

# Kodak

## Instruction Booklet for the

*Retina*

**I**

C A M E R A

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Before using your "Retina" I read the following instructions carefully. This is a precision camera and may be damaged by careless handling.

# FRONT VIEW

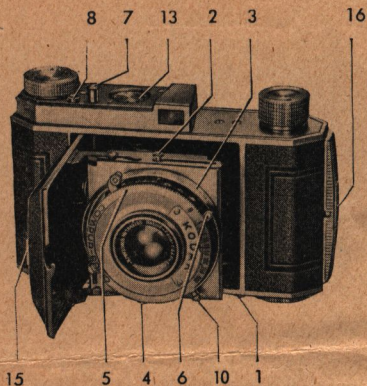


Fig. 1

## Main parts:

- 1 Button for opening camera
- 2 Buttons for closing camera
- 3 Focus Scale
- 4 Lens Diaphragm Lever
- 5 Shutter Speed Ring
- 6 Shutter Cocking Lever
- 7 Body Shutter Release
- 8 Cable Release Socket
- 9 Optical Viewfinder (fig. 2)

## REAR VIEW



Fig. 2

- 10 Focusing Knob (fig. 1)
- 11 Depth of Field Scale
- 12 Winding Knob
- 13 Exposure Counter (fig. 1)
- 14 Film Clutch
- 15 Bed Rest (fig. 1)
- 16 Locking Lever for Camera Back (fig. 1)
- 17 Film Rewind Knob
- 18 Tripod Socket

# First steps

## To open the camera

Press button 1; tilt the camera gently forward (fig. 3). Pull the bed down until you hear the two struts snap into position.

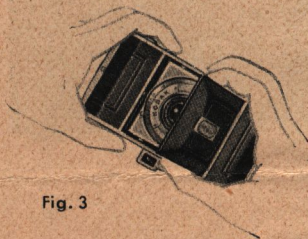


Fig. 3

## To close the camera

**Before closing the camera be sure the lens is set for  $\infty$  (infinity).**

If the camera is closed when the lensmount is set for any other distance than  $\infty$  (infinity) serious damage may result. To close the camera, press in the buttons 2 simultaneously on the sides of the front-plate (fig. 4) and push up the bed at the same time.

The body shutter release is inoperative when the camera is closed.

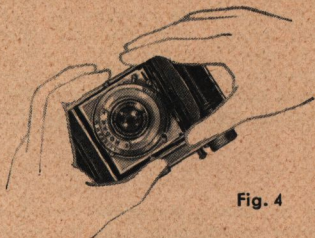


Fig. 4

## Description

### The lens

of the "Retina" I Camera is a Retina Xenar  $f/3.5$ , a Kodak Ektar  $f/3.5$  or a Ysar  $f/3.5$ . These lenses are selected carefully and will produce the best possible results.



Fig. 5

In order to take a good picture it is important always to keep the lens clean. In cleaning the lens be careful not to scratch it. Best results may be obtained by using regular Kodak lens paper or a small piece of soft cloth.

## The lens openings

are selected by moving lever 4. Moving the lever across the f-number scale changes the size of the lens opening through which the light passes while the shutter is open. From  $f/16$  to  $f/3,5$ , each succeeding lens opening admits in a given exposure time, twice as much light as the one before. The smaller the lens opening, the greater the depth of field.

## The exposure time

is adjusted by turning the milled ring 5 until the desired shutter speed comes over the point on the top of the letter "D" of the word "Kodak". The numbers represent fractions of seconds. A guide to correct exposure is given in the "Exposure table" in the manual.

## To use as a Fixed Focus Camera



set the pointer at  $f/8$  and focus the lens on the red point near 25 feet. Everything will then be in sharp focus from 15 feet to "infinity". With the pointer set at  $f/8$  and the lens focused on the other red point near 10 feet, everything is sharp from 7 feet to 15 feet. (Do not forget to set the focus back to "infinity" before closing the camera.)

Fig. 6

## The Compur Rapid Shutter

The Compur Rapid Shutter on your "Retina" I will give exposures of 1,  $\frac{1}{2}$ ,  $\frac{1}{5}$ ,  $\frac{1}{10}$ ,  $\frac{1}{25}$ ,  $\frac{1}{50}$ ,  $\frac{1}{100}$ ,  $\frac{1}{250}$  and  $\frac{1}{500}$  of a second; also Bulb exposures. The figures marked on the milled ring represent fractions of a second: 2 =  $\frac{1}{2}$ , 100 =  $\frac{1}{100}$ , etc. The shutter must be cocked for all exposures including Bulb, by moving the cocking lever 6 clockwise as far as it will go. Exposures are made by pressing the body shutter release 7.

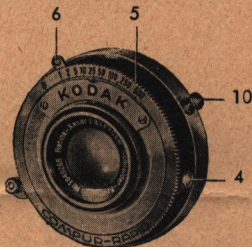


Fig. 7

For Bulb exposures ('B') the shutter opens when the shutter release is pressed and closes when it is released. For these exposures it is advisable to screw the "Retina" I on to a tripod; there is a tripod socket 18 for this purpose. Next to the body-release there is a socket into which the cable-release can be screwed. For Bulb exposures and automatic exposures from one to one-tenth of a second, the camera must be placed on a tripod or some other firm support.

## **The Depth of Field Scale**

on the lower part of the camera indicates between what distances subjects are in sharp focus. Turn the outer ring of the „Depth of Field Scale“ until the set focus (as read from the focusing ring) comes opposite the black pointer. On the inner plate you will see all lens openings from which dashes lead to the outer ring. Between these dashes you can read the range of the depth of field.

## **The Film Lock**

The body release, shutter and film wind are coupled in such a manner that double exposures and blanks are avoided. The film lock operates only when the camera is loaded with film. When the camera is loaded with film, the body shutter release cannot be depressed until the shutter is cocked. The exposure counter 13 indicates the number of pictures that you have taken.

## **Kodak Combination Lens Attachments**

The Kodak Combination Lens Attachments permit the use of a supplementary lens, a Wratten Filter, a Kodak Pola-Screen, or a Kodak Lens Hood — either singly or together. For the “Retina” I use a No. 21 Adapter Ring Series V.



## How to load the camera

Lift the locking catch 16 and open the back of the camera (fig. 8). Lay the camera down in front of you opened, so that the back is on the right. Pull out knob 17 as far as it will come and insert the new magazine of Kodak "black-and-white or Kodachrome" film in the film-chamber (fig. 9). Push in and at the same time turn knob 17 to hold the magazine in position. Thread the end of the film into one of the slots in the spool in the right-hand film-chamber (fig. 10). Give knob 12 half a turn to see that the film is firmly fixed in the slot. Be sure, that the film lies



Fig. 8

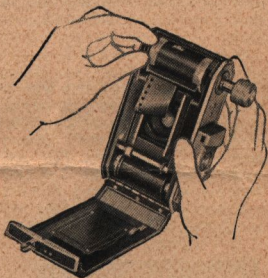
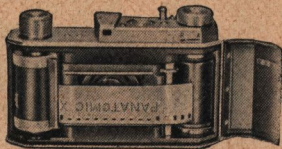


Fig. 9

Fig. 10



straight in the track provided; then close the back of the camera and turn knob 12 as far as it will go. As the first length of film may have been fogged during the loading operation it is advisable to wind the film on one more picture-length. This is done by first setting the shutter and pressing the body shutter release; this allows the winding knob to turn. Now turn the exposure counter 13 to No. 1.

## Winding on the film

The film is wound on after each exposure by turning knob 12 in the direction of the arrow as far as it will go. You cannot wind on the film without first cocking and releasing the shutter, so that double exposures and blanks are avoided.

## How to remove the film

After the 36th exposure has been made (20th exposure with a 20-exposure magazine), push the film clutch 14 to the end of the slot marked R (fig. 11). Then turn the rewind knob 17 until the winding knob ceases to revolve. This means, that all the film is wound back and only then may the back be opened and the magazine of exposed film be taken out (fig. 12). It is advisable not to load or unload the film in brilliant sunshine, as the first few exposures may become fog-

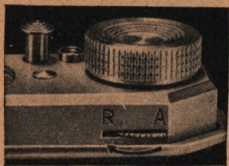


Fig. 11

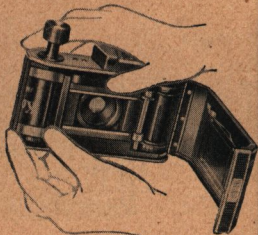


Fig. 12

ged. The magazine of exposed film should be replaced in the tube in which it was originally packed immediately after removal from the Kodak in order to avoid light leaking into the slot.

## How to hold the camera

It is particularly easy to hold and operate the „Retina“ I thanks to its compactness and handy shape. It rests comfortably in both hands and the forefinger of the right hand comes just over the body-release. Practise holding the camera in both the vertical and horizontal positions. Look through the finder, holding the camera at that distance from the eye which permits the rear frame of the finder to be superimposed on the front frame.



Fig. 13

## To operate the shutter,

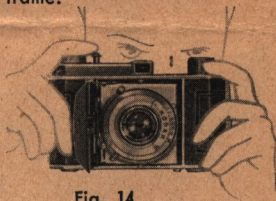


Fig. 14

press the body-release 7 gently and evenly until the shutter clicks. The shutter must first have been cocked — see under the heading „The Compur Shutter“ in the manual. The shutter can also be operated by means of a cable-release which is screwed into the hole 8 next to the body-release. The cable-release is recommended when it is desired to make Bulb exposures with the camera on a tripod.

# EIGHT STEPS for

Fig. 15

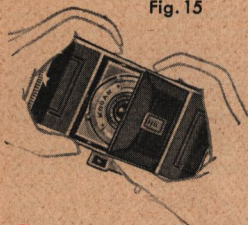


Fig. 16



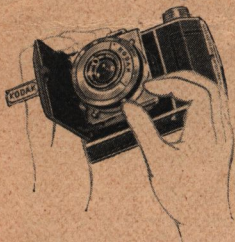
**1 Open the camera.**

Pull down the bed until you hear the struts snap into position.

**2 Set the focus scale**

by moving the focusing knob until the figure representing the distance between the subject and the camera comes to the focusing line.

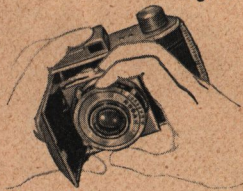
Fig. 17



**3 Move the lens diaphragm lever**

until the pointer is at the desired lens opening.

Fig. 18

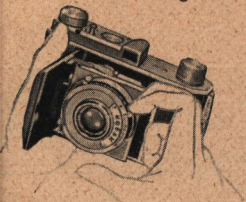


**4 Revolve the outer milled ring of the shutter**

to the desired time (see exposure table)

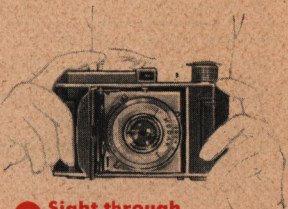
# Making a successful picture

Fig. 19



- 5 Cock the shutter**  
by moving the cocking lever clockwise as far as it will go.

Fig. 20



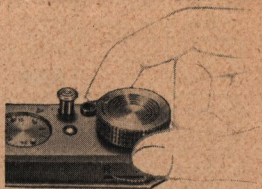
- 6 Sight through the viewfinder**  
— all vertical lines in the subject should appear parallel with the vertical lines of the finder frame.

Fig. 21



- 7 Press the body-release**  
slowly and the picture is taken.

Fig. 22



- 8 Wind on the film.**  
The body-release can only be operated after the film has been advanced and the shutter set.

# EXPOSURE-TABLE

This table for Kodak PLUS-X Panchromatic Film*		f/3.5	f/4.5	f/5.6	f/8	f/11	f/16
<b>Brilliant Subjects :</b> Beach, marine, and snow scenes ; distant landscapes and mountains without prominent dark objects in foreground					1/500	1/250	1/100
				1/500	1/250	1/100	1/50
			1/500	1/250	1/100	1/50	1/25
		1/500	1/250	1/100	1/50	1/25	1/10
<b>Bright Subjects :</b> Near-by people in marine, beach, or snow scenes ; scenics with foreground objects				1/500	1/250	1/100	1/50
			1/500	1/250	1/100	1/50	1/25
		1/500	1/250	1/100	1/50	1/25	1/10
		1/250	1/100	1/50	1/25	1/10	1/5
<b>Average Subjects :</b> Near-by people, gardens, houses, and scenes, not in shade. Use this classification if in doubt.			1/500	1/250	1/100	1/50	1/25
		1/500	1/250	1/100	1/50	1/25	1/10
		1/250	1/100	1/50	1/25	1/10	1/5
		1/100	1/50	1/25	1/10	1/5	1/2
<b>Shaded Subjects :</b> People, gardens, and other subjects in the open shade (lighted by open sky, not under trees, porch roof etc.)		1/500	1/250	1/100	1/50	1/25	1/10
		1/250	1/100	1/50	1/25	1/10	1/5
		1/100	1/50	1/25	1/10	1/5	1/2
		1/50	1/25	1/10	1/5	1/2	1

BRIGHT SUN
 HAZY SUN
 CLOUDY-BRIGHT days
 CLOUDY-DULL days

The exposures are for the hours from one hour after sunrise until one hour before sunset.

\*For Kodak PANATOMIC-X Panchromatic Film, use next larger lens opening

\*For Kodak SUPER-XX Panchromatic Film, use next smaller lens opening

# DEPTH OF FIELD TABLE

$$F = 5 \text{ cm}$$

Object Distance	STOP											
	3,5		4,5		5,6		8		11		16	
	depth		depth		depth		depth		depth		depth	
	from	to	from	to	from	to	from	to	from	to	from	to
inf.	63'	inf.	49'2"	inf.	39'6"	inf.	27'6"	inf.	20'1"	inf.	13'10"	inf.
50 feet	28'	inf.	24'10"	inf.	22'1	inf.	17'10"	inf.	14'5"	inf.	10'10"	inf.
25	17'11"	41'5"	16'7"	50'10"	15'5"	68'	13'1"	inf.	11'2"	inf.	8'11"	inf.
15	12'1"	19'8"	11'6"	21'7"	10'11"	24'1"	9'8"	32'10"	8'7"	58'9"	7'3"	inf.
12	10'2"	14'10"	9'8"	15'10"	9'2"	17'2"	8'3"	21'2"	7,6"	29'8"	6'5"	90'6"
10	8'8"	11'10"	8'4"	12'6"	8'	13'5"	7'4"	15'7"	6'8"	19'10"	5'10"	36'
8	7'1"	9'2"	6'10"	9'7"	6'8"	10'	6'2"	11'3"	5'9"	13'4"	5'1"	19'
6	5'6"	6'7"	5'4"	6'10"	5'3"	7'	4'11"	7'8"	4'7"	8'7"	4'2"	10'7"
5	4'8"	5'5"	4'7"	5'7"	4'6"	5'9"	4'3"	6'1"	4'	6,8"	3'8"	7'10"
4	3'9"	4'3"	3'8"	4'5"	3'8"	4'6"	3'6"	4'8"	3'5"	5'	3'2"	5'7"
3,5	3'4"	3'8"	3'3"	3'9"	3'3"	3'10"	3'1"	4'	3'	4'3"	2'10"	4'8"

The distances quoted in the table are all measured from the lens and are expressed in feet.

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