Voigtländer

The ULTRAMATIC in use

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 putting your first film in the camera!

First of all, make yourself thoroughly familiar with the ULTRAMATIC and practise the various operations with the empty camera. Remember also that the ULTRAMATIC 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.

VOIGTLÄNDER A.G. BRAUNSCHWEIG

Contents

ULTRAMATIC

24 x 36 – 35mm

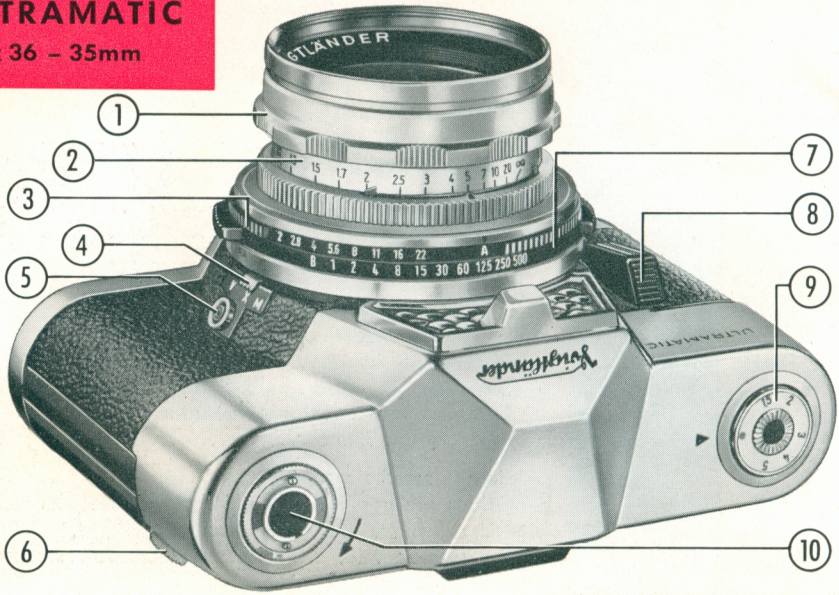


Fig. I

① **Distance ring**
for focusing

② **Distance scale**
with depth of field indicator

③ **Control ring**
for automatic or manual aperture control

④ **Synchroniser**
for M or X flash synchronisation, and self-timer V

⑤ **Flash socket**
for plug from flashgun

⑥ **Reversing lever**
for film rewind knob

⑦ **Shutter ring**
for setting the shutter speed

⑧ **Release**

⑨ **Filter factor disc**
to compensate for filters

⑩ **Film rewind knob**
with film type indicator

⑪ **Film speed catch**
for adjusting film speed scales

⑫ **Film speed scale** in DIN

⑬ **Cable release socket**

⑭ **Film speed scale in ASA**

⑮ **Lens catch**

⑯ **Film counter**
with adjustment button for 20 or 36 exposure cassettes

⑰ **Tripod bush**

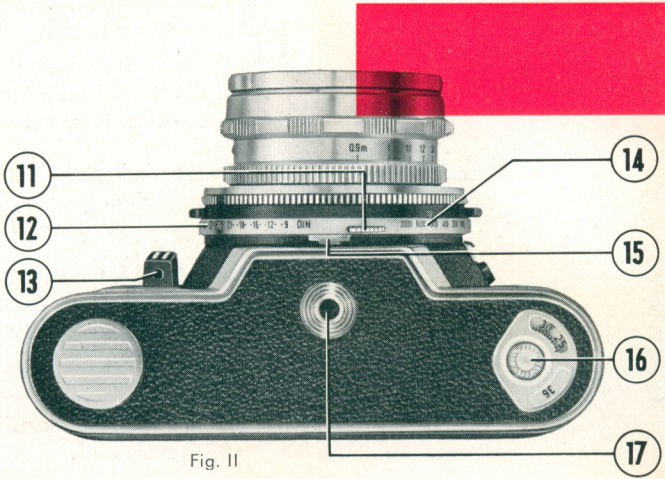
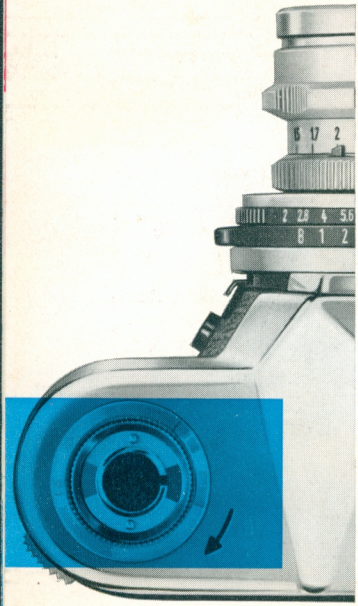


Fig. II



Loading the camera

You may use any type of film in your ULTRAMATIC camera. The usual daylight cassettes with perforated 35-mm black-and-white or colour film yield 36 or 20 exposures of 24 x 36 mm each. Colour film can be the reversal type for colour transparencies, or colour negative film for colour prints on paper.

Although the cassettes are light-tight, it is better not to handle them in direct sunlight. Always load or unload the camera in the shade – even in your own shadow if need be.

The film type indicator

is intended only to remind you of the type of film actually in the camera. It has no effect whatsoever on the exposure.

To set it: press reversing lever (6) to the right, and rewind knob (10) will spring up. Turn the coloured disc until the sector with the corresponding film symbol is situated opposite the engraved mark.

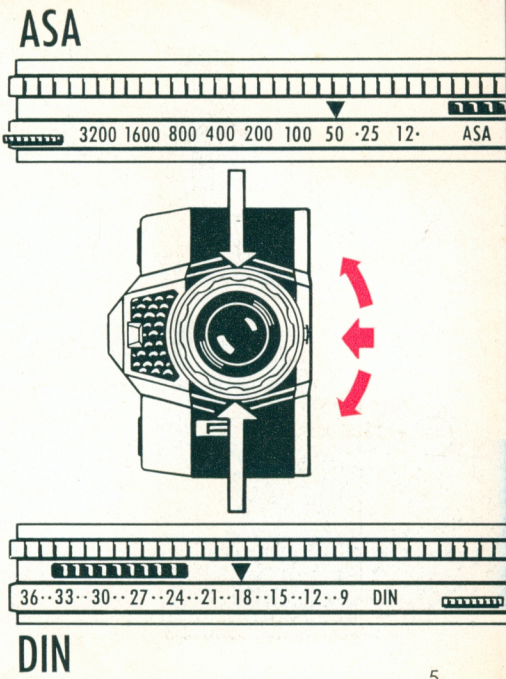
White = black-and-white film
Blue = colour film for daylight
Yellow = colour film for artificial light

Setting the Film Speed

Make it a rule to set the film speed always b e f o r e loading the camera, because the automatic exposure control depends on this setting. You will find the film speed marked in ASA or DIN on the film carton or in the instruction leaflet accompanying the film.

To set the film speed, press catch (11) and turn the ring marked with scales (12) and (14) until the required ASA or DIN number is opposite the red ▽ index mark.

10 ASA: I dot before 12 ASA
32 ASA: I dot after 25 ASA



18 Rewind knob
19 Viewfinder eyepiece
20 Cassette chamber
21 Film track
22 Rapid winder
23 Sprocket wheel
24 Take-up spool

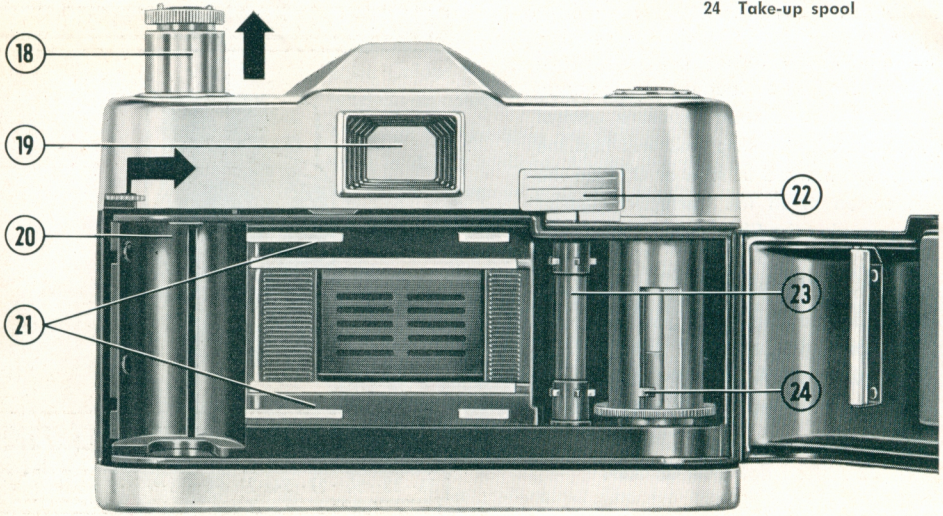


Fig. III

Inserting the Film Cassette

To open the camera: push reversing lever (6) to the right; rewind knob (18) will then spring up. Fully pull out the rewind knob (through the intermediate stop position) and the camera back can be opened (see Fig. III).

Anchor the beginning of the film to the hook of the take-up spool by a perforation hole. Draw the cassette across the film track, insert it into the cassette chamber and push the rewind knob home. At the same time, ensure that the shaft of the rewind knob engages the film cassette core correctly (see Fig. IV).

Finally turn the lower milled ring of the take- up spool until the full width of the film lies tightly upon the sprocket wheel and two of its teeth engage two film perforations (see Fig. V).

Close the camera back by clicking into the locked position.

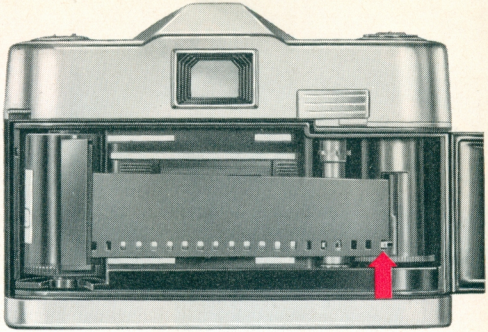


Fig. IV

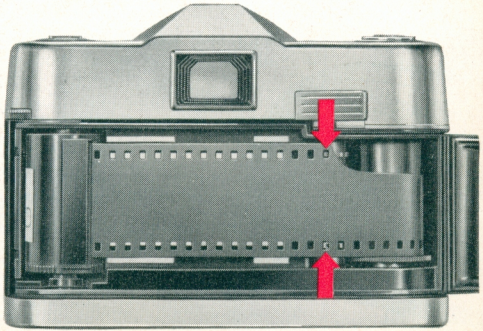
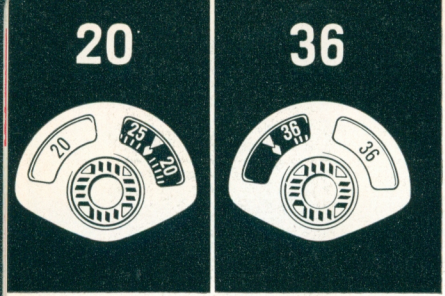
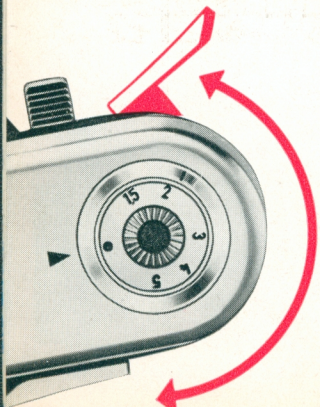


Fig. V





Getting Ready for the First Exposure

The film counter can be set to one of two positions: for a 36 or 20-exposure cassette. Accordingly turn film counter (16) to the left or right, and the appropriate number (36 or 20) will appear in the window.

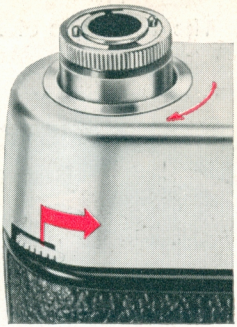
Setting: When the camera was opened, the counter automatically returned to the zero position ▲. Now operate the rapid winding lever and the release button (8) alternately until the film counter indicates No. 36 or No. 20 below the ▼ mark in the window. After each exposure the counter will show the number of exposure still available.

If the rapid winder is locked to start with (when the shutter is still cocked) first press the release.

The Rapid Winder

cocks the shutter, advances the film by one frame and also operates the film counter. The rapid winder must always be pulled as far as it will go – only then will it fly back automatically.

Unloading the camera



When the last exposure has been made, the film must be rewound: Push reversing lever (6) to the right and the rewind knob will then spring up; turn the latter in the direction of the arrow until a definite resistance is felt, sufficient to stop the knob rotating. This ist the signal that the exposed film has been wound back into the film cassette.

Now you can open the camera back by fully pulling out the rewind knob, and remove the cassette from the camera.

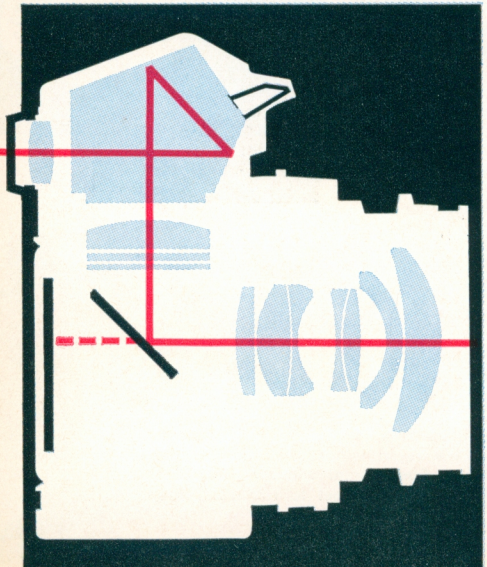
When trying to obtain more than 36 or 20 exposures on one roll of film, it may happen that the rapid winder cannot be swung completely and that it blocks. In this case do not apply force, otherwise you will tear the perforation or make the film end slip out of the cassette. Proceed as follows: push reversing lever (6) to the right, and the rewind knob will then spring up; turn the rapid winding lever as far as it will go and let it fly back to its original position. Unload the camera as described above.

Changing Partly Exposed Films

Rewind the partly exposed film as described on page 14. Remember to make a note of the number of the last exposed frame, and to re-set the film speed and film type if necessary.

When reloading the original film, first of all place the black lens cap over the lens mount. Then insert the film in the usual way and alternately actuate the rapid winder and the release button until the number of the frame you had noted appears in the film counter window (16). Advance the film once more and you are ready for further picture taking. Don't forget to remove the lens cap!

The Technique of Picture Taking



The ULTRAMATIC camera has a universal automatic exposure device, i. e. you can either use the "automatically" correct lens aperture with a pre-selected shutter speed, or you can transfer the correct exposure value "manually" to a chosen aperture. The latter method has the advantage that you can use the camera under the most favourable balance of aperture and shutter speed for a particular picture. We may add to the above advantages those offered by the perfect single-lens reflex system. With one look through the viewfinder:–

- you can see the subject upright, right-way-round, and free from parallax, with precisely the field of view covered by the film frame;
- you can accurately focus with all interchangeable lenses, either by means of the optical split-image rangefinder or on the ground-glass screen;
- you can read off the automatic aperture indication;
- you can control the adjustment of the shutter speed/aperture combination; equally, if, when using a filter, the relevant factor has been compensated for.

For Automatic Control

With control ring (3) set at the "A" position the correct aperture will be set automatically.

① **Setting the shutter speed**

Turn shutter ring (7) until the required shutter speed clicks into position opposite the red mark ▼. The shutter speed should be chosen according to subject movement and prevailing light conditions.

② **Setting the distance** (focusing)

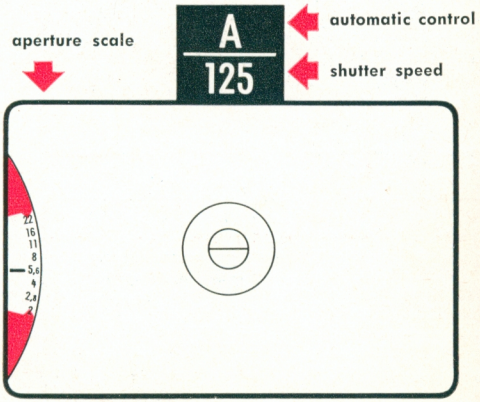
as described on page 14

③ **. . . and Taking the Picture**

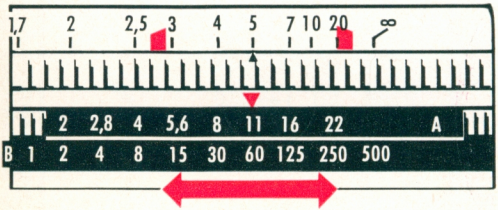
Look through the viewfinder and frame the subject in the best possible way; if the aperture pointer lies in the white area – just press the release and the picture is taken.

Should this pointer be in one of the two red areas it is not possible to take a picture because of the light conditions or because the preselected shutter speed is too short. If possible, select another longer shutter speed.

The depth of field indicator which rides over the distance scale does not function with the "A" setting. However the aperture number indicated by the pointer in the viewfinder will serve as a guide to the extent of the depth of field. But more about depth of field on page 17.



For Manual Aperture Control



Sometimes it is desirable to disengage the automatic exposure control in order to be able to set the shutter speed/aperture combination personally. This can happen with flash shots or when you wish to use "differential focusing" for greater picture impact.

① **Changing to "Manual" control**

Turn control ring (3) from the "A" position to the range of aperture numbers. At the same time the depth of field indicator will commence to operate and the two red pointers will slide over the distance scale.

② **Setting the distance (focusing)**

as described on page 14.

③ **Determining the depth of field**

Set the aperture ring to that aperture number which shows the desired depth of field on the distance scale.

The example in the illustration shows that at the aperture f/11, at a distance of 16 feet, the depth of field already begins at 10 feet and extends to 67 feet.

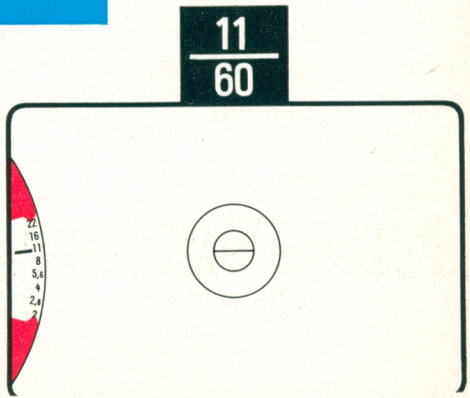
④ **. . . and Taking the Picture**

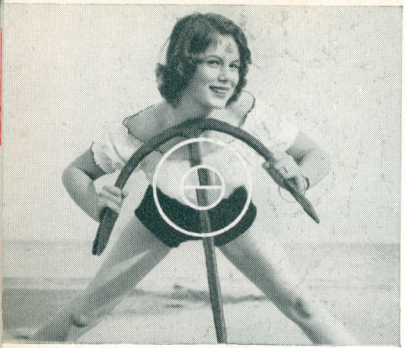
Look through the viewfinder and turn the shutter ring till the needle (in the white area) points to the same aperture number to which you have already set the control ring . . . and then take the picture.

The SYNCHRO-COMPUR Shutter

The white figures on the shutter ring (1/500 – 1/30 second) are shutter speeds which, under normal conditions, may safely be used for hand-held shots. With the yellow figures 1/15 – 1 second the camera should be firmly supported on a tripod, tree trunk, etc., to avoid unsharpness through camera movement during exposure.

At "B" the shutter remains open as long as release (8) is pressed. Here, too, a tripod is necessary, as well as a cable release which can be screwed into cable release socket (13).





I

II

Focusing

may be done in two ways:

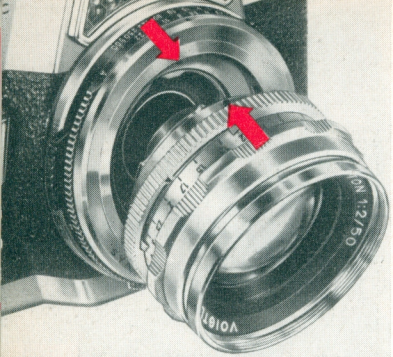
- In the split-image rangefinder vertical lines of the subject are displaced to the left or right (with the camera held horizontal) or upwards or downwards (with the camera held upright) as you turn the distance ring (see example I). The lens is accurately focused when the two parts of the image register precisely across the split circle (see example II).

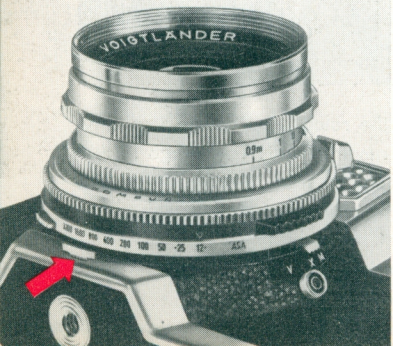
- The ground-glass screen is most suitable for focusing subjects without prominent vertical or horizontal lines. In this case turn the distance ring until the subject appears sharp on the ground-glass screen, which is arranged around the central split-image area.

Holding the camera and Taking the picture

For an exposure we recommend that you hold the camera as shown in the two illustrations. The eye should be as near to the eyepiece of the viewfinder that the entire image area can be seen in comfort.

Always press the release button as smoothly as possible – never jerk it! The image in the viewfinder disappears at the instant of exposure and re-appears immediately afterwards, so that the subject can be watched virtually without interruption.





Interchangeable Lenses — Insertion and Removal

A full range of Voigtländer high-performance anastigmat lenses, of different focal lengths and apertures, are available for the ULTRAMATIC camera. These lenses enable you to take any subject in the most effective way.

All interchangeable lenses are fitted in a quick-change bayonet mount and are accurately focused with the two-way rangefinder. As the taking lens it at the same time also the viewfinder lens, you always see the correct view in the finder irrespective of the subject distance or the focal length of the lens used.

When inserting a lens, make sure that the red dot on the lens mount is opposite the red dot on the aperture control ring (see illustration). Then turn the ring slightly to the right until it clicks into position and it will be firmly mounted in the camera.

To remove the lens, press catch (15), turn the lens to the left and pull it out of the shutter (see illustration).

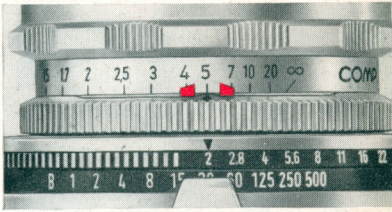
Aperture and Depth of Field

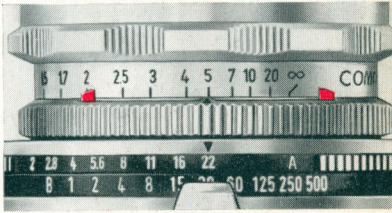
The depth of field covers that part of the subject, in front of and behind the focused distance, which is reproduced on the film with acceptable sharpness. This depth of field, however, is not permanent; it grows when stopping down and it decreases the more the lens is opened up.
Please note: –

Large apertures (e. g. f/2.8)
= smaller depth of field;

Small apertures (e. g. f/16)
= wider depth of field.

You can instantly read off the depth of field at any distance setting and with every interchangeable lens, with the exception of the Voigtländer Zoomar lens, as long as the aperture has been set "manually". The two red pointers above the distance scale indicate the limits of the sharply focused zone (see illustration).





Flash!

With flash you can take the most delightful indoor pictures of the family circle or of festive occasions; you can also give your outdoor portraits a beautiful sunny effect on a cloudy day, or make heavy shadows in "against-the-light" pictures just that little lighter.

With black-and-withe 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 Dealer will be glad to advise you.

Mounting the Flashgun on the Camera

The flashgun or the flash tube of an electronic unit is usually fitted to the side of the camera by means of a special bracket. A separate accessory shoe can also be clamped behind the viewfinder eyepiece mount; you can then fit the flashgun on the top of the camera as well. The illustration shows the Voigtländer Flashgun in position. 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 (5).

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

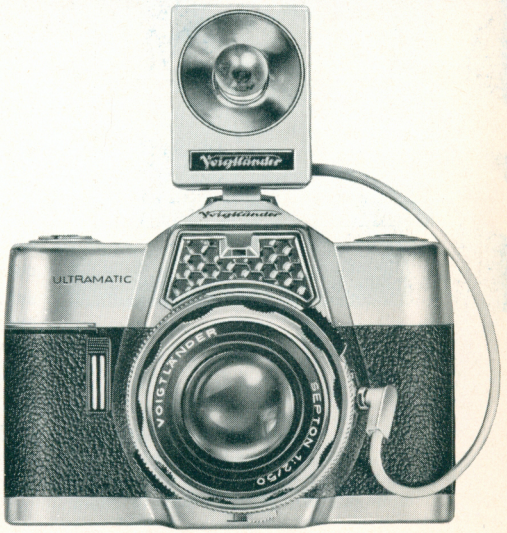
According to the type of flash-bulb or electronic flash, the synchroniser (4) is either left at the "X" position or moved to "M" (past a small locking pawl).

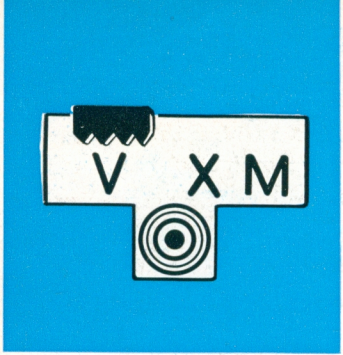
You will find all the necessary information on "X" and "M" as well as on suitable shutter speeds, with the flash-bulbs and with the flashgun or electronic flash unit itself.

For flash shots with the self-timer (synchroniser set to "V"), use only the shutter speeds intended for the "X" position (see also page 20).

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; therefore: –

aperture = guide number ÷ distance.





Shots with the Self-timer

The Synchro-Compur shutter can also be released through a delaying device (self-timer) with the control ring set to Automatic or to any of the manual settings.

It is very simple indeed: –

Put the camera on a firm base, preferably screwed on a tripod, and move synchroniser (4) to "V". If you now press the release you will have time to move to your position; after a delay of about 10 seconds the shutter will be reased automatically. The synchroniser then returns itself from the "V" to the "X" position.

Do not use the self-timer with the shutter set to "B". The synchroniser, once set to "V" cannot be pushed back to the X or M positions by hand.

Voigtländer Focar lenses

are obtainable in different powers for all interchangeable lenses from 40 mm focal length, from 0.25 to 6.5 diopters; they may be combined to a maximum power of 10 diopters, which will allow a scale of reproduction of 1 : 1.85.

Simply screw the Focar lenses on the camera lens mount. 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 the 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 of f/8. When copying documents and similar originals an aperture of f/11 or f/16 is advisable. The use of Focar lenses does not affect the exposure. If filters are to be used, screw the filter in front of the Focar lens. When using more than one Focar lens, place the one with the highest power (engraved with the largest number of diopters) immediately in front of the camera lens.

A detailed Focusing Table for all Focar lenses and interchangeable lenses, including data on scales of reproduction, depth of field, etc. is available from your Dealer.

are hard-coated and do not impair the lens performance in any way. The yellow, green and orange one can, of course, only be used with black-and-white films – ultra-violet, sky-light and polarising filters are suitable for colour film as well.

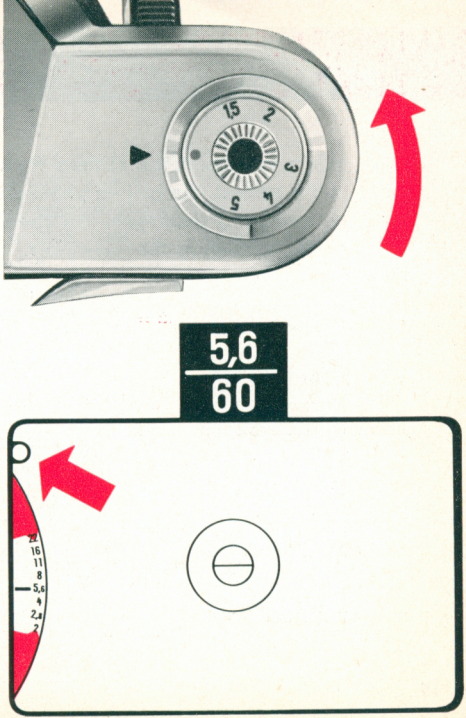
		Filter Factor
Yellow filter G 1.5 x	Slight filtering effect for outdoor shots such as sports and action subjects	1.5 – 2
Yellow filter G 3 x	Universal filter for landscapes and other outdoor subjects; indispensable for snow pictures	3
Green filter GR 4	Lightens green tones in landscapes. Recommended for artificial light portraiture and for copying of coloured originals	3 – 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	–
Sky-light filter SF	A combination of the u. v. filter and a weak conversion filter; it completely eliminates the ultra-violet part of the spectrum	–
Polarising filter POL	Reduces or cuts out disturbing reflections from shiny surfaces (spectacles, polished areas, water) other than metal	see special instructions

Compensating for a Filter

With any filter (except the u. v. and sky-light filters) the exposure setting requires some correction. You can carry out this adjustment simply by turning filter factor disc (9) to the number of the corresponding filter factor, so that the presence of a filter will be automatically taken into account by the exposure meter.

Just to remind you that you have compensated for a filter, a small black circle will have become visible in the top left corner of the viewfinder. This circle will disappear when the filter factor disc is turned back to unity.

The indicated filter factors are only approximate values, because they also depend on the type of film emulsion and on the lighting conditions when the picture is taken.



How to use the Exposure Meter

When you point the camera from the taking position to the subject, the built-in photo-electric exposure meter automatically determines the correct aperture and indicates its value in the viewfinder.

In many cases, however, a more refined method must be adopted, using close-up readings – especially for light subjects against a dark background and vice versa, as well as in portraiture.

In this case one goes so close to the subject that only the important parts are "read". At the same time change to "manual" and transfer the number indicated in the viewfinder to the aperture scale. You can now return to the original taking position and photograph the subject at this aperture.

Colour Shots

The most suitable subjects for colour pictures are those containing large coloured areas without excessive light contrasts. Persons should be placed in good contrast against a quiet and neutral background; outdoor portraits give best results when the sun is slightly covered by clouds.

When shooting landscapes make sure to include a coloured foreground in your picture. In high mountains and on the beach a UV haze filter helps to avoid a bluish colour cast.

The film speeds (in ASA or DIN) of daylight colour reversal film are valid in sunny, fine weather; you will need to give more exposure under conditions of poor light and little contrast.

Attention should therefore be paid to the instructions which accompany every colour reversal film. If the manufacturers state, for example, that the aperture should be increased or the light value changed in the absence of direct sunlight, i. e. in diffused light, follow this procedure: for an increase of half a stop (light value 0.5) turn the filter factor disc (9) to 1.5; for an increase of a full stop (light value 1) turn this disc to 2; for $1^1/_2$ stops (light value 1.5) to 3; for 2 stops (light value 2) to 4; and for $2^1/_2$ stops (light value 2.5) to 5.

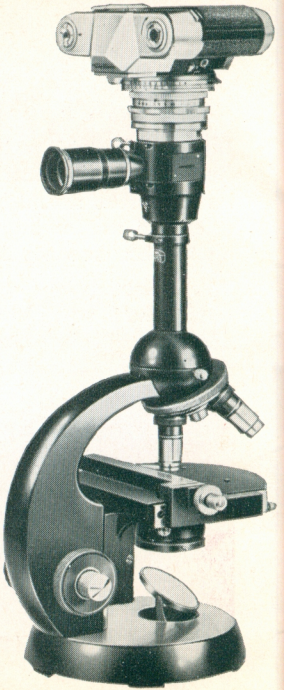
Micro Pictures

The value of photomicrography in the Natural Sciences does not need any special mention; many professional people and scientists could not do without this form of photography.

But microscopy should not only be confined to institutes, clinics and research laboratories, nor should micro pictures only be taken of biological preparations and living organisms; this captivating and interesting field of picture taking is wide open to nature lovers, just for the fun of it.

The accessories needed are not expensive; they are handy, quickly prepared for action, and the entire photomicrographical set-up can be arranged on any table. Thanks to cassettes of colour or black-and-white miniature film it is possible to take 36 exposures in rapid sequence, for instance of the growth of a crystal, a biological process, etc.

A special instruction book is available to tell you more about micro pictures.



Right-angle Viewfinder

This accessory is used for the more convenient taking of certain subjects, e. g. close-ups with Focar lenses as seen from below (worm's-eye view). It is fitted to the eyepiece of the camera by means of its push-on shoe and can then be used to shoot round the corner.

Portrait Supplementary Lens for SUPER-DYNAREX

With this supplementary lens you can take frame-filling portraits with the Super-Dynarex f/4, 135 mm lens and approach your subject as close as 6 feet. The supplementary lens is screwed into the lens mount and can even be used at maximum aperture.

Lens-hood

This small accessory should really be used for every picture you make; it not only eliminates annoying side-light which can give rise to reflections and loss of contrast, but it also protects the lens from rain and snow. The lens-hoods are made in several sizes for the different interchangeable lenses – wide-angle, normal and telephoto.

Adapter Ring for SEPTON Accessories

With the help of this adapter, all filters and Focar supplementary lenses for the Septon f/2, 50 mm lens (54 mm diameter) can also be fitted to all the other interchangeable lenses of a diameter of 40.5 mm.

Care of Camera and Lens

Successful results and long life of your ULTRAMATIC camera 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.
- Clean the lens only with a soft, fluffless cloth. However, first remove coarse particles of grit (or sand at the seaside) 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.
- Clean the interior of the camera periodically with a soft brush and remove any dust or film particles. Dust which has accumulated in the viewfinder can only be removed by taking out the lens and blowing out with a small blower.

A Guarantee

is enclosed with this camera as with all other Voigtländer cameras. Kindly check that your Dealer duly fills in and stamps this Guarantee.

Only then you will be sure that if the camera should need any attention within the duration of the Guarantee – as set out in the document – this will be given by the world-wide Voigtländer Service – free of charge.

Keep the Guarantee, even after the expiry date; in case of loss you will need the camera and lens numbers registered in the Guarantee.

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