

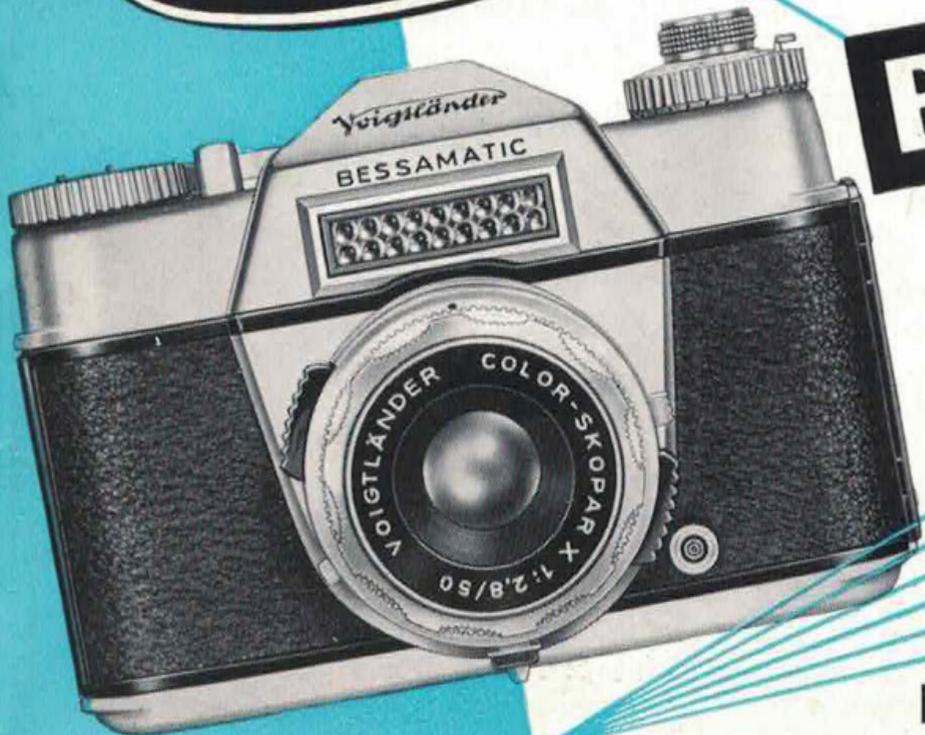
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Voigtländer



BESSAMATIC

24x36
35 mm

INSTRUCTIONS FOR USE

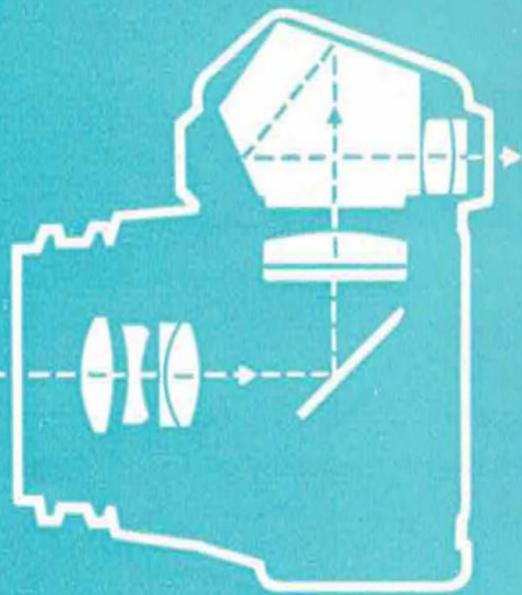
Your Best Guarantee

for first-class pictures – even in colour – are the interchangeable Voigtländer high-class lenses fitted in your camera.

All these lenses represent the highest level of scientific achievement. Constant co-operation between optical and mechanical designers under one roof

ensures the best possible matching of lenses and camera with every new Voigtländer model.

In practice it means that these lenses yield outstanding definition over the whole picture area, amazing brilliance even in dull light, and beautifully clear and faithful colour rendering.



Right Here

is the most important piece of advice of this instruction booklet. We have prepared it with a great deal of care to show everything in the clearest possible way. So please read this booklet carefully before you load your first film and begin to take pictures.

First of all make yourself thoroughly familiar with the camera. When studying the instructions, open up the four folded cover pages to the top and bottom. You will find there a clear view of all the controls. Look at these pages while you practise the various operations with the empty camera.

Remember also that the BESSAMATIC is very robust, but nevertheless an optical and mechanical precision instrument. It therefore requires gentle and sensible treatment. The camera will repay careful handling with beautifully clear and sharp pictures for many years to come.

V O I G T L Ä N D E R A . G . B R A U N S C H W E I G

BESSAMATIC

24 x 36 · 35 mm

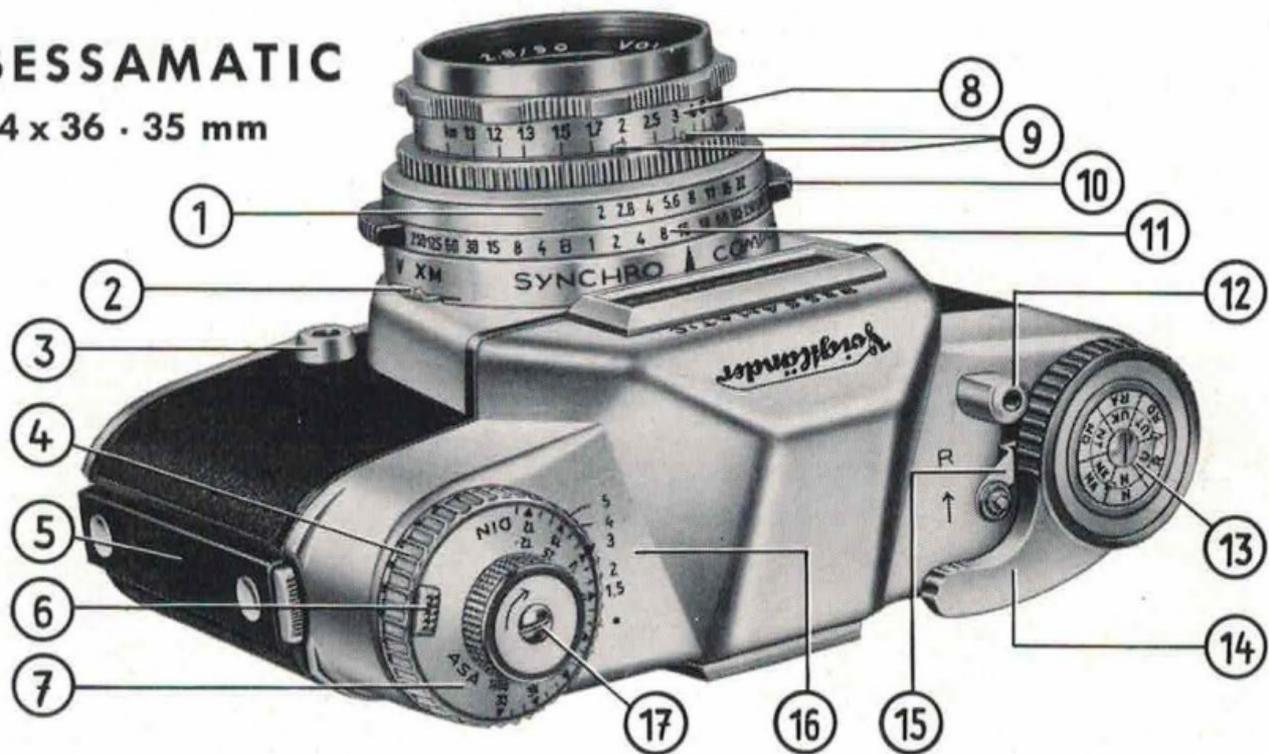


Illustration I

- 1 **Aperture ring**
- 2 **Synchronizing lever**
for M or X synchronization and
self-timer (V)
- 3 **Flash socket**
- 4 **Setting knob**
for exposure meter readings
- 5 **Spring catch**
to open and close the camera back
- 6 **Catch**
of the ASA-DIN setting disc
- 7 **DIN-ASA setting disc**
- 8 **Distance scale**
- 9 **Depth of field indicator**
- 10 **Rotating levers of the combination
setting ring**
- 11 **Combination setting ring**
with shutter speed scale
- 12 **Release button**
with cable release socket
- 13 **Film type indicator**
- 14 **Rapid winding lever**
for tensioning the shutter and
advancing the film
- 15 **Reversing lever**
- 16 **Divisions**
for filter factors
- 17 **Film rewind knob**
- 18 **Locking catch**
for the synchronizing lever
- 19 **Lens changing catch**
- 20 **Honeycomb cell window**
of the photo-electric exposure meter



Illustration II

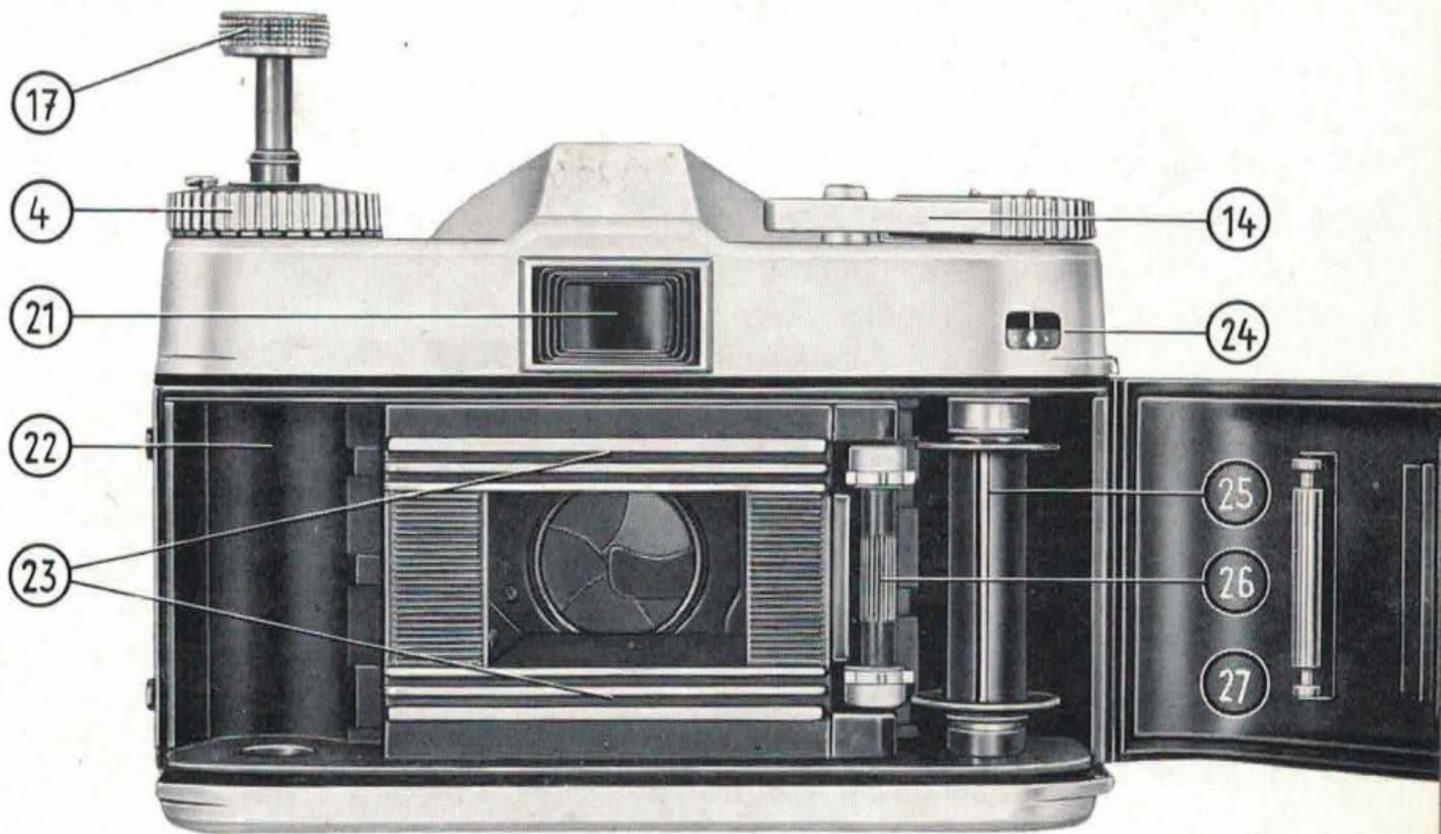


Illustration III

These pages show the BESSAMATIC with the back open:

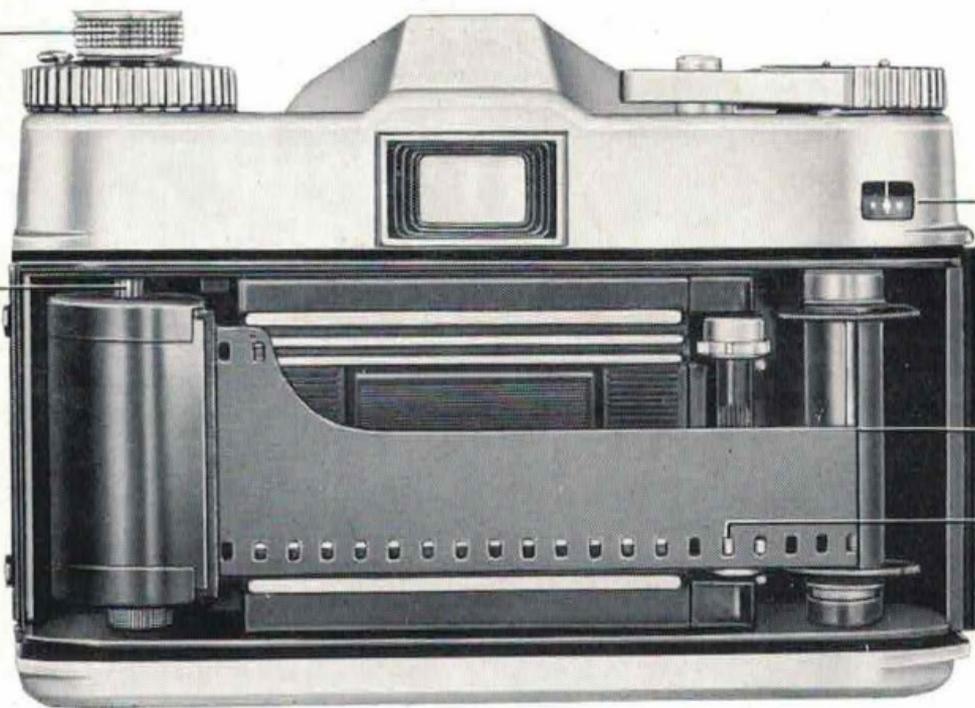
Top: without film and with extended rewind knob

Bottom: with film in position

- | | |
|--|--|
| 4 Setting knob
for exposure meter readings | 26 Film transport shaft
with milled centre for setting the
film counter |
| 14 Rapid winder
for tensioning the shutter and
advancing the film | 27 Camera back,
open |
| 17 Film rewind knob | 28 Shaft of rewind knob
engaged in cassette |
| 21 Finder eyepiece | 29 Film leader
folded over and hooked into
take-up spool |
| 22 Cassette chamber | 30 Sprocket of transport shaft
engaged in the film perforations |
| 23 Film track | |
| 24 Film counter window | |
| 25 Take-up spool
with slit on top | |

17

28



24

29

30

Illustration IV

Contents

To start with, loading the film

	Page
Opening the camera back and setting the film counter	3
Inserting the film	4
Getting ready for the first exposure – the rapid winder	5
Setting the film speed and the film type indicator	6–7

Then, taking the picture

Viewing through the finder	8
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Loading the Film

With the BESSAMATIC you are not limited to any one make of film. You can load any brand on the market, wherever you buy it.

The daylight cassettes of perforated 35 mm. miniature film hold 36 or 20 exposures 24 x 36 mm. You can get them in black-and-white, negative colour, and reversal colour film.

Although the cassettes are light-tight, it is advisable not to expose them to strong light. Make a point therefore of always loading and unloading the camera in the shade – even the shadow of your own body will do.

Opening the Camera Back

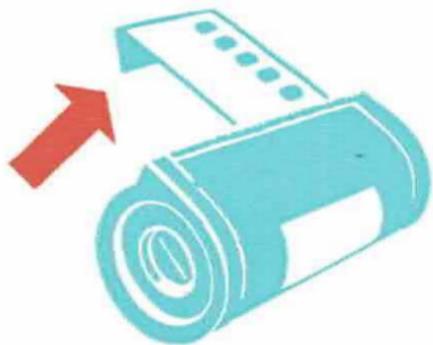
Press together both spring catches (5) and swing open the back to the right.

Setting the Film Counter

The film counter automatically shows the number of exposures still available at any time. It therefore runs backwards from No. 36 or No. 20 (in other words the first exposure) to No. 1.

Move the reversing lever (15) in the direction of the arrow towards "R". This permits the transport shaft (26) to turn in freely either direction. Now turn the shaft to the left or to the right by the milled centre until the \blacklozenge mark for (36-exposure cassettes) appears in the window (24) below the white index line. With 20 - exposure cassettes set the \odot mark to the white line.





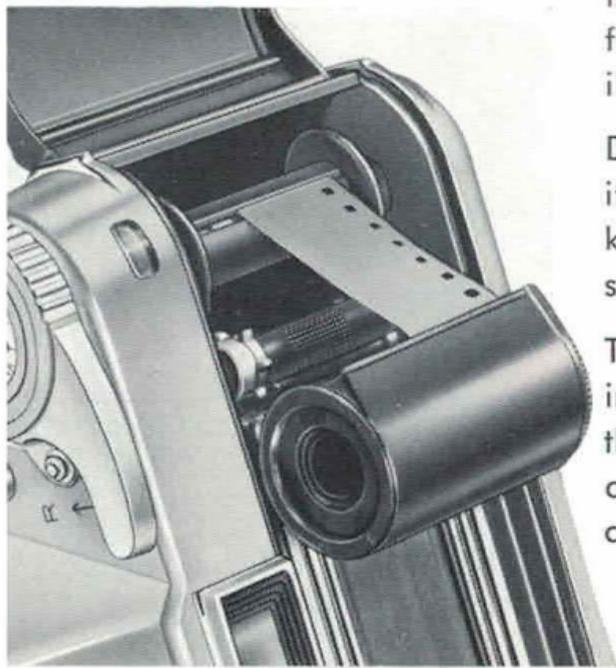
Inserting the Cassette . . .

Fully pull out the rewind knob (17) as shown in illustration III of the open cover, and turn the take-up spool (25) so that the long slit is on top.

Sharply fold back about $\frac{3}{8}$ inch of the beginning of the film, and push it into the slot up to the fold. The film edge must lie close against the spool flange (see illustration).

Draw the filmcassette across the film track (23) and insert it in the cassette chamber (22). Push back the rewind knob (17), turning it slightly if necessary to make the shaft (28) engage the cassette core.

The film should now lie flat in the film track as shown in illustration IV. Make sure that the lower sprocket of the transport shaft (30) engages the perforation holes of the film. Finally close the camera back – both catches must engage firmly.



... getting Ready for the First Exposure

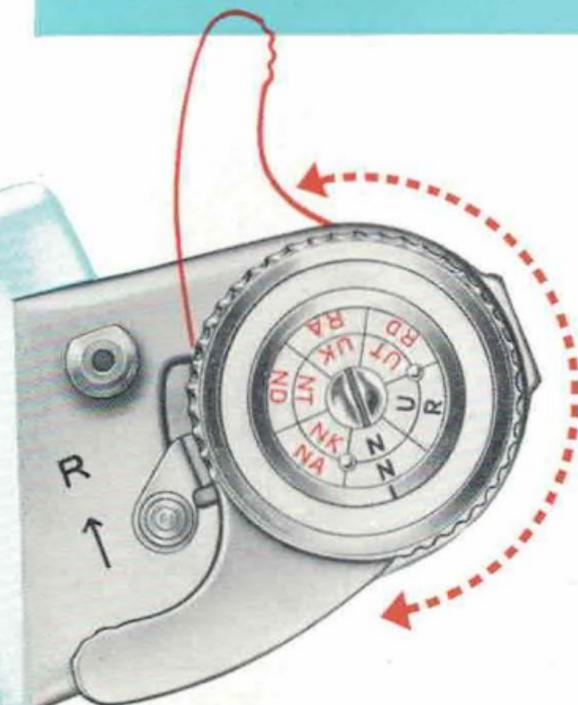
Swing the rapid winder (14) **as far as it will go**. At the same time the reversing lever (15) at "R" is pushed back into its original position. Then alternately operate the release (12) and the rapid winder until No. 36 or No. 20 respectively appears in the film counter window.

If the rapid winder is locked to start with, (in other words the shutter is still tensioned), first press the release.

The Rapid Winder

must always be pulled right through — it will then fly back automatically. This movement tensions the shutter, brings down the mirror into the optical path of the finder, advances the film by one frame, and also advances the film counter.

An interlocking mechanism prevents a second operation of the rapid winder before making an exposure. Similarly the finder image re-appears — and the shutter can be released — only after operating the rapid winder.

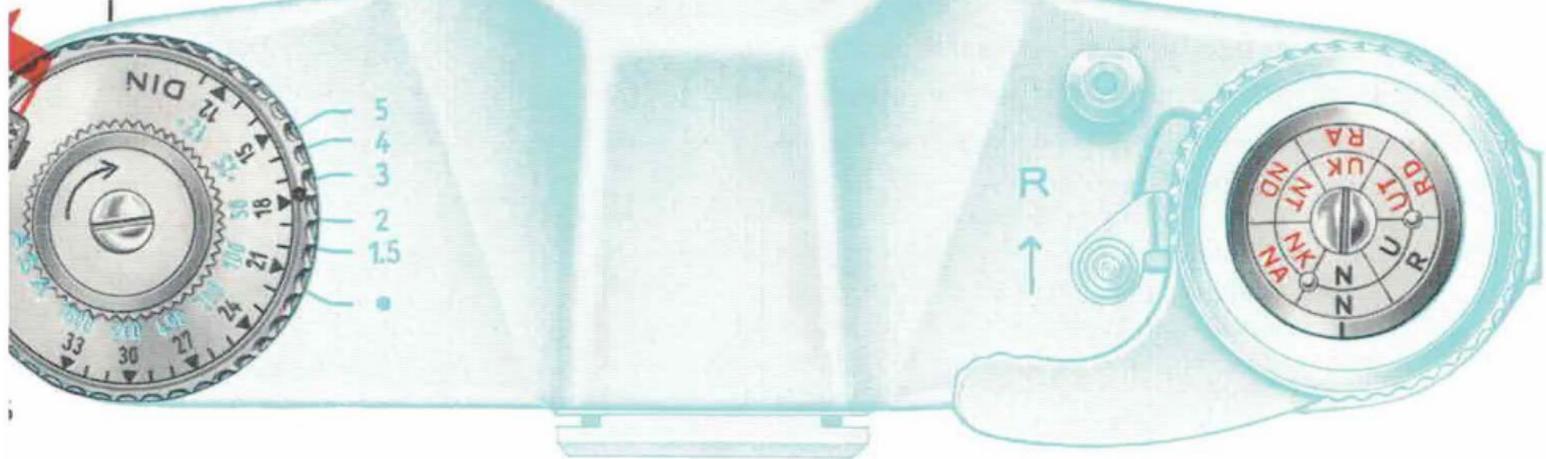


Setting the Film Speed

The meter setting knob (4) carries film speed figures in ASA and DIN.

To set the speed, pull the catch (6) outwards. At the same time turn the ASA-DIN disc (7) to the left or right to bring the required figure opposite the black index mark on the milled rim of the knob.

DIN
ASA



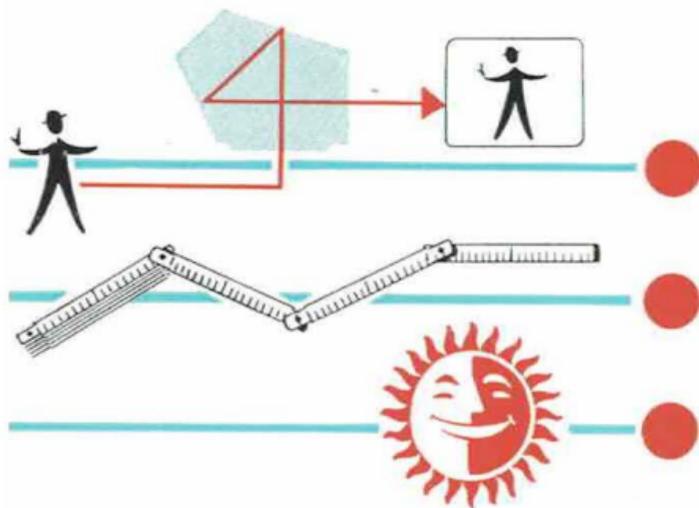
The Film Type Indicator

on the knob (13) of the rapid winder on the right serves to remind you of the type of film you have loaded in your camera. It has no effect on the exposure itself.

While you are at it, set it right away by rotating the disc until the appropriate letters are opposite the black index line.

- UT (RD)** = daylight reversal colour film (for slides)
- UK (RA)** = artificial light type reversal colour film (for slides)
- NT (ND)** = daylight type negative colour film
- NK (NA)** = artificial light type negative colour film
- N (N)** = black-and-white negative film
- U (R)** = black-and-white reversal film (for slides)





At a Glance

you take in everything in the large, brilliant, and completely novel BESSAMATIC view- and rangefinder (21):

You see the subject upright, right-way-round, and free from parallax, with the precise field of the view covered by the film;

You accurately focus all interchangeable lenses – either with the optical split-image rangefinder or with the ground glass screen;

You measure the exposure. With the coupling system you automatically set the correct values on the shutter and aperture controls at the same time.

The finder image — as mentioned on page 5 — is only visible when you have operated the rapid winder, thus advancing the film and tensioning the shutter. You therefore see immediately whether the camera is ready to shoot.

The spring-loaded pre-selector diaphragm ensures that you view and focus always at the full lens aperture. The diaphragm automatically closes down to the pre-set value when you release the shutter.

Setting the Distance

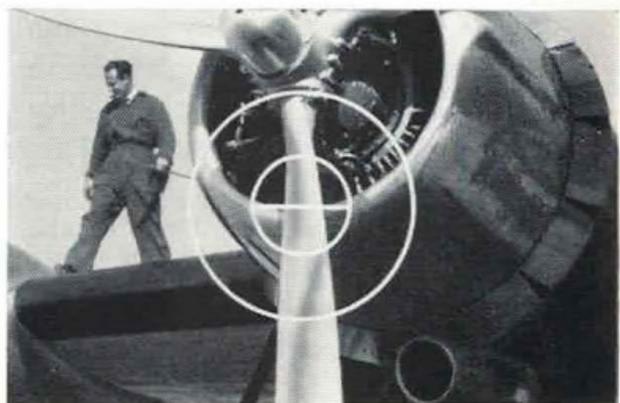
You can do this in two ways: either with the split-image rangefinder, or with the ground glass ring surrounding the split-image circle in the centre of the finder field.

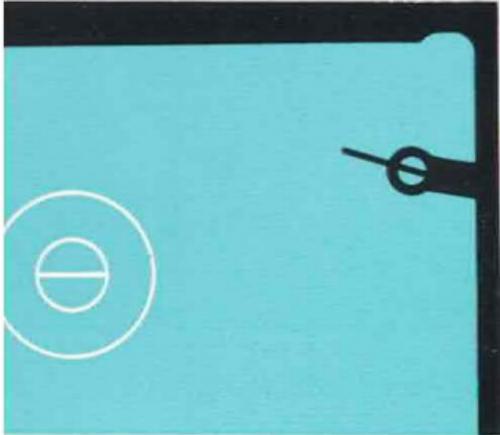
In the split-image rangefinder vertical lines of the subject are displaced to the left or right (with the camera held horizontally) as you turn the distance scale (8).

With the camera held upright, horizontal lines are displaced upwards and downwards (see top illustration). When the lens is accurately focused the two parts of the image register accurately across the split circle (see bottom illustration).

The ground glass screen ring is most suitable for focusing subjects without prominent vertical or horizontal lines. In this case rotate the distance scale until the subject appears sharp on the ground glass ring.

After focusing you can also read off the distance on the distance scale (8). The two red pointers (9) which move over the scale show you at the same time the exact depth of field (see also page 15).



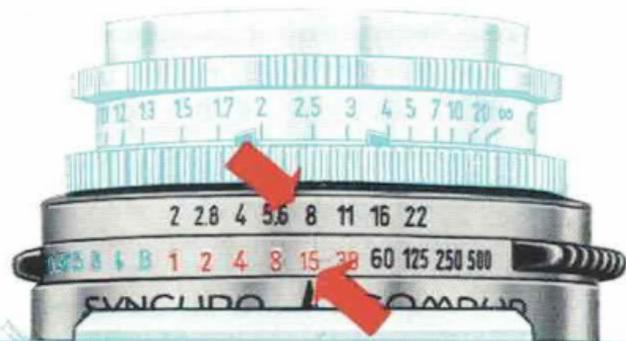


The Automatic Exposure Control

ensures the largest proportion of perfectly exposed pictures with the simplest possible operation. View the subject through the finder as you want it in the picture, and at the same time turn the setting knob (4) to superimpose the round setting marker with the meter needle in the finder (see illustration). You have now set one of the possible aperture-speed combinations.

If you should want to use a different aperture – speed combination – as read off setting ring (11) and the aperture ring (1) opposite the triangular ▲ index – simply rotate the ring (with the levers 10) to set the required combination. For instance you may want a faster shutter speed with moving subjects, or a smaller aperture for greater depth of field.

When you come up against a distinct stop in turning the ring, you have reached the limit of the possible aperture-speed combinations. Do not force the combination ring beyond those limits, as you will otherwise change the set exposure value.



The speeds from $1/500$, $1/250$, $1/125$, $1/60$, $1/30$, $1/15$, $1/8$, $1/4$, $1/2$ to 1 second are automatically timed by the diaphragm shutter. The **black** figures on the combination ring (11) are exposure times which you can safely use for hand-held shots. With the **orange** figures it is advisable to support the camera during the exposure (for instance on a table, tripod, etc.).

When the combination ring is set to the **green** figures (including B and the exposure times from 4 to 250 seconds) the shutter opens on pressing the release (12) and remains open as long as you keep the button depressed. These long exposure times are not timed by the shutter; in this series B corresponds to an exposure of 2 seconds. Always use a cable release for such exposures; this screws into the release button (12).

For exposures without the self-timer and without flash it is immaterial whether the synchronizing lever (2) is set to M or X.

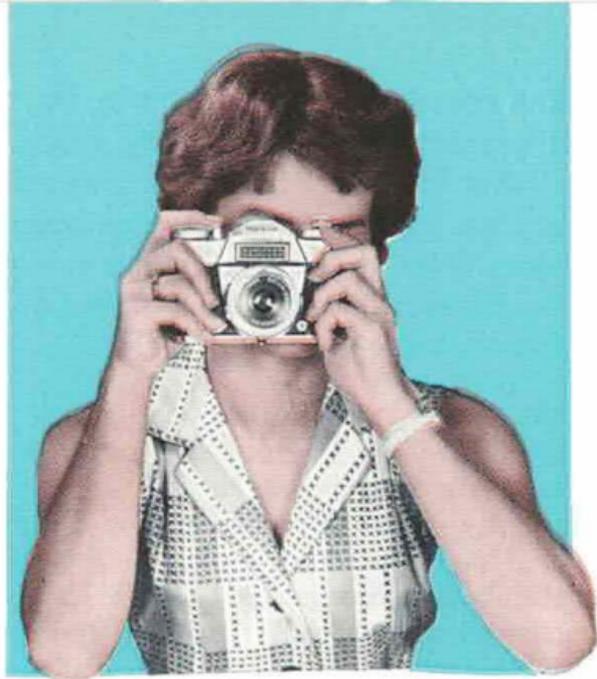
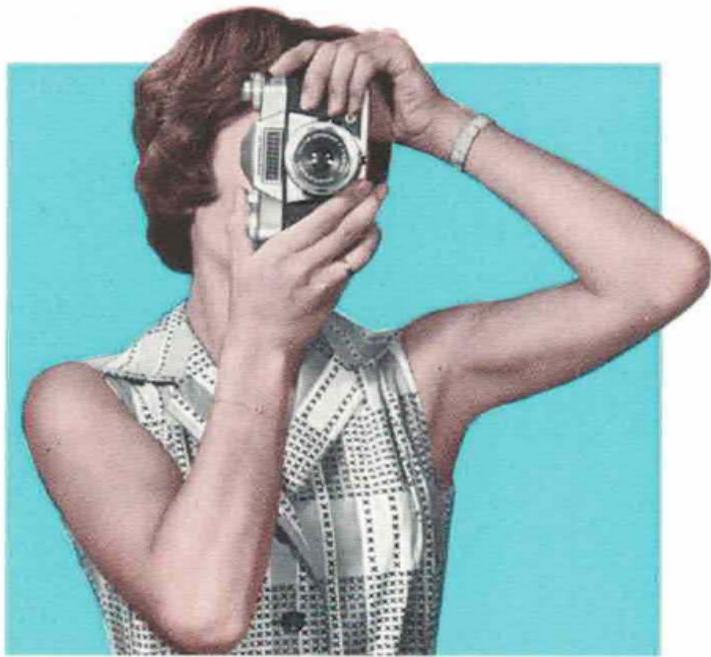


The Self-timer

Tension the shutter, depress the locking catch (18), and move the synchronizing lever (2) to position "V". If you now press the release, the shutter runs down automatically after a delay of about 10 seconds. At that point the synchronizing lever moves back from the V position. Do not use the self-timer with the shutter set to B or to the green exposure times from 4 to 250 seconds.

Holding the Camera and Releasing

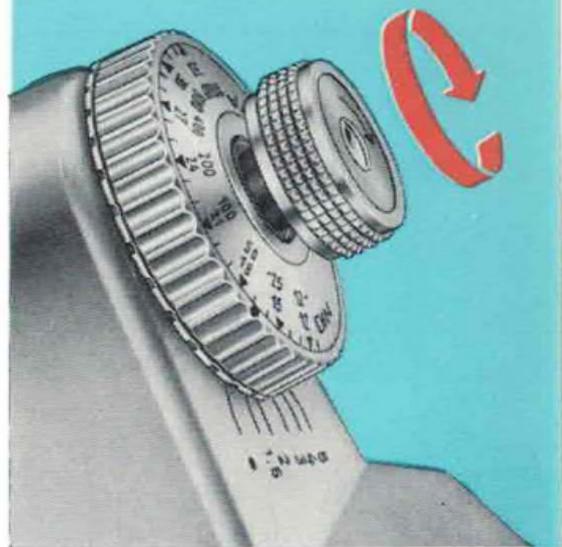
For the exposure we suggest that you hold the BESSAMATIC as shown in the illustrations. You can of course also hold it in any other way, provided you have a sound grip on the camera with both hands and you can comfortably press the release button.



To make the exposure, smoothly depress the release button – never jerk it! The finder image disappears at the instant of the exposure and reappears again when you have operated the rapid winder.

Unloading the Camera

After the last exposure rewind the exposed film into its cassette. Push the reversing lever (15) to R, and pull up the rewind knob (17) to its first stop (see illustration). Then turn the rewind knob in the direction of the arrow until the diamond \blacklozenge mark (with a 36-exposure film) or the \odot mark (with a 20-exposure film) appears again in the film counter window (24).



Now you can open the camera back. Fully pull out the rewind knob and remove the cassette with the exposed film from the film chamber (22).

Changing Partly Exposed Films

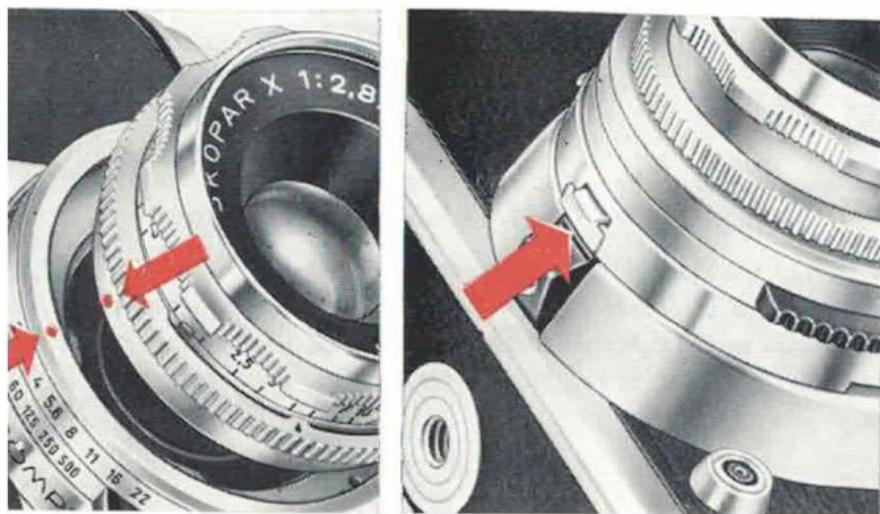
Rewind the partly exposed film as described above. Remember also to make a note of the number of the last exposed frame, and to re-set the DIN-ASA disc and the film type indicator if necessary.

When re-loading the original film, first of all put the black lens cap over the front lens mount. Then insert the film in the usual way (see pages 3—7) and alternately work the rapid winder and press the release until the number of the frame you originally noted appears in the film counter window. Advance the film once more, and you can carry on shooting. (But remember to remove the lens cap again!)

The Lens Equipment

The interchangeable lenses include the 2 inch (50 mm.) Color-Skopar f/2.8, the 1³/₈ inch (35 mm.) Skoparex f/3.4 and the 5³/₈ inch (135 mm.) Super Dynarex f/4. You thus have a versatile range of Voigtländer high-class lenses at your disposal, for the most effective rendering of any subject.

The lenses are fitted in a quick-change bayonet mount, and are accurately focused either with the coupled split-image rangefinder or the ground glass screen. As the taking lens of the BESSAMATIC is at the same time also the finder lens, you always see the correct view in the finder – irrespective of the subject distance or the focal length of the lens used.



When you insert the lens in the shutter opening, make sure that the red dot on the lens mount is opposite the red dot on the aperture ring (see illustration). Then turn the lens slightly to the right **until it engages** – it is now firmly mounted in the camera.

To remove the lens, depress the catch (19), turn the lens to the left, and lift it out of the shutter (see illustration).

Aperture and Depth of Field

The depth of field covers that part of the subject area in front of, and behind, the focused distance which is reproduced on the film with acceptable sharpness.

Please note:

Large apertures (e. g. $f/2.8$)
= yield limited depth of field;

small apertures (e. g. $f/16$)
= yield greater depth of field.

You can instantly read off the depth of field at any distance setting, and with every interchangeable lens. The two red pointers (9) above the distance scale (8) automatically indicate the limits of the sharp zone. So you only have to look at the distance figures opposite the pointers.

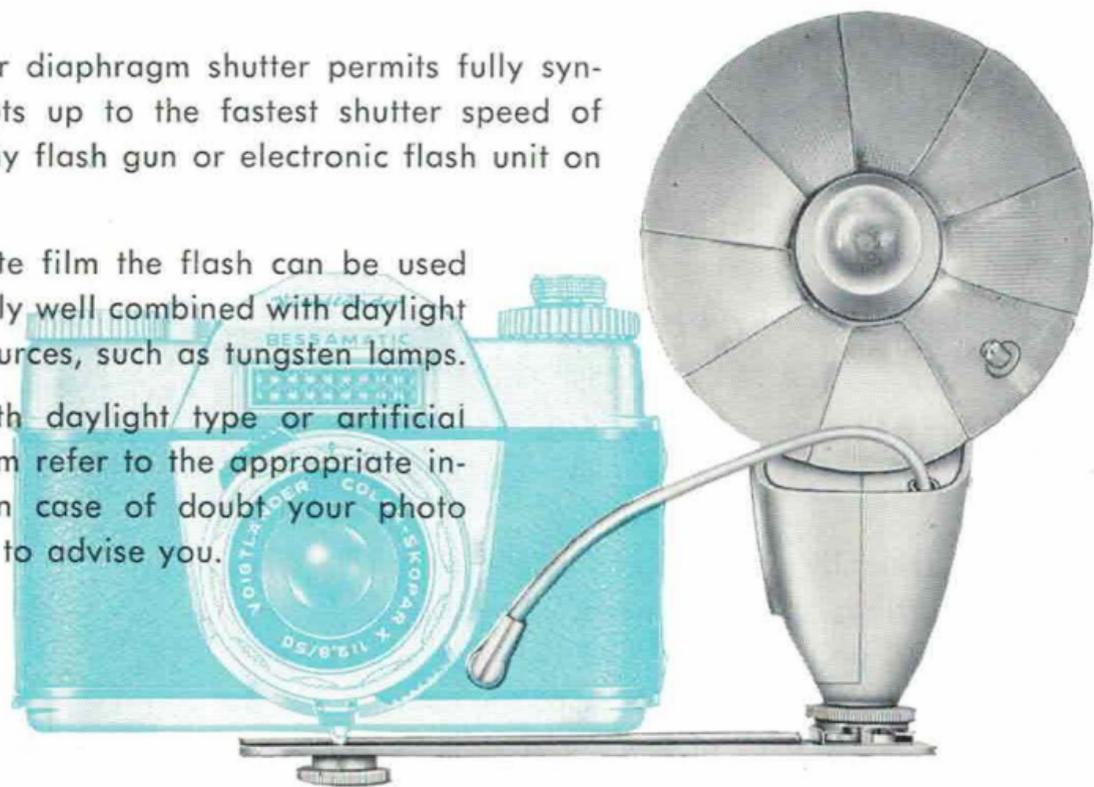


Flash Shots

The Synchro-Compur diaphragm shutter permits fully synchronized flash shots up to the fastest shutter speed of $1/500$ second, with any flash gun or electronic flash unit on the market.

With black-and-white film the flash can be used on its own, or equally well combined with daylight or artificial light sources, such as tungsten lamps.

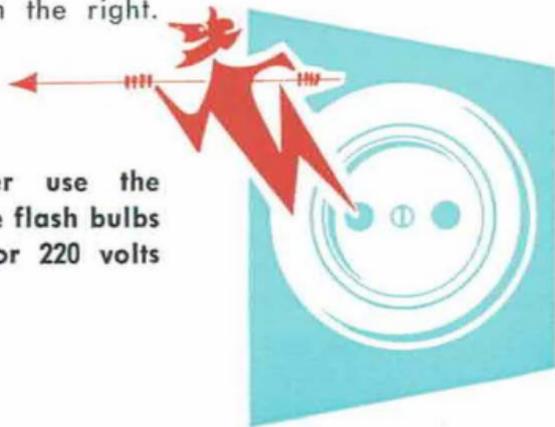
For flash shots with daylight type or artificial light type colour film refer to the appropriate instruction leaflets. In case of doubt your photo dealer will be glad to advise you.



Mounting the Flash Gun on the Camera

The flash gun or the flash holder of an electronic unit is usually fitted to the side of the camera by means of a special bracket – as shown in the illustration on the left for the Voigtländer flash gun. A separate accessory shoe can also be clamped behind the finder eyepiece mount (21); you can then fit the flash gun on the top of the camera as well.

The flash cable completes the electric circuit between the flash unit and the camera shutter. Push the plug of the flash cable into the flash socket (3) as shown in the illustration on the right.



Warning: Never use the shutter contacts to fire flash bulbs from the usual 110 or 220 volts mains.



Setting the Shutter and the Aperture



X setting:

The firing circuit closes when the shutter is fully open.

M setting:

The firing circuit closes before the shutter opens, to allow for the firing delay of class M flash bulbs.

Flash bulbs and electronic flash units differ in their characteristics such as the firing delay and light output; the table opposite classifies them in several groups. To ensure that the peak brightness of the flash coincides with the instant when the shutter is fully open, there are two types of synchronization: M and X.

Before taking a flash shot therefore depress the locking lever (18) of the Synchro-Compur shutter and move the synchronizing lever (2) to M or X as required. You can then use all types of flash at the appropriate shutter speeds listed in the table opposite. Note: for flash shots with the selftimer (synchronizing lever set to V) use only the shutter speeds listed in the table under X.

The lens aperture required for correct exposure can be obtained from the so-called guide number. This is usually quoted on the flash bulb packing or in the leaflets issued with the bulb or electronic flash unit. To find the correct aperture divide the appropriate guide number by the distance in feet between the subject and the camera with a flash gun. In short,

$$\text{aperture} = \text{guide number} : \text{distance.}$$

Suitable shutter speeds

Flash bulbs	Synchronizing lever set to	
	X	M
Type		
PF 1 PF 5 PF 14 PF 25	1—1/30 sec.	1/60—1/500 sec.
XM 1 XM 5	1—1/30 sec.	1/60—1/500 sec.
M 2 M 5	1—1/30 sec. 1—1/30 sec.	not suitable 1/60—1/500 sec.
No 0 No 5 No 25	1—1/30 sec.	1/60—1/500 sec.



Electronic flash units	Synchronizing lever set to
Type	X
Instantaneous firing	1—1/500
Relay fired with 5 milli-sec. delay	1—1/125

Voigtländer-Filter

are hard coated and carry a 40.5 mm. diameter screw mount. The filter factors given below are approximate values, as they necessarily depend on the colour sensitivity of the black-and-white film used, and on the light conditions prevailing at the time of the exposure.

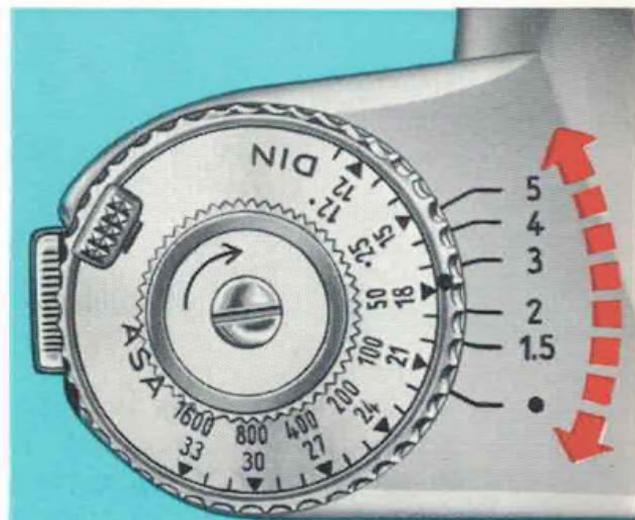
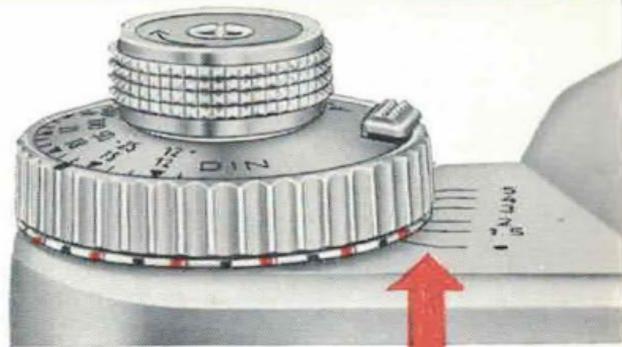
		Filter factor
Yellow filter G 1.5 x	Slight filtering effect for outdoor shots requiring short exposure times, such as sports and action subjects, and pictures with low sun.	1,5
Yellow filter G 3 x	Universal filter for landscapes and other outdoor subjects; indispensable for snow pictures.	3
Green filter Gr 4 x	Lightens green tones in landscapes. Recommended for artificial light portraiture and for copying of coloured originals.	4
Orange filter Or 5 x	Strongly cuts blue light for dramatic effects. Reduces atmospheric haze in distant views.	5
Ultra-Violet filter UV	Cuts out ultra-violet radiation in high mountains or near the sea. Eliminates unpleasant blue casts in colour shots. Requires no exposure increase.	—
Polarizing Filter P	Reduces or cuts out disturbing reflections from shiny surfaces (spectacles, polished areas, water) other than metal. Special instructions included with every filter	2,5
	With strong reflections	4-5

Setting the Filter Factors

With any filter (except the ultra-violet filter) the exposure setting requires some correction. You can carry out this adjustment with the aid of the coloured dots below the setting knob (4) and the filter factors marked alongside from -1.5 to -5. Proceed as follows:

Turn the setting knob to the left until the coloured dot with its index line (or if necessary an intermediate value) next to the black dot is opposite the index line of the required filter factor (16). This changes the aperture setting according to the filter factor to be used. The setting marker will now no longer be superimposed on the exposure meter needle in the finder.

However, if the aperture-speed combination reaches an aperture setting of $f/2.8$ opposite the triangular ▲ index, rotating the setting knob will alter the shutter speed according to the filter factor. If this results in an intermediate shutter speed setting, reset the shutter to the next longer exposure time. This is done with the combination setting ring (11).





A Focusing Table with data for scales of reproduction, depth of field, etc. is available on request.

Close-ups with Supplementary Lenses

Large-scale views of small objects and animals, or copies of pictures and documents are not only fascinating and interesting subjects, but often indispensable for professional and scientific purposes. They are really easy with the Voigtländer Focar lenses.

Simply screw the Focar lenses on the camera lens mount. You can now approach the subject with the camera considerably closer than the usual focusing limit of 3 feet. Focus with the rangefinder or ground glass screen. The finder at the same time shows the correct field of view, in full brilliance right into corners. The image is the right way round and free from any parallax error.

To make sure of adequate depth of field for such close-ups, stop down to at least $f/5.6$ or $f/8$. When copying documents and similar originals an aperture of $f/11$ or 16 is advisable. The use of the Focar lenses does not affect the exposure. If filters are to be used, screw the filter in front of the Focar lens.

Hints on Using the Exposure Meter

Generally it is sufficient to sight a subject with the camera as described on page 10. This measures the light reflected from the subject and is suitable for all average conditions without excessive contrasts of light and shade.

In some cases, however, close-up readings are necessary for more accurate measurement.



Use close-up readings with:

- light subjects against a dark background and vice versa;
- close-ups of small objects and animals;
- and nearly all pictures of people, especially portraits.

In this case go sufficiently close to the subject so that the meter cell reads only the important part of the scene.



With tricky subjects **incident light** readings are more useful. This applies especially to extreme brightness differences between the subject and its background or surroundings (for instance against-the-light shots, snow scenes, etc.).

In that case mount the diffusing screen in front of the exposure meter window (20). Take the reading from the subject towards the camera position to be used. This then measures the light actually reaching the subject. Incident light readings are also successful for interiors – with or without artificial light.

Note, however, that with incident light readings the correct exposure will of course also depend on the light reflected from the subject. Obviously it is not possible to quote any correction factors for that. So go by your own experience in deriving exposures from incident light readings.

Care of the Camera and Lens

Successful results and long life of your BESSAMATIC depend largely on proper care and correct operation.

- Therefore always handle the camera gently and never use force. In particular protect the camera against hard knocks and do not drop it. When travelling by car do not keep the camera in the glove compartment. In the long run such a "vibration test" will not do the built-in photo-electric exposure meter any good.
- Clean the lens only with a soft, fluffless, cloth. However, first remove coarse particles of grit (or sand at the seaside) carefully with a soft sable brush. Finger marks and other traces of grease on the lens surface can be removed with a piece of cotton wool moistened with pure alcohol or ether.
- In case of any trouble consult your photo dealer, or post the camera to the Voigtländer agent in your country, or to the Service Department, Voigtländer AG, Braunschweig, Western Germany.



We guarantee this camera according to present-day standards of technical perfection against defects due to faulty material and workmanship. Should any such defects become apparent in use, they will be rectified free of charge by our agencies and authorized repair shops throughout the world if the claim is made within a reasonable time after purchase. We cannot entertain claims for further damages, consequential or otherwise, or for the free repair of faults due to incorrect handling or storage.

V O I G T L Ä N D E R A . G . B R A U N S C H W E I G



BESSAMATIC

145 09 - 13 A / 759 Oe

Subject to alterations
Printed in Germany

For the convenience of purchasers in the United States and other countries where ASA film speeds are the accepted standard, the film speed dial of this camera is exclusively marked in ASA numbers, omitting the European DIN scale shown in this instruction book. This camera also has the new type film reminder dial with red sun indicating daylight-type color film, red lamp for indoor-type color film and black-and-white bars for black-and-white film.