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### HOW TO TAKE CARE OF THE NETTAR II

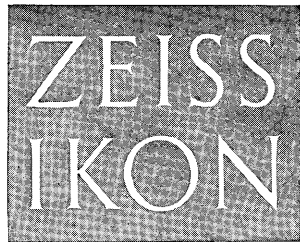
The NETTAR does not require special maintenance work. It is advisable to clean the lens from time to time with some soft cloth and to keep the interior of the camera particularly the film guide and the spool chambers, free from all foreign particles which could damage the film.

A serial number is engraved on the back of every NETTAR camera. It is recommendable to note down this number in order to be able to identify the camera in case it is lost or unintentionally exchanged.



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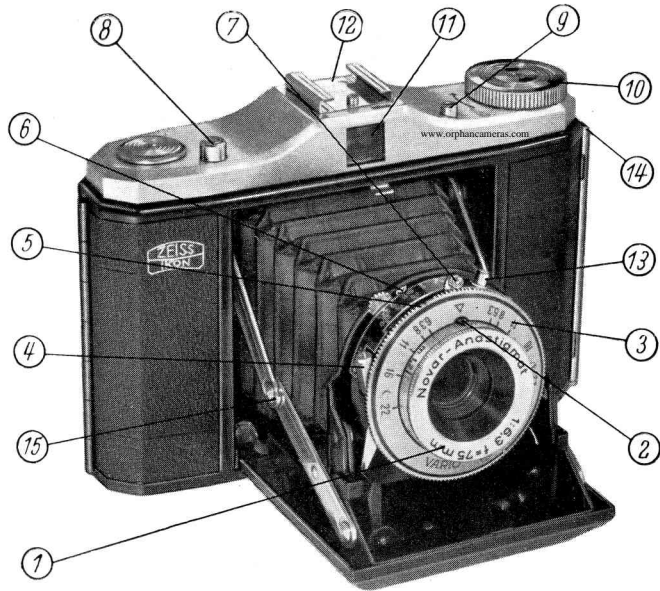


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# NETTAR II

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

## THE PARTS OF THE NETTAR II



- 1 = Rotating front lens for distance setting
- 2 = Distance setting mark
- 3 = Depth of field scale
- 4 = Thread for cable release
- 5 = Exposure time setting ring
- 6 = Lever for diaphragm setting
- 7 = Lever for winding shutter
- 8 = Body shutter release
- 9 = Knob for opening camera
- 10 = Film winding knob
- 11 = Built-in optical viewfinder
- 12 = Shoe for slip-on accessories
- 13 = Flash synchronization contact
- 14 = Bolt for locking camera back
- 15 = Struts

THE ZEISS IKON

ROLL FILM CAMERA

## NETTAR II

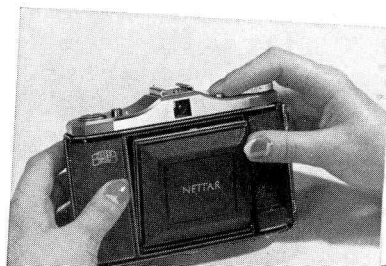
The easiness of its manipulation is a conspicuous feature of this camera, which, if handled properly, gives excellent results, as is proved by the two pictures contained in this booklet, which were made with NETTAR cameras. The picture of the house was taken with lens stop 11 and  $\frac{1}{50}$  second and the snapshot of the motorcycle race, with lens stop 4,5 and  $\frac{1}{300}$  second. Once you are familiar with the few manipulations explained in this booklet, you will have no difficulty in obtaining good photographs and will take a great pleasure in photography.

The NETTAR II takes 12  $2\frac{1}{4}$ " x  $2\frac{1}{4}$ " pictures on standard B II-8 roll film for  $2\frac{1}{4}$ " x  $3\frac{1}{4}$ " frames. It is equipped either with Novar f/6.3 or with Novar f/4.5. Its lenses are factory-coated, ensuring utmost sharpness in black and white as well as colour photography.

### HOW TO OPEN

#### THE NETTAR

Hold the camera in one hand, slightly tilting it forward. Press opening knob and the NETTAR will spring into the taking position.



## HOW TO CLOSE

### THE NETTAR

Take the camera in both hands as in the illustration, press the struts (15) down with your two thumbs and close the lid.

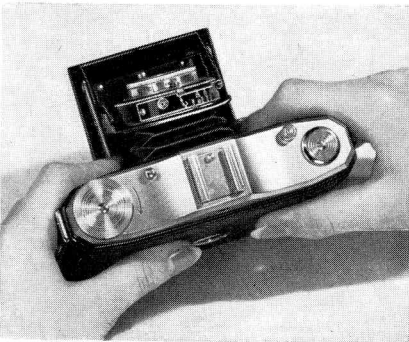
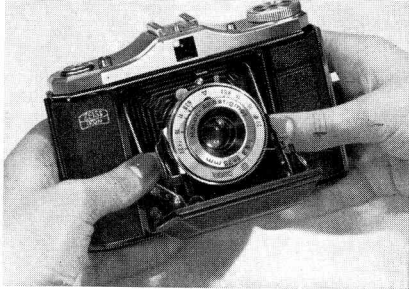
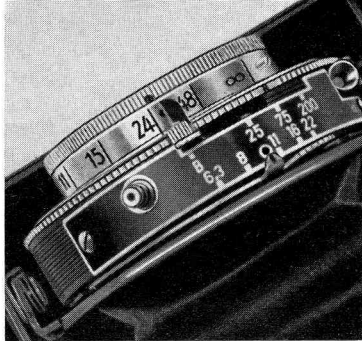
In order to close the NETTAR in the taking position press the struts (15) down with your two index fingers and close the camera lid.

## FOCUSING

Distances in terms of feet are engraved on the lens mount. The NETTAR is focused on the object to be photographed by turning the front-lens mount. The respective setting figure must be opposite the distance setting mark. Intermediate settings can be easily made. On the illustration, for instance, the NETTAR II is focused on 11 feet. The setting must be made in accordance with the straight edge of the setting mark.

## SETTING OF THE DIAPHRAGM

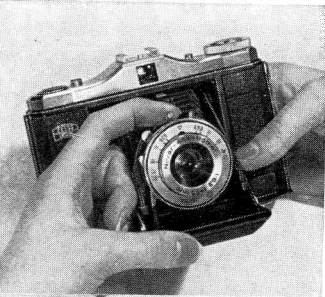
For setting the diaphragm on the desired lens aperture turn the diaphragm setting lever until (seen from above) the diaphragm setting mark points at the desired lens aperture figure.



## SETTING OF THE EXPOSURE TIME

Turn the milled setting ring (5) until the exposure time setting mark (2) is opposite the desired exposure time. The figures engraved on the exposure time setting ring indicate fractions of a second, i. e. "25" means  $\frac{1}{25}$  sec. With setting "B" the shutter remains open as long as the body shutter release is pressed down. Prior to every exposure the shutter must be wound with the shutter winding lever.

## THE SHUTTER



NETTAR II models are equipped with either Vario, Pronto, or Prontor-S shutters.

All shutters have built-in flash synchronization contacts with which all available flash bulbs can be fired.

## A DELAYED ACTION RELEASE

is built into all models with f/4.5 lenses. If the photographer wants to photograph himself alone or within a group he may screw the NETTAR II to a tripod, put it on a table or on some other solid support where it will not be shaken during the exposure. Then, after setting the distance, diaphragm, and exposure time, wind the shutter as usual and press down the small, red-dotted lever of the delayed action release.

Upon pressing the body shutter release knob the delayed action mechanism starts running and releases the shutter with a 10-second delay. The delayed action release cannot be used for time exposures (shutter speed setting ring on "B").

## THE FLASH SYNCHRONIZATION CONTACT

fires flash lamps by an impuls from the shutter the moment the shutter is wide open. Electronic flashes can be used with an extremely short ignition delay. Standard exposure time for flashlight photographs with Vario or Pronto shutters

is  $\frac{1}{25}$  sec. Details about distance setting and most expedient diaphragm setting may be found on the instruction pamphlets attached to flash lamps. The following chapter contains instructions as to the firing of flash lamps with the fully synchronized Prontor-S shutter.

### **THE FULLY SYNCHRONIZED PRONTOR-S SHUTTER ORDINARY PICTURE-TAKING**

#### NECESSARY MANIPULATIONS :

In order to set the exposure time, turn milled ring (5) until setting mark points at the desired shutter speed engraving. The figures indicate fractions of a second, e. g. 25 means  $\frac{1}{25}$  sec. The shutter is wound by pressing lever (7) down as far as possible. The shutter is released by pressing down the body shutter release (8). If setting "B" (time exposure) is used, the shutter remains open as long as the release knob is pressed down. It is advisable to make time exposures with a cable release.

### **WHEN TAKING PICTURES WITH THE DELAYED ACTION RELEASE**

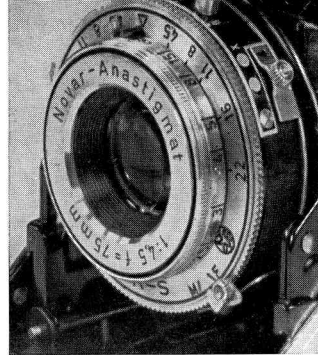
set the push lever on the red dot opposite the "X". In addition to all the above manipulations, turn the red-dotted delayed-action-release lever clockwise as far as possible. Thus the delayed action release mechanism is wound and will start operating as soon as the shutter release is pressed down.

It releases the shutter with a delay of some 12 seconds.

### **FLASH PHOTOGRAPHS**

Flash Photographs without Pre-Ignition Setting (X) can be made

1. with electronic flashes in conjunction with all shutter speeds from 1 to  $\frac{1}{300}$  sec.
2. with flash lamps in conjunction with all shutter speeds from 1 to  $\frac{1}{25}$  sec.



#### MANIPULATIONS:

Diaphragm and exposure time are set as usual. Set push lever with the arrow pointing toward the red dot beside the X. Wind shutter, connect flash cord with synchro-contact and release shutter as usual.

#### SPECIAL OBSERVATIONS:

With the push lever in position "X" the delayed action release can also be used for flash photography. To this end turn red-dotted lever clockwise as far as possible thereby winding the delayed action release mechanism. The delayed action mechanism will release the shutter some 12 seconds after the body shutter release knob has been pressed down.

#### FLASH PHOTOGRAPHS WITH PRE-IGNITION (F- and M-Position of Delayed Action Release Lever)

Pre-ignition is used if flash photographs with flash lamps are to be made in conjunction with shutter speeds from

$1/25$  to  $1/300$  sec. The length of the pre-ignition required can be ascertained from the instructions added to every flash lamp.

#### MANIPULATIONS:

Setting of diaphragm and exposure time, winding of shutter and connecting of flash cord with the synchro-contact is done as usual.

Set push lever with the arrow pointing toward the yellow dot.

#### F-SETTING

For a pre-ignition of some 5 milliseconds set the red-dotted delayed action release lever on "F". With this setting the flash is ignited first and the shutter is released some five milliseconds later.

#### M-SETTING

With the delayed action release lever on "M" the pre-ignition is some 19 milliseconds.



Intermediate settings can also be made. Shutters having speeds up to  $\frac{1}{300}$  sec permit the setting of pre-ignition times from 5 to 24 milliseconds. For a pre-ignition of 24 milliseconds the lever is pressed beyond the M-setting mark.

The intermediate settings are between the "F" and "M" setting marks. All intermediate settings as well as the M-setting must be re-set for every shot.

### **LENS APERTURE, DEPTH OF FIELD AND EXPOSURE TIME**

In good lighting condition a large depth of field can be achieved by reducing the lens aperture. The lens aperture and the lens aperture setting figures are reciprocal, i.e. the smaller the lens aperture the higher the diaphragm setting figure. Every reduction of the lens

aperture necessitates an extension of the exposure time.

When reducing the lens aperture, the depth of field increases both in forward and in 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 correctly ascertained from the depth of field scale. It is represented by the distance settings opposite the two diaphragm setting figures on the right and the left side of the diaphragm setting mark.

### **THE CORRECT EXPOSURE TIME**

can be ascertained from exposure tables or with the aid of the photo-electric exposure meter ZEISS IKON "IKOPHOT". The exposure time depends on the dia-

phragm setting, the film sensitivity, and the prevailing lighting conditions.

**BASIC RULE:**

Outdoor photographs in bright sunshine:

film sensitivity 32 ASA

diaphragm setting 8

$\frac{1}{100}$  sec.

Outdoor photographs, sky overcast:

film sensitivity 32 ASA

diaphragm setting 5,6

$\frac{1}{60}$  sec.

**DEPTH OF FIELD SCALE**

for NETTAR II,  $2\frac{1}{4}'' \times 2\frac{1}{4}''$ , focal length 3"

Lens setting feet	Diaphragm					
	4,5	5,6	8	11	16	22
inf.	55' 0"	44' 4"	31' 0"	22' 8"	15' 8"	11' 4"
	$\infty$	$\infty$	$\infty$	$\infty$	$\infty$	$\infty$
48'	25' 8"	23' 4"	19' 0"	15' 8"	12' 0"	9' 4"
	364' 0"	$\infty$	$\infty$	$\infty$	$\infty$	$\infty$
24'	17' 0"	15' 8"	13' 8"	11' 8"	9' 8"	8' 0"
	42' 0"	51' 4"	101' 0"	$\infty$	$\infty$	$\infty$
12'	10' 0"	9' 8"	8' 8"	8' 0"	7' 0"	8' 0"
	15' 0"	16' 4"	19' 0"	24' 4"	47' 0"	$\infty$
9'	7' 8"	7' 8"	7' 0"	6' 6"	5' 10"	5' 2"
	10' 8"	11' 0"	12' 4"	14' 4"	19' 8"	35' 8"
6'	5' 6"	5' 4"	5' 2"	4' 10"	4' 6"	4' 1"
	6' 8"	6' 10"	7' 4"	8' 0"	9' 4"	11' 8"
4'	3' 9"	3' 9"	3' 7.5"	3' 5.5"	3' 3.5"	3' 1.5"
	4' 3"	4' 4"	4' 6"	4' 8.5"	5' 1.5"	5' 8.5"

## THE ZEISS IKON RED-DOT SETTING

enables the NETTAR II owner to take instant snapshots in good lighting conditions without previous time-consuming settings. Set the diaphragm setting lever and the distance setting mark on the red dots and everything from 13 feet to infinity will be rendered sharply. According to the prevailing lighting conditions, exposure times from  $\frac{1}{25}$  to  $\frac{1}{100}$  sec may be used.

## LOADING OF CAMERA

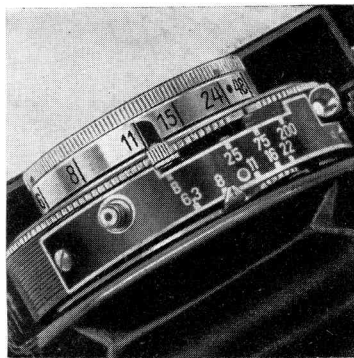
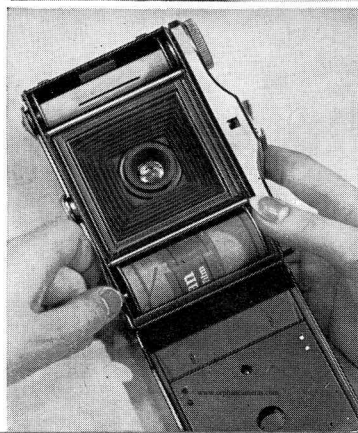
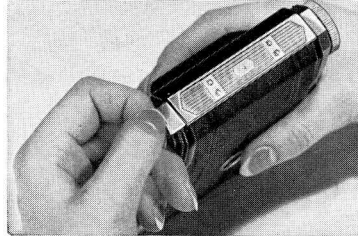
The camera back can be opened after pulling out the locking bolt.

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Unpack the  $2\frac{1}{4}$ " x  $3\frac{1}{4}$ " film, pull out the spring at the bottom of the camera and insert the film spool into the lower spool chamber. Slit open the gummed label of the film spool and pull the protective paper toward the empty take-up spool. Tighten the protective paper by turning the film winding key several times and then close the camera.

Open the small window at the back of the camera and turn the film winding key until the number "1" appears in the window. In order to prevent double exposures the film has to be wound on by one frame immediately after every exposure.

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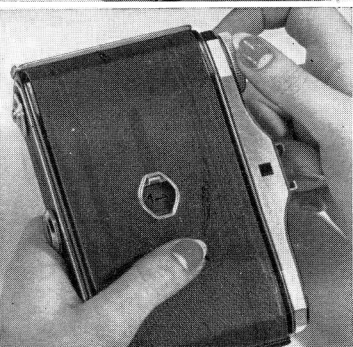
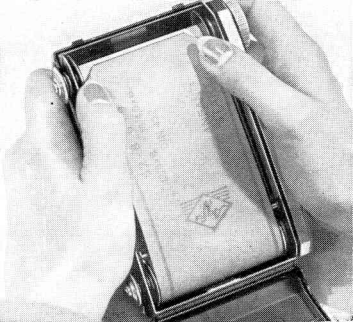
**UNLOADING  
OF THE CAMERA AFTER  
THE 12th EXPOSURE**

After the twelfth exposure turn film winding key until the end of the protective paper of the spool passes the window at the back of the camera. Then open the camera back, pull out the spring prong as when inserting the film, remove the spool carefully in the shadow (not in bright sunshine!) and seal it. Before inserting a new film, the empty feeding spool must be inserted into the take-up spool chamber. By turning the

film winding key, make sure that the empty spool has engaged with the prong of the film winding key.

**HOLDING THE NETTAR II DURING THE EXPOSURE**

The NETTAR II must be held calmly during the exposure. The right-hand index finger rests on the body shutter release. The exposure is made by pressing down the shutter release. When making time exposures with setting "B", the shutter remains open as long as the shutter release (8) is pressed down. Time exposures must be made from a tripod or some solid support. It is advisable to use a cable release.



## **PHOTOGRAPHIC EQUIPMENT AND ACCESSORIES FOR THE NETTAR II**

### **THE EVEREADY CARRYING CASE**

The ZEISS IKON Eveready Carrying Case for the NETTAR II is elegant and protects the camera from any detrimental external influences. The NETTAR II is screwed into the Eveready Carrying Case and need not be removed for an exposure.

### **THE CABLE RELEASE**

The shutter can also be released with a cable release to be screwed into the thread of the shutter. It is especially advisable to use a cable release for time exposures from a tripod or in cases where the slip-on brilliant viewfinder is used.

### **ZEISS IKON FILTERS**

improve the rendering of the tone values in black and white photography. The effect depends on the colour and on the absorbing qualities of the filter. The use of a filter necessitates an extension of the exposure time.

Slip-on filters are used with the NETTAR II models with Vario shutter whilst for the NETTAR II models with Pronto or Prontor-S shutter screw-on filters are to be used. The filters need not be removed when the camera is closed.

### **SUPPLEMENTARY LENSES FOR CLOSE-UPS**

With the standard lens equipment of the NETTAR II, photographs can be made of objects from 3.5 feet to infinity. Objects closer than 3.5 feet can be photographed only with the aid of ZEISS IKON supplementary lenses (Proxar lenses), which are slipped on to the camera lens mount. Two different Proxar lenses are available for the NETTAR II: Proxar lens I (focal length 1 m = 40") for photographing objects from 20" to 40" and Proxar lens II, focal length 20", for objects between 20" and 14".

When making close-ups with supplementary lenses, the photographer has to account for the difference of distance between the viewing window of the viewfinder and the distance from the object to the supplementary lens. The field embraced by the viewfinder will always be somewhat too large in close-up work.

When using supplementary lenses (ZEISS Proxar lenses) the following table is applicable:

	Lens setting feet	Distance between object and camera	Reduction 1:	Size of picture field	
				Width	Height
1 diopter F = 1 m	inf.	3' 3 <sup>1</sup> / <sub>4</sub> "	13.3	2' 6" x 2' 6"	
	48'	3' 1 <sup>1</sup> / <sub>2</sub> "	12.3	2' 3 <sup>3</sup> / <sub>4</sub> " x 2' 3 <sup>3</sup> / <sub>4</sub> "	
	24'	2' 10 <sup>1</sup> / <sub>2</sub> "	11.7	2' 2 <sup>1</sup> / <sub>2</sub> " x 2' 2 <sup>1</sup> / <sub>2</sub> "	
	15'	2' 8"	10.8	2' 1 <sup>1</sup> / <sub>2</sub> " x 2' 1 <sup>1</sup> / <sub>2</sub> "	
	12'	2' 6 <sup>1</sup> / <sub>2</sub> "	10.3	1' 11 <sup>1</sup> / <sub>4</sub> " x 1' 11 <sup>1</sup> / <sub>4</sub> "	
	9'	2' 4 <sup>1</sup> / <sub>4</sub> "	9.5	1' 1 <sup>1</sup> / <sub>2</sub> " x 1' 9 <sup>1</sup> / <sub>2</sub> "	
	4'	1' 9 <sup>1</sup> / <sub>4</sub> "	6.9	1' 3 <sup>1</sup> / <sub>2</sub> " x 1' 3 <sup>1</sup> / <sub>2</sub> "	
2 diopters F = 0.5 m	inf.	1' 7 <sup>3</sup> / <sub>4</sub> "	6.7	1' 3 <sup>1</sup> / <sub>4</sub> " x 1' 3 <sup>1</sup> / <sub>4</sub> "	
	48'	1' 7"	6.4	1' 2 <sup>1</sup> / <sub>2</sub> " x 1' 2 <sup>1</sup> / <sub>2</sub> "	
	24'	1' 6 <sup>1</sup> / <sub>4</sub> "	6.2	1' 2" x 1' 2"	
	15'	1' 5 <sup>1</sup> / <sub>2</sub> "	5.9	1' 1 <sup>1</sup> / <sub>4</sub> " x 1' 1 <sup>1</sup> / <sub>4</sub> "	
	12'	1' 5"	5.7	1' 1" x 1' 1"	
	9'	1' 4 <sup>1</sup> / <sub>2</sub> "	5.5	1' 1 <sup>1</sup> / <sub>2</sub> " x 1' 1 <sup>1</sup> / <sub>2</sub> "	
	4'	1' 1 <sup>1</sup> / <sub>2</sub> "	4.5	10 <sup>1</sup> / <sub>4</sub> " x 10 <sup>1</sup> / <sub>4</sub> "	

The distance of the object must be measured from the front edge of the supplementary lens mount. In order to

achieve a sufficiently large depth of field, it is necessary to use at least the diaphragm setting "8".

#### THE LENS HOOD

prevents flares or haze in against-the-light photography and protects the lens from rain or snow.

#### TRIPOD THREAD

The NETTAR II has at its bottom a thread for fixing the camera on a tripod.

#### COLOUR PHOTOGRAPHY

The ZEISS IKON Novar lenses are carefully colour corrected and are, therefore, most suitable for colour photography, which every amateur can, in fact, master with the same ease as black and white photography. In view of the fact that colour films permit very little deviation from the exact exposure time, the ascertainment of the correct exposure time is absolutely imperative for colour photography.

It is recommendable to use a photo-electric exposure meter, such as the ZEISS IKON Ikophot, for good black and white photography; for colour photography, however, it is absolutely indispensable.