

with a smaller stop to pass the same total quantity of light. To simplify work and allow the use of *one* value, expressing the quantity of light in relation to a film of given sensitivity, the *Light Value* method has been introduced. By an ingenious coupling of the iris diaphragm ring with the ring which sets the shutter speed it has now been made impossible, having once set the shutter to a particular Light Value combination of stop and shutter speed, to alter this Light Value inadvertently. Any alteration to the shutter speed automatically adjusts the iris diaphragm to compensate, so that the Light Value remains unaltered and the same total light reaches the film.

THE NEW SHUTTER SPEED SCALE

With the introduction of the Light Value scale the shutter speed scale has been altered from that hitherto customary on between-lens shutters. Because the speed scale and diaphragm scale are coupled, the successive speeds have had to be adapted to the factor of 2 by which the effective aperture increases from one stop to the next. Commencing, therefore, with $\frac{1}{500}$ sec., the exposure time is doubled with each successive setting, viz. $\frac{1}{250}$, $\frac{1}{125}$, $\frac{1}{60}$, $\frac{1}{30}$, etc. At the same time the spacing of the figures on the diaphragm scale is now completely uniform.

SETTING THE LIGHT VALUE

It is of advantage, but not indispensable, to use an exposure meter which is already calibrated in Light Values. To set the shutter to the measured Light Value the small serrated projection 1, on the sprung diaphragm ring is pressed down towards the camera body and held securely in this position. The milled shutter speed ring is then rotated with the other hand until the required Light Value on the red scale 6 comes opposite the red dot 7.

It should be noted that:

Light Values and stops may be set to the intermediate half-way positions but *not* shutter speeds. This latter situation may arise if when setting the shutter speed the beginning or end of the diaphragm scale is reached, and must be avoided. The step from $f/4$ to $f/3.5$, in any case, is only a half stop.

Should it be desired to set shutter speed and stop independently, as in the past, *without using the Light Value*, the only precaution necessary is that the *shutter must be set first, and then the stop*. As explained above, the finger grip 1 is pressed back, and the required shutter speed first set to the black arrow head 4. Then, and not before, the iris diaphragm ring may be rotated to give the desired stop.

The new Synchro Compur shutter has the further advantage that the correct Light Value corresponding to the combination of shutter speed and stop to which it has been set can be read off direct opposite the red mark 7. So long as the lighting conditions remain unaltered this figure may be used as the basic Light Value setting for any further exposures.

The Light Values of the following Table apply to the time between 3 hours after sunrise and 3 hours before sunset.

Subject	Bright sunlight	Hazy	Slightly overcast	Overcast (dull)
Bright	Light Value 14	13	12	11
Medium	Light Value 13	12	11	10
Dark	Light Value 12	11	10	9
In the shade	Light Value 7—9	6—8	5—7	4—6

These Light Values apply to negative material of $17/10^{\circ}$ DIN (ASA Exposure Index 40). When using material of different sensitivity, increase or reduce the Light Value by *one* number for every $3/10^{\circ}$ DIN difference.

THE USE OF THE SCALES

On the shutter speed ring there are three separate scales:

Red figures: The Light Value scale, graduated from 2–17. The Light Value is set by rotating the adjoining diaphragm ring until the required figure comes opposite the red dot 7.

Black figures: These are the shutter speeds, with the revised timings already explained, viz. 1 2 4 8 15 30 60 125 250 500. These values represent fractions of a second, e. g., 2 = $\frac{1}{2}$ sec., 60 = $\frac{1}{60}$ sec.

Green figures: This is not a setting scale, but is used for calculating Time exposures. With the shutter speed ring set to B, and the Light Value scale to one of the lower values $2\frac{1}{2}$ to 6, the green figure indicates the length in seconds of the exposure required, and what stop to use.

If for example the Light Value is set to 3, any of the following combinations may be used:

4 secs. at f/5.6 * 8 secs. at f/8 * 15 secs. at f/11 or 30 secs. f/16.

- ① Finger grip for setting the diaphragm ring
- ② Index mark for distance setting (e. g. 10 feet)
- ③ Black figures = shutter speeds
- ④ Index mark for setting diaphragm and shutter speeds
- ⑤ Diaphragm scale
- ⑥ Red Light Value numbers
- ⑦ Red index dot for setting Light Value

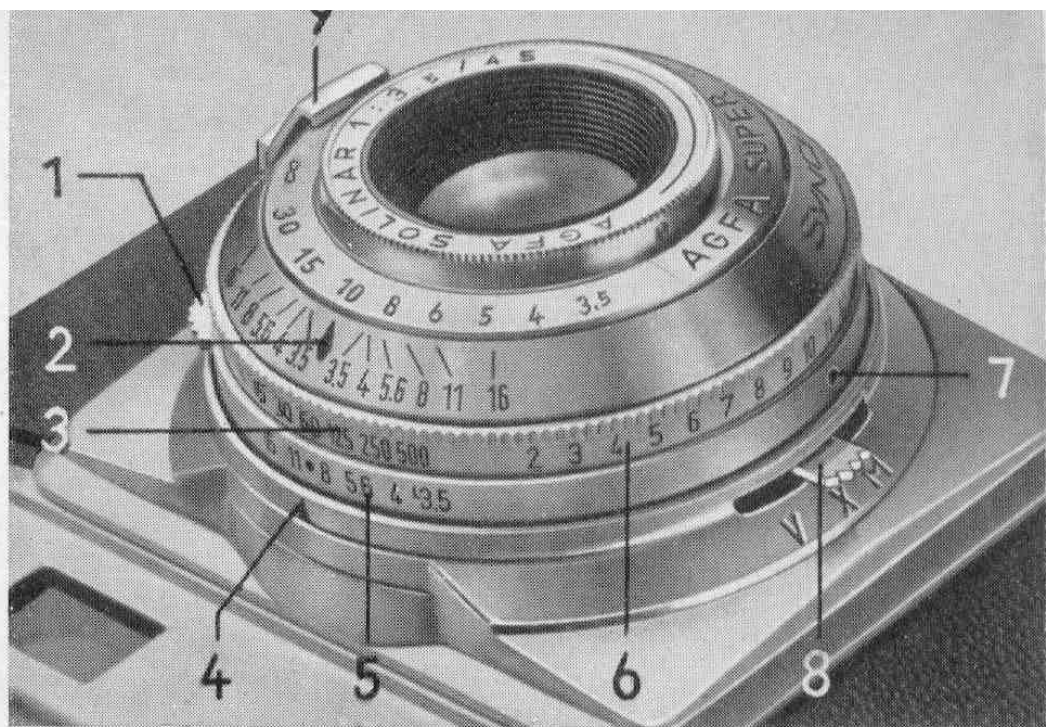


Fig. 17

- ⑧ Synchronizing and delayed action lever (green). Never set this lever to "V" unless shutter is wound.
- ⑨ Finger grip for distance setting and range finding.

SHUTTER SPEED — DIAPHRAGM

Assuming that the required exposure — expressed in Light Values — has been set by means of the diaphragm lever, the coupling of the shutter speed and diaphragm rings will allow up to five combinations. The more you approach the beginning or the end of the diaphragm scale when rotating the shutter speed scale, the smaller is the number of possible combinations; e. g. Light Value 17 : $\frac{1}{500}$ sec. at f/16, or Light Value 3 : 1 sec. at f/4. Good lighting conditions give a high Light Value, poor light a low Light Value. It therefore remains only to decide which shutter speed and stop combination is the best to choose, and this naturally depends entirely on the subject. For landscapes importance will be attached to small stops, in order to increase depth-of-field; for sports photography, on the other hand, the shortest possible exposure will be needed to stop movement.

No matter which combination is chosen, there is always the assurance that the resulting negative will be of the correct density as determined by the basic Light Value setting.

FLASH SYNCHRONIZATION — DELAYED ACTION

The Synchro Compur shutter fitted to the Super Silette is fully synchronized and provided with a green lever 8 giving X-synchronization when set to X,

and M-synchronization when set to M. See the following chapter "Flash-Technique".

In addition to these settings, the green lever can be set to V (delayed action mechanism) so that pictures with selftimer can be taken. When released the shutter opens with a delay of approx. 10 seconds.

The delayed action can only be set when the shutter is wound, i. e., when the film has been wound on; it may also be used in conjunction with flash but for X-synchronization only. The delayed action lever automatically returns to X after each exposure, and must therefore be re-set each time it is required. On no account must it be moved, or the release again operated, while the delay mechanism is running.

Important! The lever must not be set to "**V**" unless the shutter **has been wound**.

FLASH TECHNIQUE

Commercial flashbulbs differ in their duration of flash, their total light output, and the delay between making contact and firing of flash (firing delay). These characteristics are all allowed for in fully synchronized shutters.

When shutter is set to *X-Synchronization* the flash occurs at the instant that the shutter blades are fully open. It can however only be used with

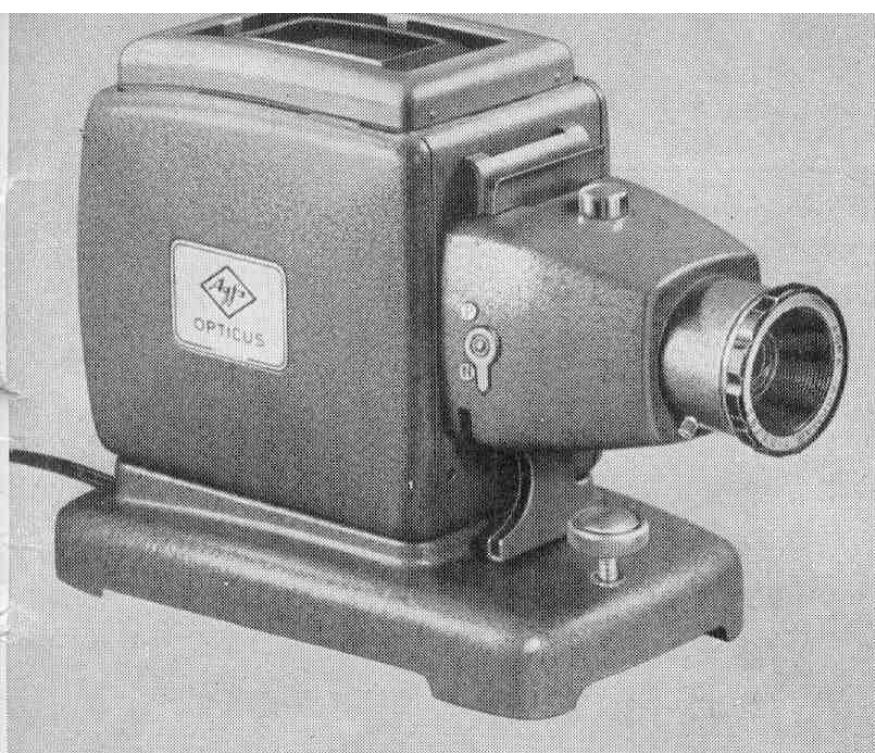
the longer shutter exposures, e. g. $\frac{1}{25}$ (or $\frac{1}{30}$); flashbulb types recommended for this method are: Philips PF 1 and PF 3 or G.E. No. 1.

M-Synchronization: In contrast to X-synchronization, when the synchro-lever is set to M the opening of the shutter blades is delayed by a few milliseconds (thousandths of a second), thereby permitting the use of flash with the shortest exposures. Only the more powerful flashbulbs are suitable for this method, e. g. Philips PF 1, 14, 25, and 56 or G.E. No. 5 and 11.

Electronic flash units can be used with **X-Synchronization** only which, however, allows of taking pictures with the fastest shutter speeds in order to catch quick movement.

The *exposure time* and the *stop setting* in flash photography depend upon the distance of the subject and the type of flashbulb used, and for this the instructions issued with the flashbulb must always be followed.

The Super Silette has an accessory shoe on which a flashgun can be mounted. The plug of the flashgun is then inserted in the flash socket 11 (page 4) on the camera front. If the flashgun is mounted on the Super Silette by means of a bracket, care must be taken that the rewind release knob on the bottom of the camera is not inadvertently pressed in by any projection on the bracket, thus possibly interfering with the film transport.



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The stylish home projector with 150 W. lamp; elegant shape, high light intensity, and easy handling.

If you wish to get your colour transparencies mounted between glasses, ask your Photodealer for the practical Agfa Slide Frames.

DEPTH-OF-FIELD TABLE FOR 45-mm. f/3.5 AGFA LENSES

Distance	Apertures		
feet	3.5	4	5.6
3	2'10 ³ / ₄ "—3'11 ¹ / ₂ "	2'10 ¹ / ₂ "—3'1 ³ / ₄ "	2'10"—3'2 ¹ / ₄ "
3.5	3'4 ¹ / ₄ "—3'8"	3'4"—3'8 ¹ / ₄ "	3'3 ¹ / ₄ "—3'9 ¹ / ₄ "
4	3'9 ³ / ₄ "—4'2 ³ / ₄ "	3'9 ¹ / ₄ "—4'3"	3'8 ¹ / ₄ "—4'4 ¹ / ₂ "
5	4'8 ¹ / ₄ "—5'4 ¹ / ₄ "	4'7 ³ / ₄ "—5'5"	4'6 ¹ / ₄ "—5'7 ¹ / ₄ "
6	5'6 ¹ / ₂ "—6'6 ¹ / ₂ "	5'6"—6'7 ¹ / ₂ "	5'3 ³ / ₄ "—6'10 ³ / ₄ "
8	7'2 ¹ / ₂ "—9'	7'1 ¹ / ₄ "—9'2"	6'9 ¹ / ₂ "—9'8 ³ / ₄ "
10	8'9 ¹ / ₄ "—11'7 ¹ / ₂ "	8'7 ¹ / ₂ "—11'11"	8'2"—12'10 ³ / ₄ "
15	12'4 ¹ / ₂ "—19'1"	12'3 ³ / ₄ "—19'10 ¹ / ₄ "	11'2 ¹ / ₄ "—22'9 ³ / ₄ "
30	20'11 ¹ / ₄ "—53'1 ¹ / ₂ "	20'1"—59'7 ¹ / ₄ "	17'8 ³ / ₄ "—∞
∞	52'8 ³ / ₄ "—∞	47'6"—∞	36'1 ¹ / ₄ "—∞

Circle of confusion of diameter 0.03 mm.

The subject distance should be measured from the focal plane
(the back edge of the accessory shoe).

DEPTH-OF-FIELD TABLE FOR 45-mm. f/3.5 AGFA LENSES

Distance	Apertures		
feet	8	11	16
3	2'9 ¹ / ₄ "—3'3 ¹ / ₂ "	2'8 ¹ / ₄ "—3'4 ³ / ₄ "	2'6 ³ / ₄ "—3'7 ¹ / ₂ "
3.5	3'2"—3'10 ³ / ₄ "	3'3 ³ / ₄ "—4'1"	2'11"—4'5"
4	3'7"—4'6 ¹ / ₂ "	3'5 ¹ / ₄ "—4'9 ¹ / ₂ "	3'2 ³ / ₄ "—5'3 ¹ / ₄ "
5	4'4"—5'10 ³ / ₄ "	4'1 ³ / ₄ "—6'4"	3'10"—7'2 ³ / ₄ "
6	5'3 ³ / ₄ "—7'4 ¹ / ₂ "	4'9 ¹ / ₂ "—8'1"	4'4 ¹ / ₂ "—9'7 ¹ / ₄ "
8	6'4 ³ / ₄ "—10'8 ³ / ₄ "	5'11 ¹ / ₄ "—12'3 ³ / ₄ "	5'4"—16'4 ¹ / ₂ "
10	7'7"—14'9"	6'11 ¹ / ₂ "—17'11 ¹ / ₂ "	6'1 ¹ / ₂ "—28'3 ³ / ₄ "
15	10'1 ¹ / ₄ "—29'5 ¹ / ₄ "	9'—46'2 ¹ / ₂ "	7'7 ¹ / ₂ "—∞
30	15'1 ¹ / ₄ "—∞	13'1"—∞	10'1 ¹ / ₂ "—∞
∞	26'6 ¹ / ₂ "—∞	19'11 ³ / ₄ "—∞	14'2"—∞

Circle of confusion of diameter 0.03 mm.

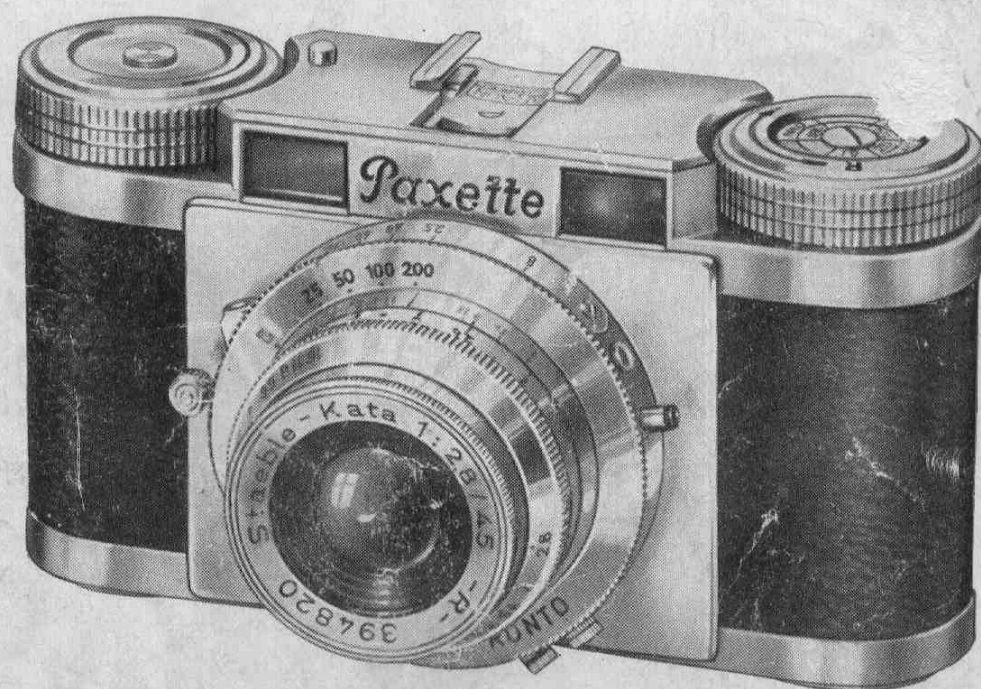
The subject distance should be measured from the focal plane
(the back edge of the accessory shoe).



We reserve the right to make structural alterations of the Agfa
Super Silette as a result of further development of the camera.

AGFA CAMERA-WERK AG. MUENCHEN

383 engl. - 556



Paxette Ib

INSTRUCTION-BOOK

It is first of all necessary to become thoroughly familiar with the various parts of the camera. Before inserting a film go over the necessary operations several times. Good snapshots can only be achieved if your

Paxette

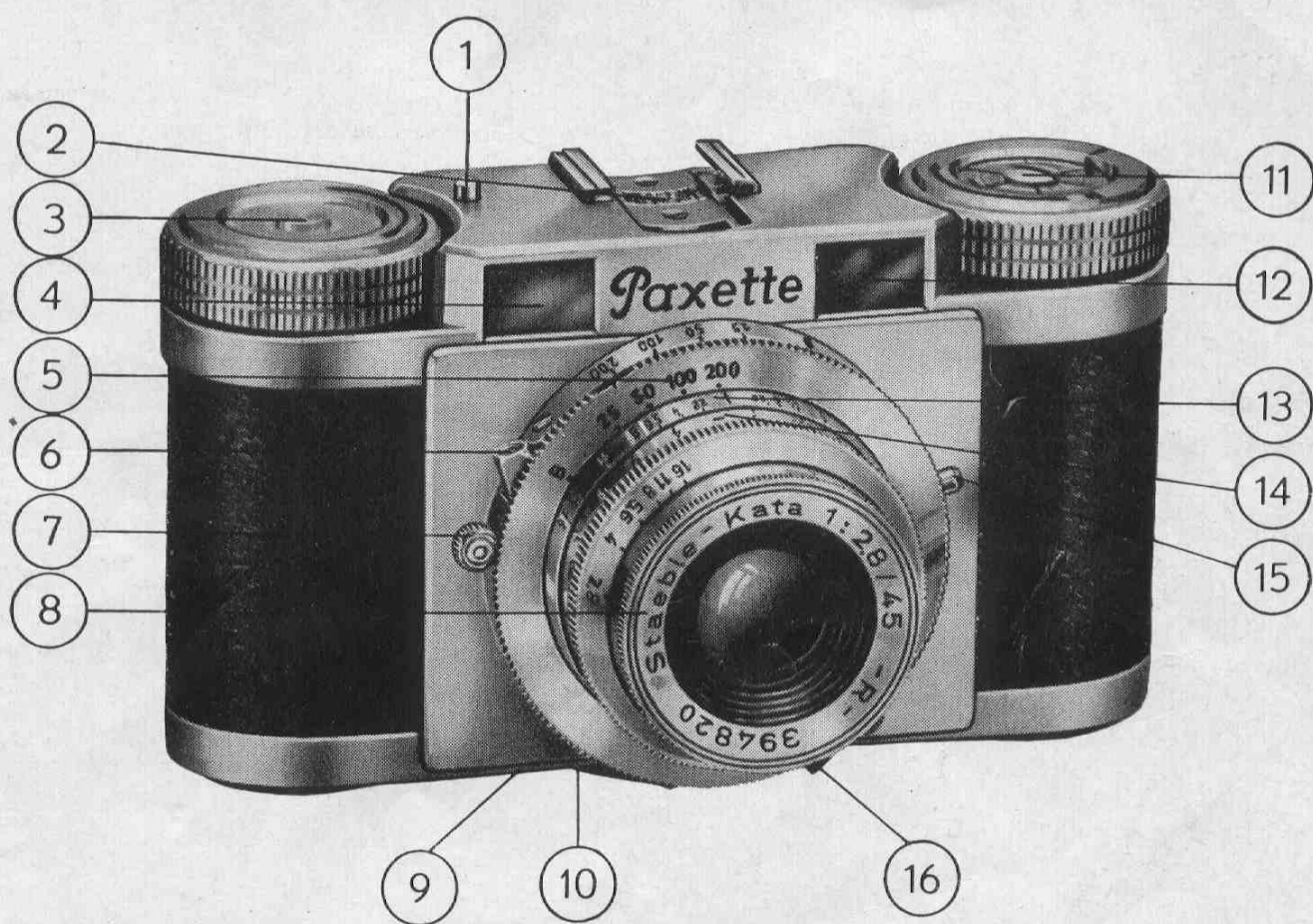
is ready for instant action.

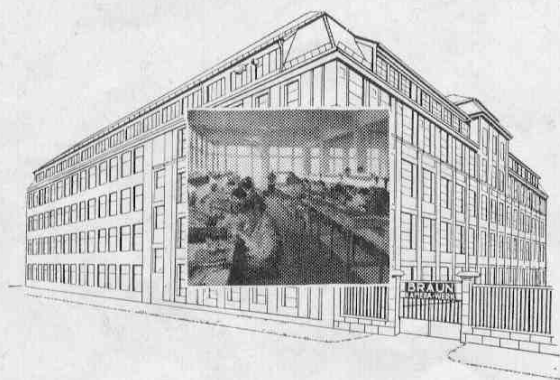
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see page

Key to numbers on opposite page

1. Film locking stud 11
2. Film counter 9
3. Knob for winding on film and cocking shutter 10
4. Optical exposure meter 15
5. Shutter setting 18
6. Socket for cable release —
7. Shutter release lever 20
8. Lens aperture control 14
9. Locking ring 5
10. Tripod bush ($\frac{1}{4}$ " Whitworth) —
11. Film rewinding knob 11
12. Optical eye level view finder —
13. Depth of field ring 19
14. Focussing ring 18
15. Flash socket —
16. Delayed action release 14





Part view of "Paxette" assembly-room

Introduction

The *Paxette* camera is made by Carl Braun of Nurnberg under the most modern conditions.

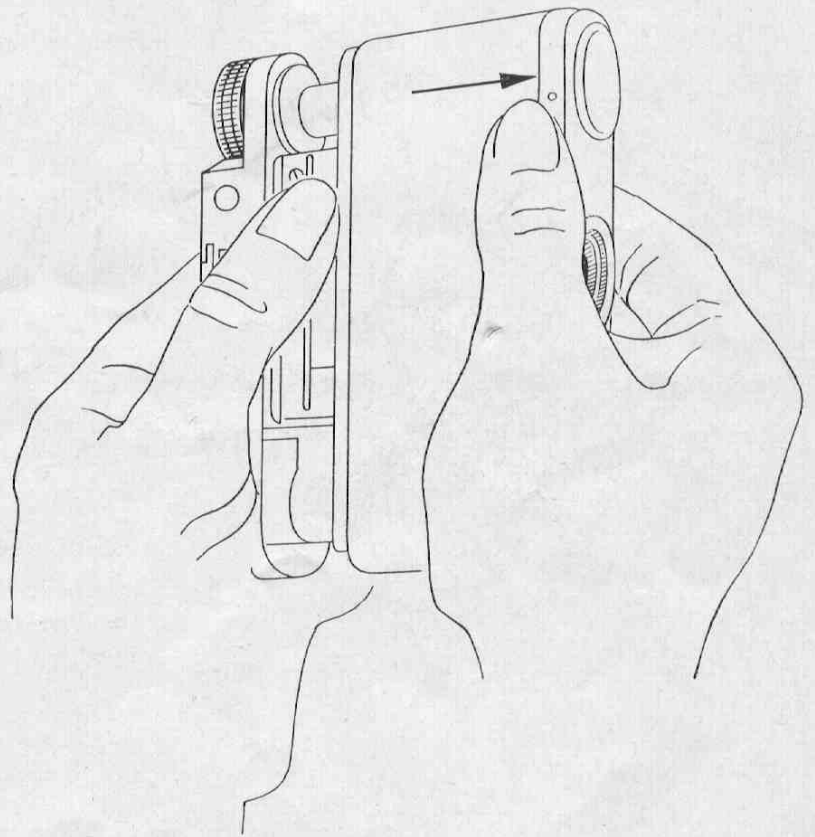
The beautiful finish of the *Paxette* is the first evidence of the quality of the plant and the skill and care of the operatives which lie behind its production. Actual use of the camera very quickly confirms the first impression. It will be found delightful to handle, thoroughly reliable and an instrument capable of producing the most perfect pictures.

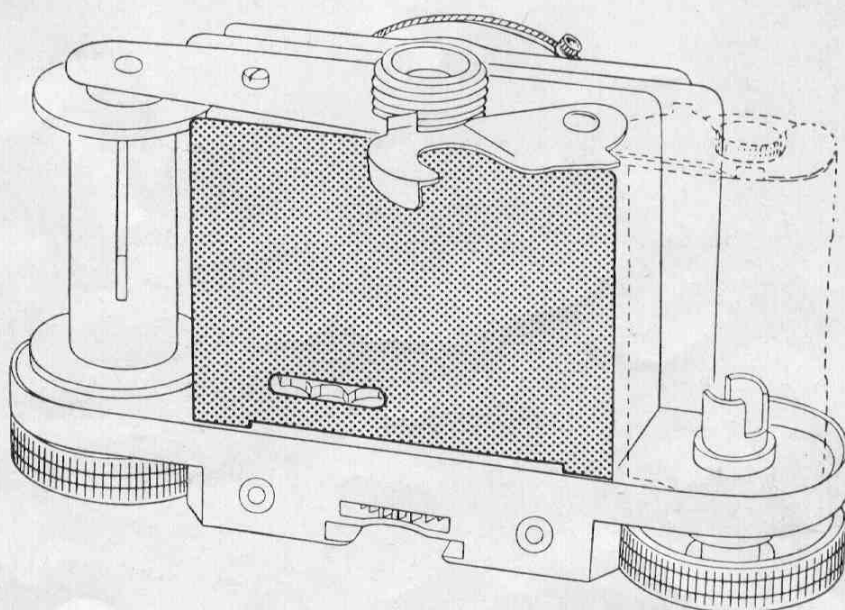
Careful study of this booklet is necessary to get the best out of this camera. Once the mechanical details are mastered every photographic problem can be faced with confidence and the

Paxette will become a constant friend and companion of leisure hours.

How to Open the Camera

The milled locking ring on the bottom of the camera is released by turning anti-clockwise. The back and bottom of the camera can then be slid out.



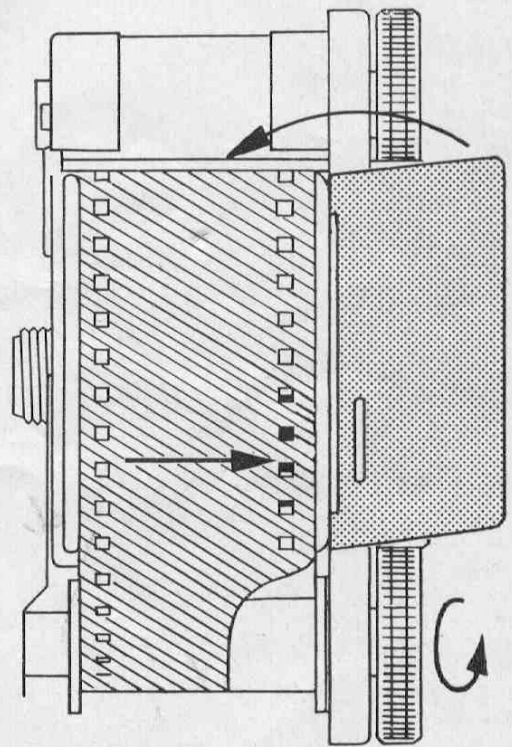


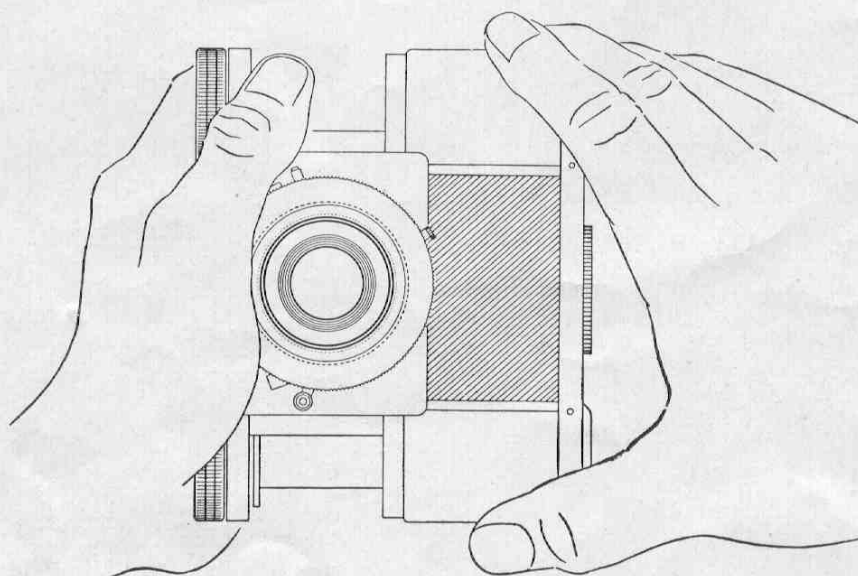
How to Insert the Film Cassette

The arm which retains the cassette is swung outwards by about 90° and the cassette is engaged in the REWIND dog. The lever holding the cassette is then swung back again so that it fits over the protruding spool knob.

How to Attach the Film

The film pressure plate is swung upwards. Draw out the trimmed end of the film far enough for it to be inserted in the slot of the take-up spool. Wind the film winding knob in the direction of the arrow until the sprocket teeth of the film transport mechanism engage in the perforations in the film. Then drop back the film pressure plate as indicated by the arrow in the diagram. Winding the film winding knob simultaneously cocks the shutter so that it is not possible to continue winding until the shutter has been released. Repeat winding and releasing the shutter alternately until the perforations have passed over the sprockets, and then close the camera.



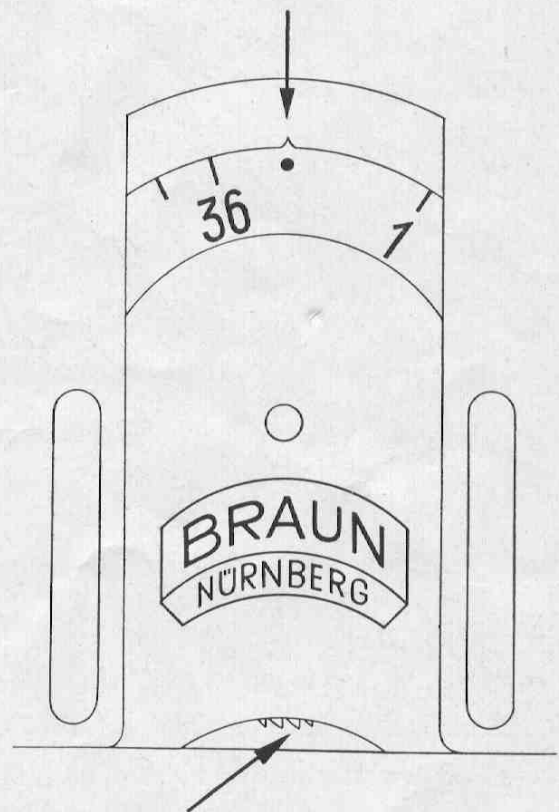


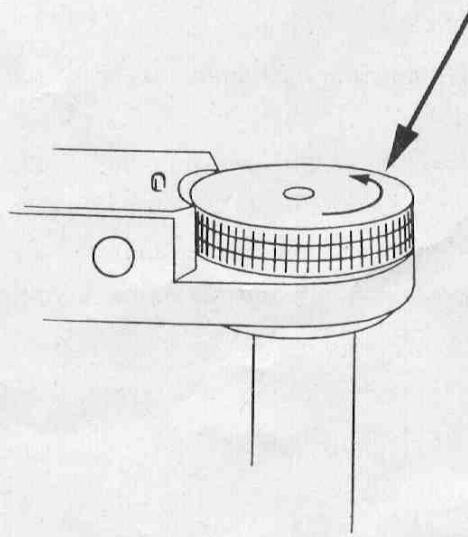
How to Close the Camera

To close the camera the back should be inserted between the camera housing and front plate and the locking ring tightened.

The Film Counter

The film counter reads backwards from 36 to 1. It thus indicates the number of unexposed frames still available. After the film has been loaded and the camera closed, the counter should be set at the red dot near the figure 36, by means of the projecting teeth. The film winding knob is then turned until the reading is 36. It is necessary to release the shutter to allow the film to wind on.





Film Winding and Film Transport

The shutter winding mechanism, film transport and film counter are coupled so that they are operated when the winding knob is wound in the direction of the arrow. After the shutter has been released and until the camera has been re-wound, the safety device which prevents double exposure is in operation.

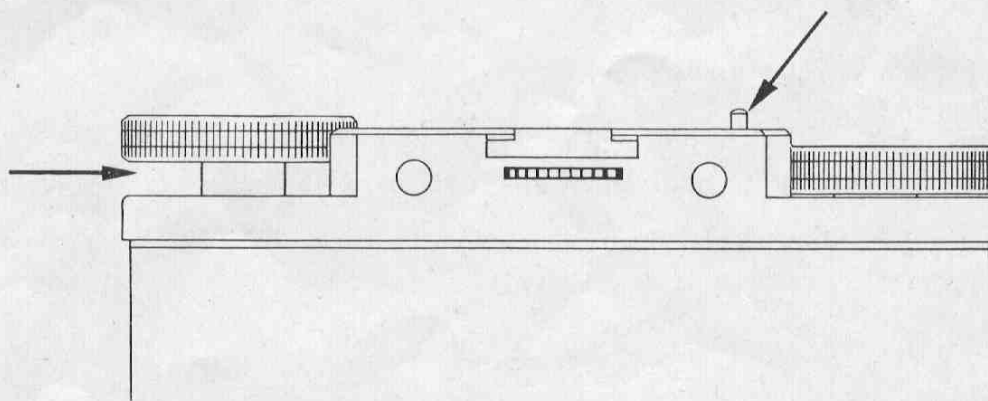
How to Unload the Camera

11

The whole length of the film has been exposed when the counter reads figure 1 and the shutter has been released.

To wind back the film, press the locking stud; pull out the rewind knob as far as it will go and turn it in the direction of the arrow. Towards the end of the film a somewhat stronger resistance is felt which indicates that the film is being held by the take up spool. A few turns further will then wind the film completely into the cassette, and the camera can be opened for insertion of a new film.

Note. The locking stud must remain depressed throughout the whole rewinding operation. It throws the sprocket out of gear.



12 Loading and Unloading Drill

Loading the *Paxette*

1. Open the camera
2. Insert film cassette
3. Attach the film to the take-up spool
4. Close the camera
5. Set the film counter on the red dot near 36
6. Wind on until 36 is against the index mark

✕ ✕ ✕ ✕ ✕ ✕ ✕ ✕ ✕ ✕

Unloading the *Paxette*

1. Press down locking stud throughout the winding operation
2. Raise rewind knob as far as it will go
3. Turn rewind knob in the direction of the arrow
4. Wind the whole of the film into the cassette
5. Open the camera
6. Remove the cassette

✕ ✕ ✕ ✕ ✕ ✕ ✕ ✕ ✕ ✕

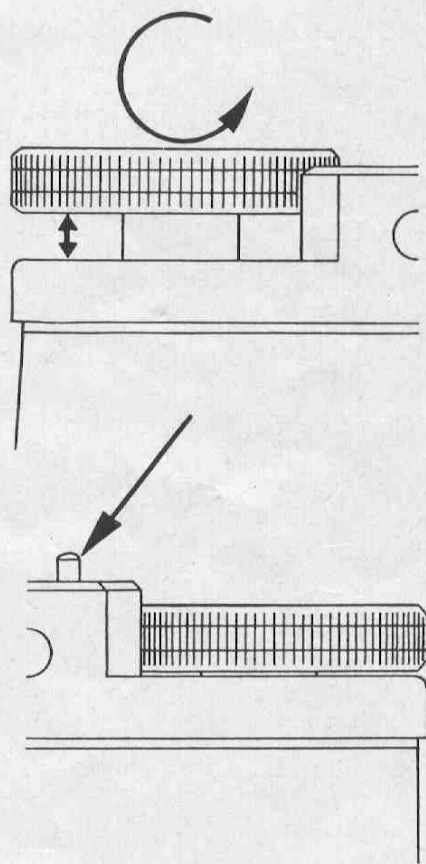
Checking the Film Transport

To make sure that the film transport is functioning properly and the film really being wound on, lift the rewind knob as far as it will go. If the film transport is functioning properly the rewind knob will turn in the opposite direction during winding operations.

Checking the Re-Winding

To check the rewinding, release the locking stud during rewind operations. It will then stand proud and there should be a strong resistance if the mechanism is working correctly.

Warning. If force is used against this resistance the perforation of the film will tear. When continuing to rewind, press home the locking stud.





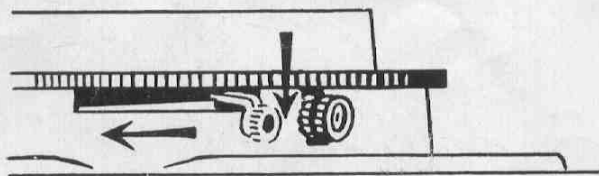
The Lens Diaphragm

The lens aperture or diaphragm is set by means of the front ring on the lens. Bring the red dot into register with the black line at whatever setting is required.

Note. The smaller the aperture number the more light is admitted, but the more limited is the depth of field. The larger the aperture number, the less light passes but the greater the depth of field. For example, $f/2.8$ passes more light than $f/16$, but the depth of field is much less.

The Delayed Action Release

This is positioned on the under side of the shutter. The small lever is pushed, as indicated by the arrow on the diagram, as far as it will go. **Simultaneously** the button next to it is pushed downwards.

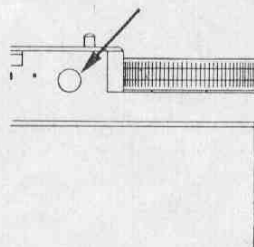
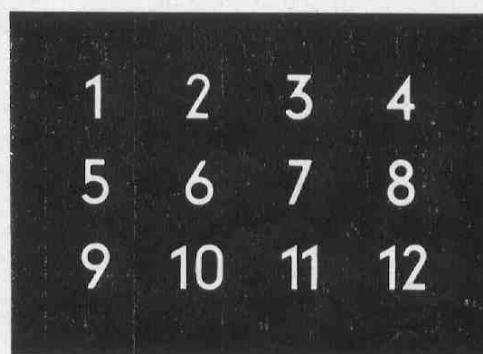


Note: At B (time) setting, the delayed-action release cannot be used and is therefore locked at that shutter setting.

The Optical Exposure Meter

There are three rows of figures of different density inside the exposure meter (right hand eye piece). With the eye piece held close to the eye, aim the camera at the subject to be taken. The highest figure which is discernible after looking through the eye piece for about 20 seconds will be the light value and is the basis for reading off the exposure time from the exposure tables on the camera case.

15



		Lichtwert/light-value											
Blende/diaphragm		1	2	3	4	5	6	7	8	9	10	11	12
	2,8	2	1	$\frac{1}{2}$	$\frac{1}{5}$	$\frac{1}{10}$	$\frac{1}{25}$	$\frac{1}{50}$	$\frac{1}{100}$	$\frac{1}{200}$	—	—	—
	3,5 4	4	2	1	$\frac{1}{2}$	$\frac{1}{5}$	$\frac{1}{10}$	$\frac{1}{25}$	$\frac{1}{50}$	$\frac{1}{100}$	$\frac{1}{200}$	—	—
	5,6	8	4	2	1	$\frac{1}{2}$	$\frac{1}{5}$	$\frac{1}{10}$	$\frac{1}{25}$	$\frac{1}{50}$	$\frac{1}{100}$	$\frac{1}{200}$	—
	8	15	8	4	2	1	$\frac{1}{2}$	$\frac{1}{5}$	$\frac{1}{10}$	$\frac{1}{25}$	$\frac{1}{50}$	$\frac{1}{100}$	$\frac{1}{200}$
	11	30	15	8	4	2	1	$\frac{1}{2}$	$\frac{1}{5}$	$\frac{1}{10}$	$\frac{1}{25}$	$\frac{1}{50}$	$\frac{1}{100}$
	16	60	30	15	8	4	2	1	$\frac{1}{2}$	$\frac{1}{5}$	$\frac{1}{10}$	$\frac{1}{25}$	$\frac{1}{50}$
		12/DIN 12/ASA x 4				15/DIN 25/ASA x 2				18/DIN 50/ASA x 1			
										21/DIN 100/ASA x 0,5			

Zeit/time

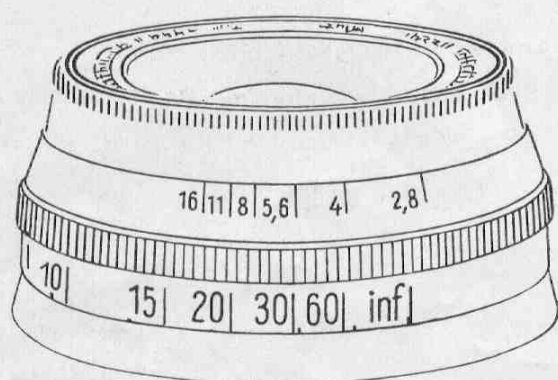
How to Read the Exposure Time from the Exposure Table

Example. Assuming that the figure 10 is the highest discernible figure in the exposure meter, refer to the table which is attached to the back of the camera case and look for figure 10 in the top horizontal row. The left-hand vertical row, in front of the thick black line gives the apertures from 2.8 to 16. It is then possible to read off the exposure times for each aperture from the vertical row running down from the figure 10. Assuming that aperture 16 has been chosen (smallest aperture), the reading in the vertical line under the figure 10 for aperture 16 will be $\frac{1}{10}$ second. For aperture 11 an exposure time of $\frac{1}{25}$ second would be required, for aperture 8, $\frac{1}{50}$ second, for aperture 5.6, $\frac{1}{100}$ second, for aperture 4, $\frac{1}{200}$ second. The same procedure should be adopted for all other light values.

Note. The table is compiled for films with a sensitivity of 18/10 DIN. For 21/10 DIN the exposure times should be halved and for 15/10 DIN they should be doubled.

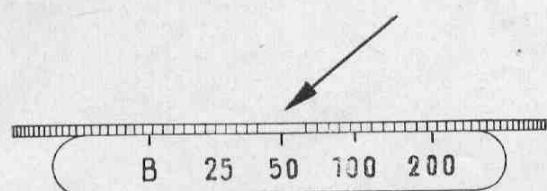
The corresponding values for other sensitivity scales may be taken to be as follows:

DIN	SCHEINER	WESTON	ASA/BS
21/10	31	80	100
18/10	28	40	50
15/10	25	20	25
12/10	22	10	12



How to Focus

After estimating the distance between the camera and the subject to be taken or after ascertaining it by means of a range finder (which can be mounted on the camera), the second milled ring situated on the lens is turned to register with the line which will be found in the middle of the fixed ring engraved in red. The scale of the distance setting ranges from $3\frac{1}{2}$ ft. to infinity.



Exposure Time

The shutter is set by bringing the red line on the milled ring of the shutter into register with the desired speed which is engraved on the collar on top of the shutter housing.

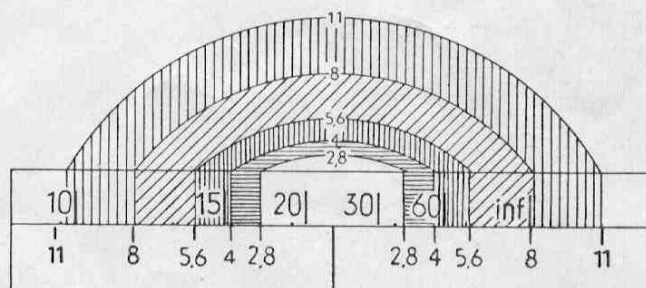
The Depth of Field

The depth of field comprises the area which is sharply defined by the lens, from the foreground to the background. This area or depth varies according to the aperture chosen, that is to say, a large aperture ($f/2.8$) gives less depth of field and a small aperture ($f/16$) gives a greater depth of field. The depth of field for every aperture setting can be read off the red scale on the middle ring of your

Paxette

This repeats on the left and on the right of the centre LINE, the range of lens apertures.

Example. If the focus is set between 20 and 30 ft., everything will be sharp from 60 ft. down to about 15 ft. when working with an aperture of $f/4$. If working at $f/8$ however, everything will be sharp from infinity down to 12.5 ft.



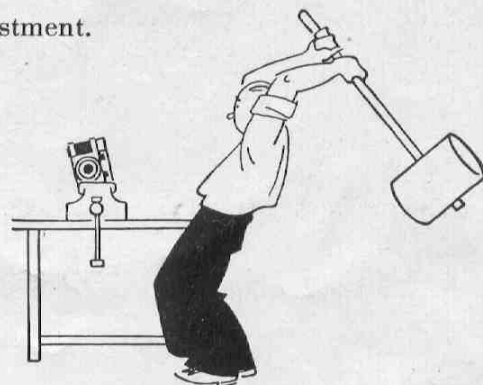
The *Paxette* should be held firmly in both hands, so that the rounded bottom edge is resting on the palms of the hands. When the shutter is released, the left hand will then be keeping the camera steady.

This should be done gently and without jerking. Move the finger only and not the whole hand. Allow the finger to rest on the release lever until the release has run off. Remain calm whilst taking a picture, especially when taking snapshots with the *Paxette*. Good results amply repay the trouble taken.

× ×



22 We do not recommend this method of camera adjustment.



If the *Paxette*

should happen to go wrong, temptation to get a screwdriver and open it up should be resisted. The correct assembly of, say, the shutter or the relationship of the lens to the focal plane are most delicate matters, and even a skilled mechanic not accustomed to cameras should hesitate. A faulty camera should not be touched but should be handed to a good photographic dealer who has a repair specialist with special tools at his disposal.

Neville Brown & Co. Ltd. London

23

THE PAXETTE BOOK.

by R. M. Fanstone.

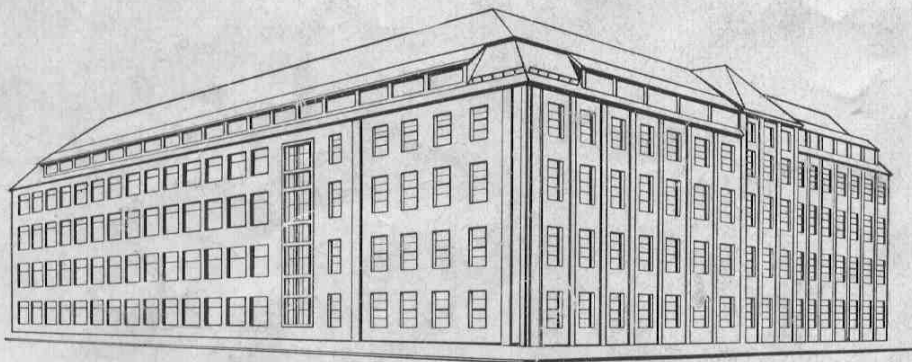
It is noteworthy that R. M. Fanstone, the well-known photographic writer, should have elected to write the book about the *Paxette*.

Paxette owners will find it full of interest and a great help in getting the best out of their camera. Every aspect of *Paxette* photography is covered.

The *Paxette* for colour photography - your negatives - and a host of other interesting topics - complete with numerous illustrations and drawings.

Ready shortly. Obtainable from all good photographic dealers.

Printed in Germany



CARL BRAUN · CAMERA-WERK · NÜRNBERG



SUPER *Paxette* II

INSTRUCTION-BOOK

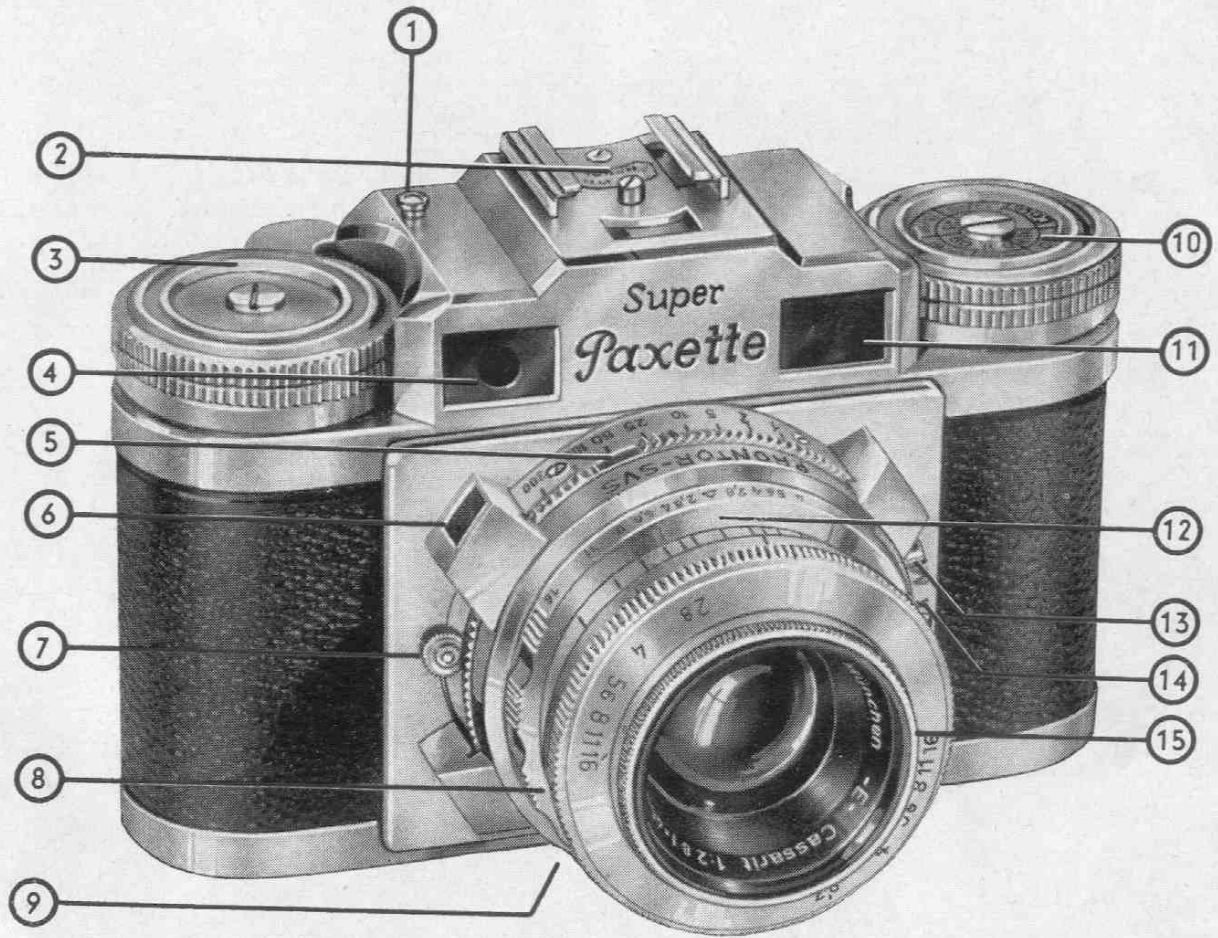
- 2 First of all make yourself thoroughly familiar with the various parts of the camera and, before inserting a film, go over the necessary operations several times. Good snapshots can only be achieved if your

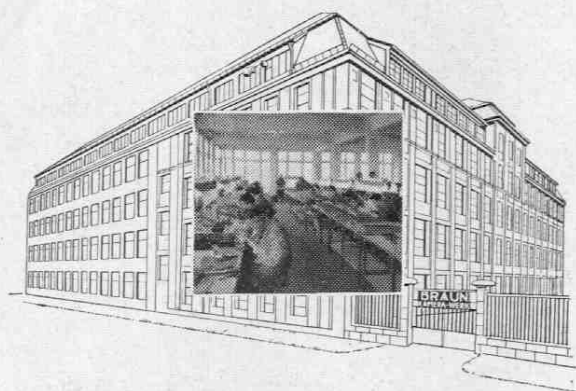
SUPER. *Paxette*

is always ready for instant action.

✕ ✕ ✕ ✕ ✕ ✕ ✕ ✕

	see page
1 Rewind push button	11
2 Accessories shoe with exposure counter . .	9
3 Rapid winder	10
4 Window of coupled view and range finder	14/15
5 Shutter speed setting ring	16
6 Socket for cable release	—
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8 Focussing ring coupled with view and range finder	14
9 Camera back locking ring with tripod bush $\frac{1}{4}$ inch	5
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12 Depth of field ring	18
13 Flash contact	—
14 MXV Adjustment	22
15 Aperture setting	17





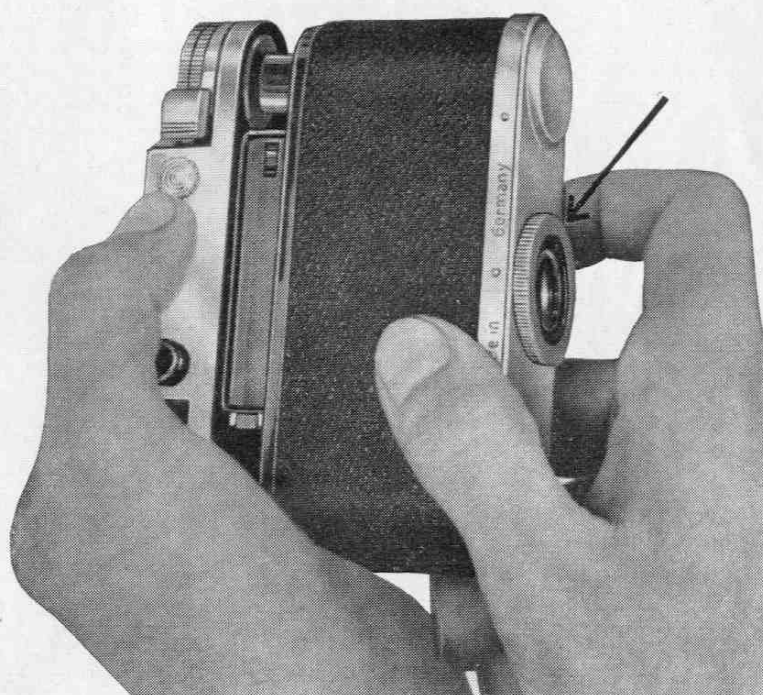
Part View of "Paxette" Assembly-room

Introduction

The **SUPER - Paxette** camera, made by Carl Braun of Nuremberg, is a first class product which reflects the skill and care of the operatives behind its manufacture and also the modern quality of the plant itself. These facts are self-evident and are very quickly confirmed by actual use of the camera.

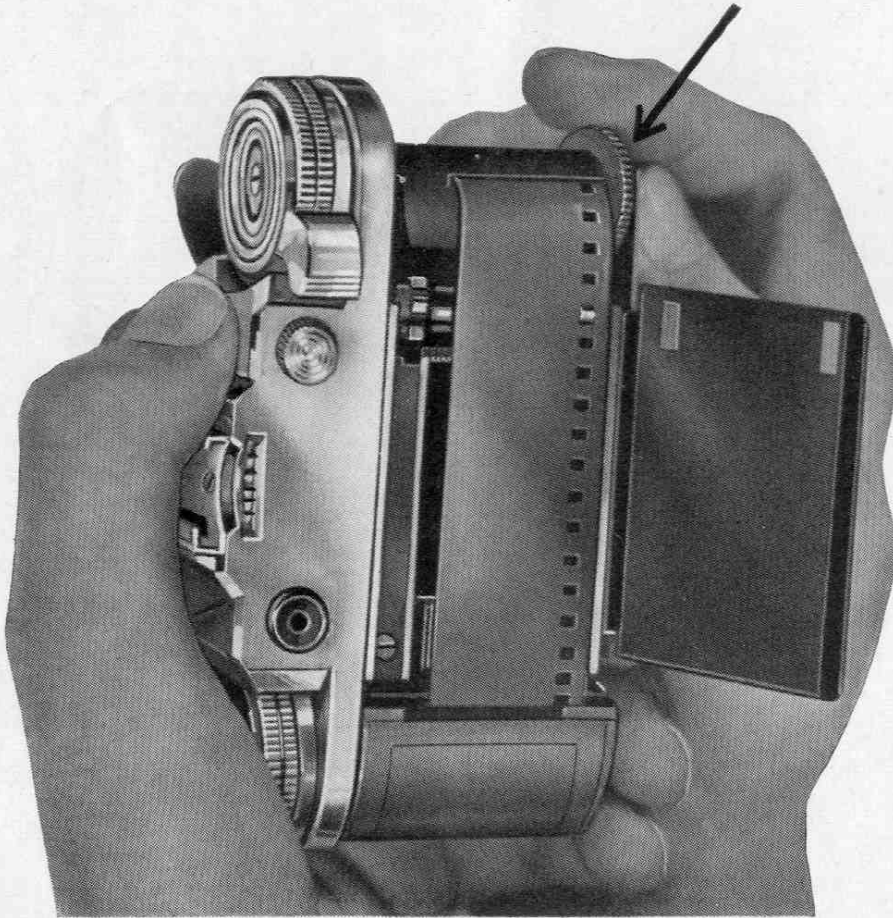
This booklet describes the
SUPER - Paxette
in detail and should be carefully studied before handling the camera.

The **SUPER - Paxette** will prove a constant friend and pleasant companion at all times.



How to Open the Camera

Release the milled locking ring on the camera base by turning it to the left. The back of the camera can then be slid off.



How to Insert the Film

7

Insert the film cassette into the film chamber so that it engages in the rewind knob. Open the film pressure plate and draw out the trimmed end of the film far enough to be inserted into the slot of the take-up spool. At the same time ensure that the lug on the take-up spool hooks into the perforation in the film. Now wind the lower wheel of the empty spool until both sprockets engage in the perforations of the film; it is also advisable to depress the film rewind push button at the same time. Lastly, swing the film pressure plate back into the closed position and close the camera.

Important: Avoid direct sunlight when loading or unloading the camera. Turn your back to the light and hold the camera in your own shadow.

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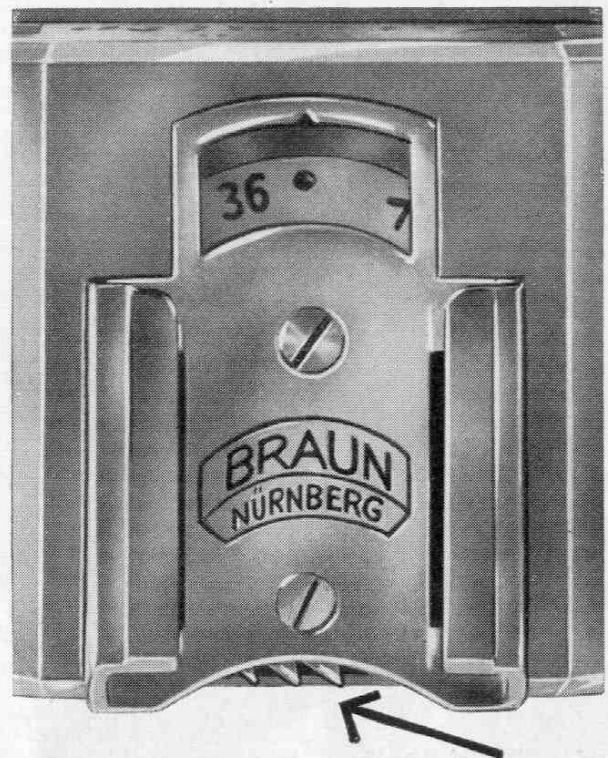


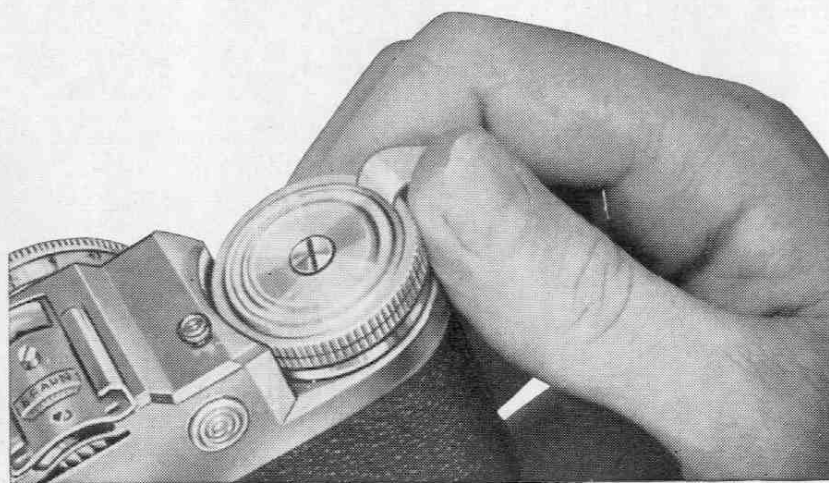
How to Close the Camera

To close the camera the back should be inserted between the camera housing and front plate and the locking ring tightened.

The Exposure Counter

The exposure counter reads backwards from 36 to 1, indicating each time the number of unexposed frames still available. After the film has been inserted and the camera closed, set the counter at the red dot near the figure 36 by turning the toothed wheel which is positioned just below the maker's name. Advance the film twice (each time advancing the rapid wind lever $1\frac{1}{2}$ times until a definite resistance is felt), and the film counter should then read 36.





The Rapid Winder

The shutter winding mechanism, film transport and film counter are coupled and operated by means of the rapid wind lever. Advance the lever as far as possible, then release it, allowing it to spring back; then advance it approximately half way until a noticeable resistance is felt. The film is now transported, the shutter cocked, the exposure counter correctly set and your Super-Paxette is ready for the next shot.

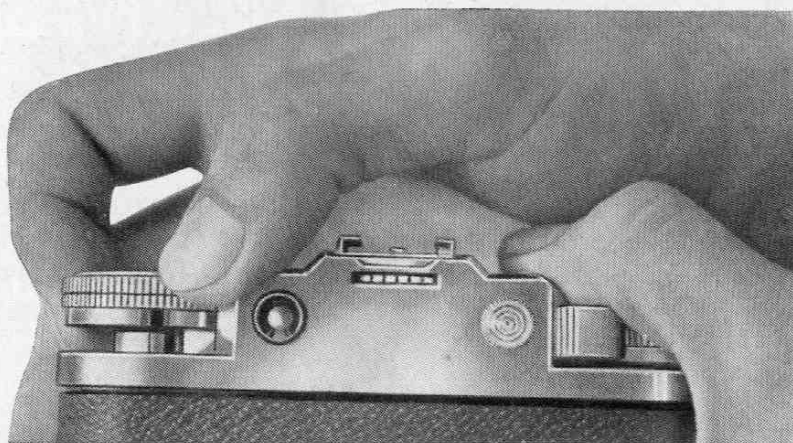
How to Unload the Camera

11

When the exposure counter shows figure 1, this means that the entire length of the film has been exposed.

To wind back the film, press the rewind push button, then pull out the rewind knob as far as it will go and turn in the direction of the arrow. Just before the rewinding operation is completed, a more marked resistance will be noticeable indicating that the end of the film is still held by the take-up spool. A few more turns will wind the film completely into the cassette. The camera can then be opened and the film changed.

Important: The rewind button must remain depressed throughout the rewinding operation.



12 Loading and Unloading Drill

Loading the

SUPER - *Paxette*

1. Open the camera
2. Insert film cassette
3. Attach film to take-up spool
4. Close the camera
5. Set the exposure counter
6. Advance the rapid wind lever twice
7. The camera is ready for the first shot

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Unloading the

SUPER - *Paxette*

1. Press down rewind button
2. Pull out rewind knob as far as it will go
3. Turn rewind knob in direction of arrow
4. Wind the entire film into cassette
5. Open the camera
6. Take out cassette

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Checking the Film Transport

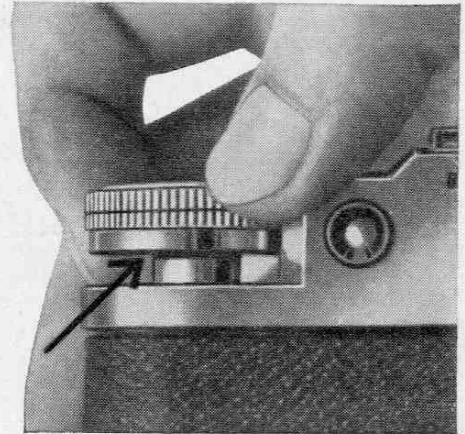
In order to ensure that the film transport is functioning correctly, pull up the rewind knob as far as it will go. If the film is moving forward properly, the rewind knob will turn in the direction opposite to that indicated by the arrow when the rapid winder is advanced.

Important: This check should be made for a short time only. After checking, push the rewind knob in again.

Checking the Rewinding

To check the rewinding action, release the locking stud during the rewinding operation. If the mechanism is functioning properly a very definite resistance will be noticeable. If no resistance is felt, this means that the film has been pulled out of the cassette and cannot be wound back. This fault can only be remedied by opening the camera in a darkroom.

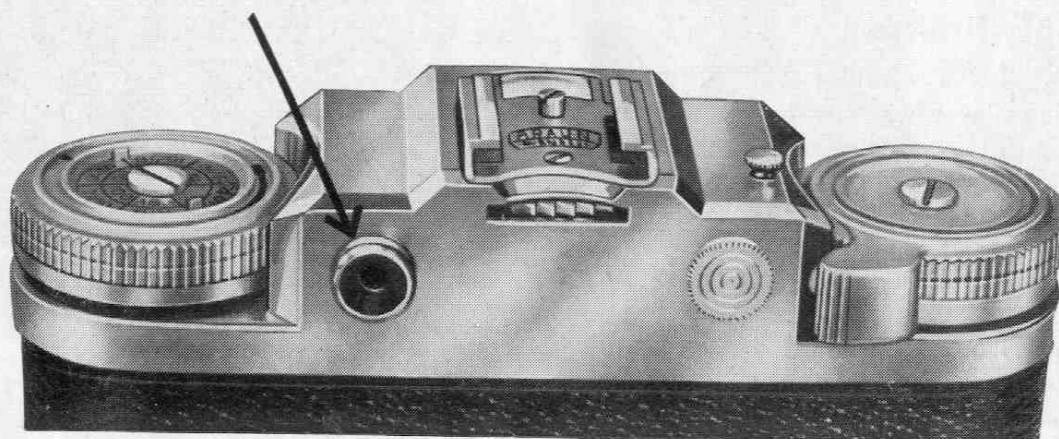
Important: Do not attempt to force the film or the perforation of the film will tear. When continuing to rewind, press in the locking stud again.



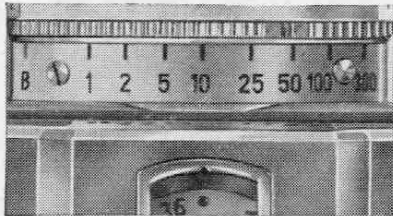
14 The Coupled View and Range Finder

The coupled view and range finder of the **SUPER . Paxette** does not only give the frame of the picture but also the range finder image which is visible as a light circular area in the centre of the field. By turning the focussing ring on the lens the exact distance to the subject can be measured and is automatically set.

Attention: All interchangeable lenses for the Super-Paxette are coupled to the range finder.



In order to avoid errors when choosing aperture and shutter speed, set the film speed indicator to the speed of the film used as soon as the latter is inserted into the camera.



The shutter is set by bringing the red mark on the milled ring of the shutter into register with the desired speed engraved on the collar of the shutter housing.

How to Use the Range Finder

In the middle of the light circular area you will see a double image of the subject sighted. By turning the



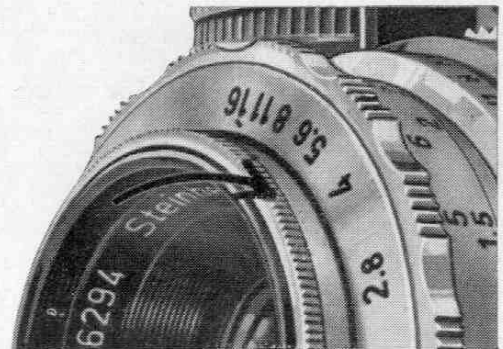
15

focussing ring these two contours should be made to coincide; in this way the exact distance to the subject is established and the lens focussed.

The Lens Diaphragm

The lens aperture or diaphragm is set by means of the front ring on the lens. Bring the red dot into register with the black line at whatever setting is required.

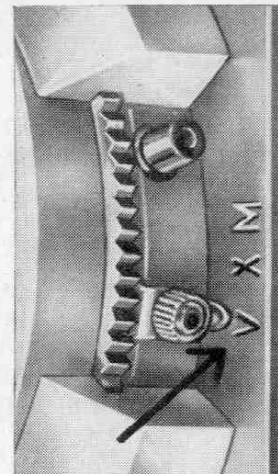
Note. The smaller the aperture number, the more light is admitted, but the more limited is the depth of field. The larger the aperture number, the less light passes, but the greater is the depth of field. For example, $f/2.8$ passes more light than $f/16$, but the depth of field is much less.

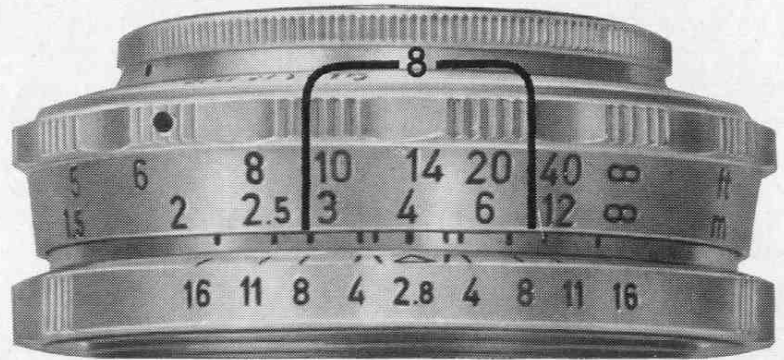


The Delayed Action Release

With the Prontor SVS shutter, put the lever at the green setting "V". The delayed action release can be set either before or after the shutter is cocked.

Attention! When the setting "V" is used, the shutter setting time B cannot be used.





Depth of Field Ring

The depth of field or depth of definition comprises the zone from the foreground to the background of the picture which is sharply defined in the reproduced image. This area or depth varies according to the aperture chosen, that is to say, a large aperture (f/2.8) gives less depth of field and a small aperture (f/16) gives a greater depth of field.

With the **SUPER - Paxette** the depth of field for every photograph can be easily read off the depth of field ring which is between the focussing ring on the lens and the shutter speed setting ring; this repeats on the left and on the right of the setting mark the range of apertures.

Changing the Lens

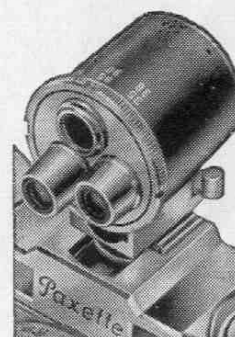
The lens should be screwed firmly home into the lens panel in a clockwise direction. If correctly screwed in, the central dot on the red engraved depth of field scale should be just below the engraving "SUPER-PAXETTE". Remove the lens by unscrewing it in the opposite direction. When screwing the lenses in and out they should be held by the knurled fixed ring bearing the depth of field scale.

The Attachable View Finder

Without mask this view finder gives the exact framing of the picture when using the wide angle lens of 38 mm focal length. The mask must be used with long focus lenses of 85 and 90 mm. For the 135 mm tele-lens an additional mask is necessary, which is supplied together with the lens. Furthermore these focal lengths are engraved on the bottom edge of the view finder and on the mask.

For High Demands!

Ask your photodealer for the Universal Prismatic view finder of Steinheil or for the Polyfocus Universal view finder which give you the exact images for all focal lengths. (See also page 23)

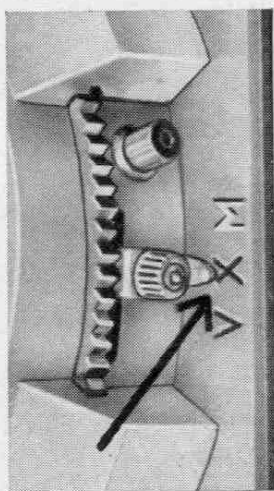


The **SUPER -** *Paxette* should be held firmly in both hands with the rounded bottom edge resting in the palms of the hands. When the shutter is released hold the camera steady with the left hand.

Release the shutter gently and deliberately without jerking it, moving the middle finger only and not the whole hand. Allow the finger to rest on the release lever until the release action is completed. Remain perfectly still and composed whilst taking a picture, especially when taking snapshots. If you follow these rules you will be delighted with the excellent results achieved.

✕ ✕





Flash Synchronisation for the Prontor SVS shutter

The new Gauthier shutter Prontor SVS is fully synchronised for flash, and enables you to set the lever in any desired position, before and after cocking the shutter.

Three settings are possible:

Setting M, yellow

In this position, the M-type flash lamps are ignited with shutter speeds of 1/50 sec. to 1/300 sec. Setting M cannot be used for electronic flashes. The delayed action release does not work. If no flash-gun is attached the shutter operates normally.

Setting X, red

In this position electronic flash shots can be taken at any shutter speed. For flash lamps, only shutter speeds up to 1/25 second can be used. The delayed action release does not work. If no flash unit is attached the shutter operates normally.

Setting V, green

This position is used if you want to work with the delayed action release. For flash shots the same conditions apply as for position "X".

Accessories for the SUPER - *Paxette*

Interchangeable lenses coupled to the range finder

Wide angle lens Choro f:3,5/38

Wide angle lens Westron f:3,5/35

Long focus lens Telexon f:5,6/85

Long focus lens Quinar f:3,5/85

Long focus lens Telenar f:3,8/90

Long focus lens Ennaston f:3,5/135

Prismatic View Finder Made By Steinheil for focal lengths 38, 85/90 and 135 mm with parallax compensation.

TEWE-Polyfocus Universal View Finder for focal lengths 35/38, 45/50, 85/90 and 135 mm with parallax compensation.

Optical View Finder for 38 mm with mask for 85/90 or 135 mm

Paximat 35 mm Slide Projektor with rapid slide changer. Amazingly simple to handle.

Branax 35 mm Enlarger can be used for reproduction and macro photography in conjunction with ground glass adapter, intermediate rings and repro lens.

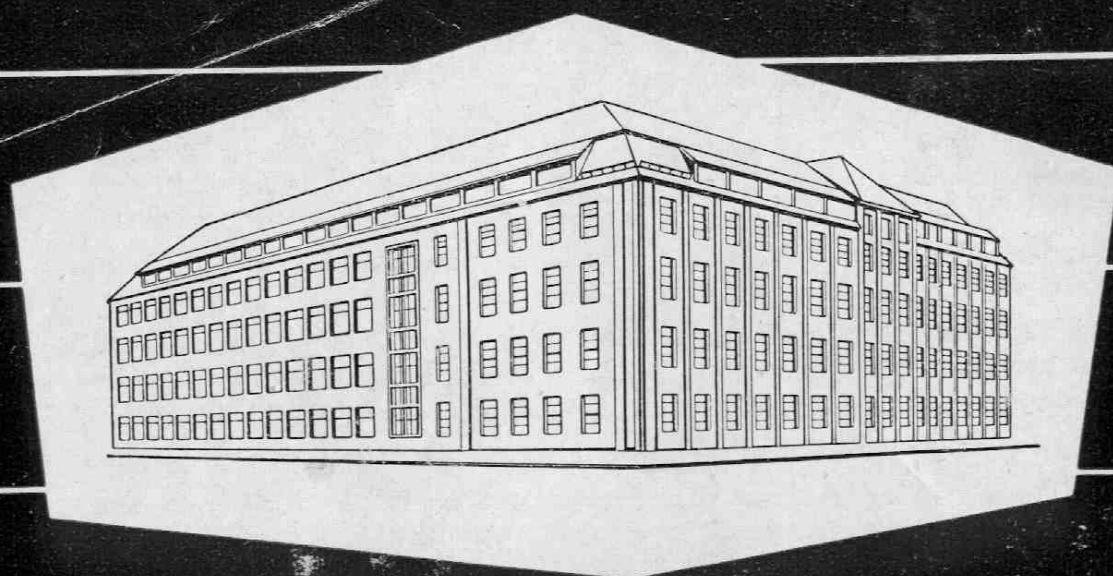
Paxitron Home Flash works without dry or wet batteries and takes its energy directly from the mains. Guide number 44 for 17/10 DIN = 40 ASA films. Light output: appr. 80-90 W/sec.

Pico Electrical attachable exposure meter masters all exposure problems. Ranging from 15 sec. - 1/1000 sec.

Eveready and combi-cases - filters and filtersets - sunshades

The right for change of construction due to improvement is reserved herewith

Printed in Germany
256/5e



CARL BRAUN CAMERA WORKS, NURNBERG, GERMANY

WARNINGS:

1. To assure the lifetime service of the shutter: **First** set the speed, **Then** transport the film (which also cocks the shutter), **Then**, if wanted, set the self-timer. This order of procedure will assure that the film will not wrinkle in consequence of changes in temperature.
2. When re-winding the film, press the clutch properly (Instruction Book p. 13) and never use force. You may not only tear the film but also severely damage the mechanism.
3. If you have a Paxette I or Paxette IM camera with fixed lens, do not try to unscrew the lens. It is not meant to be unscrewed - you may break the mount.

Repairs which should be necessary which are due to the non-observance of these warnings and/or of those mentioned in the Instruction Book, will be charged.

"PHOTIMPORT", Pty. Ltd. Melbourne
Sole Australian Agents for
CARL BRAUN, Nürnberg.

H A S S E L B L A D[®]

Instruction Manual



500C/M



500EL/M



SWC/M

People who buy their first Hasselblad seldom do so on the spur of the moment. Their decisions are usually preceded by careful study of the camera at one or more demonstrations. But a Hasselblad is literally packed with features to which no brief demonstration can do justice. So read this Instruction Manual carefully.

Previous owners of Hasselblad may choose only to leaf through the Manual. Not advisable, we feel. The Manual should be read from cover to cover. Even experienced photographers could miss a piece of information of potential importance. Our cameras are also modified from time to time. The Instruction Manual now covers the Hasselblad 500C/M, 500EL/M, and SWC/M cameras. All the basic concepts, such as film loading, attaching and detaching film magazines, lenses, viewfinders, focusing screens, etc. are described under the "Hasselblad 500C/M" heading. Features pertinent to the 500EL/M and SWC/M will be found under those headings. Hasselblad cameras are renown for their quality and precision, but, like any other precision instrument, they demand skill and know-how to yield the best results. So let us once again recommend a careful reading of this Instruction Manual. It will be worth the effort.

HOW TO PREPARE YOUR 500C/M AND 500EL/M FOR OPERATION

Front protective cover

Unscrew the protective cover (with bayonet mount) in the direction of the arrow.

Fig 1



Attaching the lens

First make sure that the camera is advanced and not in the pre-released mode.

Make sure the lens mechanism is cocked. The slot (A) on the head of the cocking shaft should point to the adjacent red index dot (B). See also p. 11 for the procedure of cocking a released, detached lens.

Align the red delta at the rear of the lens with the red dot (O) on the camera lens mount. Rotate the lens **clockwise** until it stops and locks into place with a **click**.

Fig 2

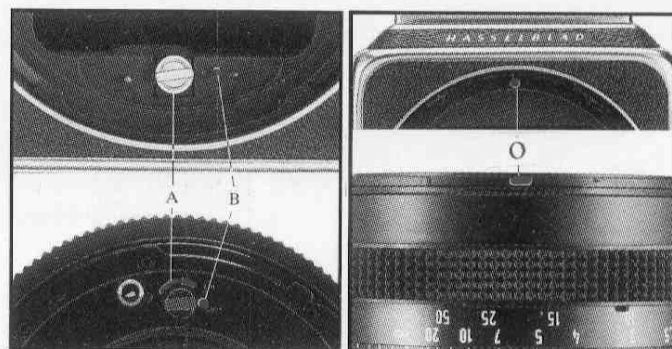
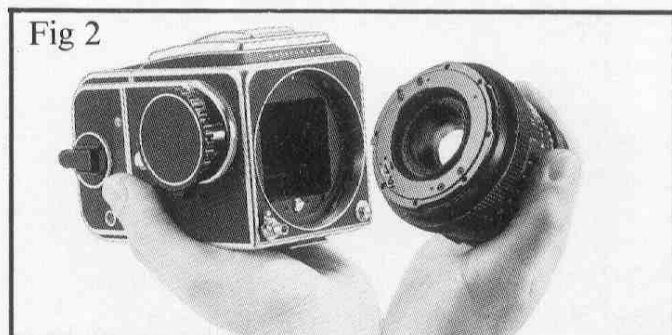


Fig 3

Fig 4



Rear protective cover

Press the catch in the direction of the arrow and tip the cover backwards. Lift it off the lower magazine support catches.

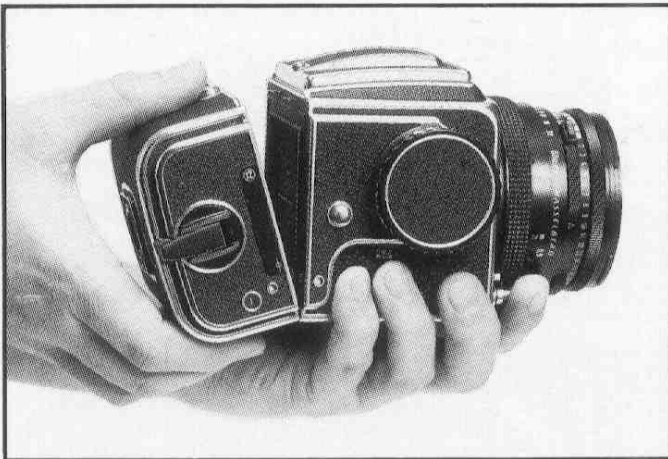


Fig 5

Attaching a magazine

Hook the magazine onto the camera's lower magazine support catches (40) and make sure the attachment is secure. Then pivot the upper part of the magazine against the upper catches while sliding the magazine release catch (28) to the right. Release the catch and *make sure the magazine is locked in place by sliding the catch to the left.*

500C/M



Fig 6

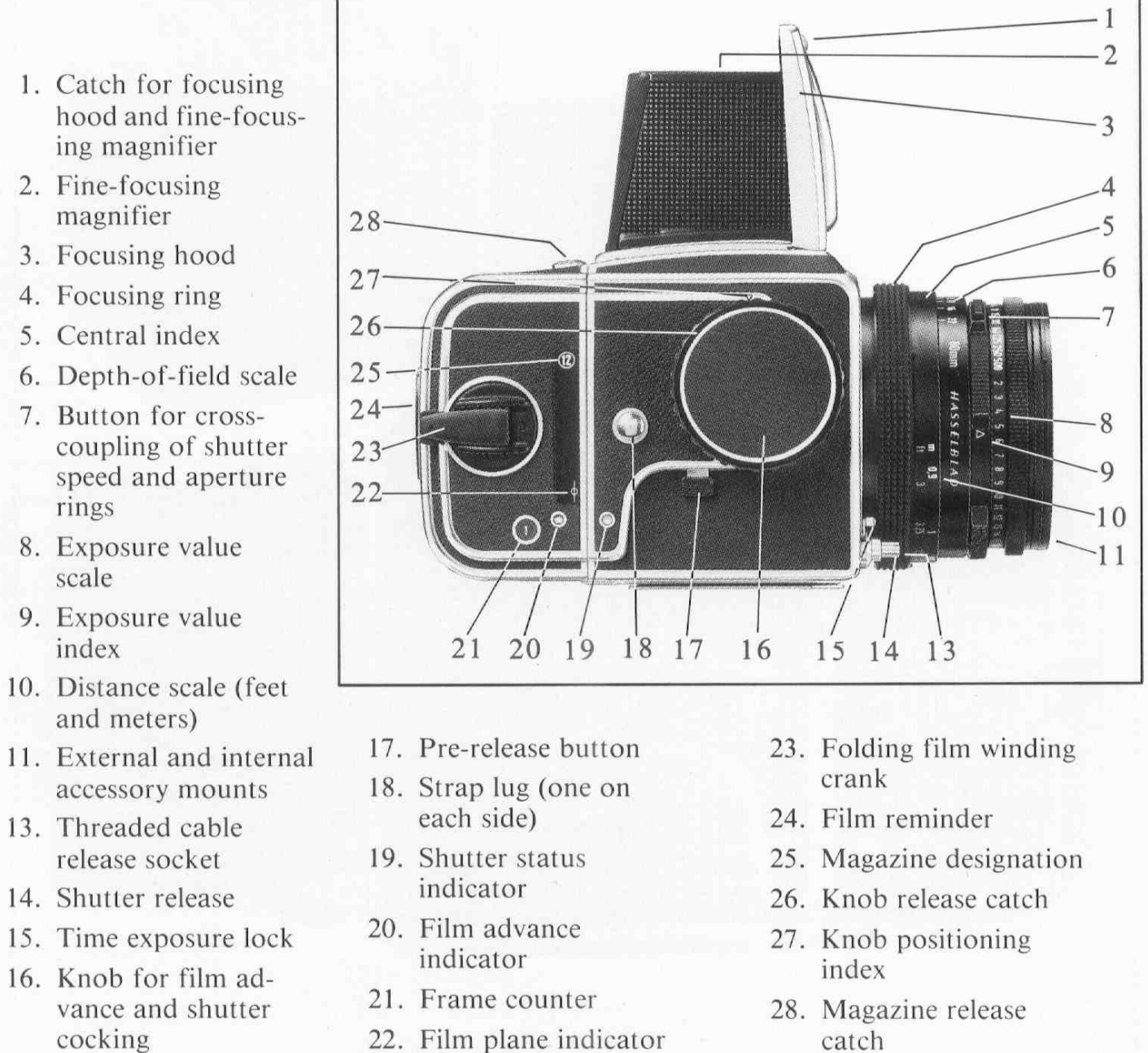
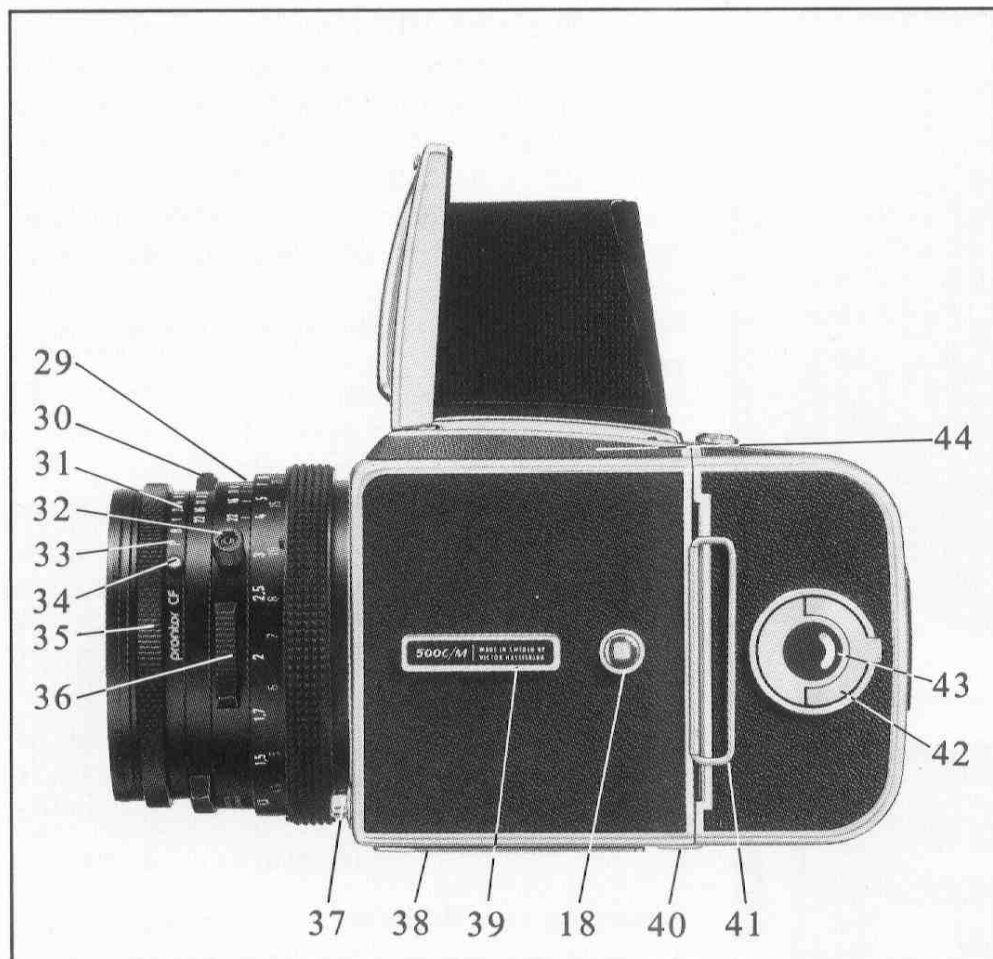


Fig 7



- | | | |
|---|---|--------------------------------|
| 29. Index for infrared compensation | 34. Detent button for F setting | 39. Accessory rail |
| 30. Aperture ring with aperture scale | 35. Shutter speed ring | 40. Magazine support catches |
| 31. Shutter speed scale | 36. Depth-of-field preview tab | 41. Magazine slide |
| 32. PC flash terminal | 37. Lens lock release button | 42. Roll holder key |
| 33. F setting (used only with 2000FC/M) | 38. Tripod plate and 3/8" tripod socket | 43. Film consumption indicator |
| | | 44. Focusing screen |

Fig 8



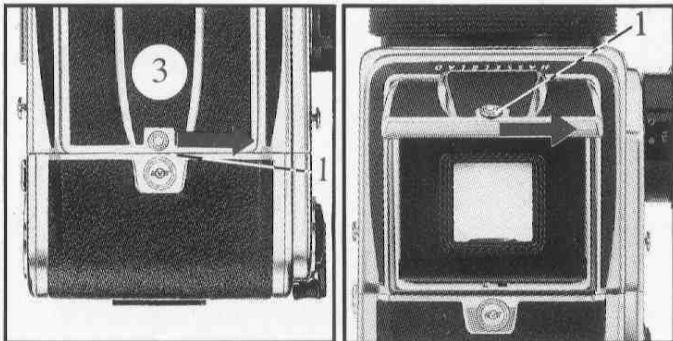
LEFT-HAND GRIP (Fig. 8)

Fig. 8 shows the best way to hold a Hasselblad 500C/M when taking pictures. Hold the camera cradled in your *left* hand with your *left* index finger on the release button. This leaves your right hand free to carry out other operations, such as film winding, focusing, etc.

Always make it a habit to use the left-hand grip.

FOCUSING HOOD (Figs. 9—10)

The focusing hood (3) automatically opens when the catch (1) is slid to the right. For critical checks on image sharpness, use the fine-focus magnifier which pops up when the catch (1) is again slid to the right. Flip the magnifier down until it clicks into place before closing the focusing hood. Then fold the hood's side leaves down over the focusing screen, followed by the rear leaf and finally the front leaf.



Figs 9—10

Changing viewfinders:

1. Remove the film magazine (see p. 15).
2. Slide the viewfinder back out of the grooves.
3. Slide the new viewfinder into the grooves and press it firmly forward.
4. Replace the film magazine.

CF LENSES

The 80mm f/2.8 Planar is the standard Hasselblad lens. Lenses developed for the 500C/M and 500EL/M are referred to as CF and C lenses (for C lenses, see p. 35).

CF lenses can also be used on the 2000FC and 2000FC/M and can then operate with their

built-in leaf shutter or with that shutter disconnected (exposure is made with the camera's focal plane shutter).

The CF lenses feature built-in Prontor CF leaf shutters with an automatic diaphragm, exposure value scale and X synchronization. These lenses attach to the camera via a bayonet mount.

Diaphragm (Fig. 11)

CF lenses have an automatic diaphragm that stops down to the working aperture immediately prior to exposure.

Depth-of-field preview:

Press down on the top part of the depth-of-field preview tab (36). Use your left thumb. The lens will then stop down to the preset working aperture.

Upward pressure on the tab will reopen the diaphragm to the maximum aperture.

(After film advance, the diaphragm is always reopened to the maximum aperture unless the tab is depressed.)

Shutter speeds (Fig. 12)

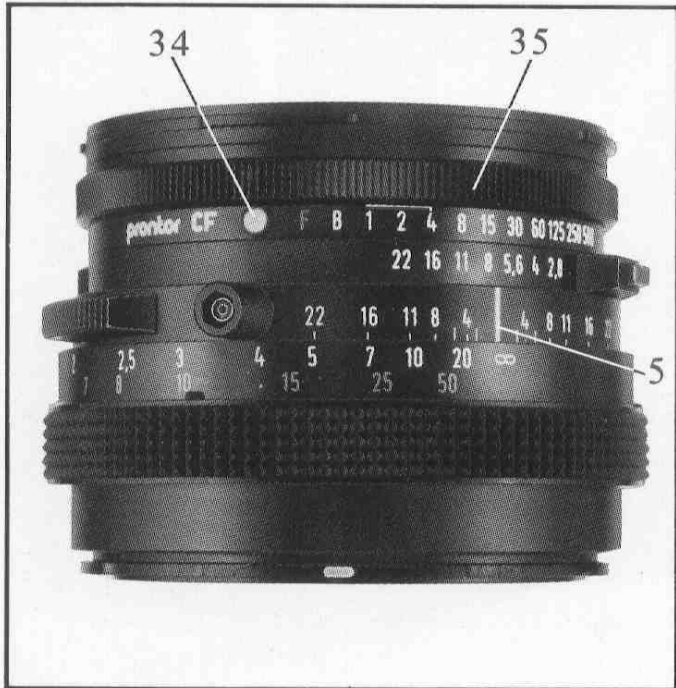
Shutter speeds are set on the shutter speed ring (35) opposite the index (5). The shutter speed ring has two scales, an F setting and a green detent button. The white scale shows the shutter speeds and the orange scale the exposure values.

The green F setting is only used when the lens is attached to a 2000FC or a 2000FC/M camera (the F setting disconnects the optic's built-in leaf shutter. See the Instruction Manual for the 2000FC/M.) The F setting can be made only after depressing the green detent button (34).

Fig 11



Fig 12

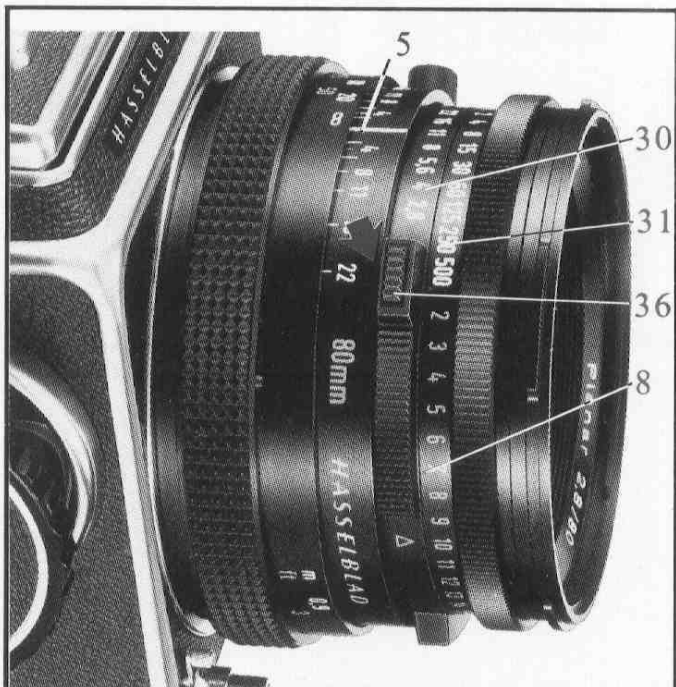


Shutter speeds: 1 to 1/500 s and B.
At the B setting, the shutter remains open as long as the shutter release is depressed.
Always use a cable release for long exposures.

NOTE Some films may display a loss of speed in very long exposures (reciprocity failure). Any exposure compensation necessary here is usually specified by the film manufacturer.

Warning signal

There is a red marking on the shutter speed scale opposite the 1, 1/2, and 1/4 s. This is to warn against possible exposure errors. The auxiliary shutter remains open as long as pressure is maintained on the shutter release. If the pressure is relaxed too soon, the auxiliary shutter will terminate the exposure prematurely. So make a habit of maintaining pressure on the shutter release until the leaf shutter has opened and closed fully.



Exposure values (Fig. 13)

The aperture and shutter speed combination set opposite the central index (5) determines the exposure. Every combination of shutter speed/aperture has an equivalent exposure value (8).

Fig 13

The shutter speed ring (35) and the aperture ring (30) can be cross-coupled by pressing the cross-coupling button (7). When this button is depressed, the shutter speed/aperture combination can be changed without altering the exposure value (EV).

Should you, for example, wish to change from f/8 to f/11, the shutter speed ring will automatically switch to the corresponding shutter speed when the shutter speed and aperture rings are cross-coupled.

Focusing (Figs. 14—15)

The lens is focused with the focusing ring (4). The ring is turned until the subject is as sharp as possible on the focusing screen. “Rock” the ring back and forth around the point of apparent sharp focus a few times for maximum focusing accuracy.

The distance between the subject and the film plane is read off on the distance scale (10) opposite the central index (5). The distance in meters is shown in white numerals, and the distance in feet is in orange numerals.

Objects on the near or far side of the set distance can be sharp within certain limits. The limits for this field of sharp focus, i.e. depth of field, vary with the f/stop.

A small f/stop yields wide depth of field.

A large f/stop yields shallow depth of field.

The depth of field available at any given f/stop can be read off on the depth-of-field scale (6) on both sides of the central index (5). In the example shown here (Fig. 15), the lens is set at 7 m. Depth of field at f/11 will then range from 4 m to 20 m. (Also see “Depth-of-field Preview” on p. 7.)

Fig 14

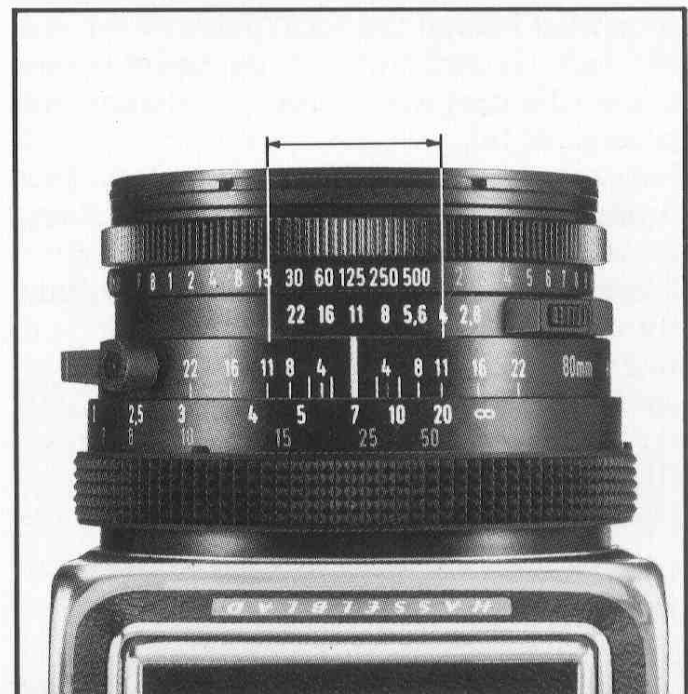
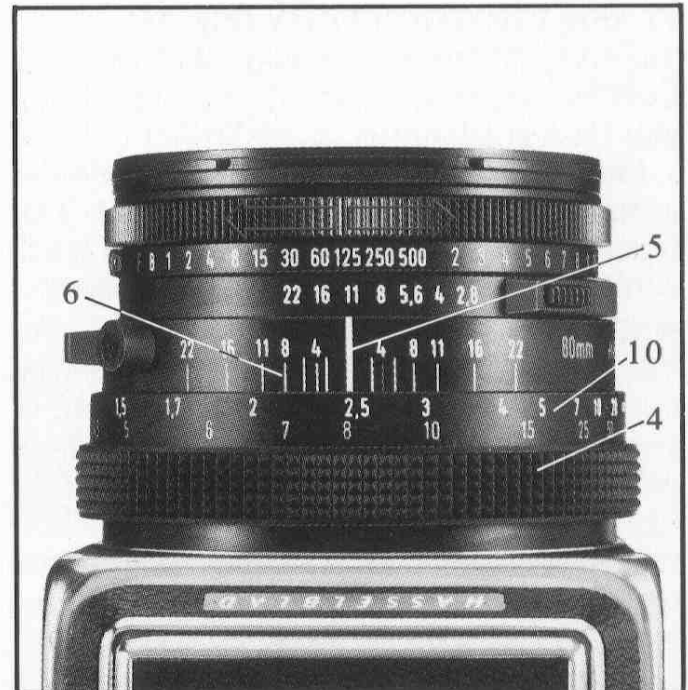


Fig 15

FLASH PHOTOGRAPHY (Fig. 16)

The 500C/M, 500EL/M, and SWC/M can be used for synchronized electronic and expendable flash at all shutter speeds from 1 to 1/500 s. Flash synchronization is made via the built-in leaf shutter's PC flash terminal (32). This terminal has a friction lock to keep the sync cord's PC contact more securely in place.

X synchronization

The shutter is fully synchronized for electronic flash (X) at all speeds (1 to 1/500 s). X synchronization triggers the shutter without delay to accommodate the brief duration of the light output from electronic flash units. Expendable flash is also possible with shutter speeds of 1/30 s or slower.

Infrared photography (Figs. 17—18)

Infrared (IR) rays (wavelengths longer than 800 nanometers) are refracted to a focal plane somewhat behind the focal plane of the visible light images formed on the focusing screen. To compensate for this discrepancy, proceed as follows:

Focus as usual on the focusing screen. Then rotate the focusing ring (4) until the distance set is opposite the red IR index (29).

Example: In Fig. 17 the lens is set at infinity for normal photography.

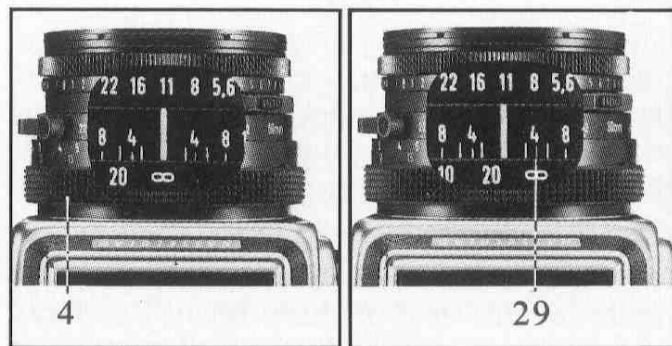
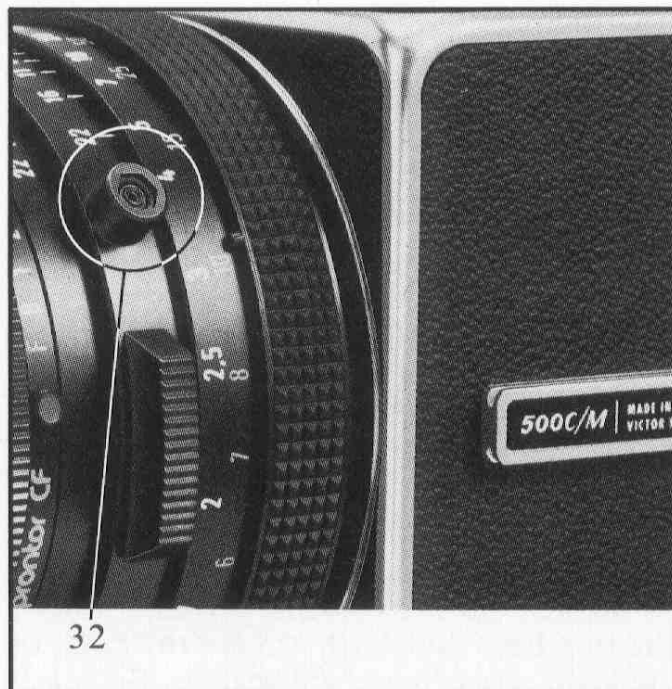
In Fig. 18 the setting distance has been adjusted for IR photography by setting the infinity symbol opposite the IR index (29). Infrared (IR) is the designation for wavelengths longer than 800 nm.

CHANGING LENSES (Figs. 19—20)

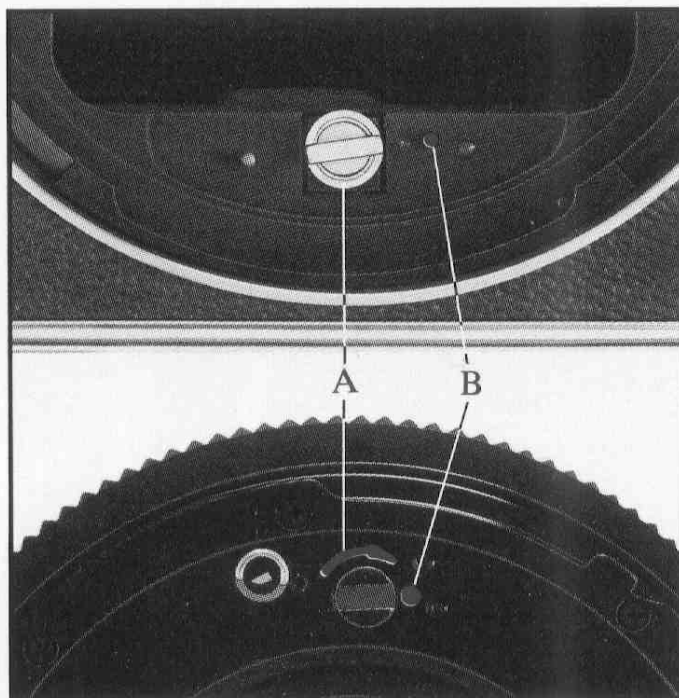
Lens removal

Make sure the camera is cocked (white signal in the film advance indicator window 20) and

Fig 16



Figs 17—18



not pre-released. (“Pre-release”, p. 13.) Press the button (37) with your left index finger. Twist the lens *counter-clockwise* one tenth of a turn and remove it.

Lens attachment

Ensure that the camera is cocked and not pre-released. Make also sure the lens is cocked. The slot (A) on the cocking shaft should point to the red index dot (B). (See "Shutter cocking" below for cocking untensioned, detached lenses.)

Carefully insert the lens into the camera's lens mount with the red marking on the lens barrel aligned with the red marking on the camera body. Twist the lens *clockwise* until it clicks into place.

Shutter cocking

When the lens is attached to the camera, the shutter mechanism is automatically cocked each time the film is advanced. If the lens has been off the camera and the shutter inadvertently released, the shutter mechanism must be cocked before the lens is attached to the camera's lens mount.

The shutter in a detached, untensioned lens is cocked with a coin inserted into the slot (A) on the cocking shaft. Rotate the shaft *clockwise* slightly more than one turn until it stops. (Do *not* use a screwdriver or any other sharp object which could slip and damage the rear lens element.) When the lens is cocked, the slot (A) on the shaft will point to the red index dot (B). See Fig. 20.

Figs 21—22

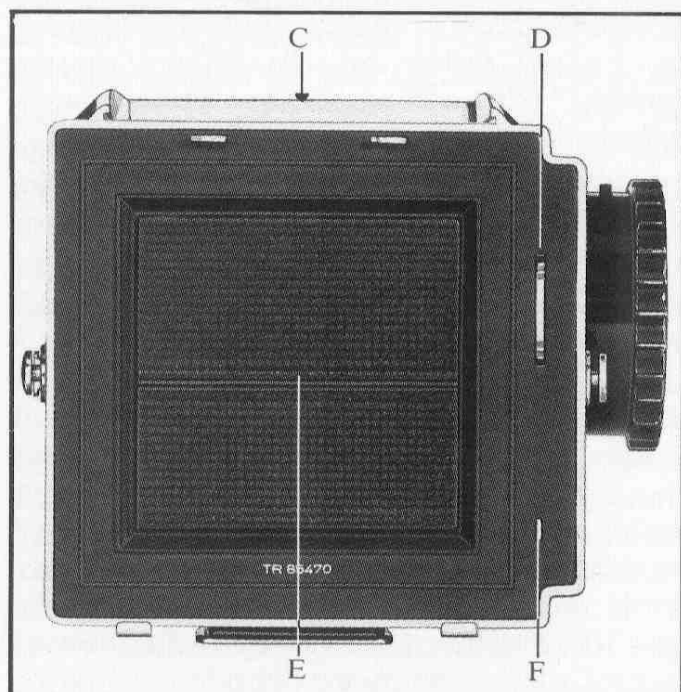
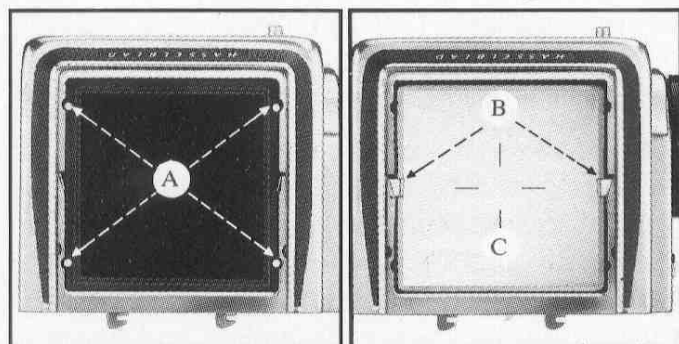


Fig 23

CAMERA BODY (Figs. 21—23)

Focusing screen

The focusing screen (C, Figs. 21—22) has 4 inscribed lines to facilitate horizontal and vertical alignment. Masks can be placed on top of the focusing screen when formats other than $2\frac{1}{4} \times 2\frac{1}{4}$ are used.

Changing the focusing screen

Remove the magazine and focusing hood. Slide the screen retaining catches (B) into the retracted position. Cup your hand over the focusing screen and turn the camera upside down. The focusing screen should then drop into your hand. If it fails to do so, remove the camera lens and gently tap the underside of the screen from inside the camera body. *Note. The mirror must be in the down position.* Insert the new focusing screen into the camera body. Make sure it rests firmly on all four screen supports (A). The retaining catches (B) automatically lock the screen in place as soon as a viewfinder is attached.

Camera body rear plate (Fig. 23)

The auxiliary shutter (E), which consists of two vertically moving blinds, can be seen through the rear opening of the camera body. The gear wheel (D) transfers the force applied to the film advance knob or crank to the magazine mechanism.

The pin (F) actuates the film advance indicator and automatically blocks the shutter release after the last frame is exposed.

Make sure (D) and (F) are kept clean and free from dirt and dust.

Exposure (Fig. 24)

Exposure takes place when the shutter release (14) is depressed.

Fig 24

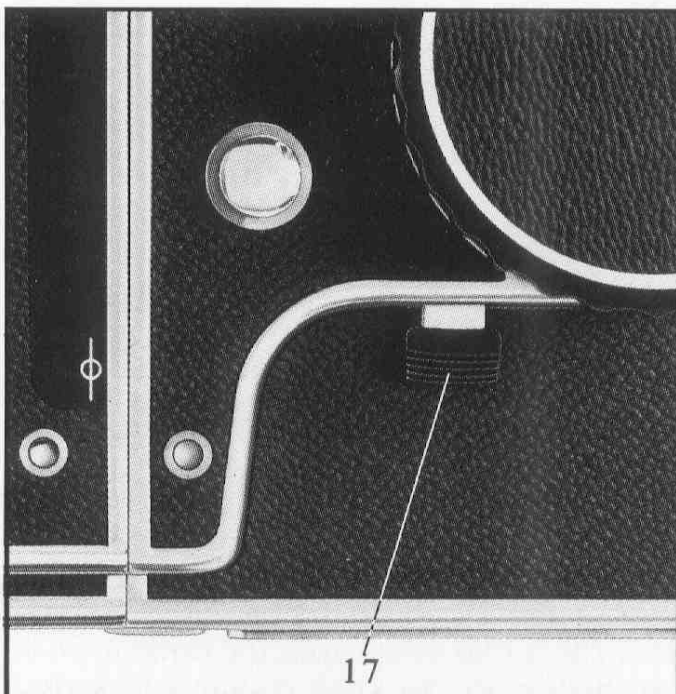
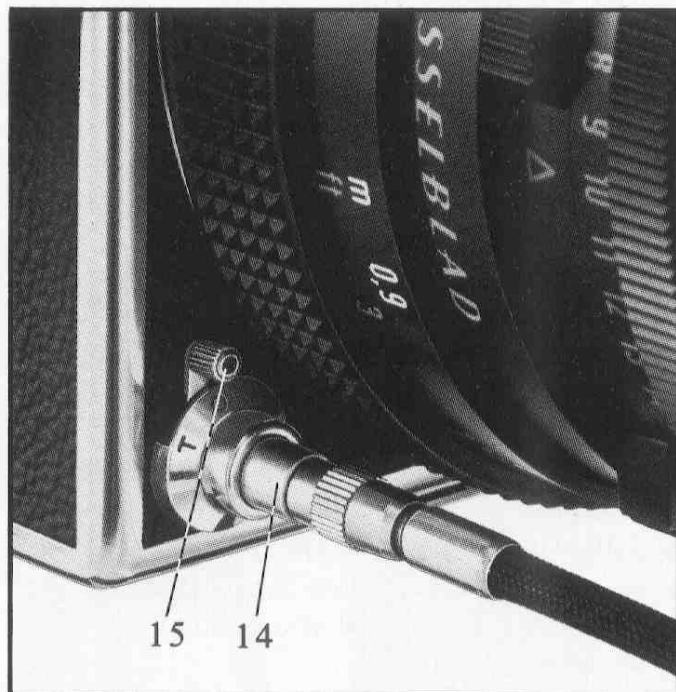


Fig 25

As a general rule for all exposure with the time exposure lock 15 at the O setting, the shutter release must be kept depressed until the between-the-lens shutter has opened and closed fully. This is especially important at shutter speeds from 1 s to 1/15 s.

If pressure on the release is relaxed too soon, the auxiliary shutter will terminate the exposure prematurely.

The cable release is screwed into the threaded socket in the shutter release.

Time exposure lock

The time exposure lock (15) has two settings: O (= disengaged) and T (= depressed shutter release locks in the depressed position until the lock is returned to the O setting).

The T setting can thus be used for time exposure when the shutter is set at B.

Film cannot be advanced until the lock is reset to O.

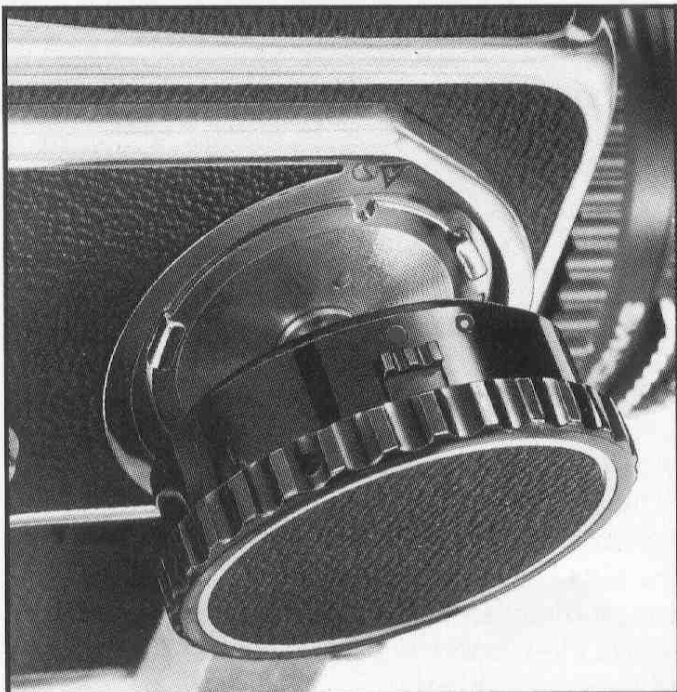
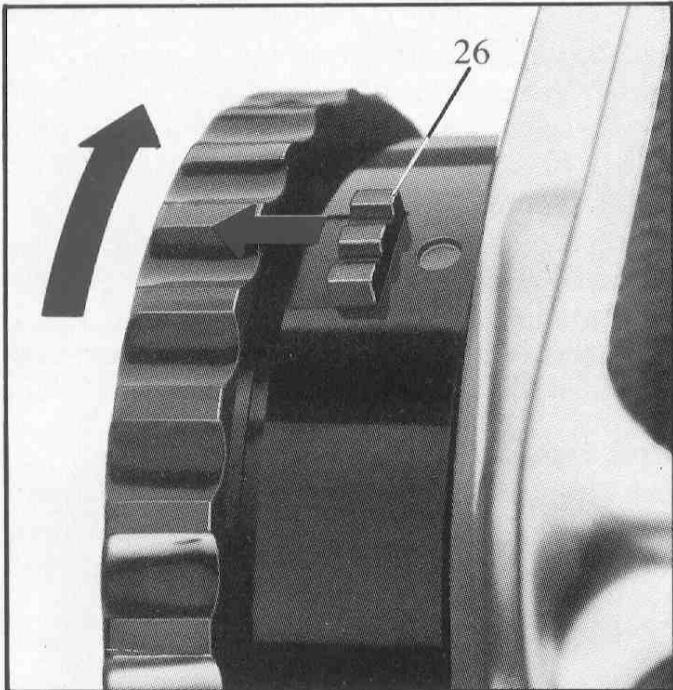
The setting cannot be used in operation with a cable release.

Pre-release (Fig. 25)

To reduce the low level of camera-induced shake to a minimum, the camera can be pre-released by pressing the pre-release button (17). This is what happens when the pre-release button is pressed: the mirror flops up, the lens stops down to the preset working aperture, the auxiliary shutter opens, and the shutter closes (but remains cocked).

When the shutter release is pressed, only the operation of the between-the-lens shutter remains. Since the image on the focusing screen disappears in a pre-released camera, a sports viewfinder is a good way to keep track of moving subjects.

Fig 26



KNOB FOR FILM ADVANCE AND SHUTTER COCKING (Figs. 26—27)

An interchangeable knob for film advance and shutter cocking is standard equipment with each new camera. This knob can be replaced with a crank or a knob with a built-in exposure meter.

The knob has two functions:

- To advance the film.
- To set up the camera for a new exposure by actuating the mechanism which flips down the mirror, reopens the diaphragm, and cocks the shutter. Knob operation also actuates the film advance and shutter status indicator signals (see also p. 18).

Note The *shutter release* may refuse to budge for one of the following reasons:

- The last film frame has been exposed. This automatically blocks the shutter release. There will then be no number in the frame counter.
- The magazine slide has not been withdrawn.

The *knob may refuse to budge* for one of the following reasons:

- The time exposure lock is set at T.
- The auxiliary shutter was tripped with the release button but the shutter release was not subsequently pressed to trigger the leaf shutter (see p. 13).

Changing the knob

It is best to change the knob with the camera tensioned.

Knob removal: Push the spring-loaded release catch (26) away from the camera while bayoneting off the knob counter-clockwise.

Fig 28

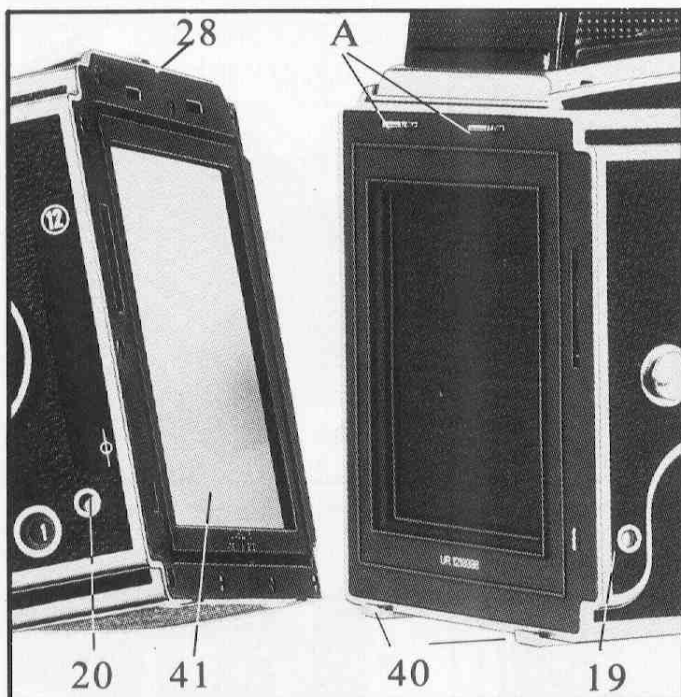
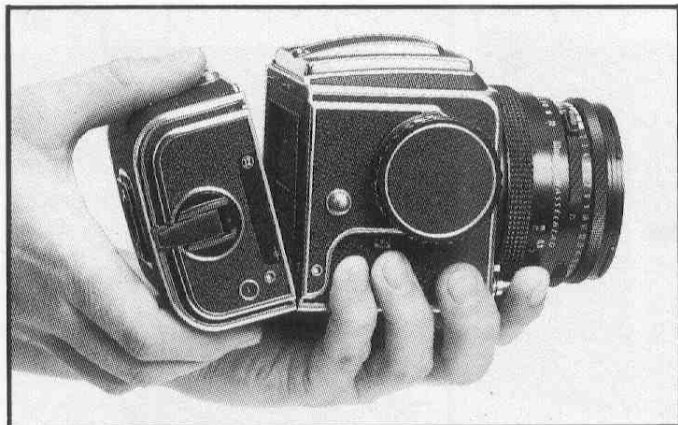


Fig 29

Knob attachment: Align the red circle on the knob with the red delta on the camera (see the picture) and bayonet the knob clockwise onto the mount.

FILM MAGAZINES

Changing the magazines (Figs. 28—29)

Make sure the indicator windows (19 and 20) are displaying white signals whenever magazines are changed. Insert the magazine slide (41). Slide the magazine release catch (28) to the right and swing down the magazine on the two lower support catches (40). The magazine slide protects the film from fogging if the magazine is detached from the camera. The magazine is attached to the camera as follows:

Hook the magazine onto the lower magazine support catches (40) and make sure the connection is secure. Then swing the top of the magazine up against the upper catches (A) while simultaneously pushing the magazine release catch (28) to the left. Release the catch and *then push it to the left to make sure the magazine is securely locked in place*. Remove the magazine slide.

NOTE A magazine can only be detached when the magazine slide is inserted. *No exposure can be made until the magazine slide is withdrawn from the attached magazine.*

Loading the magazine

The magazine can be loaded on or off the camera. When the magazine is loaded off the camera, the magazine slide (41) must be inserted with the curl of its handle retainer facing the roll holder key (42).

Fig 30

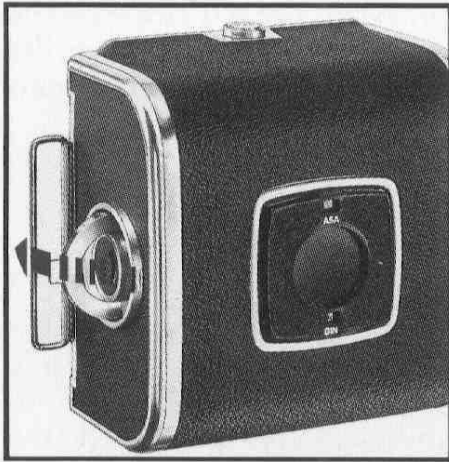


Fig 31

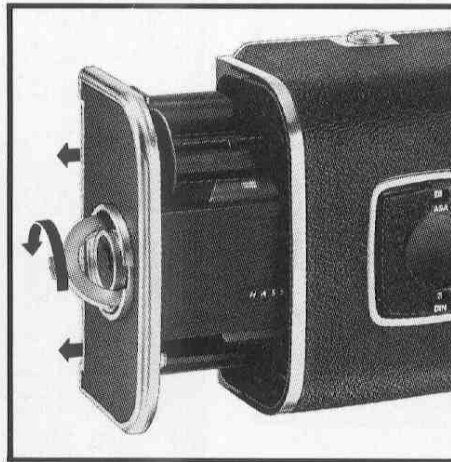


Fig 32

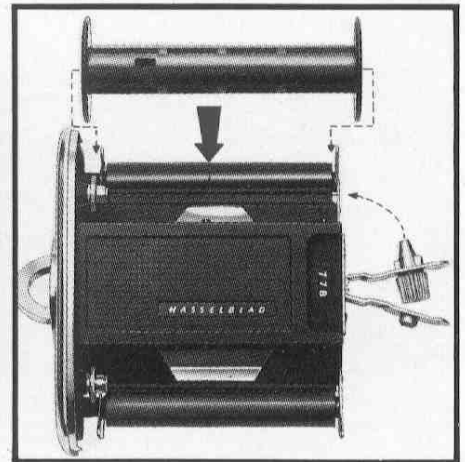


Fig 33

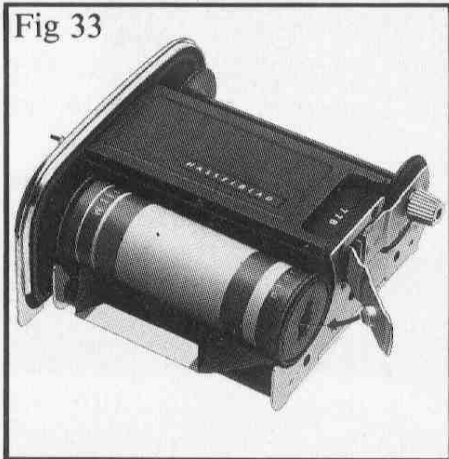


Fig 34

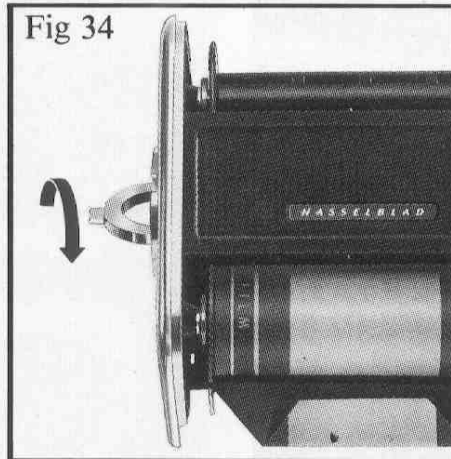


Fig 35

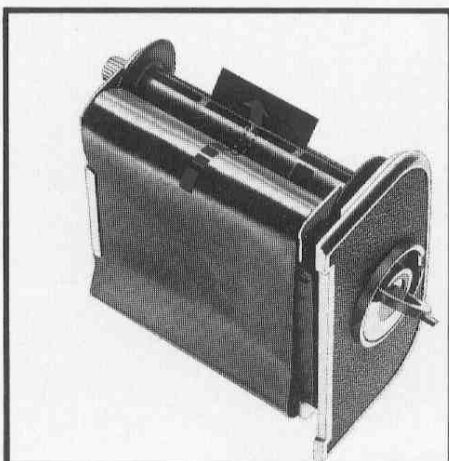
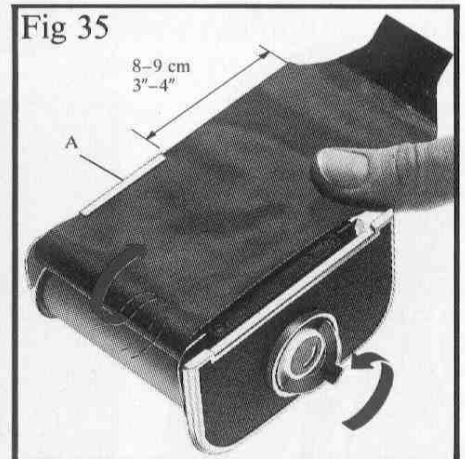


Fig 36

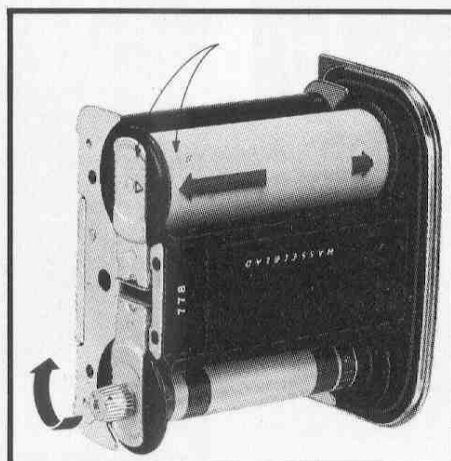


Fig 37

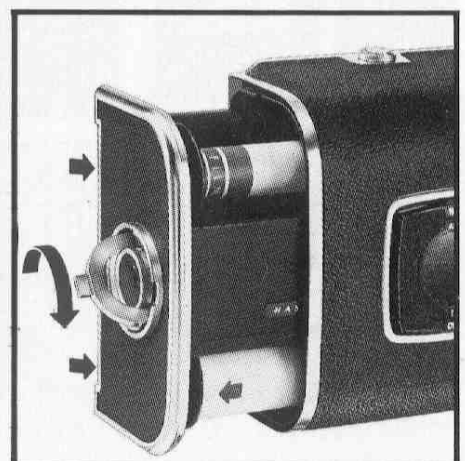


Fig 38

Fig. 30. Fold out the roll holder key.

Fig. 31. Turn the key counter-clockwise. Withdraw the roll holder completely.

Fig. 32. Flip both spool clips. Insert an empty take-up spool on the take-up side (with the knob clip) and flip down the clip. Twirl the spool to ensure that it is correctly seated.

Fig. 33. Insert a roll of film as shown in the illustration and flip down the clip. *Make sure the narrow, glued paper strip securing the paper backing is removed completely.*

Fig. 34. Turn the roll holder key on the side of the magazine *clockwise* so the film clamp (A, Fig. 35) opens.

Fig. 35. Pull out 3 to 3 1/2 inches of paper backing from the roll of film and guide it under the film clamp (A).

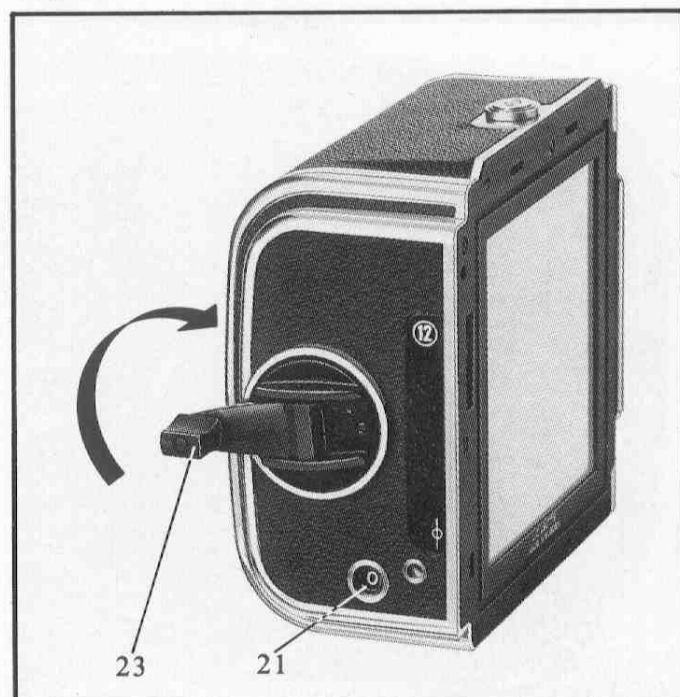
Fig. 36. Insert the tongue of the paper backing into a slit in the take-up spool.

Fig. 37. Turn the knurled knob *clockwise* until the arrow on the paper backing is opposite the delta on the spool clip. Then turn the roll holder key *counter-clockwise*.

Fig. 38. Slide the roll holder key into the magazine, jiggling it a little if it does not immediately click into place, and lock it by turning the key *clockwise*.

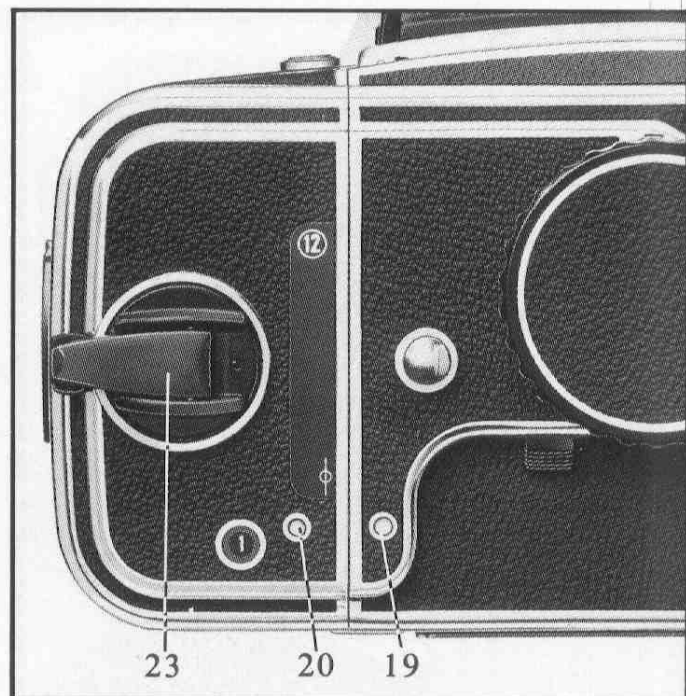
Fig. 39. Make sure the magazine slide is inserted (or that the magazine is attached to the camera). Fold out the film winding crank (23) and turn it clockwise until it stops (about 10 turns). Refold the crank. The number '1' will be displayed in the frame counter (21). The magazine is now loaded and ready for use.

Fig 39



Note. The magazine can only be removed from the camera when the magazine slide is inserted. No exposure can be made when the magazine slide is inserted with the magazine on the camera.

Fig 40



Indicator signals (Figs. 40—41)

Indicator signals (19 and 20) in the camera body and film magazine are actuated by film advance. The following signal combinations may be displayed in the indicator windows:

- A** Both windows white = Camera ready for exposure.
- B** Both windows red = Film not advanced and shutter not cocked. Advance the film. This operation automatically cocks the shutter.
- C** Magazine window red and camera body window white = Magazine was attached to a tensioned camera with the exposed frame unadvanced. Remove the magazine, trigger the camera, replace the magazine, and advance the film.
- D** Magazine window white and camera body window red = A magazine with exposed film frame advanced was attached to a triggered camera. Remove the magazine and tension the camera with the knob.

GOLDEN RULE: Make sure the signals in both windows display the same color when you attach a magazine to the camera.

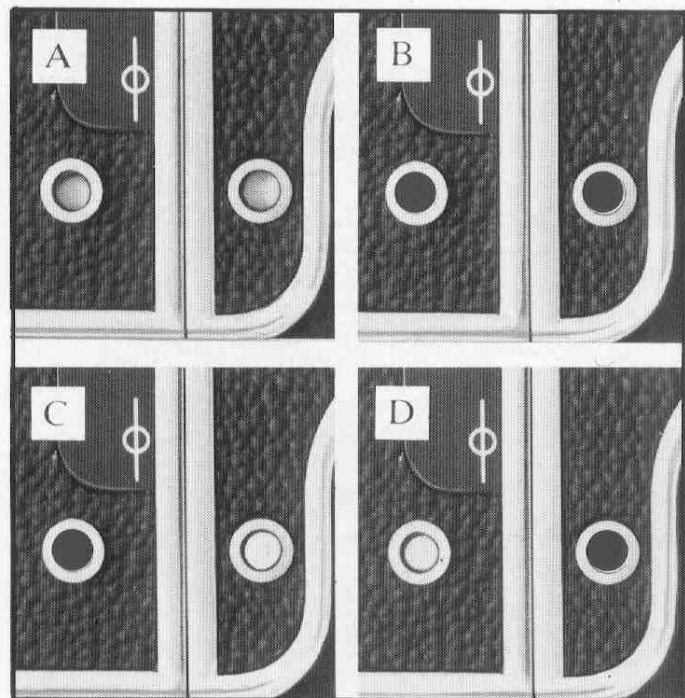


Fig 41

After the final exposure

The camera's release mechanism is automatically blocked when the final frame has been exposed. Fold out the magazine's film winding crank and wind the remaining film onto the take-up spool.

Miscellaneous (Figs. 42—43)

The magazine's film winding crank (23) is blocked only at frame '1'. So a partially exposed roll of film can be wound onto the take-up spool at any time.

The frame counter is automatically reset whenever the roll holder key is removed.

The center of the roll holder key (42) features a film consumption indicator (43) which is blank when the magazine has a full load on the supply spool. But the indicator gradually turns red as the film is exposed and advanced onto the take-up spool. A completely red indicator shows that the final frame has been exposed or that there is no film left in the magazine.

The film reminder (24) can be set at the ASA or DIN speed of the film used. You set this speed by flipping down the hinged clip and turning the serrated ring. There is a space behind the clip for a film box end.

Fig 42

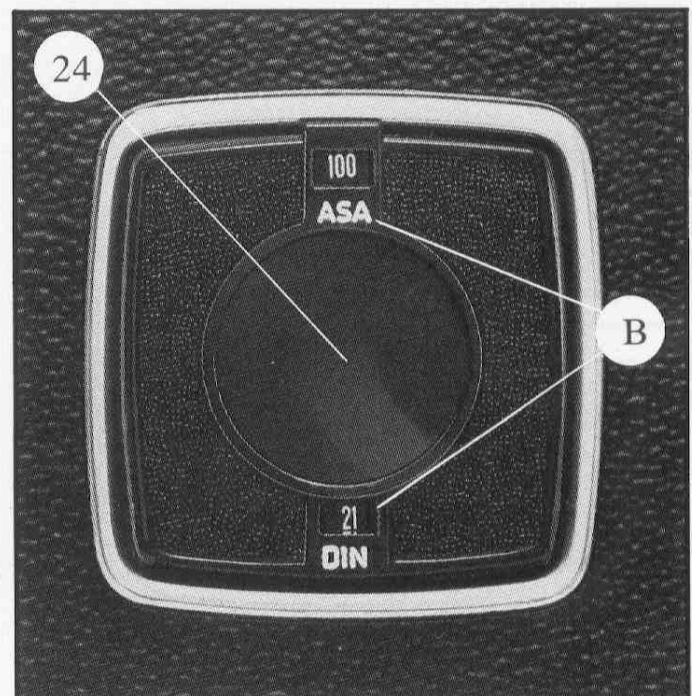
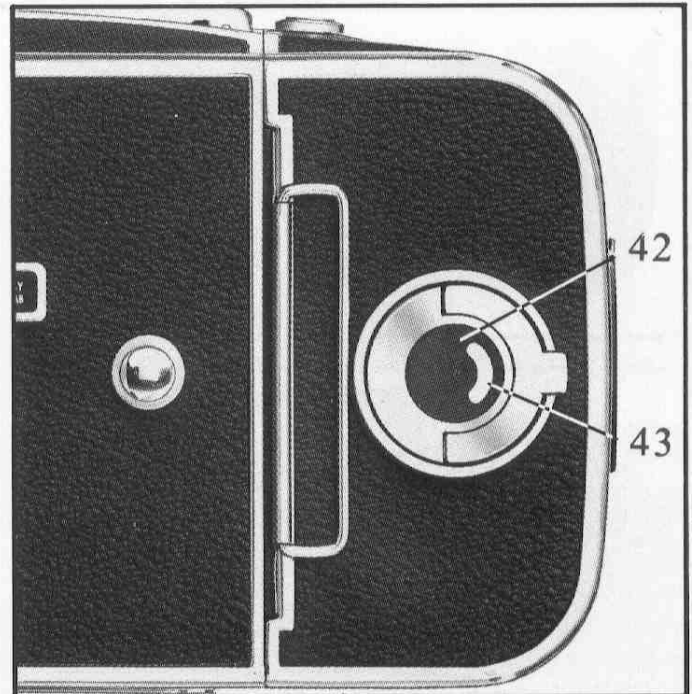
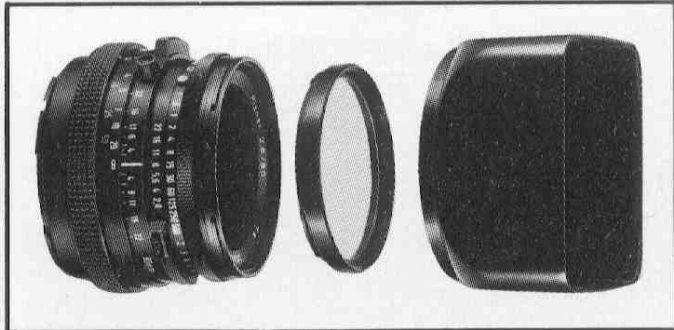


Fig 43

Fig 44



ACCESSORIES

Lens bayonet mounts

Hasselblad lenses with a 60mm Ø accessory mount have an internal bayonet mount for filters and Proxars and an external bayonet mount for lens shades and ringlight.

Tripod attachment (Fig. 45)

There is a tripod plate (38) on the base of the Hasselblad 500C/M and 500EL/M. It has a 1/4" and a 3/8" tripod socket.

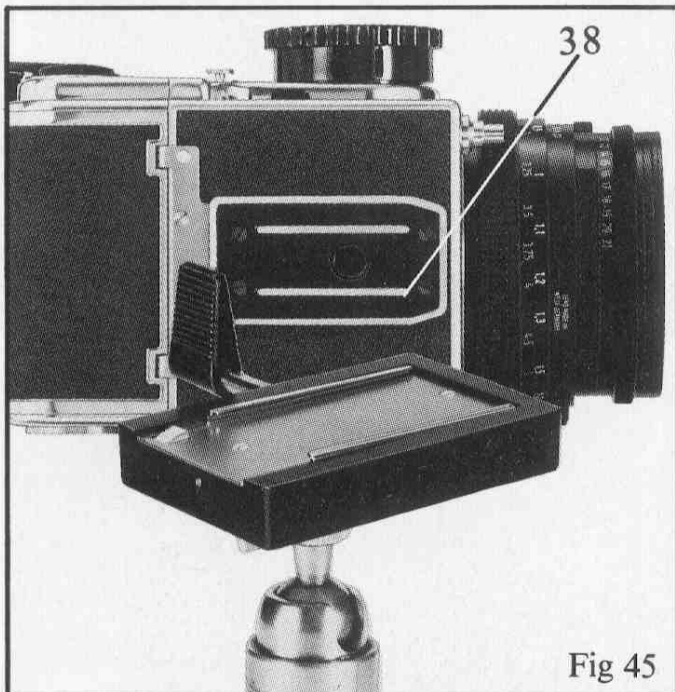


Fig 45

STRAP LUGS

Strap attachment (Fig. 46)

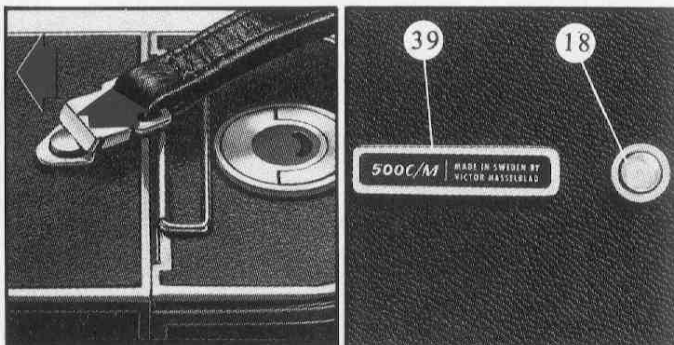
Place the main body of the strap clip onto one of the camera's strap lugs (18). Press down on the tip of the clip and pull back so the strap lug slips into the opening at the tip of the clip. Repeat this procedure on the other side of the camera.

Strap removal

Lift the clip locking plate and slide the clip forward. The clip will then slide off the strap lug.

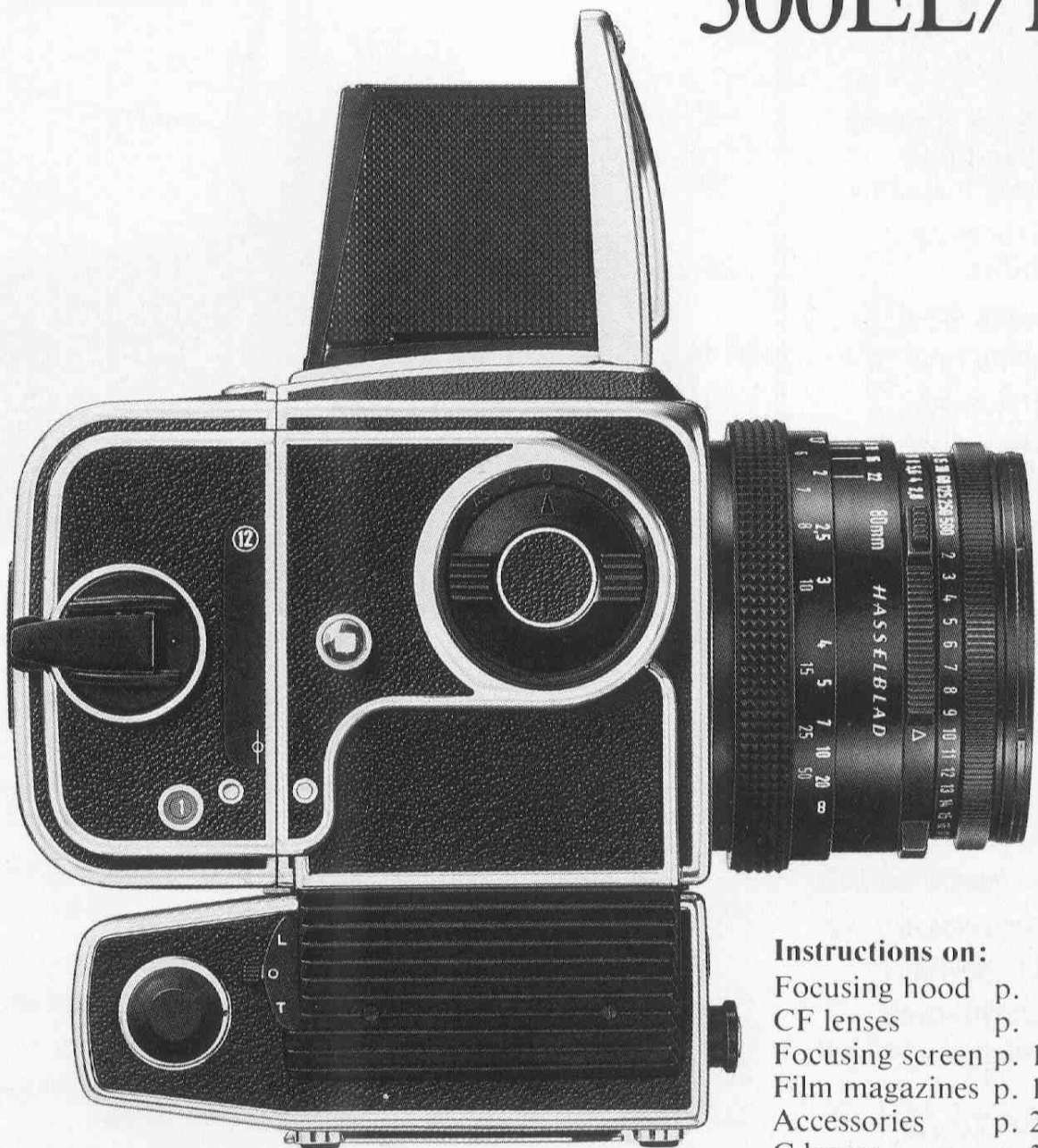
Accessory rail (Fig. 47)

The accessory rail (39) is used as the seat for e.g. the sports viewfinder, spirit level, or adjustable flash.



Figs 46—47

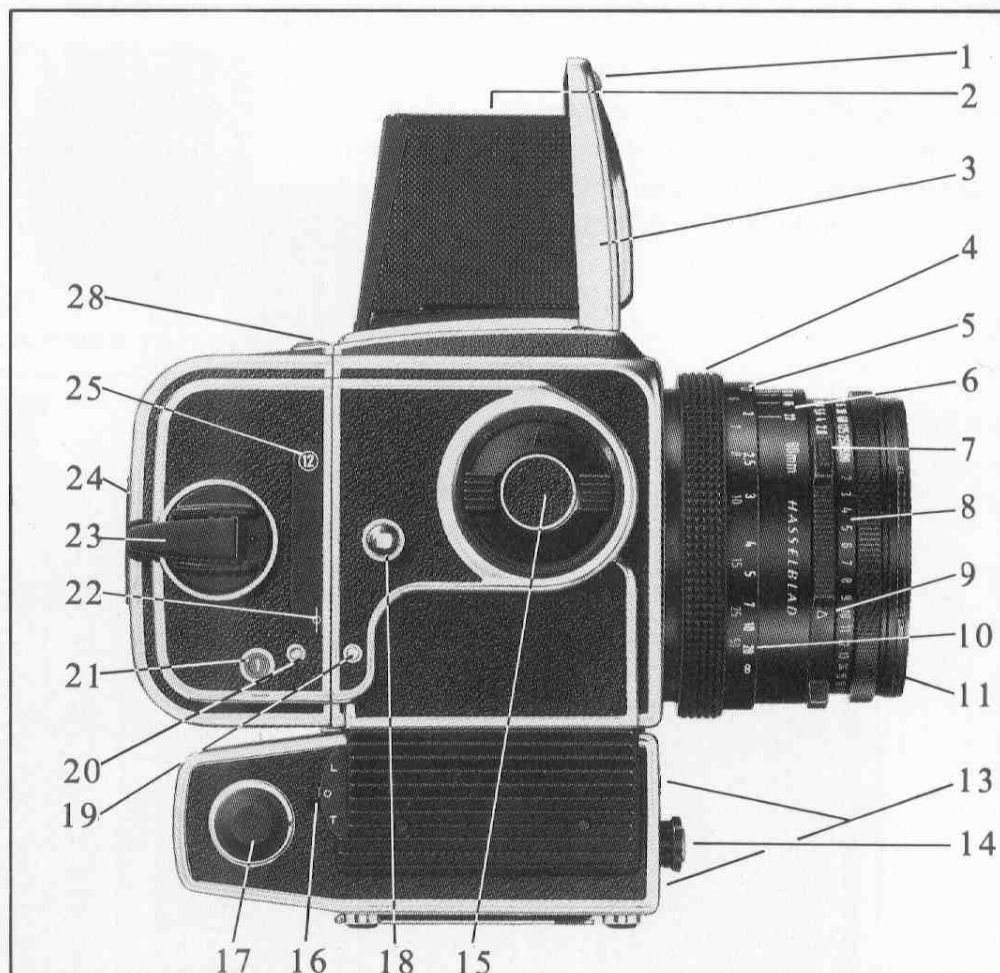
500EL/M



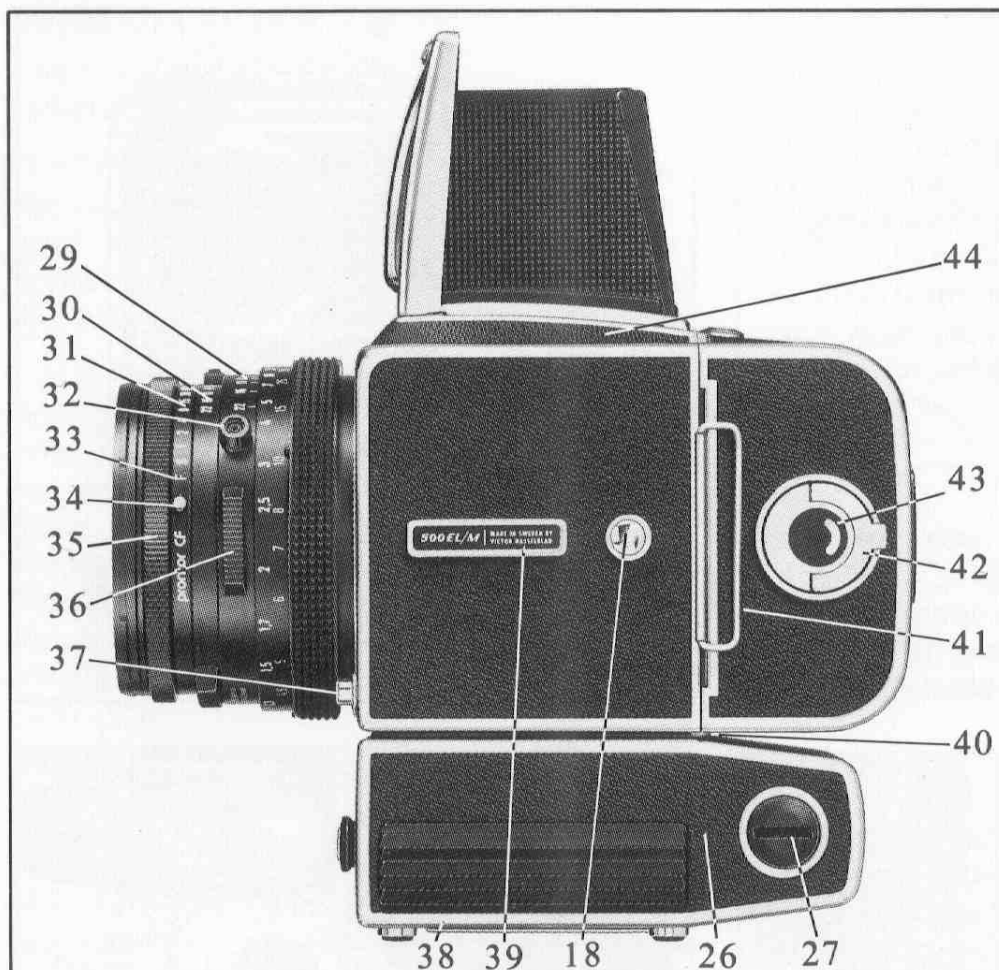
Instructions on:

Focusing hood	p. 6
CF lenses	p. 7—10
Focusing screen	p. 12
Film magazines	p. 15—19
Accessories	p. 20
C lenses	p. 35—40

1. Catch for focusing hood and fine-focusing magnifier
2. Fine-focusing magnifier
3. Focusing hood
4. Focusing ring
5. Central index
6. Depth-of-field scale
7. Button for cross-coupling of shutter speed and aperture rings
8. Exposure value scale
9. Exposure value index
10. Distance scale (feet and meters)
11. External and internal accessory mounts
13. Front release sockets
14. Shutter release
15. Mode selector
16. Time exposure, locking and charging lever
17. Side socket for camera release and battery charging



- | | |
|--------------------------------|-------------------------------------|
| 18. Strap lug | 24. Film reminder |
| 19. Shutter status indicator | 25. Magazine designation |
| 20. Film advance indicator | 26. Battery compartment cover |
| 21. Film counter | 27. Battery compartment cover catch |
| 22. Film plane indicator | 28. Magazine release catch |
| 23. Folding film winding crank | |



- | | | |
|---|---|--------------------------------|
| 29. Index for infrared compensation | 34. Detent button for F setting | 39. Accessory rail |
| 30. Aperture ring with aperture scale | 35. Shutter speed ring | 40. Magazine support catches |
| 31. Shutter speed scale | 36. Depth-of-field preview tab | 41. Magazine slide |
| 32. PC flash terminal | 37. Lens lock release button | 42. Roll holder key |
| 33. F setting (used only with 2000FC/M) | 38. Tripod plate and 3/8" tripod socket | 43. Film consumption indicator |
| | | 44. Focusing screen |

CAMERA BODY (Fig. 48)

The camera body contains the mechanical and electrical components for camera operation. The lower section (B) contains compartments for the batteries, fuse, and motor. The upper section (A) contains the mode selector, focusing screen, mirror, and auxiliary shutter. The camera body is equipped with fixtures for viewfinders, lenses, and film magazines plus sockets for camera release and battery rechargers.

BATTERIES (Figs. 49—50)

The camera is operated by a battery-powered motor (C). Rechargeable DEAC 5/600 DKZ batteries (nickel-cadmium accumulators) are used. The battery compartment (B) holds two batteries. Each battery is good for about 1,000 exposures.

Battery insertion

Use a coin in the slot to turn the battery compartment cover catch (27)—the slot should then be vertical. The battery compartment cover (26) then unlocks at the rear end and can be removed.

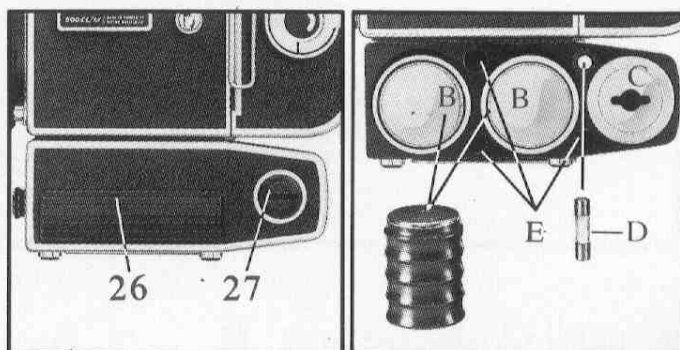
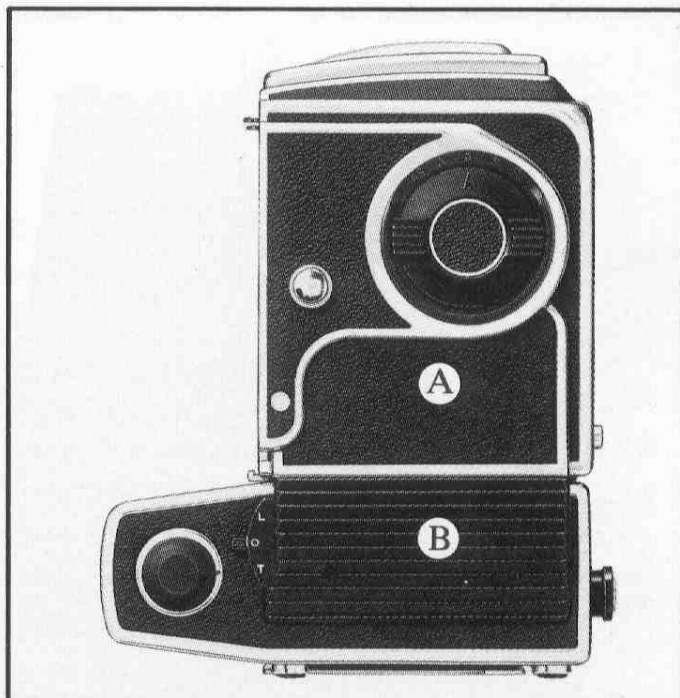
Insert each battery with the '+' end first. The battery compartment cannot be closed if a battery has been inserted incorrectly.

The camera cannot be released, nor the batteries charged until the battery compartment cover has been closed.

Fuse

A 1.6 A medium slow-blow fuse (5 × 20 mm) must be used in the fuse receptacle (D). Always have a spare fuse on hand. Spare fuses can be stored in the three receptacles (E).

Fig 48



Figs 49—50

MODE SELECTOR (Fig. 51)

The mode dial has five settings governing the camera release mode.

O = Normal mode. When the shutter has been triggered and pressure on the shutter release relaxed, the film is advanced, the between-the-lens shutter is cocked and the mirror is returned to the focusing position.

S = Pre-release. Certain mechanical functions are pre-released in this mode, leaving only operation of the between-the-lens shutter when the release button is pressed. This reduces camera-induced shake even further and reduces to a minimum the time elapsing from the moment the shutter release is pressed until the shutter actually operates. The mode selector automatically returns to the O mode after each cycle.

RS = Pre-release repeat. Operation is the same as in the S mode but the camera remains in the S mode after shutter release.

A = Automatic. The camera makes continuous exposures as long as the triggering impulse is supplied and unexposed film remains in the magazine. The sequential exposures in this mode are at a rate of about 1 frame/s. The A setting cannot be used with shutter speeds slower than 1/15 s.

AS = Automatic pre-release. The same operation as in the A mode, but the camera remains in the pre-release mode after every exposure sequence.

Fig 51

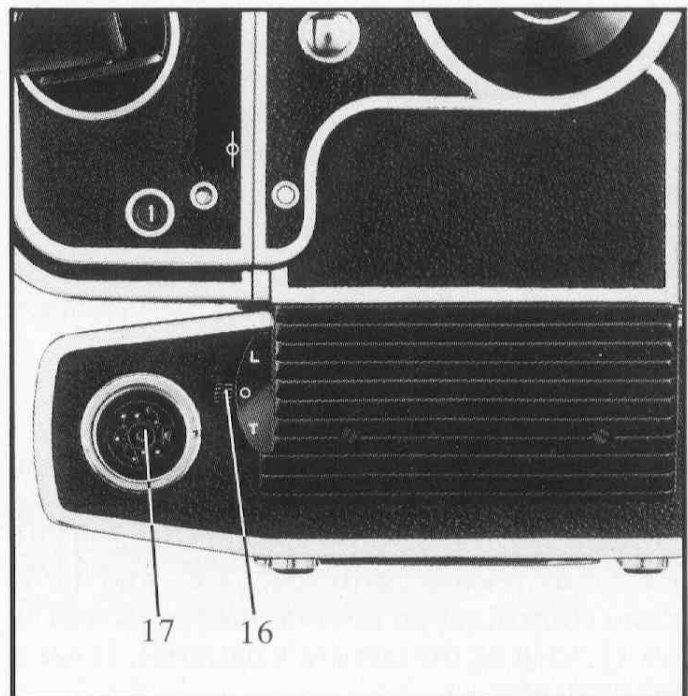
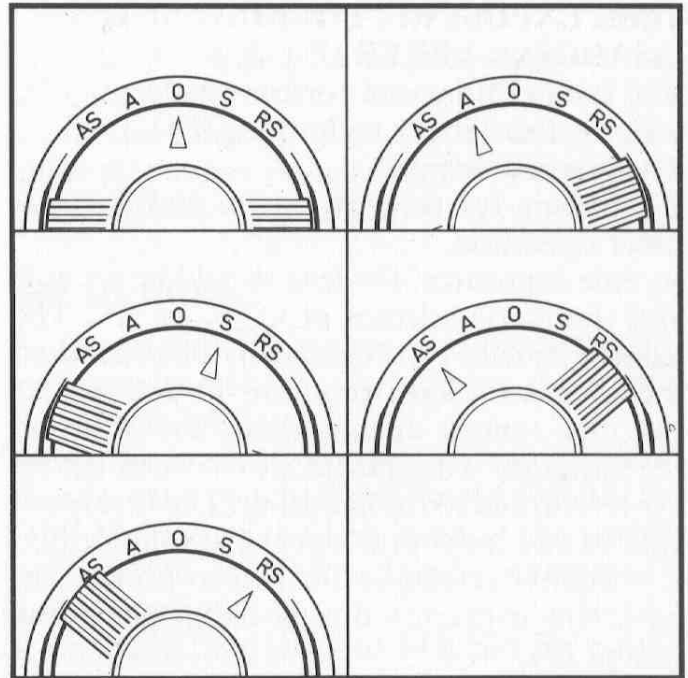


Fig 52

TIME EXPOSURE, LOCKING AND CHARGING LEVER (Fig. 52)

The lever (16) is used for time exposure (T), locking and battery recharging (L).

O = Normal setting.

T = Setting for time exposures and for self-timer operation.

In time exposures, the lens should be set at B and the mode selector at O, S, or RS. The camera shutter is mechanically opened when the lever is shifted from O to T. The shutter can then remain open without any drain on the batteries. The shutter closes when the lever is returned to the O setting. The film is advanced and the shutter cocked automatically. L = Shutter release is blocked to prevent inadvertent triggering during battery charging (see p. 27).

Double exposure

Proceed as follows when multiple exposures are desired on the same frame:

Press the shutter release and keep it depressed. Move the time exposure, locking and charging lever (16) to the L setting. Insert the magazine slide and remove the magazine. Return the lever (16) to the O setting. Replace the magazine. Make an exposure in the normal way. Repeat this cycle if additional exposures are desired on the same frame.

Side socket for camera release and battery charging

The camera's side socket for camera release and battery charging (17) is a standard 5-pole DIN socket. It is used for shutter triggering by means of release cords (SK, LK, and DK), radio control, or an intervalometer, as well as for recharging the camera's batteries. It has a protective cover.

Fig 53

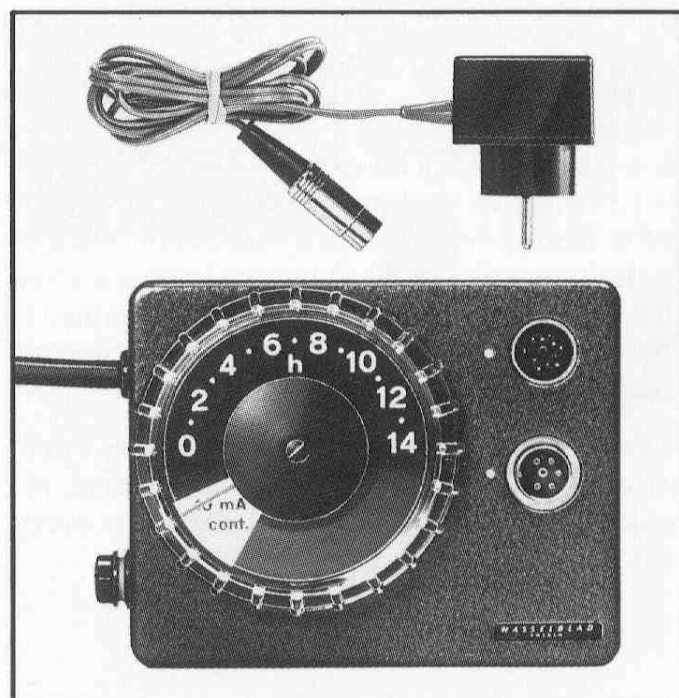


Fig 54

ALTERNATIVE RELEASE METHODS

The camera can be triggered in different ways, e.g. with a release cord, intervalometer, by radio control, etc.

The general rule for all release methods is that the button which triggers the release impulse to the camera must be kept depressed until the between-the-lens shutter has opened and closed completely. This is especially important at shutter speeds from 1 to 1/15 s. If the shutter speed is set at 1 s, for example, and pressure on the release button is relaxed before the between-the-lens shutter has had time to close, the auxiliary shutter will terminate the exposure prematurely.

Release sockets (Fig. 53)

The front of the camera features two identical sockets (13) for attachment of a release cord or a release button. The release button or shutter release (14) is normally in the lower socket but can be removed by simply pulling it out.

FK type cords are suitable release cords.

Release cords

A tripod should be used when operating the camera at slow shutter speeds. Camera release by release cord is then suitable. Release cords in lengths from 1 ft to 20 ft are connected to the front sockets (13). Release cords from 100 ft to 600 ft and cords for connection of a recharge unit are connected to the side socket (17). When cords longer than 100 ft are used, an amplifier should be put between camera socket and cord.

General

The 500EL/M can also be released by closing the electric circuit between pins 1 and 3 (see the circuit diagram in p. 28). External resistance should not exceed 6 ohms if triggering is to be reliable.

RECHARGING

Recharge unit I is standard equipment with each new camera and is used for recharging the camera's batteries.

Move the lever (16) to the L or O position. Connect the recharge unit to the side socket (17). Make sure the unit is set at the correct voltage (110 or 220 VAC) and connect it to a wall outlet.

Recharging time is about 14 hours for a fully discharged battery and 28 hours if two batteries are recharged simultaneously. Batteries should not be overcharged.

Change or recharge a battery as soon as the camera recycling time becomes noticeably prolonged. If a battery becomes so exhausted that the camera stops working or stops in the middle of a cycle, move the lever (16) to L and connect the recharge unit.

NOTE! The L setting must be used if the camera has not recycled fully. If the camera has recycled, either the L or the O setting can be used for battery recharging.

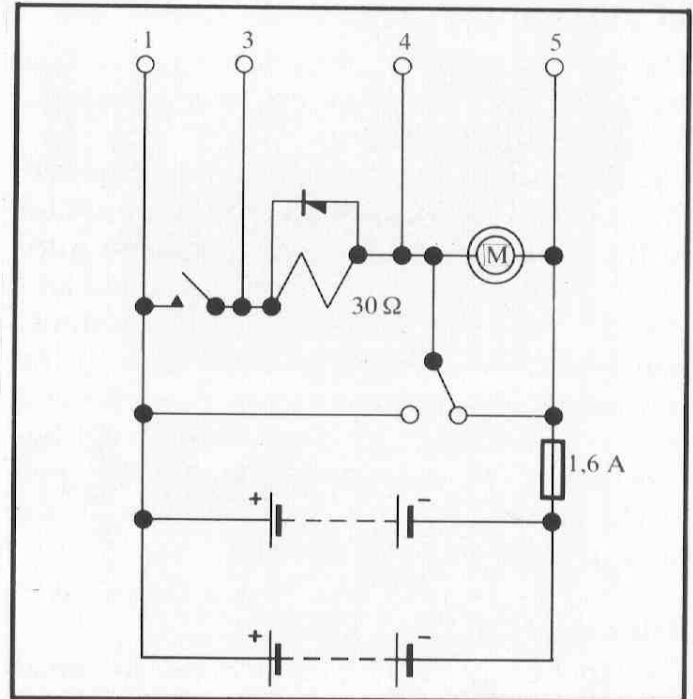
Battery charger option

Recharge unit III with a built-in timer is available as an optional extra.

CIRCUIT DIAGRAM

Voltage: 6V
Batteries: One or two DEAC 5/600 DKZ without soldering tabs or battery terminals.
Fuse: 1.6 A medium slow-blow (5×20 mm).
Socket: Preh 8-6404
Exposure current (pins 1 and 3): 0.2 A

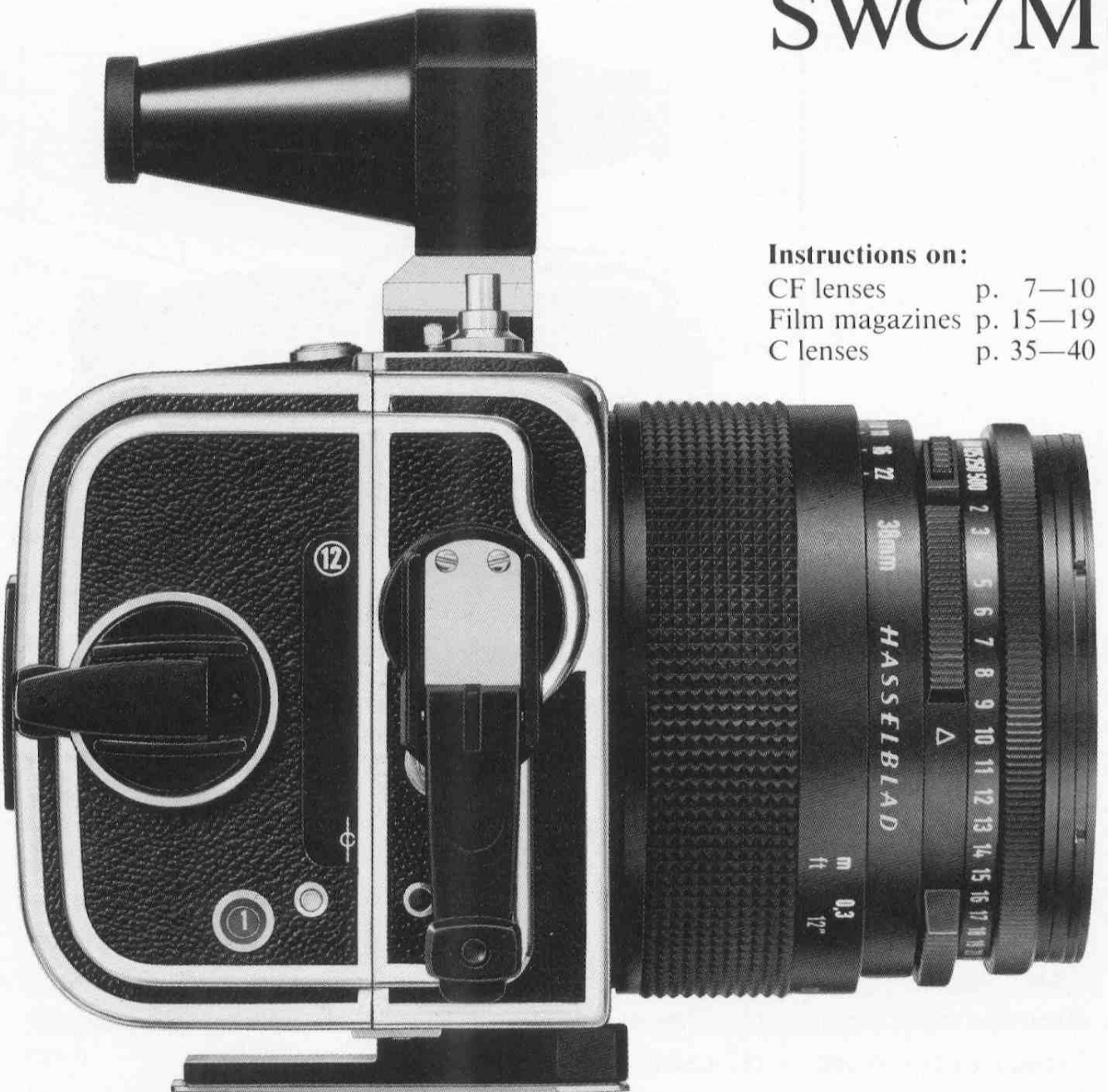
Fig 55

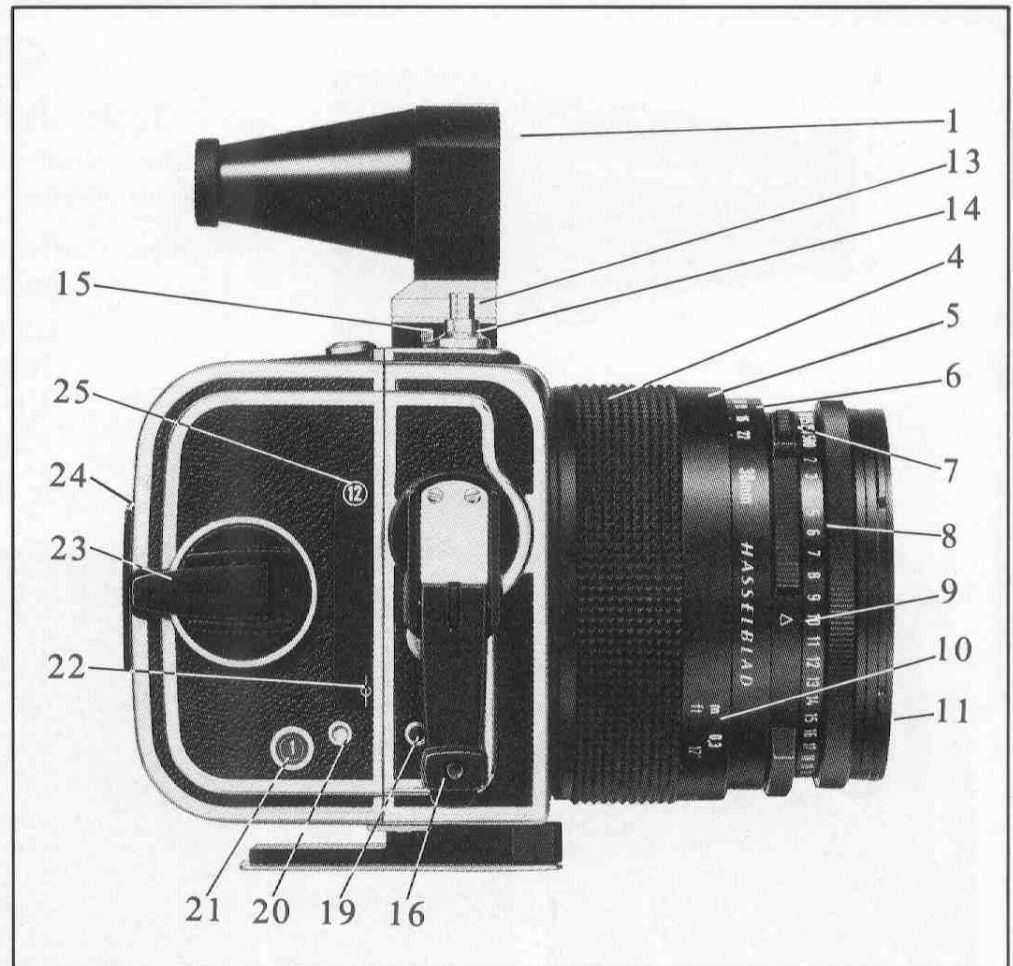


SWC/M

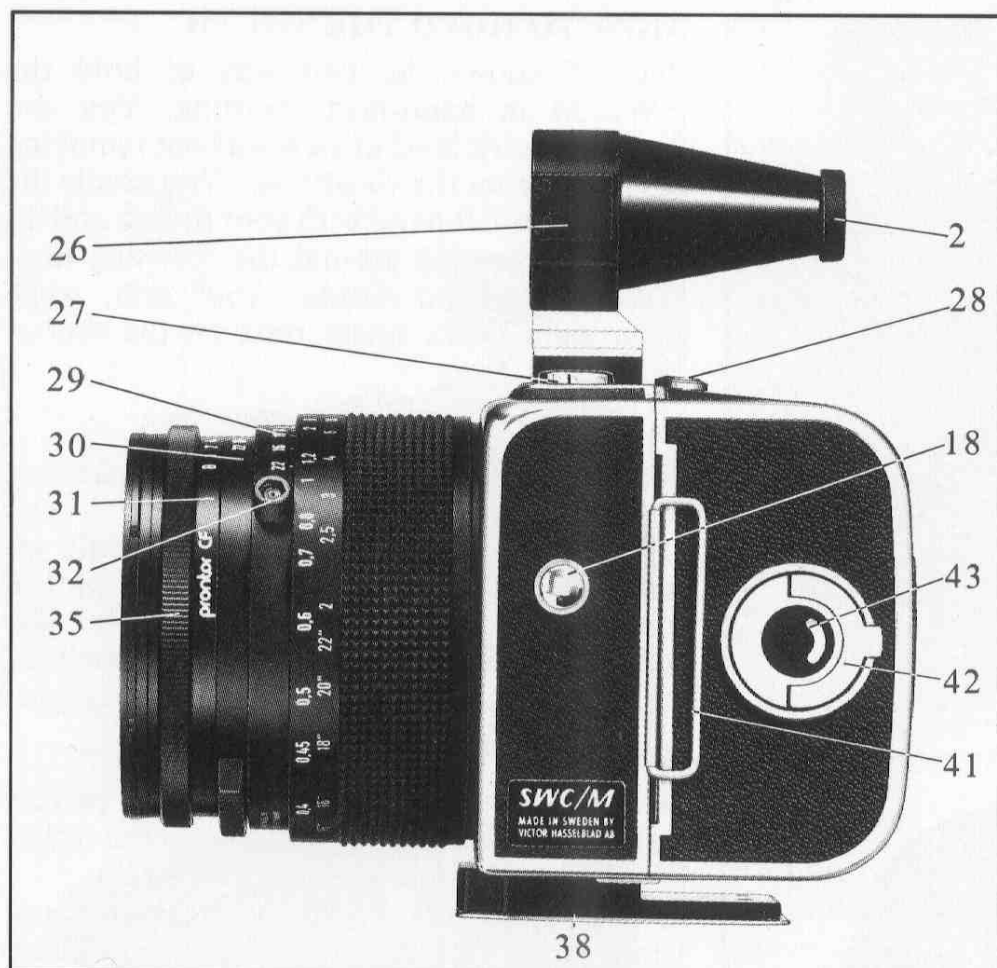
Instructions on:

CF lenses p. 7—10
Film magazines p. 15—19
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- | | | |
|--|--|--------------------------------|
| 1. Viewfinder | 11. External and internal accessory mounts | 18. Strap lug |
| 2. Protective rubber ring | 13. Threaded cable release socket | 19. Shutter status indicator |
| 4. Focusing ring | 14. Shutter release | 21. Film counter |
| 5. Central index | 15. Time exposure lock | 22. Film plane indicator |
| 6. Depth-of-field scale | 16. Crank for film advance and shutter cocking | 23. Folding film winding crank |
| 7. Button for cross-coupling of shutter speed and aperture rings | | 24. Film reminder |
| 8. Exposure value scale | | 25. Magazine designation |
| 9. Exposure value index | | |
| 10. Distance scale (feet and meters) | | |



- | | | |
|--------------------------------------|---------------------------------------|--------------------------------|
| 26. Reflector prism for spirit level | 30. Aperture ring with aperture scale | 40. Magazine support catches |
| 27. Spirit level | 31. Shutter speed scale | 41. Magazine slide |
| 28. Magazine release catch | 32. PC flash terminal | 42. Roll holder key |
| 29. Index for infrared compensation | 35. Shutter speed ring | 43. Film consumption indicator |
| | 38. Tripod plate | |

Fig 56



HOW TO HOLD THE SWC/M

Fig. 56 shows the best way to hold the SWC/M in hand-held shooting. You can keep the spirit level in view without removing your eye from the viewfinder. You cradle the lens in your left hand with your thumb and index finger curled around the focusing ring. Your right hand steadies your grip, while your right index finger rests on the shutter release.

MAIN CAMERA COMPONENTS

The Hasselblad Super Wide C/M consists of three main components:

The camera body with its permanently attached Biogon lens, the detachable optical viewfinder, and the interchangeable film magazine which also fits the other Hasselblad cameras.

VIEWFINDERS (Figs. 57—58)

The optical viewfinder (1) shows the picture area and a simultaneous view—via the reflecting prism (26)—of the spirit level (27).

The reflector makes it possible to keep a constant check on the spirit level during hand-held use of the camera.

The viewfinder has the same angle of view as the lens, but it takes in a slightly larger field because of its location on top of and behind the lens. The difference is as follows:

Top of the field:	6 in. larger.
Bottom of the field:	Viewfinder and lens field coincide.
Sides of the field:	3 in. wider on each side.

This is the case irrespective of the lens-to-subject distance.

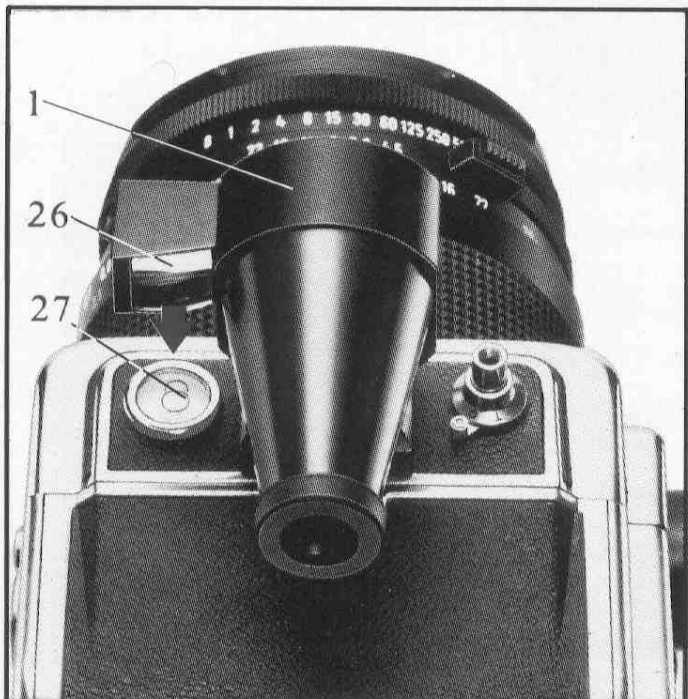


Fig 57

Fig 58

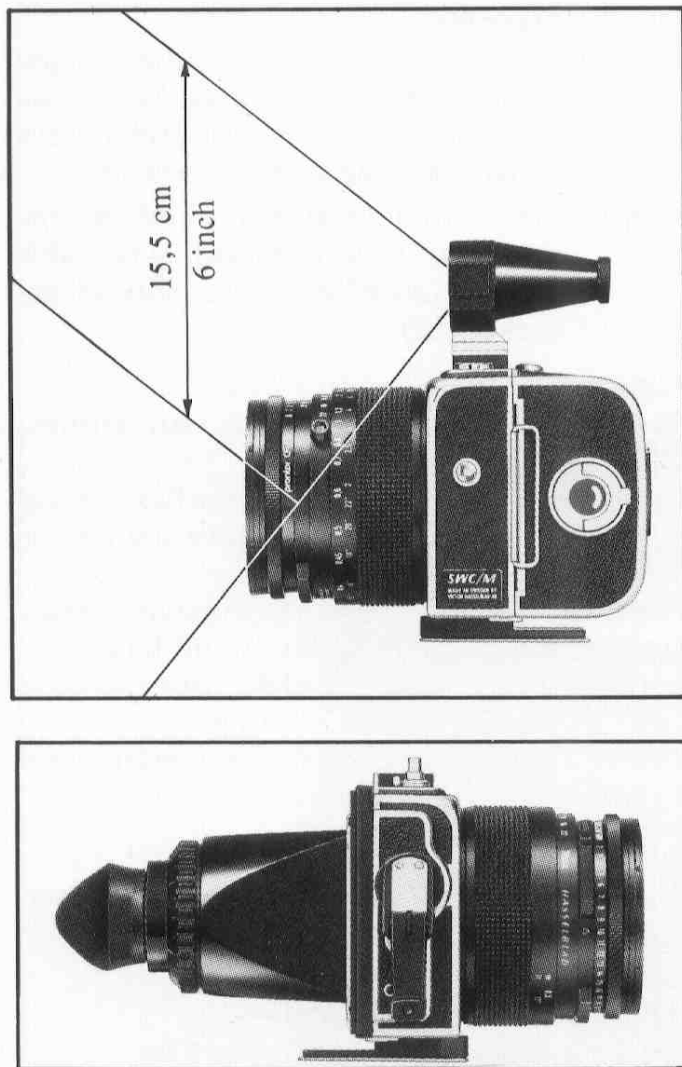


Fig 59

So decide on the desired framing and camera angle and use the spirit level (27) to level the camera. In hand-held work, you should concentrate on keeping the camera level at the moment of exposure.

This is extremely important, since the ultra wide-angle lens demands careful alignment for accurate rendition of vertical lines in the subject. Leveling the camera with the aid of the spirit level is even easier if a tripod is used.

Focusing screen adapter (Fig. 59)

The focusing screen adapter is used when an exact check on depth of field and image composition is necessary. It is attached to the camera in place of the film magazine. The focusing screen adapter has a seat to permit attachment of a magnifying hood, prism viewfinder, or focusing hood.

Image checks on focusing screen

Set the shutter at B.

Set the lens at the maximum aperture.

Set the time exposure lock (15) at T.

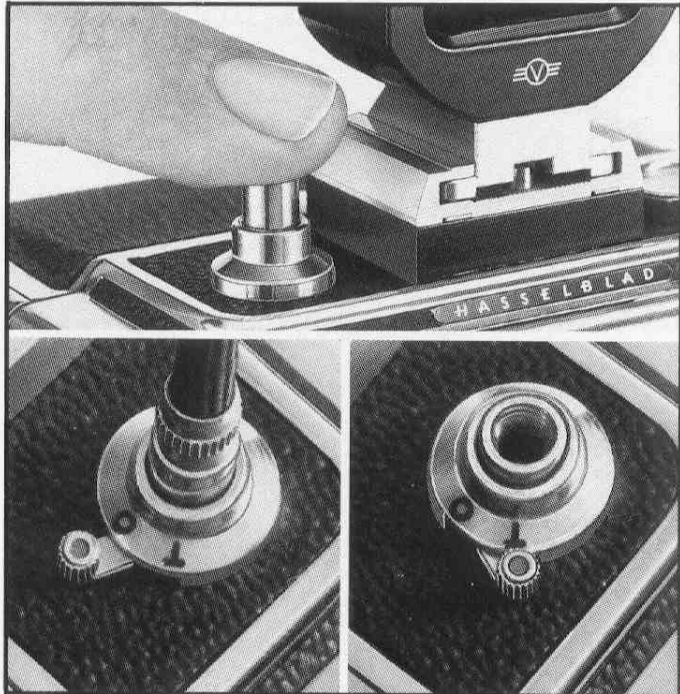
Open the shutter by depressing the shutter release.

When the checks have been completed, return the time exposure catch to O, thereby closing the shutter. Cock the shutter with the film advance crank. Remove the focusing screen adapter and reattach your film magazine. Then make your exposure in the ordinary way.

Cleaning the Biogon lens

The optical design of the Biogon lens has resulted in unsurpassed performance for a wide-angle lens. However, the short distance between the rear lens element and the film means that performance can easily be impaired by even a trace of dust. So when cleaning your lens, pay particular attention to the rear lens element.

Fig 60



Making exposures

The Hasselblad SWC/M has a shutter release button on top of the camera body. When you make an exposure, press the shutter release (14) smoothly, exerting steady pressure.

Note! The shutter must be cocked and the magazine slide removed. The cable release is attached to the cable release socket (13).

Time exposure lock

The time exposure lock (15) has two settings:
O = Normal setting

T = Release button locked after being pressed. Remains depressed until the lock is returned to the O setting.

The T setting is used for time exposures when the lens is set at B. The film cannot be advanced with the crank (16) until the time exposure lock is returned to the O setting.

This blocking function will not operate when a cable release is attached.

Magazines for Polaroid film (Fig. 61)

When a magazine for Polaroid film is used with the SWC/M, the film advance crank is unable to make a complete turn.

Proceed as follows in this case:

Attach a magazine for Polaroid film.

Make an exposure.

Move the crank up and down with a pumping movement (2 1/4 times) until it stops.

Note! The magazine ~~100~~⁵⁰ for Polaroid film must never be used with the SWC/M.

Tripod attachment

There is a tripod plate (38) on the base of the Hasselblad SWC/M. The plate has two tripod sockets (1/4" and 3/8").

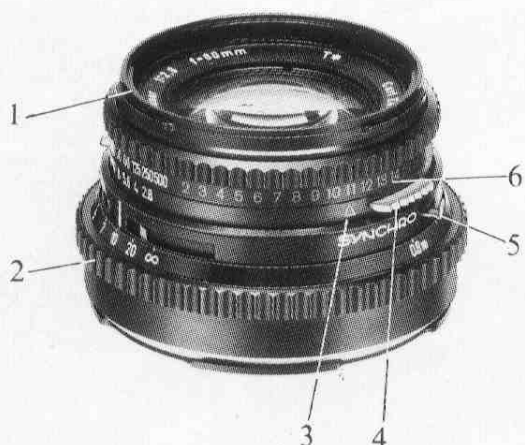


Fig 61

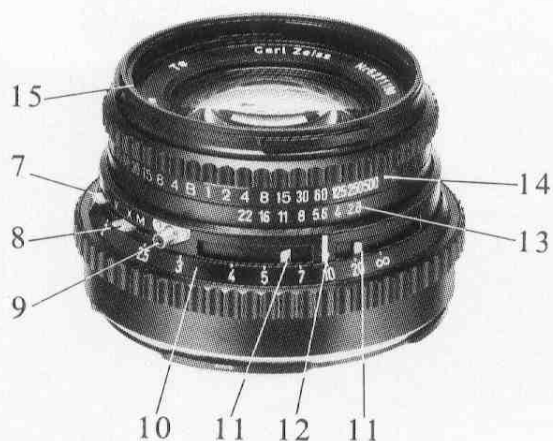
C lenses

Instructions on:
Changing lenses p. 11





1. External and internal accessory mounts
2. Focusing ring
3. Exposure value index
4. Cross-coupling release
5. Depth-of-field preview catch
6. Exposure value scale
7. Catch for synchronization and self-timer selector (8)
8. Synchronization and self-timer selector



9. PC flash terminal
10. Distance scale
11. Automatic depth-of-field indicators
12. Central index
13. Aperture scale
14. Shutter speed ring and shutter speed scale
15. Grip ring for setting shutter speed, aperture, and exposure value

C LENSES

C lenses (this designation does not appear on the lenses) can be used with the 500C, 500C/M, 500EL, 500EL/M, 2000FC, and 2000FC/M (see also the Instruction Manual for the 2000FC/M).

They all feature a built-in Synchro-Compur leaf shutter, an automatic diaphragm, an exposure value scale, automatic depth-of-field indicators, M and X flash synchronization at all speeds, and a self-timer V. The C lenses attach to the camera via a bayonet mount.

Diaphragm (Fig. 62)

The aperture ring (13) and shutter speed ring (14) are cross-coupled. Both rings are operated with the grip ring (15). For independent setting of the aperture or shutter speed, press the cross-coupling release (4) to the rear and rotate the ring until the desired value is opposite the central index (12). The lens is normally focused wide open. The diaphragm automatically closes down to the working f/stop at the moment of exposure. Press the depth-of-field preview catch (5) to check out the available depth of field. This will stop the lens down to the working aperture. The diaphragm is reopened to the maximum aperture by turning the aperture ring (13) to the maximum aperture or tripping the shutter (with a detached film magazine) and winding the camera.

Shutter speeds (Figs 63—64)

The shutter speed ring (14) has three different scales with white (black on chrome finish lenses), green, and red numerals. Only the white (black) numerals and B can be set opposite the central index (12).

Fig 62

