

IKOFLEX

IIa

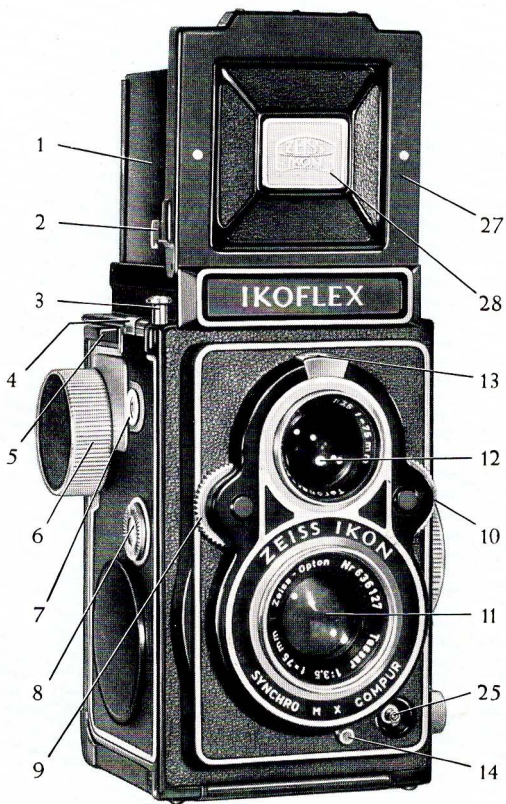
I N S T R U C T I O N B O O K



Z E I S S I K O N A G . S T U T T G A R T



IKOFLEX-picture: Dr. Weizsäcker, Tessar 1:3.5, Diaphr. 5.6, Electronic flash



THE PARTS OF THE IKOFLEX IIa

- 1 Right side of finder hood
- 2 Double exposure prevention
- 3 Body shutter release threaded to fit cable release
- 4 Signal window of double exposure prevention
- 5 Eyelet for carrying strap
- 6 Knob for advancing film and winding shutter
- 7 Automatic picture counter
- 8 Setting wheel of picture counter
- 9 Shutter speed setting wheel
- 10 Diaphragm setting wheel
- 11 Taking lens
- 12 Viewing lens
- 13 Window for verifying shutter speed and diaphragm settings
- 14 Flash synchronisation switch
- 15 Focusing magnifier
- 16 Left side of finder hood with exposure table
- 17 Eyepiece of frame-type sports finder
- 18 Bolt for closing finder hood
- 19 Bolt for closing camera back
- 20 Upper spool chamber
- 21 Depth-of-field scale
- 22 Focusing knob with distance scale
- 23 Lower spool chamber
- 24 Film window
- 25 Contact nipple
- 26 Tripod thread
- 27 Sports finder frame in front side of finder hood
- 28 Plate closing finder hood from inside

The

IKOFLEX IIa

is a twin-lens mirror reflex camera manufactured by ZEISS IKON AG, STUTTGART, taking 12 2 $\frac{1}{4}$ " by 2 $\frac{1}{4}$ " pictures on standard B II/8-120 roll or colour film. Its viewing lens renders an unusually brilliant and sharply defined image of the motive on a bright ground glass. The coupled taking and viewing lenses, which are of equal speed and focal length, permit high-speed one-hand manipulation, and ensure 100 % accurate focusing as well as convenient composition. The taking lens, the world-famous Zeiss Tessar, is excellently colour corrected and ensures black and white as well as colour pictures of unmatched sharpness. Both lenses are coated to prevent reflexes and eliminate flare. The dependable ground glass focusing mechanism permits full exploitation of the high-speed Tessar lens.

The IKOFLEX IIa is equipped with a fully synchronised Synchro-Compur shutter which is automatically wound when the film is advanced. Furthermore the IKOFLEX IIa features an automatic film stop as well as a shutter release lock preventing double exposures and blanks.

Before inserting the first film it is recommendable to familiarise oneself with all the manipulations described in this booklet. Taking this trouble will pay because with an excellent working knowledge about the IKOFLEX IIa and its controls your very first pictures will be a complete success and the camera will remain a source of constant pleasure for you.

OPENING AND CLOSING THE FINDER HOOD OF THE IKOFLEX IIa

The finder hood opens and erects itself automatically upon pressing bolt (18) to the left.

For 100 % accurate focusing swing out the focusing magnifier (15) which is fitted to the frontside of the finder hood. When closing the finder hood first fold the magnifier back, then fold the left and right sides and the rear side successively to the center and finally cover these with the front side which, after snapping into the lock, automatically blocks the shutter release thus preventing unintentional picture-taking while the finder hood is closed.

FOCUSING

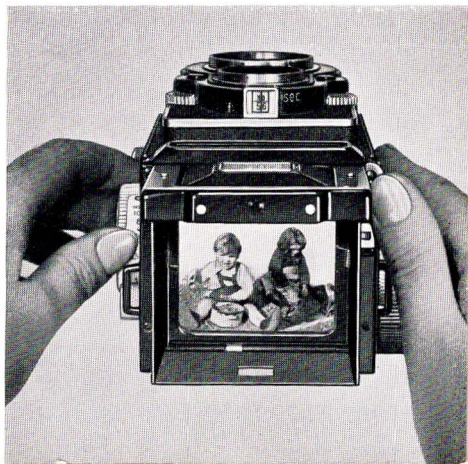
The special feature of the IKOFLEX is the erect ground glass image of the object produced by an ingenious mirror reflex system and a viewing lens which has the same optical efficiency as the taking lens and renders an image of the motive which is equal in sharpness and framing to the image thrown on the film by the taking lens.

Framing and sharpness can be conveniently and accurately controlled on the ground glass because the novel finder system is of such brilliancy that the entire ground glass is evenly illuminated from corner to corner.

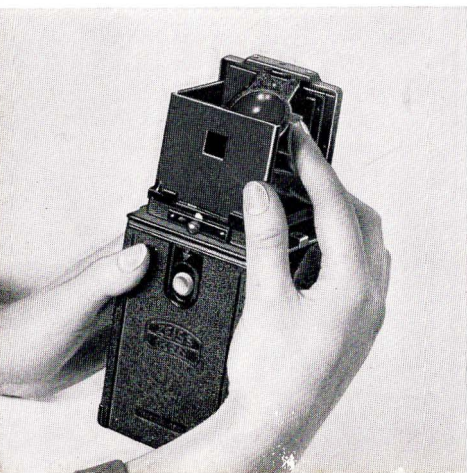
The taking lens and the viewing lens are coupled so that both lenses are focused simultaneously. Indeed, the IKOFLEX IIa ensures split-second and 100% accurate focusing and composition of any given motive.

Objects are focused by turning the focusing knob (22) which covers all distances from 3 feet to infinity with a 90° turn. The point of ultimate sharpness can be easily ascertained on the ground glass.

*Focusing with
focusing knob*



Consequently it is very easy to achieve accurate focusing with the IKOFLEX IIa. Even if the taking lens is stopped down pin-point accurate focusing can be accomplished with the bright ground glass image because the opening of the viewing lens is not reduced. The depth-of-field of the stopped down taking lens can be conveniently ascertained from the depth-of-field scale (21). Delicate focusing problems can be easily solved with the focusing magnifier (15). If it is necessary to use the magnifier, swing it out with the right index finger after pressing inward the right side of the finder hood. The eye should be as close as possible to the magnifier and should be directly above its center so that the entire ground glass image can be conveniently viewed in magnification.



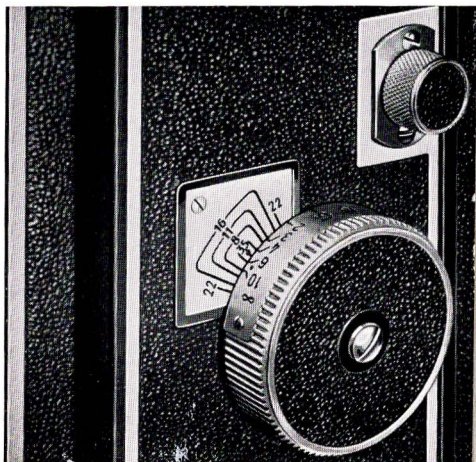
*Focusing magnifier
for 100% accurate
focusing*

THE DEPTH-OF-FIELD SCALE

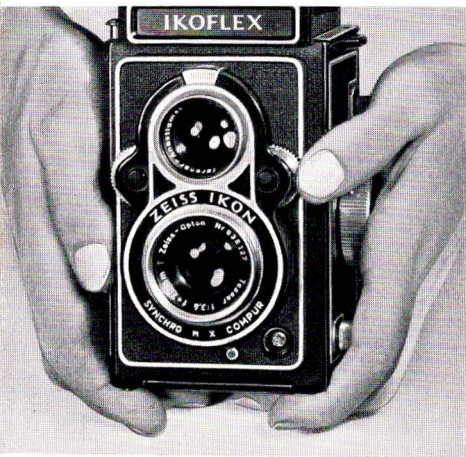
Beside the focusing knob (22) is the depth-of-field scale (21). The bracket-like lines of this scale indicate the depth-of-field for any given lens opening; the figures between the convergent ends of these lines are diaphragm settings. The depth-of-field for a given lens opening can be read off the focusing scale at the two distance setting marks opposite the ends of the left and right bracket lines of the respective diaphragm settings. For example: When using distance setting 5 m (approximately 5 yards and 1 foot) the depth of field ranges from 3 to 15 m (3 yards 1 foot to approximately 17 yards) with diaphragm setting 11, from 2.5 m (2 yards and 2 feet) to infinity with diaphragm setting 16, and from 4 to 6 m (4 yards and 1 foot to 6 yards and 2 feet) with diaphragm setting 3.5.

The exact figures may be found in the depth-of-field table on page 11.

*The self-working
depth-of-field scale*



The diaphragm is set with the diaphragm setting wheel (10), the black figures appearing in the window (13) indicating the different lens openings. These figures and the lens opening are reciprocal, that is, the higher the figure the smaller the opening, the longer must be the exposure. With a small diaphragm opening, however, the depth of field will be larger. When taking pictures by hand the diaphragm opening should not be excessively reduced, otherwise the picture will be blurred because of the vibrations of the hands during the long exposure required when the lens is stopped down. When using $\frac{1}{25}$ second or during shorter exposures the camera can be held by hand. The ground glass image of the IKOFLEX ensures 100 % accurate focusing. It is, therefore, advisable to use a wide diaphragm opening and a short exposure time. Correct shutter speeds may be found out from the exposure table on the left side of the finder hood.



Diaphragm setting wheel (settings can be verified in window)

DEPTH-OF-FIELD TABLE

focal length = 75 mm

Lens setting	D I A P H R A G M			
	3.5	4.0	5.6	
inf.	70' 8" — ∞	61' 8" — ∞	44' 4" — ∞	
48'	28' 8" — 147' 8"	27' 4" — 210' 0"	23' 4" — ∞	
24'	18' 0" — 36' 0"	17' 4" — 38' 8"	15' 8" — 51' 4"	
15'	12' 8" — 19' 0"	12' 4" — 19' 8"	11' 4" — 22' 4"	
12'	10' 4" — 14' 4"	10' 4" — 14' 8"	9' 8" — 16' 4"	
9'	8' 0" — 10' 4"	8' 0" — 10' 4"	7' 8" — 11' 0"	
6'	5' 6" — 6' 6"	5' 6" — 6' 6"	5' 4" — 6' 10"	
5'	4' 8.5" — 5' 4"	4' 8" — 5' 4"	4' 7" — 5' 6"	
4'	3' 10" — 4' 2.5"	3' 9.5" — 4' 3"	3' 9" — 4' 4"	
3' 6"	3' 5.5" — 3' 8.5"	3' 5" — 3' 9"	3' 4.5" — 3' 10"	

Lens setting	D I A P H R A G M			
	8	11	16	22
inf.	31' 0" — ∞	22' 8" — ∞	15' 8" — ∞	11' 4" — ∞
48'	19' 0" — ∞	15' 8" — ∞	12' 0" — ∞	9' 4" — ∞
24'	13' 8" — 101' 0"	11' 8" — ∞	9' 8" — ∞	8' 0" — ∞
15'	10' 4" — 28' 0"	9' 4" — 42' 4"	8' 0" — 265' 4"	6' 8" — ∞
12'	8' 8" — 19' 0"	8' 0" — 24' 4"	7' 0" — 47' 0"	6' 0" — ∞
9'	7' 0" — 12' 4"	6' 6" — 14' 4"	5' 10" — 19' 8"	5' 2" — 35' 8"
6'	5' 2" — 7' 4"	4' 10" — 8' 0"	4' 6" — 9' 4"	4' 1" — 11' 8"
5'	4' 4.5" — 5' 10"	4' 2.5" — 6' 2"	3' 11" — 7' 0"	3' 7.5" — 8' 4"
4'	3' 7.5" — 4' 6"	3' 5.5" — 4' 8.5"	3' 3.5" — 5' 1.5"	3' 1.5" — 5' 8.5"
3' 6"	3' 3.5" — 3' 11.5"	3' 2.5" — 4' 1"	3' 0.5" — 4' 4.5"	2' 10.5" — 4' 9.5"

THE EXPOSURE TABLE

The exposure table on the left side of the finder hood (16) gives the proper settings for the most frequently occurring taking conditions. The data are based on a film sensitivity of 18/10° DIN (22 Scheiner US; 40 ASA) and presuppose sunlight. The following hints should be taken into consideration when taking pictures under different lighting conditions:

1. When using 15/10° DIN (19 Scheiner USA; 20 ASA) film the exposure must be doubled; for 21/10° DIN half the given shutter speed is sufficient.
2. When using lens opening 11 instead of 8 the exposure time must be doubled; for lens opening 16 the exposure must be increased 4 times.
3. When the sky is slightly overcast the given exposures must be doubled, when it is cloudy the exposures must be increased 4 times.
4. During the months of September, October, March and April, the given exposures must be doubled; during the months of November, December, January and February the given exposures must be multiplied by 4. During the latter months they are applicable only to the hours from 10 a. m. to 2 p. m.

The data of the exposure table are valid for intermediate and northern latitudes.

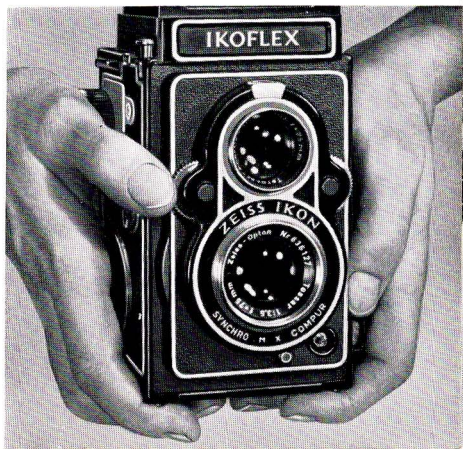
The IKOPHOT, the dependable and easy-to-use photo-electric exposure meter manufactured by ZEISS IKON AG, STUTTGART, will give you the correct exposure time for any given lens opening under all lighting conditions, even under the most adverse circumstances.

THE SHUTTER

The IKOFLEX IIa is equipped with a fully synchronised Synchro-Compur shutter with shutter speeds ranging from 1 to $\frac{1}{500}$ second. The shutter speeds are set with the setting wheel (9). For long exposures use setting "B". The shutter speed settings can be verified from above in the window (13). The red figures appearing in this window indicate fractions of a second, for instance "5" means $\frac{1}{5}$ second, "100" means $\frac{1}{100}$ second, etc. Please note that $\frac{1}{500}$ second can be set only before winding the shutter.

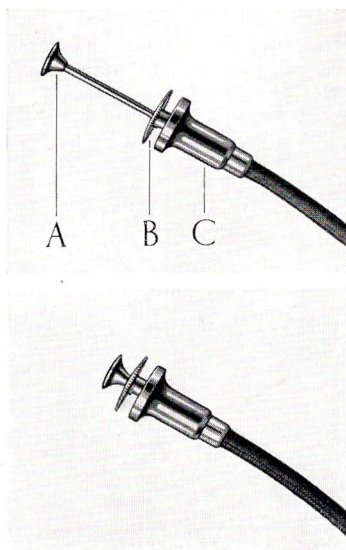
For extremely long exposures use setting "B". With this setting the shutter remains open as long as the shutter release is pressed. In order to ensure really sharp pictures, all time exposure should be made with a cable release, and the IKOFLEX should be screwed on a tripod or on a firm support such as a table, or a chair, or something similar.

Shutter speed setting wheel (shutter speeds can be verified in window)



THE ZEISS IKON CABLE RELEASE

equipped with plunger catch may be used for long exposures. It is screwed into the thread of the body shutter release (3). For action photographs and short exposures, press plate "B" toward "C" and turn it slightly to the right until it remains in the pressed-in position. For long exposures, separate plate "B" from

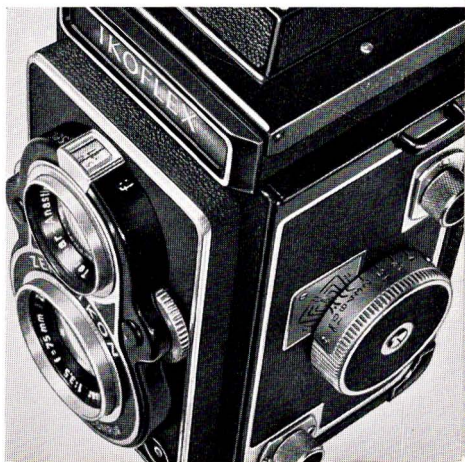


"C." Upon pressing the cable release the plunger then remains pressed in until plate "B" is pressed slightly. With this plunger catch you can make time exposures of unlimited length without constantly pressing the cable release.

THE RED-DOT SETTING

The practical red-dot setting of the IKOFLEX IIa ensures utmost readiness for snapshots in good lighting conditions. With the focusing knob and the diaphragm set to the red dots the IKOFLEX has such a great depth of field (from 13 feet to infinity) that snapshots can be taken without any further focusing. Framing is done as usual on the ground glass. For split-second snapshots it is preferable to use the frame-type sports finder. In especially good lighting conditions use a shutter speed of $\frac{1}{100}$ second, otherwise $\frac{1}{50}$ or, under less favourable conditions, $\frac{1}{25}$ second.

Red-dot setting



HOW TO HOLD THE IKOFLEX II_a DURING THE EXPOSURE

When taking pictures from the hand the IKOFLEX is hooked to the carrying strap which is to be adjusted so as to permit convenient viewing of the ground glass image. The right hand gives the camera the necessary stability; the right thumb sets the shutter speed (9) and then releases the shutter (3).

The left hand supports the camera from the left; the left thumb sets the lens opening (10). The left thumb and index finger are used for focusing (22).

The film must be wound on after every shot. In doing so the shutter is wound automatically. A red mark will appear in the signal window of the double exposure prevention (4) upon completion of this manipulation. Should a white mark be in the signal window the film must first be wound on. Exposure is made by slowly, not

jerkily, pressing the body shutter release knob (3) down as far as possible.



*The IKOFLEX ready
for picture-taking*



THE FRAME-TYPE SPORTS FINDER

For taking pictures at eye level use the built-in frame-type sports finder. Press the inner plate (28) of the front side of the finder hood upward. The frame in the

front side (27) and the sighting aperture (17) at the back of the hood constitute the sports finder. Proper framing is ensured when the edges of the rear (sighting) frame cover the edges of the front-side frame. Focusing is done in advance on the ground glass or with the aid of the red-dot setting. The frame-type viewfinder is preferably used for sports photographs and other split-second snapshots.

*Frame-type
direct-vision finder
for snapshots and
sports photographs*



LOADING THE CAMERA

For loading the camera disengage the film stop mechanism. This mechanism is out of gear when, after the 12th exposure, the film has been advanced. Then the film winding knob may be turned freely.

However, should the film stop mechanism not be out of gear the film winding knob (6) must be turned until the number "12" has passed the picture counter window. This is achieved by alternately turning the film winding and shutter winding knob (6) and releasing the shutter with the body shutter release, as for an ordinary exposure (3).

Open the bolt (19) of back, pull out the film spool



How to insert empty film spool into upper spool chamber

holder (20) and turn it a little to the right so that it cannot snap back. Then insert the empty film spool into the upper spool chamber so that the prong of the film winding knob (6) engages into the slit of the film spool. The spool holder snaps back and engages when it is slightly turned to the left. Then the film can be conveniently wound with the film winding knob (6).

In exactly the same manner the unexposed film spool is inserted into the lower spool chamber with the beginning of the film, i. e. the narrow end of the protective paper back, pointing toward the upper film spool chamber. But use only the standard 120 (B II/8) wide core. Other cores may trouble the film transport mechanism. Pull the protective paper over the picture frame, insert

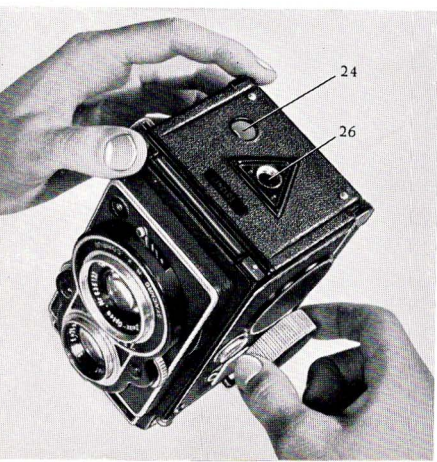
*How to introduce
the protective paper*



it into the long slit of the upper spool and tighten it by turning the film winding knob (6). Take care that the paper winds evenly on the film spool. Close the camera and turn the film winding knob until the number "1" appears in the film window (24).

When these manipulations have been completed the first exposure can be made. Close the film window and turn the setting wheel (8) of the picture counter under constant pressure anti-clockwise until it catches. If one turn of the hand is not sufficient, turn the thumb to the right without diminishing the pressure on the setting wheel and turn again to the left. From then on it is only necessary to watch the number of the picture counter. The camera should preferably be loaded in

subdued daylight
or in the shadow.

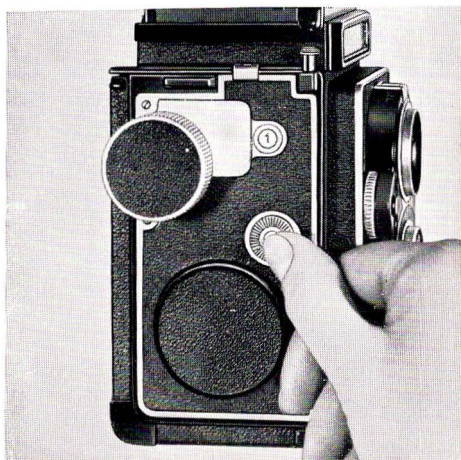


*Film window
and tripod thread at
bottom of camera*

AUTOMATIC FILM STOP AND PICTURE COUNTER

After every exposure, advance the film by turning the film and shutter winding knob (6) until a resistance is felt in the mechanism. As the picture numbers need not to be watched in the film window, this manipulation can even be properly done in the dark. The number of the picture which is ready for the exposure automatically appears in the picture counter window (7). At the same time the red mark appearing in the signal window (4) of the double exposure prevention indicates that this frame has not yet been exposed. If the film has not been advanced after an exposure a white mark is visible

*How to set
the picture counter*



in the signal window (4). The film can, however, be advanced only if an exposure has been made. On the other hand, the shutter can be released only if the knob (6) was wound until it caught. Consequently the IKOFLEX IIa will not take any double exposures and prevents blanks.

UNLOADING THE CAMERA

After the 12th exposure the film stop mechanism disengages automatically. Turn the film winding knob (6) until the end of the protective paper passes the film window (24). Open the bolt of the camera back of the IKOFLEX, seal the film spool while it is in the spool chamber and finally take it out of the camera after pulling out the film spool holder (20). Remove the empty feeding spool from the lower spool chamber and insert it into the upper spool chamber. Take care that the prong of the film winding knob (6) properly engages with the slit of the spool. Having completed these manipulations you may insert a new film.

TAKING THE PICTURE

Set the diaphragm and the shutter speed according to the exposure table on the finder hood or according to the measurings obtained with a photo-electric exposure meter. The red dot in the signal window (4) indicates that an unexposed section of the film is in the picture frame and that the shutter has been wound. If a white mark is seen in the signal window it is either necessary to wind the knob (6) until it catches or, in case the camera has been newly loaded, the setting wheel (8) must be wound.

The shutter is automatically wound when the film is advanced. Shutter speeds from "B" to $1/250$ second may be set even after the shutter has been wound. However, $1/500$ second may be set only before winding the shutter, that is, prior to turning the film and shutter winding knob (6).

Focusing and framing is done on the ground glass in the finder hood. As soon as the ground glass image is satisfactory as regards composition and sharpness, release the shutter. The camera should be held firmly and steadfastly during the exposure.

The right thumb presses down the body shutter release (3) slowly and smoothly, without giving the camera a jerk.

TAKING PICTURES FROM A TRIPOD

At the bottom the IKOFLEX IIa has a thread (26) for attachment of the camera to a tripod. All exposures longer than $\frac{1}{25}$ second should be made from a tripod. As mentioned above, such pictures should be taken with a cable release to prevent any picture blur.

FLASH PHOTOGRAPHY WITH THE IKOFLEX IIa

The IKOFLEX IIa is synchronised for taking flash pictures with flash lamps (vacuflashes, flash bulbs) or with flash tubes (electronic flashes). Connect your flash unit with the IKOFLEX IIa by slipping the plug of the synchronisation cable of the flash equipment on the contact nipple (25) of the camera. The fully synchronised shutter permits ignition of flashes at the very moment the shutter is wide open (synchro-switch in position "X") or may be set on "M" for pre-ignition, which is imperative for all shutter speeds over $\frac{1}{25}$ second to be used in conjunction with flash bulbs.

FLASH PHOTOGRAPHS WITHOUT PRE-IGNITION

(SYNCHRO-SWITCH IN POSITION "X")

are made (1) with electronic flashes in conjunction with all available shutter speeds from 1 to $\frac{1}{500}$ sec and (2) with flash bulbs in conjunction with all shutter speeds between 1 and $\frac{1}{25}$ sec.

For such flash photographs, set the green synchro-switch (14) so that it catches right under the "X". Wind and release the shutter as usual.

FLASH PHOTOGRAPHS WITH PRE-IGNITION

(SYNCHRO-SWITCH IN POSITION "M")

Pre-ignition is used for taking flash snapshots in conjunction with flash bulbs with all available shutter speeds up to $\frac{1}{500}$ sec. The table on the next page gives the shutter speeds which may be used in conjunction with all types of flashes available on the market.

For firing flashes with pre-ignition, set the green synchro-switch (14) so that it catches right under the "M". The shutter is released as usual.

*How to set the flash
synchronisation
switch*

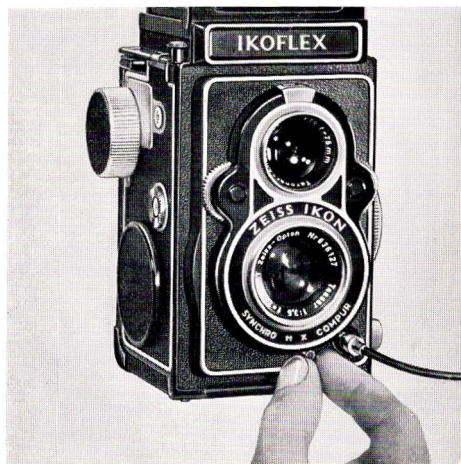


TABLE OF EXPOSURE TIMES FOR FLASH PHOTOGRAPHY

Type of flash		Synchro-Switch set on	
		X	M
Osram Vacublitz	XP	$1\frac{1}{50}$	—
	XO	$1\frac{1}{50}$	—
	F1	$1\frac{1}{25}$	—
	F2	$1\frac{1}{25}$	—
	S0	$1\frac{1}{25}$	$\frac{1}{50}\text{—}1/500$
	S1	$1\frac{1}{25}$	$\frac{1}{50}\text{—}1/500$
	S2	$1\frac{1}{25}$	$\frac{1}{50}\text{—}1/500$
Philips Photoflux	Pf 3	$1\frac{1}{25}$	$\frac{1}{50}\text{—}1/100$
	Pf 14	$1\frac{1}{25}$	$\frac{1}{50}\text{—}1/500$
	Pf 25	$1\frac{1}{25}$	$\frac{1}{50}\text{—}1/500$
	Pf 56	$1\frac{1}{25}$	$\frac{1}{50}\text{—}1/500$
	Pf 24	$1\frac{1}{25}$	$\frac{1}{50}\text{—}1/500$
	Pf 45	$1\frac{1}{25}$	$\frac{1}{50}\text{—}1/500$
	Pf 110	$1\frac{1}{10}$	$\frac{1}{25}\text{—}1/50$
Gen. Electric Westinghouse	SM	$1\frac{1}{50}$	—
	No. 5	$1\frac{1}{25}$	$\frac{1}{50}\text{—}1/500$
	No. 11	$1\frac{1}{25}$	$\frac{1}{50}\text{—}1/500$
	No. 22	$1\frac{1}{25}$	$\frac{1}{50}\text{—}1/500$
	No. 6	$1\frac{1}{25}$	$\frac{1}{50}\text{—}1/500$
	No. 31	$1\frac{1}{25}$	$\frac{1}{50}\text{—}1/500$
	No. 50	$1\frac{1}{10}$	$\frac{1}{25}\text{—}1/50$
Sylvania Superflash, Wabash	SF	$1\frac{1}{50}$	—
	No. 0	$1\frac{1}{25}$	$\frac{1}{50}\text{—}1/500$
	No. 2	$1\frac{1}{25}$	$\frac{1}{50}\text{—}1/500$
	Press 25	$1\frac{1}{25}$	$\frac{1}{50}\text{—}1/500$
	Press 40	$1\frac{1}{25}$	$\frac{1}{50}\text{—}1/500$
	No. 3	$1\frac{1}{10}$	$\frac{1}{25}\text{—}1/50$
Electronic Flash		$1\frac{1}{500}$	—

ACCESSORIES FOR THE IKOFLEX IIa

FILTERS are especially useful for effectively rendering the tones of natural colours in shades of gray on black and white film. 35.5 mm screw-on filters or 37 mm slip-on filters may be attached to the IKOFLEX. It is recommendable to use the high quality ZEISS IKON filters which thanks to their optical and precision-mechanical quality do not impair the sharpness of the Zeiss Tessar lens.

SUNSHADES are indispensable for against-the-light-photography. The ZEISS IKON sunshade, which may be slipped on the focusing ring or on the filter, prevents the rays of an illuminant from falling directly upon the lens.

THE IKOPROX is a close-up attachment which serves for focusing the viewing lens and the taking lens of the IKOFLEX on near distances (under 3' 3"). It corrects automatically the parallax between the viewfinder image and the image produced on the film, for which allowance has to be made when close-ups are taken.

The required setting, scale of reduction and size of field embraced by the camera may be found in the table on page 29.

THE IKOPOL, an attachment of two coupled polarization filters for the viewing lens and the taking lens, eliminates to a large degree troublesome reflexes on glass, water, wet asphalt, etc. In many cases clear pictures that are rich in contrasts can only be made with the aid of polarization filters. Colour photographs, which are usually a little pale when the sky is overcast, will mostly show richer colours when made with the aid of the polarization filter IKOPOL.

THE PRISMATIC VIEWFINDER for the IKOFLEX is slipped onto the finder hood. It shows an erect image of the object, not a reversed one as in a mirror. Thus it is especially suitable for sports photographs and other rapid snapshots.

THE EVEREADY CARRYING CASE protects the precious IKOFLEX against outside strain and damage without hindering the photographer in his picture taking.

THE IKOPHOT, the photo-electric ZEISS IKON exposure meter, reliable under all conditions, gives the correct shutter speed for any given lens opening.

With the **IKOBLITZ**, the flash unit for flash bulbs, and the **IKOTRON**, the ZEISS IKON electronic flash unit, pictures can be taken even under poor lighting conditions or in complete darkness.

HOW TO TAKE CARE OF THE IKOFLEX IIa

It is advisable to clean the interior of the camera, especially the film transport, from time to time with a soft hair-brush. If the lens should be dirty, wipe it carefully with a soft, well washed, dry piece of linen which must be free from any chemical substances. Dust can be easily wiped off the lens with a soft hair-brush. However, the precious lens should not be cleaned unless it is absolutely necessary.

Each IKOFLEX IIa camera and each ZEISS TESSAR bears a serial number. The owner of an IKOFLEX IIa is advised to note down these numbers in order to be able to indentify his camera and to assert ownership rights in case of loss or unintentional exchange.

The technical development may require slight changes on the camera as compared to the description.

TABLE FOR THE USE OF THE IKOPROX CLOSE-UP ATTACHMENT

	Lens setting	Distance between object and camera	Reduction 1 :	Size of picture field Width Height
$F = 1 \text{ m}$	inf.	3' 3 $\frac{1}{4}$ "	13.3	2' 6" x 2' 6"
	48'	3' 1 $\frac{1}{2}$ "	12.3	2' 3 $\frac{3}{4}$ " x 2' 3 $\frac{3}{4}$ "
	24'	2' 10 $\frac{1}{2}$ "	11.7	2' 2 $\frac{1}{2}$ " x 2' 2 $\frac{1}{2}$ "
	15'	2' 8"	10.8	2' 1 $\frac{1}{2}$ " x 2' 1 $\frac{1}{2}$ "
	12'	2' 6 $\frac{1}{2}$ "	10.3	1' 11 $\frac{1}{4}$ " x 1' 11 $\frac{1}{4}$ "
	9'	2' 4 $\frac{1}{4}$ "	9.5	1' 9 $\frac{1}{2}$ " x 1' 9 $\frac{1}{2}$ "
	6'	2' 3 $\frac{1}{4}$ "	8.2	1' 6 $\frac{1}{2}$ " x 1' 6 $\frac{1}{2}$ "
	5'	1' 11"	7.6	1' 5 $\frac{1}{4}$ " x 1' 5 $\frac{1}{4}$ "
	4'	1' 9 $\frac{1}{4}$ "	6.9	1' 3 $\frac{1}{2}$ " x 1' 3 $\frac{1}{2}$ "
	3'6"	1' 8 $\frac{1}{2}$ "	6.4	1' 2 $\frac{1}{4}$ " x 1' 2 $\frac{1}{4}$ "
$F = 0.5 \text{ m}$	inf.	1' 7 $\frac{3}{4}$ "	6.7	1' 3 $\frac{1}{4}$ " x 1' 3 $\frac{1}{4}$ "
	48'	1' 7"	6.4	1' 2 $\frac{1}{2}$ " x 1' 2 $\frac{1}{2}$ "
	24'	1' 6 $\frac{1}{4}$ "	6.2	1' 2" x 1' 2"
	15'	1' 5 $\frac{1}{2}$ "	5.9	1' 1 $\frac{1}{4}$ " x 1' 1 $\frac{1}{4}$ "
	12'	1' 5"	5.7	1' 1" x 1' 1"
	9'	1' 4 $\frac{1}{2}$ "	5.5	1' 1 $\frac{1}{2}$ " x 1' 1 $\frac{1}{2}$ "
	6'	1' 3 $\frac{1}{4}$ "	5.1	11 $\frac{1}{2}$ " x 11 $\frac{1}{2}$ "
	5'	1' 2 $\frac{1}{2}$ "	4.8	10 $\frac{3}{4}$ " x 10 $\frac{3}{4}$ "
	4'	1' 1 $\frac{1}{2}$ "	4.5	10 $\frac{1}{4}$ " x 10 $\frac{1}{4}$ "
	3'6"	1' 2 $\frac{1}{4}$ "	4.3	9 $\frac{3}{4}$ " x 9 $\frac{3}{4}$ "

The distance between object and camera must be measured from the rim of the IKOPROX to the object. For obtaining adequate depth-of-field it is advisable to stop down to f/8 or smaller.

