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**AKARELLE**



**OPERATION INSTRUCTIONS**

E / SVS

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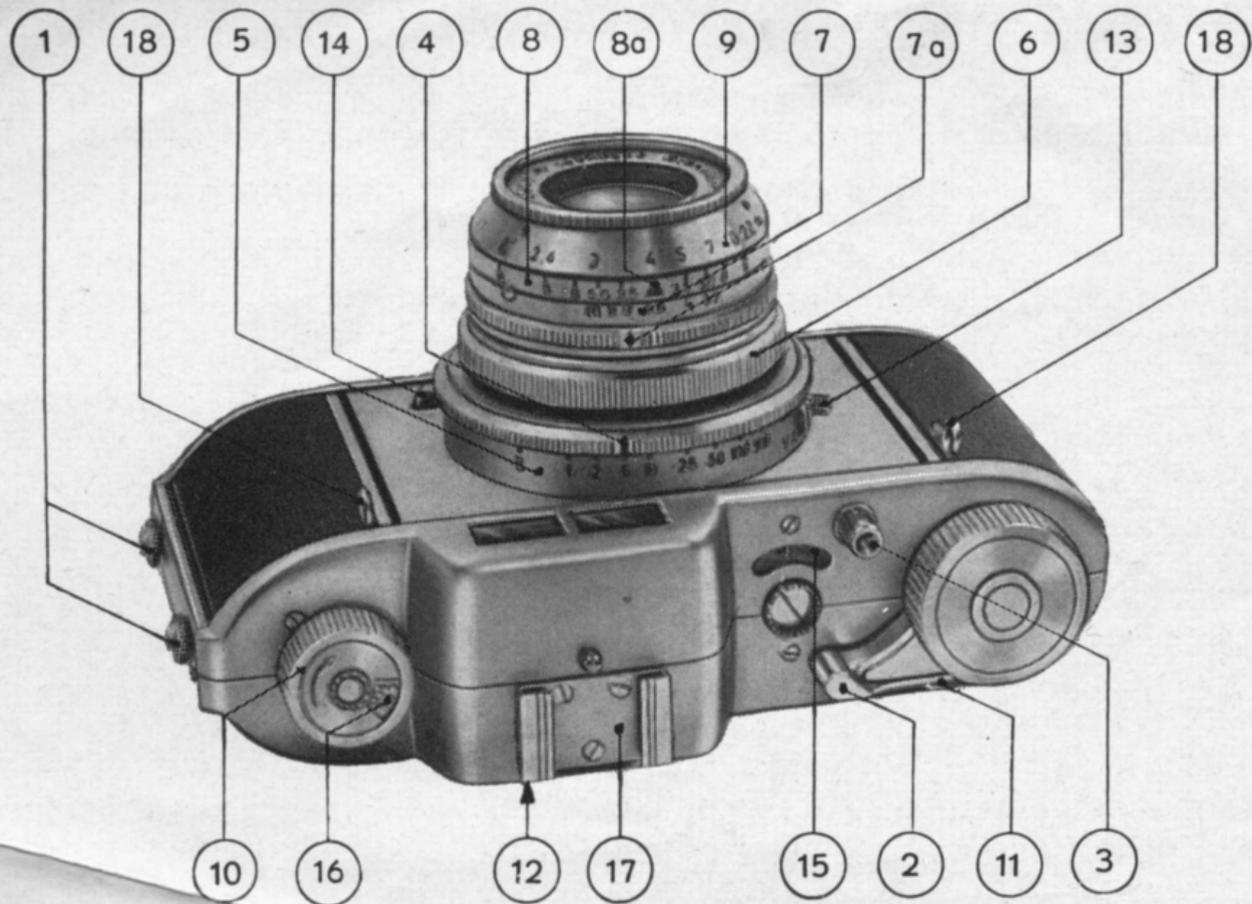
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## INTRODUCING THE AKARELLE

Your Akarelle too is a miniature camera of the Akarelle interchange system based on the principle of fully interchangeable lenses. The standard lens unit can be removed at all times even while the camera is loaded, either for use in other photographic instruments, especially for close-up exposures or enlargers, or in order to exchange it for a high capacity telephoto or wide-angle lens.

Among further advantages of the Akarelle are the following: the universal switch which simultaneously winds the film and cocks the shutter, the between-lens shutter Prontor SVS with optional use of automatic release and fully synchronised or standard flash release at all shutter times, and the telescopic viewfinder which shows a brilliant reflected line frame for several focal lengths.

Please take the precaution of familiarising yourself with your new camera with the aid of the following survey before operating the various levers and buttons.



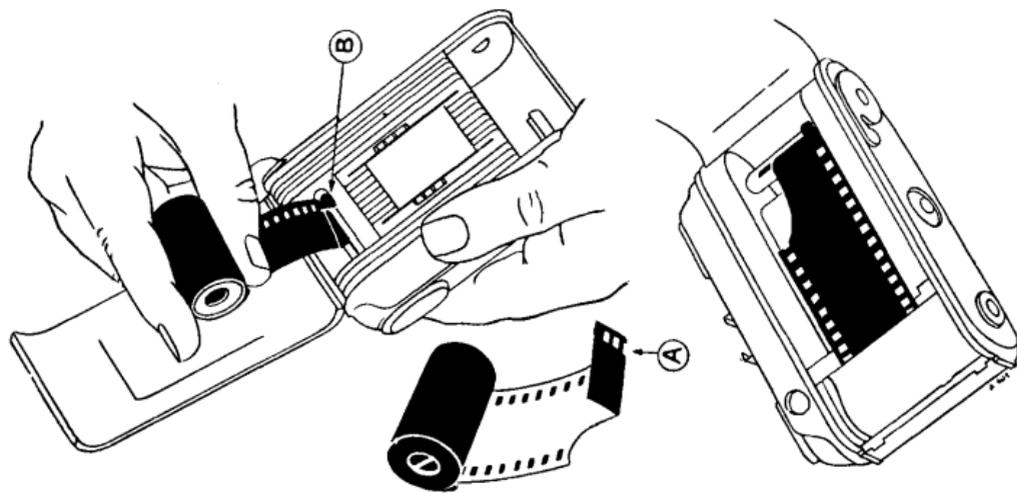
## OPERATING PARTS OF THE AKARELLE

- (1) Double locking device of hinged back.
- (2) Quick action universal switch simultaneously operates film transport and shutter cocking lever.
- (3) Release button with thread for cable release.
- (4) Shutter ring for setting exposure times on the.
- (5) Exposure time scale; shutter speeds B, 1,  $\frac{1}{2}$ ,  $\frac{1}{5}$ ,  $\frac{1}{10}$ ,  $\frac{1}{25}$ ,  $\frac{1}{50}$ ,  $\frac{1}{100}$ ,  $\frac{1}{300}$  second.
- (6) Knurled ring for screwing lens to the camera housing.
- (7) Aperture scale with setting mark (7a).
- (8) Depth of focus scale with centre mark (8a).
- (9) Distance ring with distance scale (metres).
- (10) Extensible rewinder knob for winding film back into cassette.
- (11) R-lever for releasing rewinding mechanism.
- (12) Viewfinder window.
- (13) Synchro-lever with positions M X and V.
- (14) Flash light sockets.
- (15) Exposure counter disc.
- (16) Film indicator disc for recording the type of film used.
- (17) Slip-on shoe for accessories.
- (18) Lug for carrier strap or chain.

## INSERTION OF FILM

The AKARELLE is designed for the perforated miniature film (35 mm) normally supplied by the trade in rolls of 20 or 36 exposures (size 24 x 36 mm).

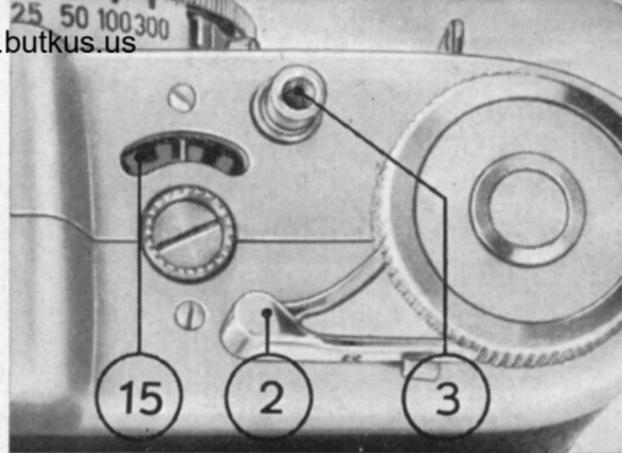
To open the back of the camera the two milled knobs are pressed against each other with the thumb and index of the right hand. The tapered end of the film, projecting from the film cartridge, is folded through the middle of the third perforation hole (A) in such a way that when the tapered end of the film is pushed through the slot (marked with a red dot) of the take-up spool, the red clip of this latter enters into the said third perforation hole (B). The film thus is protected against its being pulled out during the winding operation.



Place the film cartridge into the cassette chamber of the camera, after having pulled out re-winder knob (10) completely. When the cassette has been correctly positioned re-engage button (10) and turn this to tighten the film so that it is properly centered over the film gate. Then close back panel.

## EXPOSURE COUNTER

After inserting the film, the film strip protruding from the cassette has been exposed. Before making the first exposure, this section of the film should be advanced by two or three turns (transport and release). Only when these blind exposures have been made the exposure counter disc (15) should be placed into starting position by depressing the knurled knob with the tip of your finger and setting the number disc to „0“. This may be done in a clockwise or anti-clockwise direction.



## FILM INDICATOR DISC

Immediately after inserting the film, the indicator disc (16) should be set to its correct value. To do this, depress the small knurled button with the tip of your finger. The references „Colour Positive“ and „Colour Negative“ refer to positive and negative colour films respectively.



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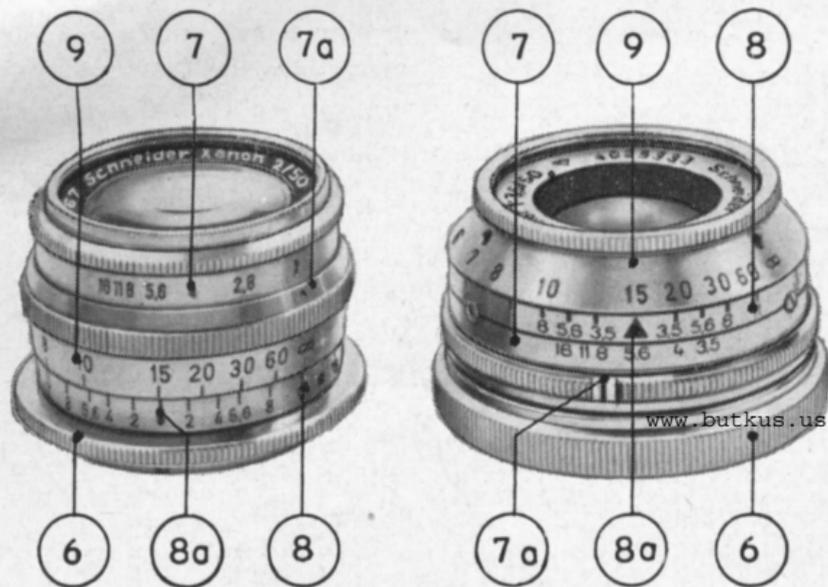
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## LENSES

No matter whether your AKARELLE is equipped with an f/3.5 or f/2.8 anastigmatic lens or with a costly f/2.0 six-unit objective, you will find yourself the lucky owner of a superb quality lens.

The adjacent illustration shows two standard lenses with 50 mm focal length, one Xenon f/2.0 and one Xenar f/3.5. The following examples refer to the latter lens, but the other lenses are handled identically.

The lens mount has three scales:

- (7) The stop scale with engraved f numbers 16, 11, 8, 5.6, etc.
- (8) Depth of field scale with aperture values engraved on either side of the indicator mark, e. g. 16, 11, 8, 5.6, 3.5      3.5, 5.6, 8, 11, 16.
- (9) Focusing scale graduated in feet  $\infty$  to 3.5 ft or in meter  $\infty$  to 1 m.

Inserted in the AKARELLE, the lens is always sharply focused on the distance shown by the indicator mark (8a). It is important, however, to utilize the range of adequate sharpness extending both in front of and behind that distance. This range grows in inverse proportion to the size of the stop selected. The exact range corresponding to the individual stop values can be easily read off the focusing scale (9) with the aid of the depth of focus scale (8), for the lens provides sharp definition for the range between identical numbers. The following examples show the settings of a Xenar f/3.5 Standard lens with a focal length of 50 mm:

Examples feet calibration

Distance	Stop	Depth of field
15 ft	f/5.6	11 — 24 ft
15 ft	f/11	9 — 60 ft
15 ft	f/16	7 ft — $\infty$

Examples meter calibration

Distance	Stop	Depth of field
4 m	f/5.6	3 — 6 m
4 m	f/11	2,4 — 12 m
4 m	f/16	2 m — $\infty$

These facts are the key to a number of simple rules. If you observe them, you will have no difficulty in setting your camera to the correct distance.

For **pictures of close subjects** set your distance by the indicator mark (8a). You can then read off, as described above, the near and far limit of the range of sharp focus available.

For **distance exposures** without foreground set mark (8a) to infinity  $\infty$ .

For shooting **distant subjects with foreground** set focusing ring (9) in such a manner that the  $\infty$  mark is located opposite the selected stop value on the depth of focus scale (8).

Stop 5.6 then gives you a depth of focus ranging from 19 feet to  $\infty$  (6 m to  $\infty$ ), stop 8 from 14 feet to  $\infty$  (4 m to  $\infty$ ) and stop 11 from 10 feet to  $\infty$  (3 m to  $\infty$ ). From this you will see that the short focal lengths of miniature cameras lenses have the great advantage of providing good definition of both foreground and background provided that the subject is sufficiently bright.

When using a telephoto lens of 75 or 90 mm focal length the depth of focus range is naturally smaller, so that special attention should be paid to correct focusing in the case of close-up exposures. The 35 mm focal length wide-angle lens, however, has a depth of focus exceeding even that of the standard lens. With this lens, for example, the depth of focus at stop 5.6 extends from 9 feet to  $\infty$  (2.6 m to  $\infty$ ) and at stop 11 from 4.6 feet to  $\infty$  (1.4 m to  $\infty$ ).

Besides, the lens mount provided with an internal thread in front to enable a lens hood or supplementary lenses for close-ups to be screwed in.

The colour filters and supplementary lenses, which are supplied in a special mounting for the AKARELLE are provided with double threads so that they can be screwed into one another as required. It is thus possible to fit a supplementary lens, a colour filter and a lens hood to be fitted to the objective at the same time. The lens hoods are designed for standard and telephoto lenses; they are not suitable for use with wide-angle lenses. As the mounting of the lenses are so designed as to provide protection against sun rays, no additional lens hood is required.

## EXCHANGE OF LENSES

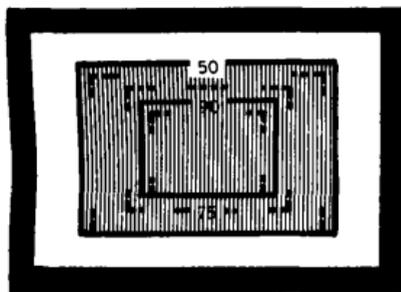
The lens is secured to the camera by means of a screw ring (6).

If you wish to change the lens, take the camera into your hand, lens uppermost, and unscrew the locking ring. The ring releases after only one turn and you can remove the lens. When replacing it make sure that the small slit in the lens mount is located on top and fits into the guide pin of the camera. Slip the lens home and turn the screw ring tight again. Take great care not to touch the lens with your fingers. Any trace of grease left on the lenses, however slight, will mar the quality of the exposure. To clean the lens, only use a soft clean piece of linen cloth or chamois.

The AKARELLE is always ready for shooting, as you can carry it in your ever-ready case, for the lenses need neither be removed nor engaged in a ratchet.

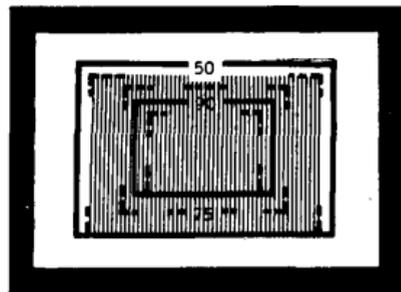
## VIEWFINDER

A reflected frame in the viewfinder makes it very much easier to obtain the desired subject section. The limitations of the field of view for the various interchangeable lenses are shown by a system of bright lines reflected into the viewfinder window (12).



$\infty$

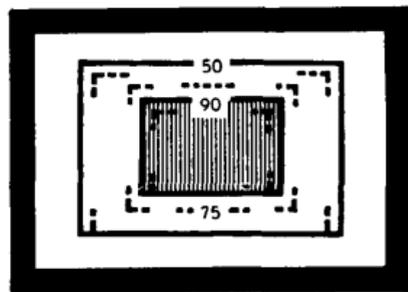
For the standard lens of 50 mm focal length the larger of the projectet frames, marked „50“, applies. Strictly speaking, however, it applies only in the case of lens setting  $\infty$ . In the case of sharp focusing at a distance of 3,5 ft, the field of view, due to parallax and loss of field, is slightly smaller. This lesser field is indicated by the dotted lines in the corners of the fields. The range for intermediate values can be easily estimated.



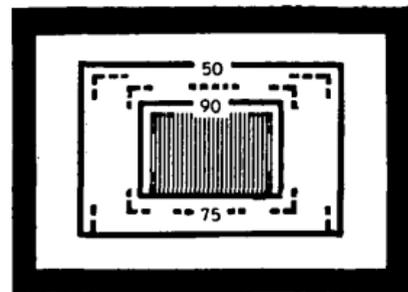
3,5 feet  
or 1 m

for 50 mm Objektiv

The limitation for a lens of 90 mm focal length at setting  $\infty$  has been similarly indicated by the dotted line at 90, and by the corner marking for a distance setting of 3,5 ft.



( $\infty$ )



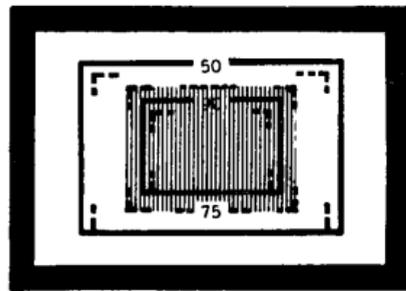
for 90 mm Objektiv

(3,5 ft or 1 m)

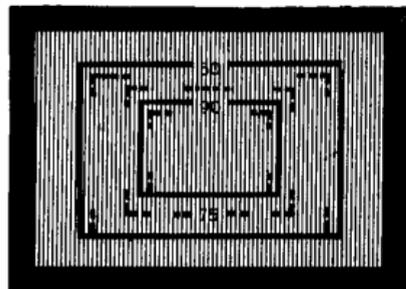
The dotted frame at „75“ indicates the section obtained when using a 75 mm telephoto lens.

It is important that the position of the reflected limitation lines in the finder image is practically independent of the direction of view, so that faulty settings are more or less eliminated. This fact provides a considerable degree of accuracy in establishing the desired subject until it occupies the entire field of the viewfinder, without danger of losing details on the negative.

The entire subject area recognisable in the viewfinder corresponds to that of the wide-angle lens with a focal length of 35 mm. In order to ensure perfect correspondence between finder image and negative, however care should be taken to ensure that the elected limitation lines in the viewfinder are quite symmetrical.



for 75 mm Objektiv ( $\infty$ )



for 35 mm Objektiv ( $\infty$ )

## SHUTTER

The AKARELLE is equipped with a precision Prontor SVS sector type shutter with a speed scale which is easily visible from above. By turning the shutter speed ring (4), eight exposure times from 1 second to  $1/300$  second, or position „B“ for time exposures, can be set on the shutter speed scale (5). Setting may be effected either before or after cocking the shutter lever. Only those exposures times can be used which are engraved on the scale. No intermediate values can be set. If the mark lies between two time values, either the shorter or the longer shutter speed comes into operation.

You need not worry about cocking the shutter — the AKARELLE does this automatically. To wind the film move the transport lever (2) as far as it will go. The film can be advanced only by the length of one frame at the time, the built-in double action frame interlocking device preventing double or blind exposures. In order to ensure uniform spacing of exposures on the film, care should be taken that the quick action transport lever (2) is moved as far as the stop.

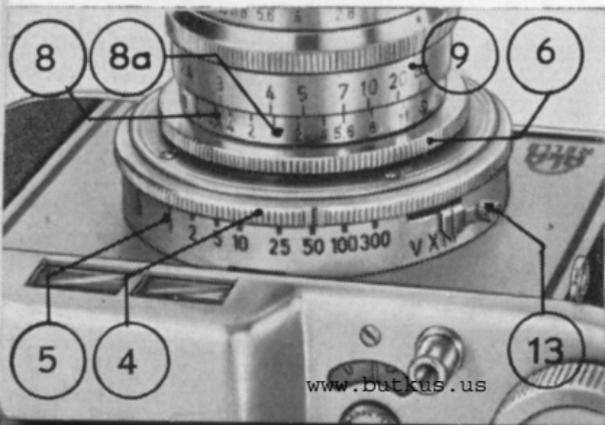
Otherwise the exposure counter (15) does not show the correct number. This is only a minor matter which has no bearing whatsoever on the performance of the AKARELLE and which is cancelled again by the next winding action.

To release the shutter press the release button located next to the transport lever. It is also possible to use a cable release, the release button being appropriately threaded. For time exposures set the shutter to „B“ and use a cable release with a locking device.

## SELF-TIMER

The self-timer is a handy device which can be used in a number of cases, for example if you want to take a picture with yourself in it or, in the case of time exposure, if release is to be effected from an unstable position without moving the hand holding the camera.

The SVS Prontor shutter, when using the self-timer, opens only 10 seconds after depressing the release if the synchrolever (13) has been placed in position „V“. The self-timer mechanism is cocked automatically. If the self-timer is not to be used, the lever (13) should be moved to position „M“ or „X“. It is an advantage that the various operations do not have to be carried out in a specified order: Setting may be effected before or after winding the film.



## FLASH SYNCHRONISATION

To connect the flashlight insert flash cable into the socket (14). There are two types of flashlight contact, internationally referred to as „X“ or „M“ position respectively. These are selected by moving lever (13) to the positions marked „X“ or „M“. In both cases ignition and shutter opening occur immediately the release is depressed. If lever (13) is moved to the third position, marked „V“, the self-timer comes into action as described above; the flash contact then works as per position „X“ only.

In standard synchronisation („X“ position) the flash contact is closed the moment the shutter blades are fully open. In order to obtain reliable results, exposure time must be longer than the duration of the flash. This „X“ synchronisation can be used for all types of flashbulbs and electrically ignited flash powders. In the case of electronic flashes it is the only one possible.

Fully synchronised shutters, in addition to the „X“ position just described, have a second mode of operation in order to enable minimum exposure times to be used with flashbulbs designed for the „M“ position. In this position contact is made so early that the flashbulb flares up the very moment the shutter blades reach maximum aperture. When using very short exposure times ( $1/100$  or  $1/300$  second) the shutter will open and close during the actual flash period, thus permitting very short exposure times even when using flashbulbs.

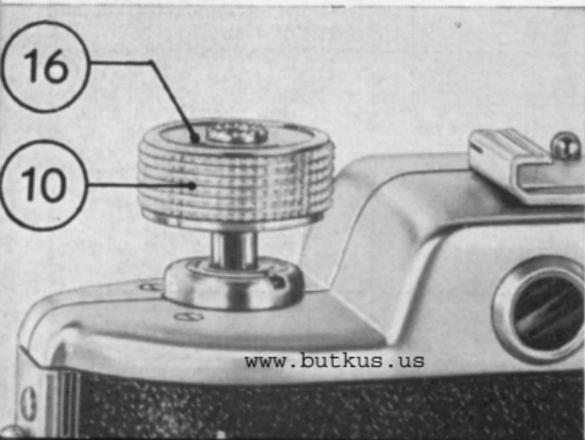
Exposure time and aperture should, as usual, be adapted to distance, film speed and light. Detailed instructions on this subject are given on leaflets supplied with the flash equipment. With the synchronised flashlight equipment you can make flashlight exposures not only at night but also in such cases where natural light is not quite sufficient, i. e. in bright rooms or in the open on dull days or at twilight. — The following table gives the shutter times which can be used with the most important types of flashlight.

# POSSIBLE SHUTTER SPEEDS FOR FLASHLIGHTS

Flashlight	Flash Bulb		Synchro-lever position on	
	Make	Type	X or V Exposure time longer than flash duration	M Exposure time shorter than flash duration
Electronic flash	All flashes without ignition delay		B, 1 to $1/300$	No exposure
Flashlights for "X" position only	General Electric Westinghouse	SM		Not designed "M" position
	Sylvania Wabash	SF		
	Osram	XO      XP F1      F2	B, 1 to $1/50$ B, 1 to $1/25$	
Flashlights designed for "M" and "X" position	Philips	PF 110	B, 1 to $1/25$	1 to $1/100$
		PF 3      PF 14 PF 25      PF 56		
	Osram	MX1 SO S 1 S 2	B, 1 to $1/25$	1 to $1/300$
	General Electric Westinghouse	No. 5 11 22		
	Sylvania Wabash	Press 5 40 50 No. 0		
Sylvania Wabash	No. 2	B, 1 to $1/25$	1 to $1/100$	

## REWINDING THE FILM

After 36 or 20 exposures, as the case may be, a certain resistance is felt when winding the film forward; this indicates that the end of the film has been reached. Do not be misled in case the counter does not show the expected figure of 36 or 20 respectively. This happens when the film is not advanced by a whole frame during the last winding action, the length of film having been exhausted.



Before opening the back panel the film must be wound back into its cassette. In order to release the take-up spool depress rewind lever R (11) at transport lever (2), preferably with the thumb of your left hand in which you are holding the camera. Now slightly extract the rewind

knob (10) to get a better hold on it, but only to the point where a slight resistance is felt. You can now wind the film back into its cartridge by turning this knob in the direction of the arrow. The change in the sound made by the spool, and the reduced resistance, indicate that rewinding has been completed. Moreover, the exposure counter (15) stops rotating. Now open the back panel and remove the film, now back in its cartridge, for developing.

## **EXCHANGING PARTLY EXPOSED FILMS**

At times it is desirable to remove from the camera a film which has been only partly exposed, e. g. for the purpose of exchanging a black and white film for a colour film or vice versa. Memorize the position of the exposure counter and rewind the film into the cassette as usual, but stop rewinding immediately the counter ceases to rotate, to ensure that the end of the film still protrudes from the cassette. It is useful to mark on this end the number of exposures already made.

For reinserting this film at a later date proceed as per instructions on page 6, but protect lens from light (by means of the lens cover or some other medium). After 3 blind exposures set film counter to „0“ and then, alternately, release and wind with lens covered up until the counter is ahead of the figure marked on the end of the film. Now the film is ready for normal use again. The smart and simple thing to do, however, is to purchase a second AKARELLE body for your colour films. Should you be lucky enough to own several AKARELLE lenses you can equip both bodies and interchange the lenses as required.

## THE AKARETTE-AKARELLE INTERCHANGING SYSTEM

All accessories of the older AKARETTE also fit the AKARELLE, while conversely, the owner of an AKARETTE can make full use of AKARELLE accessories.

4 standard objectives can be fitted on the AKARELLE, differing mainly in their speed and the number of their lens units:

3-unit Anastigmat,	Westar	speed	f/2.8	} Angle of view approx. 50°
3-unit	"	"	f/3.5	
4-unit	"	"	f/3.5	
4-unit	"	"	f/2.8	
6-unit	"	"	f/2.0	

These standard objectives can be efficiently complemented by lenses with a different angle of view:

Wide-angle lens:

Westron, focal length 35 mm, speed f/4.5	Angle of view 63°
Xenagon, focal length 35 mm, speed f/3.5	Angle of view 63°

Telephoto lens:

Radionar, focal length 75 mm, speed f/4.5	Angle of view 32°
Tele-Xenar, focal length 90 mm, speed f/3.5	Angle of view 27°
Tele-Ennalyt, — do — 135 mm, — do —	— do — 18°

The AKARELLE augmentation system permits progressive addition of interchangeable lenses and accurately gauged accessories, and any future supplementary apparatus developed within the framework of this system will also fit your AKARELLE. For enquiries on this subject please write to us. If, for some reason or other, you wish to send us your camera, please do not forget to include the lenses, so that we can guarantee accurate adjustment.

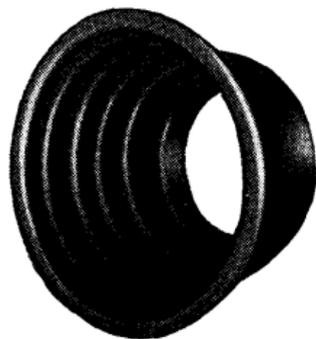
## DETAILS ON AKARELLE ACCESSORIES

Each lens mount is provided with an internal screw thread in front for the attachment of colour filters, a lens hood or supplementary lenses for close-up exposures. The threaded lens hood, colour filters and supplementary lens should be selected as follows:

Size 46 for telephoto lens Tele-Xenar  $f/3.5/90$  mm

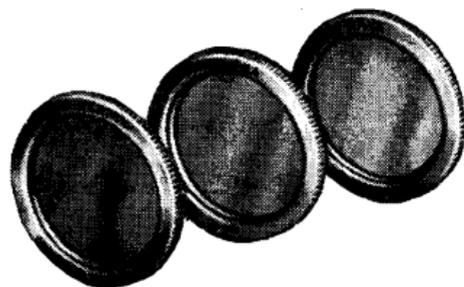
Size 32 for all other supplementary and standard lenses.

Collapsible rubber **Lens Hood**. This is an indispensable protection against direct light falling obliquely into the lens and ideally suitable for colour photography. Threaded mounts to fit all AKARELLE lenses. For wide-angle lenses no lens hood is required, the lens mount itself being designed to eliminate unwelcome light (see page 10).



**Filters** in screw mounts:

light yellow	G	1	Multiplying factor	2	
medium yellow	G	2	" "	4	
light yellow-green	Gr	1	" "	2	
medium yellow-green	Gr	2	" "	4	
orange	O	3	" "	4-6	
red	R	3	" "	8	
ultraviolet	UV		No extra time		
blue (for artificial light)	B		Multiplying factor	2	by daylight
				appr. 8	by artificial light



Colour film filter „COLOR“. No extra time, in order to avoid violet and blue effect in colour photography where this might be expected.

**The uncoupled Combined „Akameter“ Range & Viewfinder**

This precision instrument which can be fitted on the slip-in shoe of the AKARELLE is a measuring viewfinder with **one** window. The whole field of view can be seen **at a glance** exactly as in the viewfinder, including the clearly defined reflected measuring field. The angle of view is adapted to the focal length of the AKARELLE standart lens (50 or 45 mm).

A velvet-lined cowhide **Ever-ready case** to house the AKARELLE with standard lens. When shutting this roomy case the lens hood (folded back) and one filter may remain on the lens.

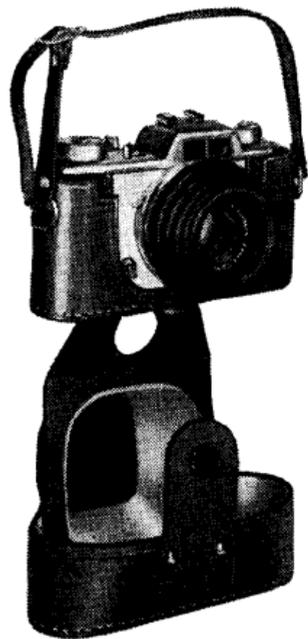
Velvet-lined Ever-ready Cases for special purposes:

Model A = for AKARELLE with fitted range-finder „Akameter“.

Model F = Ever-ready case with pocket for 3 filters or supplementary lenses.

Model TX = Ever-ready case for AKARELLE and fitted Radionar 75 mm or Tele-Xenar 90 mm.

A **dust-proof Cover** for the camera body when the objective has been removed.



A **Universal Pocket Stand** easily dismantled and very sturdy, supplied in a smart chamois case. With this stand the AKARELLE can be reliably fixed to tables, shelves, doors, trees etc. Besides, it can be used as a chest stand with neck strap, as a short stand for ground exposures and as a mobile table stand. Universal joint, self-locking.

**Screen Focusing Unit** in two designs KT and BW. A ground screen image is observed through a lens; this allows subject area and definition to be accurately judged. Eminently suitable for reproduction, documents and close-ups of any description. Working range with an AKARELLE standard lens from exposures of a 1 : 1 ratio up to a distance of 50 cm (field size approximately equal to DIN A 4 notepaper); with lens in special mount extension of working range up to infinity.

**Supplementary Lenses Size 32** in screw mounts to fit all AKARELLE standard lenses  
**Focusing Table** valid for lenses of 45 and 50 mm focal length.

**Objektives with feet calibration.**

Position of Focusing Scale		feet	$\infty$	60 ft	30 ft	20 ft	15 ft	10 ft	8 ft	
Supp. Lens Nr. 1	Diopter 1,0	Near Limit	inch	42,5	39,4	38,2	37,0	35,6	32,5	30,4
		Subject Distance	inch	<b>45,1</b>	<b>41,7</b>	<b>40,3</b>	<b>39,0</b>	<b>37,4</b>	<b>34,2</b>	<b>32,0</b>
		Far Limit	inch	47,9	44,5	43,0	41,3	39,6	36,4	33,7
	Size of Field	inch x inch	19,3x29,1	17,7x27,0	17,1x26,0	16,7x25,2	16,1x24,2	14,6x22,0	13,8x20,5	
Supp. Lens Nr. 2	Diopter 1,5	Near Limit	inch	27,7	27,0	26,3	25,5	24,9	23,8	22,9
		Subject Distance	inch	<b>29,1</b>	<b>28,3</b>	<b>27,4</b>	<b>26,6</b>	<b>25,9</b>	<b>24,6</b>	<b>23,8</b>
		Far Limit	inch	30,8	29,7	28,7	27,8	27,0	25,7	24,8
	Size of Field	inch x inch	12,2x18,1	11,8x17,7	11,2x16,9	10,8x16,5	10,6x15,9	9,8x15,0	9,4x14,2	
Supp. Lens Nr. 3	Diopter 2,5	Near Limit	inch	18,4	17,7	17,4	17,2	17,0	16,6	16,1
		Subject Distance	inch	<b>18,9</b>	<b>18,3</b>	<b>17,9</b>	<b>17,7</b>	<b>17,5</b>	<b>17,0</b>	<b>16,5</b>
		Far Limit	inch	19,5	18,8	18,4	18,2	18,0	17,5	17,0
	Size of Field	inch x inch	7,1x10,6	6,7x10,2	6,7x10,0	6,7x9,9	6,7x9,7	6,5x9,4	6,3x9,0	

Distance should be measured from back panel of the AKARELLE. It is recommended to stop down to at least 5.6, but very small apertures should be avoided. Exposure times need not be increased when using supplementary lenses.

7 ft	6 ft	5 ft	4,5 ft	4 ft	3,5 ft
29,2	27,8	26,1	25,4	24	23,2
<b>30,6</b>	<b>29,0</b>	<b>27,3</b>	<b>26,4</b>	<b>25,3</b>	<b>24</b>
32,3	30,9	28,8	27,8	26,6	25
13,4 x 20,0	12,4 x 18,7	11,8 x 17,9	11,2 x 17,3	10,8 x 16,5	10,2 x 15,6
22,3	21,6	20,6	20,2	19,5	18,7
<b>23,1</b>	<b>22,3</b>	<b>21,2</b>	<b>20,8</b>	<b>20,1</b>	<b>19,3</b>
24,1	23,2	22,0	21,5	20,8	19,9
9,2 x 13,8	8,8 x 13,2	8,3 x 12,4	8,1 x 12,0	7,7 x 11,4	7,3 x 11,0
15,8	15,5	15,1	14,9	14,6	14,3
<b>16,2</b>	<b>15,9</b>	<b>15,5</b>	<b>15,2</b>	<b>15,0</b>	<b>14,7</b>
16,6	16,2	15,8	15,6	15,3	15,0
6,1 x 8,9	6,0 x 8,7	5,7 x 8,5	5,6 x 8,3	5,4 x 8,1	5,3 x 7,9

The figures in the top line indicate the distance values on the lens mount scale. The bold figures in each group indicate the corresponding distances of the subject from the back panel of the camera, measured in centimetres. The depth of field in respect of aperture 5.6 can be ascertained from the figure above it (near limit of sharp focus) and the figure below (far limit of sharp focus). The size of field means the subject area covered by the exposure.

**Supplementary Lenses Size 32** in screw mounts to fit all AKARELLE standard lenses.  
**Focusing Table valid for lenses of 45 and 50 mm focal length.**

**Objectives with meter-calibration.**

Position of Focusing Scale meter			$\infty$	20	10	7,0	5,0	4,0	3,0	2,4	2,0
Supp. Lens No. 1 Diopter 1,0	Near Limit	cm	108,0	100,5	98,0	95,2	91,8	87,6	82,5	78,0	74,1
	Subject Distance	cm	114,5	106,5	103,5	100,4	96,6	92,7	86,6	81,7	77,5
	Far Limit	cm	121,8	113,4	109,8	106,2	102,0	97,6	91,1	85,6	81,0
	Size of Field	cm x cm	49 x 74	45 x 68	44 x 67	43 x 65	41 x 62	39 x 60	37 x 56	35 x 52	33 x 50
Supp. Lens No. 2 Diopter 1,5	Near Limit	cm	70,4	69,3	67,5	66,1	64,3	62,5	60,2	58,2	56,1
	Subject Distance	cm	74,0	72,5	70,5	68,9	67,0	65,1	62,6	60,4	58,2
	Far Limit	cm	78,2	76,3	74,0	72,2	70,1	68,1	65,3	62,9	60,5
	Size of Field	cm x cm	31 x 46	30 x 45	29 x 43	28 x 42	27 x 41	26 x 39	25 x 37	24 x 36	23 x 34
Supp. Lens No. 3 Diopter 2,5	Near Limit	cm	46,7	45,6	44,8	44,4	44,0	43,5	42,6	41,1	40,3
	Subject Distance	cm	48,0	46,8	46,0	45,5	45,1	44,6	43,6	42,2	41,2
	Far Limit	cm	49,5	48,2	47,3	46,8	46,3	45,8	45,0	43,3	42,3
	Size of Field	cm x cm	18 x 27	17 x 26	17 x 25	17 x 25	17 x 25	17 x 24	16 x 24	16 x 23	15 x 22

Distance should be measured from the back panel of the AKARELLE. It is recommended to stop down to at least 5.6, but very small apertures should be avoided. Exposure times need not be increased when using supplementary lenses.

1,7	1,5	1,3	1,2	1,1	1,0
70,5	67,7	64,2	62,0	60,0	57,8
<b>73,5</b>	<b>70,4</b>	<b>66,7</b>	<b>64,3</b>	<b>62,2</b>	<b>59,8</b>
76,8	73,4	69,4	66,9	64,6	62,0
31 x 47	30 x 45	28 x 42	27 x 41	26 x 40	25 x 37
54,2	52,4	50,5	49,2	48,2	46,8
<b>56,2</b>	<b>54,2</b>	<b>52,2</b>	<b>50,8</b>	<b>49,8</b>	<b>48,3</b>
58,4	56,3	54,1	52,6	51,6	49,9
22 x 33	21 x 32	20 x 30	19 x 29	19 x 28	18 x 27
39,3	38,7	37,8	37,4	36,9	36,4
<b>40,3</b>	<b>39,6</b>	<b>38,7</b>	<b>38,3</b>	<b>37,7</b>	<b>37,2</b>
41,3	40,6	39,6	39,2	38,6	38,0
15 x 22	14 x 22	14 x 21	14 x 21	14 x 20	13 x 20

The figures in the top line indicate the distance values on the lens mount scale. The bold figures in each group indicate the corresponding distances of the subject from the back panel of the camera, measured in centimetres. The depth of field in respect of aperture 5.6 can be ascertained from the figure above it (near limit of sharp focus) and the figure below (far limit of sharp focus). The size of field means the subject area covered by the exposure.



Apparate- und Kamerawerk GmbH.  
Friedrichshafen (Bodensee)