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I K O N T A

III

R O L L F I L M C A M E R A 2 1 / 4 " x 2 1 / 4 "

THE IKONTA III 2 1/4" X 2 1/4"

The IKONTA III is an ingeniously constructed high quality ZEISS IKON camera with built-in range finder guaranteeing excellent, needlesharp pictures. Having made yourself thoroughly familiar with the few manipulations described in this instruction booklet, you will easily obtain good pictures and you will derive great pleasure from photography.

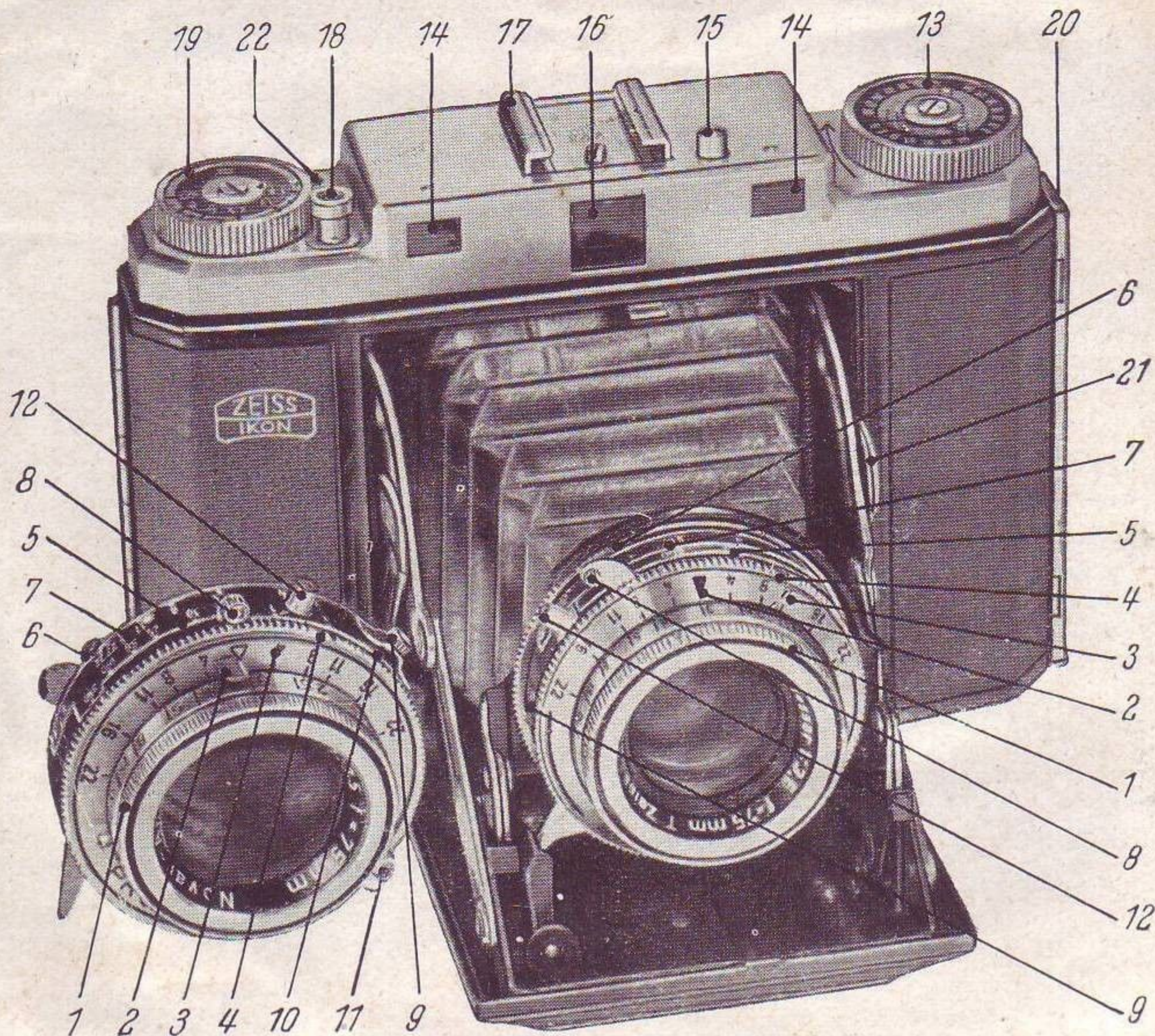
The IKONTA III furnishes 12 exposures, 2 1/4" X 2 1/4", on standard B II/8 (120) roll film. For ascertainment of the exact distance between object and camera the IKONTA III is equipped with a built-in precision range finder. The IKONTA III is available with a NOVAR or a TESSAR lens. All lenses of the IKONTA III, which are factory (T) coated in order to eliminate flare and reflexes, ensure unmatched sharpness and colour correction. An automatic shutter release lock with signal device prevents double exposures.

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THE PARTS OF THE IKONTA III 2 $\frac{1}{4}$ × 2 $\frac{1}{4}$

- 1 = Rotating front lens for distance setting
- 2 = Distance setting mark
- 3 = Depth of field scale
- 4 = Exposure time setting ring
- 5 = Exposure time setting scale
- 6 = Diaphragm setting ring
- 7 = Diaphragm setting scale
- 8 = Shutter winding lever
- 9 = Synchro-switch
- 10 = Marks for synchronization
- 11 = Lever for winding delayed action and synchronization mechanism
- 12 = Flash synchronization contact
- 13 = Film winding knob with film-type indicator
- 14 = Range finder window
- 15 = Knob for opening camera
- 16 = Built-in optical viewfinder
- 17 = Viewfinder shoe for attachment of slip-on accessories
- 18 = Body shutter release threaded for fitting cable release
- 19 = Focusing ring for range finder with focusing scale
- 20 = Bolt for opening and closing camera back
- 21 = Struts
- 22 = Signal for film winding lock

IKONTA III 2 1/4" x 2 1/4"



Prontor SV

www.butkus.us Synchro-Compur

HOW TO OPEN THE CAMERA

Grasp the camera at the camera back and tilt it slightly forward. Upon pressing the knob (15) the camera automatically erects itself and springs into the taking position.



HOW TO CLOSE THE CAMERA

Take the camera in both hands as in the illustration. When pressing with your thumbs on the struts, the camera can be conveniently closed.

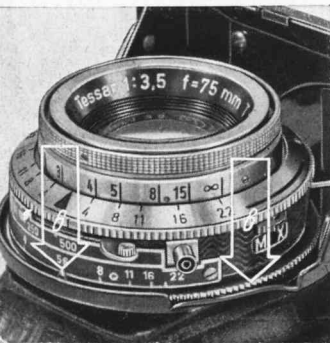
In order to close the IKONTA III in the taking position, the struts are pressed down with the index fingers. The IKONTA III can be closed with any setting, even with a slipped-on filter.





HOW TO SET THE DISTANCE

Distances in terms of meters are engraved on the mount of the rotating front lens. The lens is focused on the object by turning the front lens on the distance setting previously ascertained with the aid of the built-in range finder (*see p. 13*).



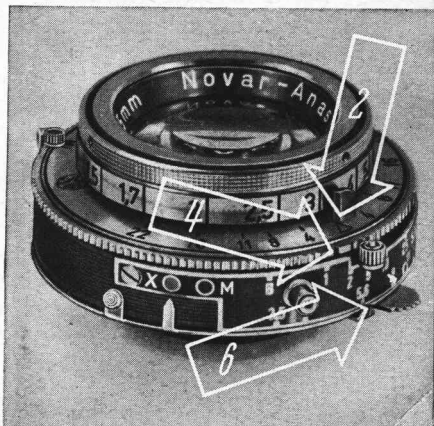
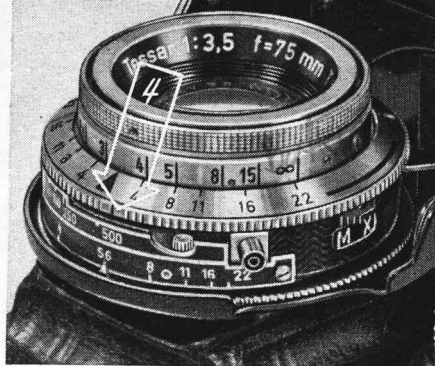
HOW TO SET THE DIAPHRAGM

For setting the diaphragm, set the mark of the diaphragm setting lever on the desired lens aperture figure.

HOW TO SET THE EXPOSURE TIME

Turn the milled ring (4) until the exposure time setting mark is opposite the required exposure time setting. The figures indicate fractions of a second, i. e. 50 means $\frac{1}{50}$ sec. When using setting "B", the shutter remains open as long as the release is pressed.

The shutter must be wound with the winding lever (8) prior to every shot. It does not matter whether the shutter is wound first or whether the shutter speed is set first. The exposure time is set before the shutter is wound only when the shortest shutter speed ($\frac{1}{500}$ sec) of the Synchro-Compur shutter is the used.



THE SHUTTER

The IKONTA III is fitted either with a fully synchronized Prontor-SV shutter or with a Synchro-Compur shutter. Both shutters are synchronized for flash, so that the camera can be used with any current flash unit, e. g. the ZEISS IKON-IKOBLITZ or IKOTRON. After setting the required shutter speed, the shutter is wound by pushing lever (8) as far as possible. The shutter is released by pressing the body release (17). When setting "B" (time exposures) is used, the shutter remains open as long as the release is pressed down. For time exposures it is recommendable to use the cable release, which is fitted into the thread of the body release (17).

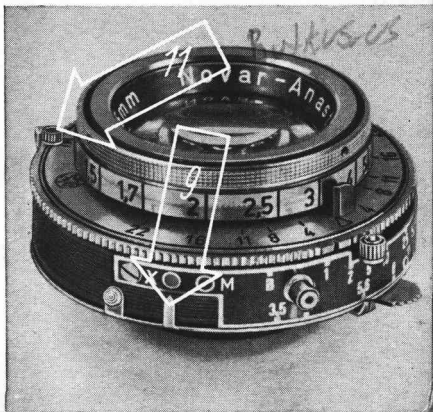
THE DELAYED ACTION RELEASE

The IKONTA III with Prontor-SV shutter is equipped with a delayed action release. Time exposures (setting "B") cannot be made when the delayed action release is used. In addition to the above mentioned manipulations, push lever (9) must be set on the red dot beside

the **X** (position **X**), if snapshots have to be made. Furthermore, lever (11) must be pushed clockwise as far as possible. Thus the delayed action mechanism is wound and will start running as soon as the body release is pressed down. After a delay of approximately 7 sec. the shutter is automatically released. Position **X** also permits flash photographs to be made with the delayed action release.

FLASH PHOTOGRAPHS

When releasing the shutter, the built-in flash contact permits igniting the flash bulb connected to contact nipple (12), at the moment when the shutter is wide open. The instructions for the various types of flash bulbs contain details regarding distances and lens apertures to be used.



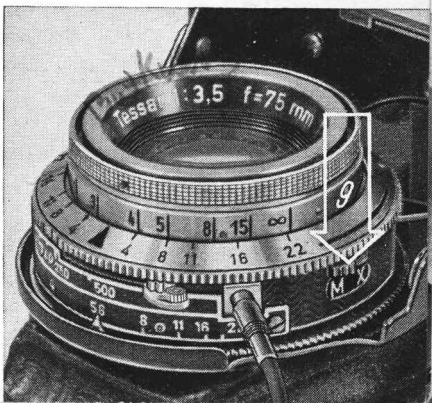
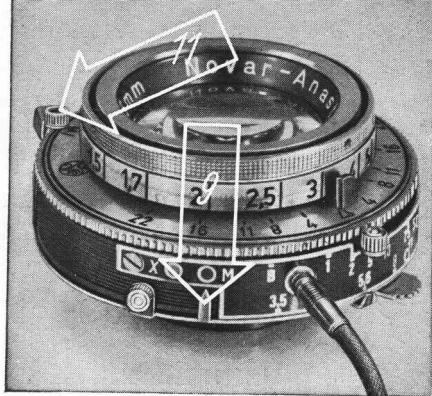
The fully synchronized shutters Prontor-SV and Synchro-Compur do not only fire a flash at the moment when the shutter is opened (position **X**) but also permit firing the flash first and releasing the shutter after a delay of approximately 1/50 sec. (position **M**). Thus, any instantaneous exposure coincides with the peak light intensity of the flash bulb, so that even the shortest shutter speeds may safely be used.

POSITION "M"

Flash photographs with pre-ignition can be made, using all shutter speeds up to 1/300 sec. or 1/500 sec. Our table on page (11) shows the proper flash bulbs to be used.

MANIPULATIONS

Set lens aperture and shutter speed and wind shutter as usual. Set push lever (9) on **M**. With the Prontor-SV shutter, lever (11) must furthermore be set on the **M**. Connect flash cable with contact nipple (12). Release shutter. In the case of the Prontor-SV shutter the position **M** is valid for one exposure only, so that lever (9) has to be set on **M** for every exposure.



POSITION "X"

Flash photographs without pre-ignition can be made

- 1) with electronic flashes in conjunction with all shutter speeds from 1 to 1/300 sec.;
- 2) with flash bulbs in conjunction with all shutter speeds from 1 to 1/25 sec.

MANIPULATIONS

Set lens aperture and shutter speed and wind shutter as usual. Set push lever (9) on red dot beside the X. Connect flash cable with contact nipple (12). Release shutter.

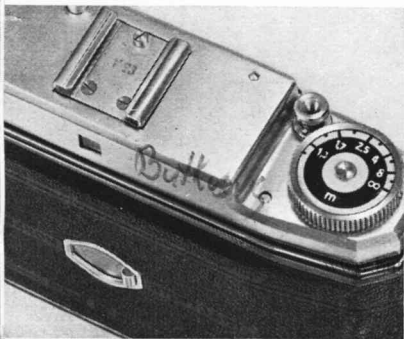
TABLE OF EXPOSURE TIMES FOR FLASH BULBS

Type of Flash	Synchro-Switch in Position	
	X	M
Osram F 0	1—1/50	—
F 1, F 2	1—1/25	—
General Electric	1—1/100	—
Westinghouse	1—1/100	—
Sylvania	1—1/100	—
Wabash	1—1/100	—
Osram S 1	1—1/25	1/50—1/500
S 2	1—1/10	1/50—1/500
Philips Pf 14	1—1/25	1/50—1/500
Pf 25	1—1/25	1/50—1/500
Pf 56	1—1/25	1/50—1/500
Gen. Electric	1—1/25	1/50—1/500
Westinghouse		
Sylvania		
Wabash	1—1/25	1/50—1/500
Philips Pf 110		
Gen. Electric	1—1/10	1/25—1/50
Westinghouse		
Sylvania	1—1/10	1/25—1/50
Wabash		
Electronic Flashes		
without ignition delay	1—1/500	—
with delayed ignition after 5 milliseconds	1—1/100	—

HOW TO USE THE RANGE FINDER

Looking through the range finder eyepiece you see in the middle of the image, a rectangular bright section in which the object appears with double contours. Turn the focusing ring of the range finder until the two images merge. Then ascertain from the scale of the distance meter the exact distance of the object. After focusing the front lens accordingly, you may rest

assured that the camera is correctly focused on the object. When the exposure is to be made, the exact final framing is done through the viewfinder.



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The following method has proved to be the most practical one:

If it is, for instance, intended to photograph a child at play, the front lens is set on the most favorable distance. By turning the focusing ring, the range finder can be focused on the same distance as the lens. Then observe the child through the range finder eyepiece while slowly approaching the child until the two range finder images merge. Then, after a final look through the viewfinder, make the exposure.

LENS APERTURE DEPTH OF FIELD AND EXPOSURE TIME

In good lighting conditions a larger depth of field can be obtained by reducing the lens aperture. Lens aperture and lens aperture settings are reciprocal, i. e. the smaller the lens aperture, the higher the lens aperture setting figure. Every reduction of the lens aperture however, necessitates an increase of the exposure time. In reducing the lens aperture, the depth of field increases both in forward and backward direction from the distance on which the lens is focused. The depth of field for any given lens aperture and distance setting can be ascertained from the depth of field scale of the camera. The depth of field can be read off the distance settings opposite the two diaphragm setting figures on the right and left side of the setting mark. Using distance setting 3 m (10 ft.) and diaphragm setting "11" you can read off 2 m (6.5 ft.) on the left side and on the right side 5 m (appr. 17 ft.). Consequently, everything between 6.5 ft. and 17 ft. will be rendered sharply with diaphragm setting "11" and distance setting 3 m (6.5 ft.). The exact depth of field for any given lens aperture and distance setting can be found on page 21.

DEPTH-OF-FIELD TABLE

focal length = 75 mm

Distance

Lens setting	DIAPHRAGM			
	3,5	4,0	4,5	5,6
inf.	70' 8" — ∞	61' 8" — ∞	55' 0" — ∞	44' 4" — ∞
48	28' 8" — 147' 8"	27' 4" — 210' 0"	25' 8" — 364' 0"	23' 4" — ∞
24	18' 0" — 36' 0"	17' 4" — 38' 8"	17' 0" — 42' 0"	15' 8" — 51' 4"
15	12' 8" — 19' 0"	12' 4" — 19' 8"	12' 0" — 20' 4"	11' 4" — 22' 4"
12	10' 4" — 14' 4"	10' 4" — 14' 8"	10' 0" — 15' 0"	9' 8" — 16' 4"
9	8' 0" — 10' 4"	8' 0" — 10' 4"	7' 8" — 10' 8"	7' 8" — 11' 0"
7	6' 6" — 7' 8"	6' 4" — 7' 8"	6' 4" — 8' 0"	6' 2" — 8' 4"
6	5' 6" — 6' 6"	5' 6" — 6' 6"	5' 6" — 6' 8"	5' 4" — 6' 10"
5	4' 8,5" — 5' 4"	4' 8" — 5' 4"	4' 7,5" — 5' 6"	4' 7" — 5' 6"
4	3' 10" — 4' 2,5"	3' 9,5" — 4' 3"	3' 9" — 4' 3"	3' 9" — 4' 4"
3,5	3' 4,5" — 3' 7,5"	3' 4" — 3' 8"	3' 4" — 3' 8,5"	3' 3,5" — 3' 9"

Lens setting	DIAPHRAGM			
	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"
7	5' 10" — 8' 8"	5' 6" — 9' 8"	5' 0" — 12' 0"	4' 6" — 16' 4"
6	5' 2" — 7' 4"	4' 10" — 8' 0"	4' 6" — 9' 4"	4' 1" — 11' 8"
5	4' 4,5" — 5' 16"	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"
3,5	3' 2,5" — 3' 10,5"	3' 1,5" — 4' 0"	2' 11,5" — 4' 3,5"	2' 9,5" — 4' 8,5"

THE CORRECT EXPOSURE TIME

can be ascertained from exposure tables or, most exactly, with the photo-electric ZEISS IKON exposure meter IKOPHOT. The required exposure time depends on the diaphragm setting, the film sensitivity, and the prevailing lighting conditions.

BASIC RULE:

Outdoor photographs in
bright sunshine:
film sensitivity 17/10 DIN
diaphragm setting 8
 $1/100$ sec.

Outdoor photographs,
sky overcast:
film sensitivity 17/10 DIN
diaphragm setting 5,6
 $1/50$ sec.

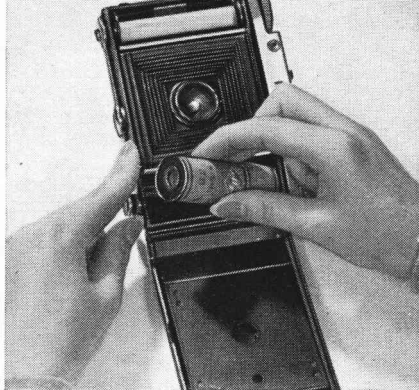
THE ZEISS IKON RED-DOT SETTING

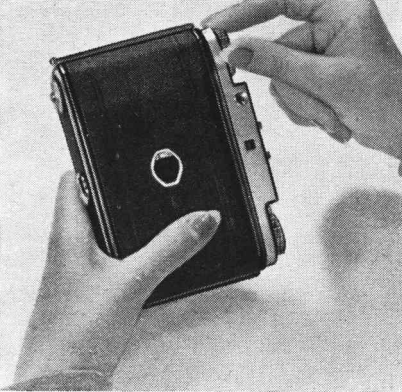
enables the IKONTA III owner to take rapid snapshots. Set the diaphragm lever and the distance setting mark on the red dots and everything from approximately 13 ft. to infinity will be rendered sharply. According to the prevailing lighting conditions, exposure times from $1/25$ to $1/100$ sec may be used in conjunction with the red-dot setting.

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LOADING OF THE CAMERA

The camera back can be opened after pulling out the bolt (20). For loading the camera with a $2\frac{1}{4}'' \times 3\frac{1}{4}''$ roll film, pull out the spring prong at the bottom of the camera and insert the spool into the lower spool chamber. Then slit the label of the film and pull out the protective paper so that its beginning can be inserted into the wider slot of the take-up spool. Tighten the protective paper by turning the film transport knob several times.





Close the camera back and advance the film until number "1" appears in the red aperture on the camera back.

THE DOUBLE EXPOSURE PREVENTION

After every shot the film has to be advanced by one frame, i. e. by one number. The IKONTA III does not take any double exposures because it has a built-in automatic shutter release locking mechanism. Even if the shutter has been wound the body shutter release cannot be pressed down unless the film has been pre-

viously advanced by one frame. A red dot in the signal window indicates that the film has been duly advanced and that the camera is ready for the next shot.

UNLOADING OF THE CAMERA

After the twelfth exposure turn the film transport knob until the end of the protective paper passes the window on the back of the camera. Open the camera back, pull out the spring prong as when inserting the film, carefully remove the spool in the shadow (not in bright sunlight) and glue it. Before inserting a new film, remove the empty spool and insert it into the take-up spool chamber. By turning the film transport knob make sure that the empty spool has engaged with the prong of the film transport.



HOW TO HOLD THE CAMERA DURING THE EXPOSURE

The IKONTA III must be held still during the exposure. The distance meter focusing ring is manipulated with index finger and thumb. The picture can be taken after focusing the front lens on the distance ascertained with the range finder.

The index finger rests on the body shutter release. The shutter is released, i. e., the exposure is made, by pressing down the body shutter release. Time exposures are to be made from a tripod or some other solid support, preferably with a cable release.

ACCESSORIES FOR THE IKONTA III

THE EVEREADY CARRYING CASE

The elegant ZEISS IKON Eveready Carrying Case protects the IKONTA III from dust and other detrimental external influences. The camera is screwed into the case and need not be removed for taking a picture.

CABLE RELEASE

A cable release is especially useful for time exposures and photographs from a tripod. It is screwed into the thread of the body shutter release. The ZEISS IKON cable release is equipped with a plunger catch for long time exposures.

ZEISS IKON FILTERS

improve the rendering of tone values in black and white photography. The filters are screwed on the front lens mount and need not be removed when the camera is closed. Available filters: yellow, green-yellow, orange, and red filters.

SUPPLEMENTARY LENSES FOR CLOSE-UPS

With the standard lens equipment of the IKONTA III photographs can be made of objects from 4 ft. to infinity. Objects closer than 4 ft. can be photographed only with the aid of ZEISS IKON

supplementary lenses (PROXAR lenses), which are slipped on the front lens mount. Two different PROXAR lenses are available for the IKONTA III. When using supplementary lenses, the photographer should take into account that due to parallax the viewfinder shows too much of the upper part of the object and cuts off part of the lower end of the object which is actually embraced by the camera, i. e. when framing close-up objects take care that you duly tilt the camera. (See table p. 23.)

THE LENS HOOD

prevents flare and haze in against-the-light photographs. Moreover, in bad weather, it protects the lens from rain and snow.

COLOUR PHOTOGRAPHY

The IKONTA III is excellently suited for colour photography, because it is equipped with high quality colour corrected ZEISS lenses. Contrary to black and white films, colour films permit little deviation from the exact required exposure time. Therefore, the photo-electric exposure meter IKOPHOT is indispensable for colour photography.

**TABLE FOR THE USE OF ZEISS PROXAR
LENSES FOR CLOSE-UP PHOTOGRAPHY**

	Lens setting	Distance between object and camera	Reduction 1 :	Size of picture field Width Height
1 dioptr F = 1 m	inf.	3' 3 1/4"	13,3	2' 6" × 2' 6"
	48'	3' 1 1/2"	12,3	2' 3 3/4" × 2' 3 3/4"
	24'	2' 10 1/2"	11,7	2' 2 1/2" × 2' 2 1/2"
	15'	2' 8"	10,8	2' 1 1/2" × 2' 1 1/2"
	12'	2' 6 1/2"	10,3	1' 11 1/4" × 1' 11 1/4"
	9'	2' 4 1/4"	9,5	1' 9 1/2" × 1' 9 1/2"
	4'	1' 9 1/4"	6,9	1' 3 1/2" × 1' 3 1/2"
2 dioptr F = 0,5 m	inf.	1' 7 3/4"	6,7	1' 3 1/4" × 1' 3 1/4"
	48'	1' 7"	6,4	1' 2 1/2" × 1' 2 1/2"
	24'	1' 6 1/4"	6,2	1' 2" × 1' 2"
	15'	1' 5 1/2"	5,9	1' 1 1/4" × 1' 1 1/4"
	12'	1' 5"	5,7	1' 1" × 1' 1"
	9'	1' 4 1/2"	5,5	1' 1 1/2" × 1' 1 1/2"
	4'	1' 1 1/2"	4,5	10 1/4" × 10 1/4"

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

HOW TO TAKE CARE OF THE CAMERA

The lens, the most precious part of the camera, must never be touched with the fingers. Should this happen inadvertently, the lens must be carefully cleaned with a soft cloth. Moreover, care should be taken that the interior of the camera is always free from dust, because dust particles may scratch the film.

SERIAL NUMBER

Every camera has a serial number on the camera back. It is advisable to take this number down, in order to be able to identify the camera in case of loss.

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



ZEISS IKON AG STUTTGART