. The speeds and apertures in actual use are indicated against a small U-shaped piece of metal on the left side of the shutter housing. The shutter speed and aperture are always in mesh as in all exposure value shutters, except when the above-mentioned release is depressed.

Loading the Camera

The back is opened by the base lock in the same way as all other modern Rolleiflex and Rolleicord cameras and is shown clearly in Fig. 24.13. The back is now swung up and an empty spool placed in the take-up chamber. To do this, the film wind knob on the right-hand side of the camera is pulled out, when the spool holder will immediately spring up into the loading position. The empty spool is now inserted in the grooves and the winding knob again pulled out whilst the spool and holder are pressed back. The winding knob is then allowed to spring home.

At the feed spool position, a red arrow will be seen showing the direction of film travel and before a film is inserted the finger should be allowed to press firmly on this arrow when the spool holder will spring out into the loading position. Now insert a roll of 127 or A-8 film and press firmly on the spool to return it and the film holder into the ready position. The film leader is now led over the rollers (N.B. not threaded through them) into the take-up spool in the usual way.

In this model the feeler mechanism is built into the side of the film gate and it is now only necessary to close the back, lock it and wind on the film until No. 1 comes automatically into the numbering window on the right-hand side of the camera under the film wind knob. The film wind and shutter setting mechanism is fully automatic and foolproof as in all standard Rolleiflex Automat cameras already described and the shutter is cocked as the film is wound on to the next exposure. Double exposure is impossible with this model.

Shutter Release

This is situated at the right-hand base of the camera front and is inclined at an angle for the forefinger. The shutter cannot be released when the focusing hood is closed and, therefore, no shutter release guard is necessary.

Flash Plug and Delayed Action

The flash socket is situated in the usual position at the left-hand base of the camera front and the flash plug is inserted in the usual way by pressing it in, when it immediately becomes locked. To detach the flash cable it is only necessary to turn the external milled wheel around it and pull out the flash plug. 'X' or 'M' synchronization (see Chapter 10) is available by adjusting the chrome stud situated between the two lenses on the right-hand side, to the necessary sign. For delayed action this same button is pressed up to the 'V' position and the shutter released in the usual way, when approximately 12 seconds delay will be given.

Neckstrap and Camera Case

The Ever-Ready case for this camera is not fitted with a special strap as this is used for both the camera and the case as in the recent Automats described on page 384. The Ever-Ready case, however, is of a new format and both front and rear portions collapse allowing the camera to be held only by the central base portion. In 1958 a soft leather zip case was produced which collapses away from the camera as it is zipped - the case is still retained by the central base portion of the camera into which it is pushed, as in the Rolleiflex attachment. To detach the neckstrap from the camera, the half round piece of metal below the side fixing should be

depressed and the neckstrap end button slid out and downwards. To insert, it is only necessary to push the button upwards into position when it is immediately locked.

ROLLEIFLEX 3.5T

Shown first at the Photokina Exhibition in Cologne in October 1958, but only becoming generally available to the public later in the year, the Rolleiflex 3.5T departs somewhat from the conventional Rolleiflex. It is a slightly simplified version using the winding mechanism and the speed and aperture setting devices of the Rolleicord. In all other respects it is similar to the Rolleiflex 3.5E described on page 382. It is fitted with a f/3.5 Carl Zeiss Tessar lens made from the new Lanthanum glass, which gives even better resolution and color correction than previous Tessars. This is fitted in the standard Exposure Value Synchro-Compur shutter with delayed action and 'X' and 'M' synchronization. The camera is finished in two-tone black and grey leather with provision for exposure meter as in the 3.5E models. It also has provision for sixteen pictures, either 4 x 5.5 or 4 x 4, but is not equipped with the optional double exposure mechanism of the standard model. The pressure plate is of a new type and is not adjustable for use with the Rolleikin accessory.

Fig. 24.28

Rolleiflex-T, front view:

- (1) Thumb grips;
- (2) Back hinge and lock;
- (3) Neckstrap fixing;
- (4) Film numbering window;
- (5) Frame number indicator-;
- (6) Crank handle;
- (7) Flash and delayed action selector;
- (8) Crank handle stowage;
- (9) Shutter release with cable thread;
- (10) Shutter release guard;
- (11) Base lock;
- (12) Locating studs;
- (13) Flash plug-.
- (14) Flash plug release;
- (15) Focusing hood with screen magnifier;
- (16) Collapsing panel;
- (17) Accessory framefinder studs;
- (18) Blanking plate for optional exposure meter;
- (19) Speed and aperture peep window;
- (20) Double bayonet mounts;
- (21) Light value, speed, and aperture setting lever.

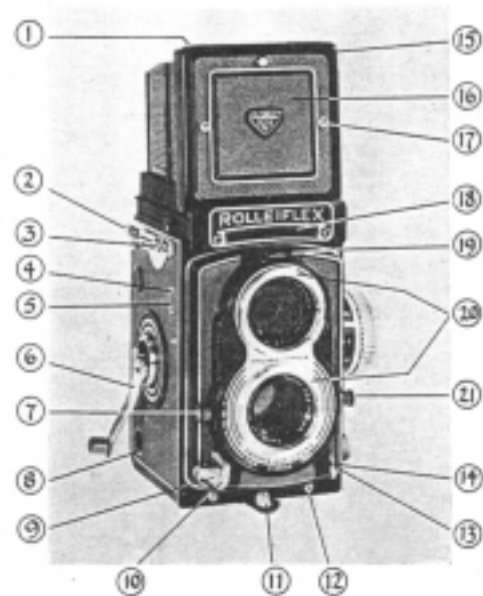
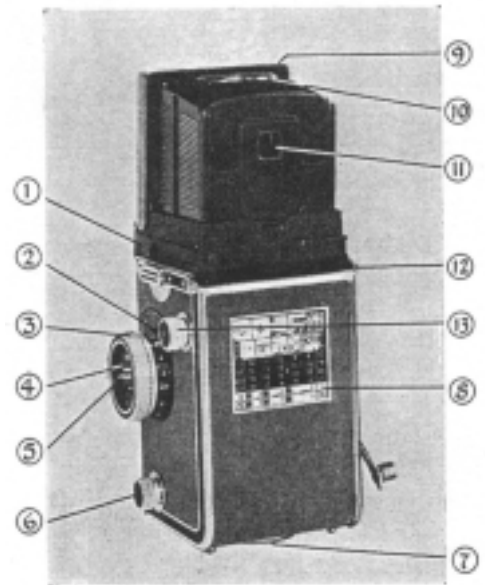


Fig. 24.29

Rolleiflex-T, back view:

- (1) Hood removal lever;
- (2) Depth of field indicator;
- (3) Focusing knob;
- (4) Film speed reminder panel;
- (5) Film speed adjuster;
- (6) Feed spool retaining knob and cine rewind knob-
- (7) Grooved base hub;
- (8) Light value table;
- (9) Focusing hood:
- (10) Focusing magnifier;
- (11) Eye-level finder window;
- (12) Back hinge and lock;
- (13) Takeup spool retaining knob.

*Focusing Hood*

This is of very similar design to the 4 x 4 model hood described on page 385 and does not collapse into the camera body. It is of 'concertina' construction and folds inwards at both sides and back. To erect the hood, it is merely necessary to pull up the back portion in the usual way. There is a direct vision aperture in the rear wall and the center portion of the front wall collapses for use with it as in the normal Rollei hood. A magnifier is built in as described for the 4 x 4. In this model, however, the screen is not of the plano-convex type, but is a completely new departure from previous Rollei types. The whole of the hood can be removed from the screen by depressing the two milled hand-levers (Fig. 24.29 No. 1) on either side of the hood. While these are depressed, the hood is then slid backwards out of its grooves and can be removed completely for cleaning the screen or for changing to other formats.

Focusing Screen

This new type of screen is much more brilliant than any previous Rollei focusing screen and is manufactured from a hard plastic material, on to the underside of which has been impressed minute prisms (about three millions of them) all set at a different angle and radiating from the center. Each prism throws the maximum amount of light up to the eye and the screen is fine enough to resolve very small detail when examined through the magnifier. This new screen has become a standard fitting in all new Rollei models. The screen can be hinged up from the back by sliding it backwards and then lifting, when any dust or foreign matter may be blown from the mirror. It is, however, not advisable to touch this with the fingers or with a cloth which may damage it. Only a jet of air or a fine brush should be used to remove any adhering particles of dust. Once in the open position, the 4 x 5-5 mm. or 4 x 4 mm. screen masks can be placed into position on the locating pins and with this innovation even the smaller sizes are automatically parallax corrected.

Focusing

The focusing knob and the method of focusing is identical to that of the 3.5E described on page 381 except that the automatic depth of field indicator is not included, and the camera is available either with or without an exposure meter built into the focusing knob. This is used in an identical manner to the 3.5E. The depth of field indicator, however, is of similar design to the earlier Rolleiflex Automats and does not contain the automatic depth of field louvres.

Exposure Value Shutter

This is in every respect similar to the exposure value shutter fitted to the Rolleicord V and VA cameras with the exception of a simpler release mechanism for setting the light value. A small pull-out knob is situated on the left-hand side of the camera (Fig. 24.28 No. 21) and this controls both the light value in the small window on the shutter housing and also the aperture in the conventional window (No. 19). To change the shutter speed only, the same knob is used in the depressed position so that it engages the exposure value system. The correct speed is then engaged and the light value or aperture reset as required. If the knob is taken to its full uppermost position, giving an aperture of $f/22$, and the correct speed is still not attained, then it should be disengaged, put down to the bottom of its travel, and brought up once again until the correct speed is seen in the peep-window.

'B' Position and Longer Exposures

A new departure is the omission of the 'B' or bulb position usually situated after the one-second exposure time. Instead, a figure '2' comes into position on a green band. After this, all figures on the green band are for time exposures and the 'B' position is engaged on any of the 2, 4, 8, 15, 30, 60 second positions. This now allows longer exposure times than one second to be coupled into the exposure value system. These speeds are not automatically produced, but must be counted with the shutter open.

Shutter Release

This is situated in a similar position as in the 4 x 4 model. It protrudes outwards for convenient operation with the thumb and the shutter release guard (No. 10) is pulled out from the front of the camera. To lock the shutter again, it is only necessary to push it back flush with the release.

Flash and Delayed Action Selector

This is situated at the opposite side of the camera front to the exposure value setting lever and there are three positions, one for conventional flash bulbs (X), the second for electronic flash (M), and the third for delayed action (top) indicated by the letter 'V'.

Flash Plug

This is situated at the opposite side of the camera to the shutter release button, and the flash plug is inserted in the usual way, locking into position when it is pressed home. To release it, the milled ring (No. 14) is depressed forwards and downwards.

Small Picture Device

As in the Rolleicord VA, small picture accessories can be accommodated in this camera which permit sixteen pictures $1\frac{5}{8} \times 1\frac{1}{8}$ (4x5.5 cm.) and $1\frac{5}{8} \times 1\frac{5}{8}$ (4 x 4 cm.) to be taken. The twenty-four picture accessories are not catered for in this model. The peep-window (No. 4) normally indicates a figure '12' in the lower position with the actual number of exposures' being counted in the upper position. When the sixteen-picture device is installed in the film plane, the gate-mask itself actuates a lever which brings a '16' into the upper position and then the frames are automatically counted from 1 - 16 in the lower position. The film-size indicator is engraved in white numbers on a black ground whilst the actual frame number is engraved in black figures on a white ground.

Installation of the Small Picture Device

This must be installed before a film is loaded and it is only necessary to insert the gate-mask by pushing the top into the upper part of the gate and then letting it spring back into the lower part of the gate. A screen-mask of the same size is inserted over the locating pins under the screen, as described on page 391, the screen closed and the hood replaced. A further direct vision frame-mask is fitted on to the locating studs on the camera front as for the Rolleikin direct vision mask described on page 301.

Camera Case and Neckstrap

For the 1959 Rolleiflex-T and Rolleiflex 3.5F, a new case has been designed in which the retaining lugs are built into the side of the case and these are engaged by small semi-circular discs outside the neckstrap lugs. These engage into the underside of the camera neckstrap slots. The neckstrap can be inserted either into the camera slots themselves or into the case slots now provided. The neckstrap has the fork-type lock which on being pushed into the eyelet, locks automatically on entry as in the 3.5E. To release the neckstrap, the two sides of the fork must be pressed together as for the Rolleiflex 3.5E described on page 384. This new Ever Ready case is fitted with press-stud accommodating buttons to house a stiff leather protecting cover for the exposure meter, and before opening the camera for use, the upper button at least must be disengaged and the cover swung down. The front part of the case can now be removed completely by unclipping the central catch on the front bottom hinge, then lifting this part of the case out of its retaining base studs.

ROLLEIFLEX 3.5F

This model first became available early in 1959 and is the first Rolleiflex camera to have an automatic exposure system by the linkage of exposure meter, film speed and aperture controls. The new type hood and screen are similar to the 3.5T, described on page 389, with the addition of the usual Rolleiflex eye-level focusing system through a small mirror. Apart from the new hood, the coupled exposure meter and the omission of the Exposure Value scale, it is in most respects similar to its forerunner, the Rolleiflex 3.5E.

Fig. 24.30

Rolleiflex 3.5F, front view:

- (1) Thumb grips;
- (2) Back hinge and lock;
- (3) Neckstrap fixing;
- (4) Film numbering window;
- (5) Interlocked film wind release;
- (6) Crank handle;
- (7) Shutter speed setting wheel;
- (8) Crank handle stowage;
- (9) Shutter release with cable thread;
- (10) Shutter release guard;
- (11) Base lock;
- (12) Locating studs;
- (13) Flash plug;
- (14) Flash plug release;
- (15) Focusing hood with screen magnifier;
- (16) Collapsing panel;
- (17) Accessory framefinder studs;
- (18) Exposure meter cell;
- (19) Speed and aperture peep window;
- (20) Double bayonet mounts;
- (21) Aperture setting wheel.

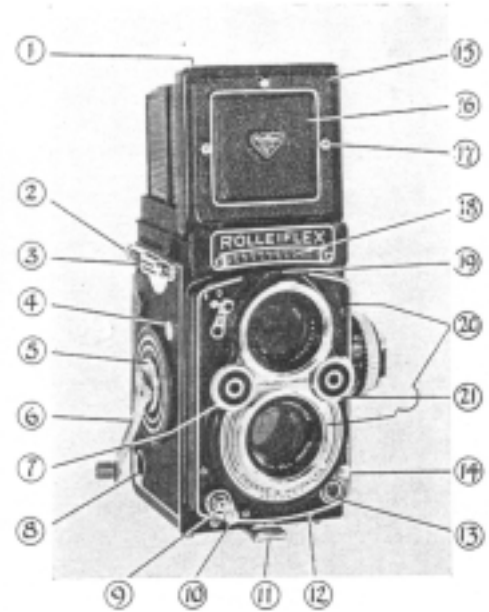
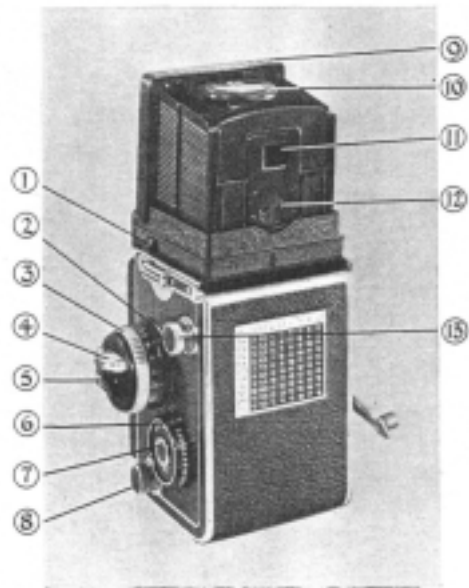


Fig. 24.31

Rolleiflex 3.5F, back view:

- (1) Hood removal lever;
- (2) Depth of field indicator;
- (3) Focusing knob;
- (4) Exposure meter needles;
- (5) Film type reminder panel;
- (6) Filter factor setting ring;
- (7) Film speed setting disc;
- (8) Feed spool retaining knob and cine rewind knob;
- (9) Focusing hood;
- (10) Focusing magnifier;
- (11) Eye-level finder window;
- (12) Eye-level focusing window;
- (13) Take-up spool retaining knob.



Focusing Hood

This follows the design of the 4 x 4 and the 3.5T models and it can now be accepted that the type of hood which folds down into the camera body has gone for ever. This new hood is of concertina construction and folds inwards at both sides and back. To erect it, it is merely necessary to pull up the back portion in the usual way. There is a direct vision aperture in the rear wall with the center portion of the front wall collapsing as in the normal Rolleiflex hoods. When this collapses into position, it also brings a further small mirror into a ninety degree angle position so that the center of the screen can be focused through a further magnifier under the direct vision aperture (Fig. 24.31 No. 10). The whole of the hood can be removed from the screen by depressing the two milled hand levers (Fig. 24.31 No. 1) on either side of the hood and then sliding it back in its grooves so that it is completely detached from the camera. To replace the hood, it should be laid on the screen with its sides in the necessary grooves and merely pushed back until it clips in position.

Focusing Screen

The screen is once again of the new type, hard plastic material, and is extremely brilliant in use. It slides back and swings upwards for cleaning or for inserting alternative frame masks in a similar manner to the 3.5T described on page 389.

Focusing

The focusing knob and the method of focusing is identical to that of the 3.5E, except that the film speed adjusting ring has been omitted and has been repositioned on a separate dial below it on the camera body. On this model the depth of field louvres, working against the focusing scale, has been retained as on the 3.5E.

Shutter Speed and Aperture Settings

These are coupled to the exposure meter so that as the aperture scale is altered by the left-hand milled setting wheel (Fig. 24.31 No. 3) the ringed needle on the exposure meter is also altered. Changing the shutter speed by the right-hand milled ring will alter the speeds which are shown in the front portion of the peep-window engraved in red figures. To make an automatic exposure, first choose a convenient speed and set this with the right thumb on the right milled ring. Now depress the lock over the left-hand milled ring with the left thumb and turn it until the meter needle and the shutter needle coincide. Any other combination of speeds and apertures can now be obtained by turning the right-hand milled ring without altering the basic exposure already ascertained by the meter.

Later models of this camera produced after January 1959, have a slightly different method of exposure control. In these, the ringed needle on the exposure meter can be altered by both the speed setting wheel and the aperture setting wheel. It can therefore be brought into coincidence with the exposure meter needle at any pre-selected aperture or any pre-selected shutter speed.

'B' Position and Longer Exposures

As in the Rolleiflex 3.5T described on page 389, the 'B' or bulb position situated immediately after the 1 second exposure time has now been discontinued and a figure 2 comes into position

in green engraved figures. The 'B' position can then be engaged on the figure 2 or the following figures, 4, 8, 15, 30, 60 second positions, which allow for longer exposures than one second coupled to the exposure value system when using smaller apertures. It should be noted that these speeds are not automatically produced, but must be counted with the shutter open as if the camera was set on to the 'B' position. The shutter release, flash and delayed action positions are exactly as for the 3-SE described on page 380.

Exposure Meter

The speeds for this meter are now set according to the film rating in both A.S.A. and DIN speeds on the milled button inside the exposure control ring, below the focusing knob (Fig. 24.30 No. 7). This is also engraved from 'O' to '3' with halved divisions on its outer periphery for the setting of filter factors in conjunction with the exposure meter settings. These factors are as given for Rollei filters. The meter cell under the Rolleiflex nameplate has two studs for the fitting of an incident light baffle which, for convenience and portability, is stowed in the front of the camera case by means of similar studs.

Loading and Unloading

This is carried out in the usual Rolleiflex method, through the feeler mechanism, which is fully described on page 366.

Camera Case and Neckstrap

The new case for use with this model is as described on page 392 for the 3.5T, and the neckstrap can be used either on the camera case or on the camera itself, the case being attached to the camera by means of small semi-circular discs which, on being turned, engage into the camera neckstrap slots.

THE TELE-ROLLEIFLEX

This camera appeared in mid-1959 and caters specially for the requirements of the portrait photographer, the news photographer, and other specialized fields where a longer focal length lens than the normal 3' (75 or 80 mm.) is required. It is equipped with a 13.5 cm. f / 4 Carl Zeiss Sonnar five-element lens, and gives an angle of view of 33' on the 6 x 6 format. The viewing lens is of similar focal length and construction, but contains four elements and has a specially wide exit lens giving extra illumination on the ground glass screen, especially at the corners. In photographs taken with this camera, objects will appear four times larger when compared with the normal Rolleiflex, and the perspective in particular relation to the background will appear more natural, with the more distant features larger in the view (Fig. 24.34).

Because of the specialist fields in which this camera will be used, and because of the small depth of field at the wider apertures, the camera is fitted with an optical glass register plate against which the film is pressed at the time of exposure. Whilst the film is being wound it is not under pressure, this being automatically released by the winding mechanism.

In other respects, the camera is similar to the Rolleiflex 3.5E with Light Value shutter, described on page 380, but it incorporates the new type hood of the 3.5F and T described on pages 389 and 393. The new brilliant screen is also featured in this model. All controls are of the current type and are similar in all respects to the 3.5E model described on page 380, with the exception of the Rolleikin counter mechanism which is already built into the camera, as in the recent $f/2.8$ models.

Fig. 24.32

Tele-Rolleiflex, front view:

- (1) Thumb grips;
- (2) Collapsing panel;
- (3) Cine framefinder studs;
- (4) Blanking plate for optional exposure meter;
- (5) Speed and aperture peep window;
- (6) Flash and delayed action selector-
- (7) Double bayonet mounts;
- (8) Lens aperture and light value adjusting wheel;
- (9) Base catch;
- (10) Flash plug;
- (11) Flash plug release;
- (12) Focusing hood with screen magnifier;
- (13) Hood removal lever.

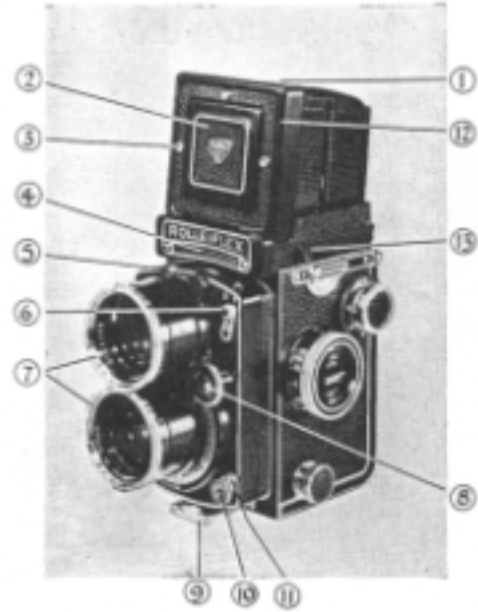
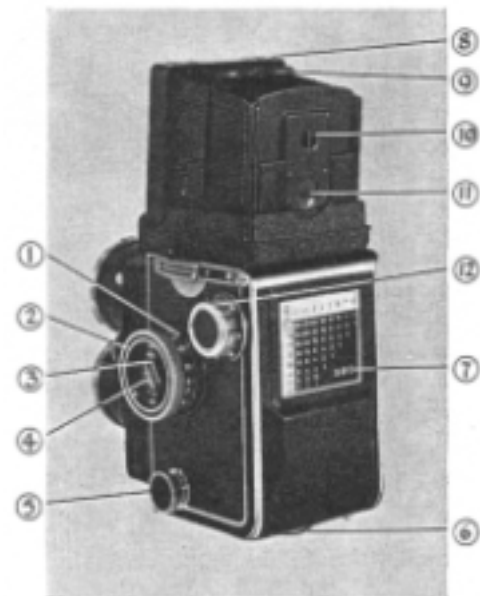


Fig. 24.33

Tele-Rolleiflex, back view:

- (1) Depth of field indicator;
- (2) Focusing knob;
- (3) Film speed reminder panel;
- (4) Film speed adjuster;
- (5) Feed spool retaining knob and cine rewind knob,
- (6) Grooved base hub;
- (7) Long exposure calculator;
- (8) Focusing hood;
- (9) Focusing magnifier;
- (10) Eye-level finder window;
- (11) Eye-level focusing window;
- (12) Take-up spool retaining knob and cine film release knob.



Focusing

The camera focuses in the usual manner and the focusing knob has provision for the installation of a photo cell, as in the case of the 3.5E and T models, but the camera only focuses down to 8 1/2 feet without special attachments.

Close-up Accessories

A special range of close-up accessories (see page 307) has been designed for this camera and they are of a double lens type and are hinged so that they open in book-form. Once in position, they can be used or swung out of use as required. They are made in .35 and .7 diopter for closer working than 8 1/2 feet. The .35 Rolleinar will focus from 9' 2" (2.60 meters) to 4' 5" (1.25 metres), and the .7 Rolleinar from 4' 6 1/2" (1.50 meters) to 3' 6" (1.1 meter). Standard Type Rolleinars can then be used in addition by merely fixing them into the outer bayonets. For full focusing ranges see Appendices 11 and 12.

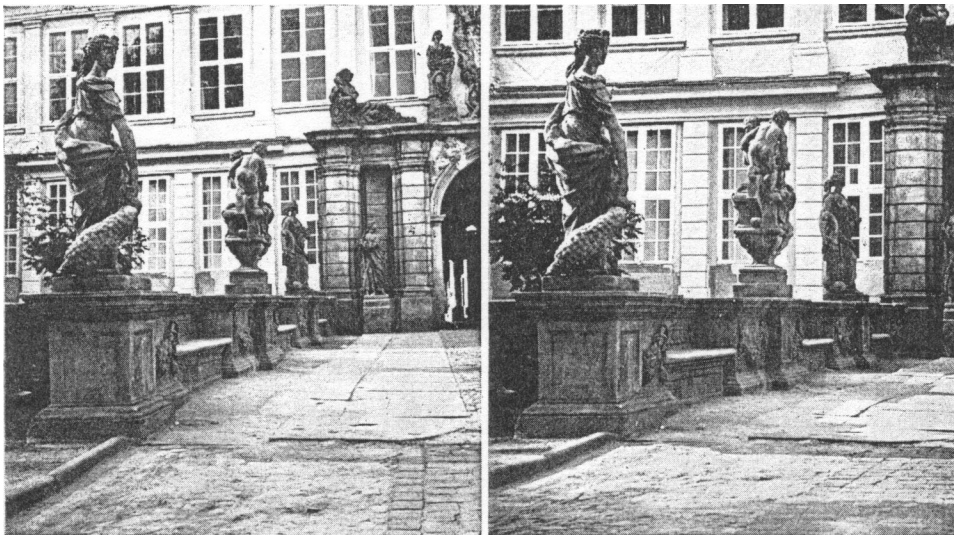


Fig. 24.34

(a) Picture taken with 75 mm. lens on Standard Rolleiflex.

(b) Taken from same viewpoint with Tele-Rolleiflex. Note changed perspective and relative size of distant objects.

Glass Pressure Plate

This is of special optical quality glass and has no effect whatsoever on the image shown by the lens. It normally remains in position during use, but can be removed for cleaning, etc., by turning the camera upside down and pressing in the bar which will be found in the film track in front of the feeler mechanism housing. The glass plate can then be dropped into the hand. To re-insert the glass plate, stand the camera on its hood, tilt it slightly forward and slide the glass, with bevelled edges facing outwards, under the retaining bar of the film gate. One bevelled edge should be placed in first and then the other one snapped into position at the other end of the film gate. The glass is secured in position by pressure on the retaining bar described above.

Adjustable Pressure Plate

As in the Rolleiflex 3.5E, the pressure plate in the back of the camera is adjustable for 2 1/2" x 2 1/2" (6 x 6 cm.) and 1" x 1 1/2" (24 x 36 mm.) positions. There is a third central position in the Tele-Rolleiflex and should pictures be taken without the glass register plate, then the center position should be used which shows the visible symbol of a roll film. When using the glass plate, the pressure plate should be in the upper position showing the additional visible picture symbol of a roll film with glass plate.

Camera Case and Neckstrap

The new case for use with this model is as described on page 392 for the 3.5T, and the neckstrap can be used either on the camera case or on the camera itself, the case being attached to the camera by means of small semi-circular discs which, on being turned, engage into the camera neckstrap slots.

*Details of new models will be added
in future editions as they appear.*