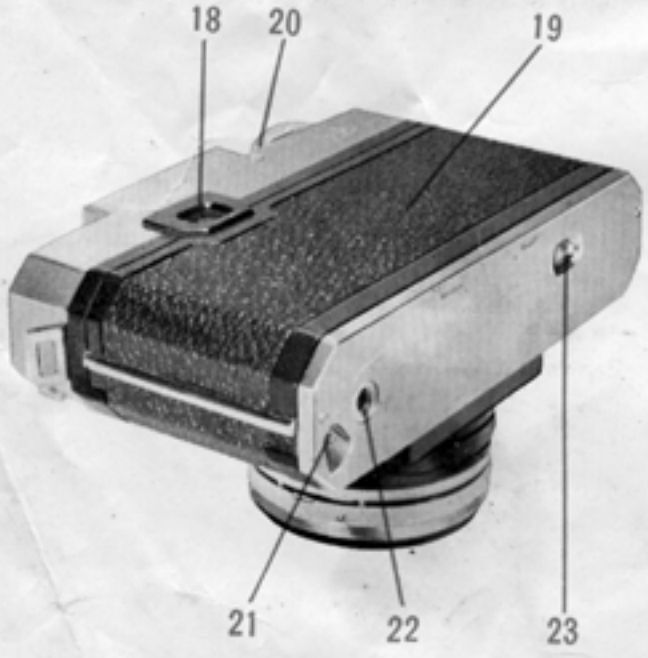
NIKKOREX

INSTRUCTION

NIPPON KOGAKU K.K.

01 SHINAGAWA TOKYO JAPAN

Printed in Japan



FRONT VIEW

1. Automatic exposure counter
2. Single stroke film advance lever
3. Shutter release button (with screw thread for attaching cable release)
4. Exposure meter indicator
5. Accessory shoe
6. Film rewind crank (can be lifted up from the rewind knob)
7. Terminal for flash unit
8. Lens aperture preset ring
9. Aperture and shutter speed combined index
10. Shutter speed ring
11. Synchro selector (MX)
12. Filter factor scale
13. Film speed (ASA) setting ring
14. Lens focusing lever
15. Self-timer
16. Distance scale
17. Depth of field scale (color coded)

REAR VIEW

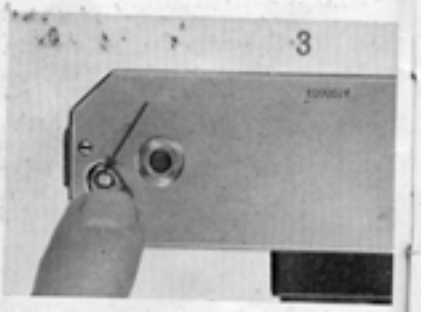
18. View finder eyepiece
19. Hinged camera back
20. Exposure meter zero adjuster
21. Camera back release button
22. Tripod socket
23. Rewind button

LOADING THE CAMERA

The Nikkorex Camera will accept any standard 35mm black-and-white or color film.

First, remove the camera out of the eveready case, after releasing the locking screw nut found on the bottom of the case. Loading of the film should be made in subdued light, never in direct sunlight.

To open the camera, depress a button found on the camera bottom (Fig. 3). The camera back will pop open so that can be lifted and swung out.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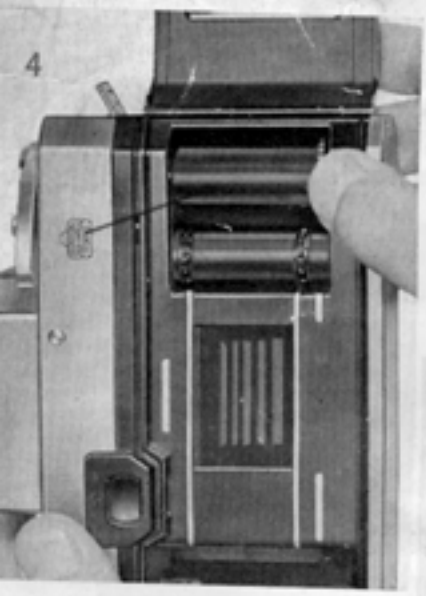
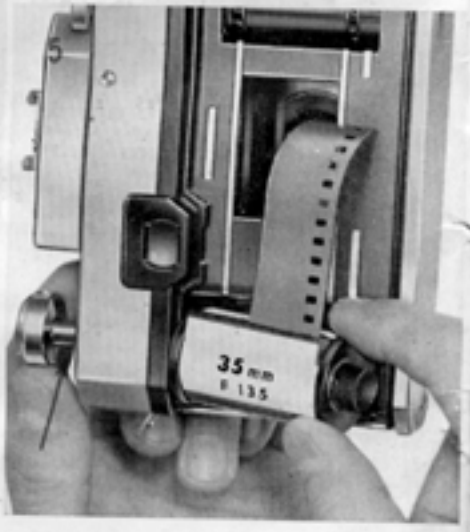
Rotate the take-up spool until the film slit on the spool turns upwards (Fig. 4).


4

Pull up the rewind knob, place the film cartridge into the chamber just below the rewind knob (Fig. 5). The end of the cartridge containing the cross piece goes towards the rewind knob.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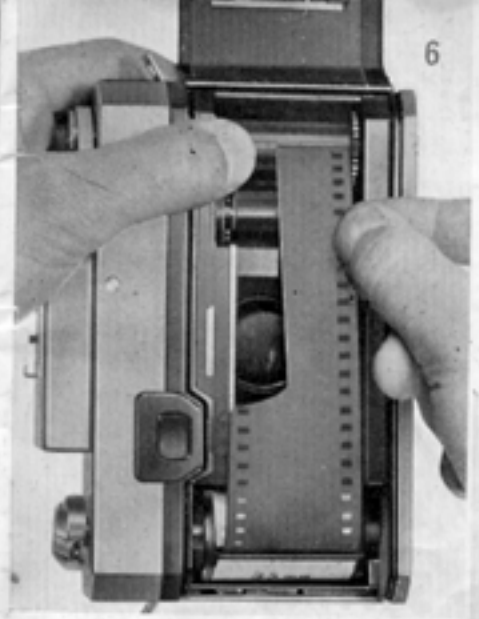
Rotate the knob to engage the cross piece to the fork of the rewind knob, thereby locking the film cartridge in place. The knob can now be pushed back into the camera.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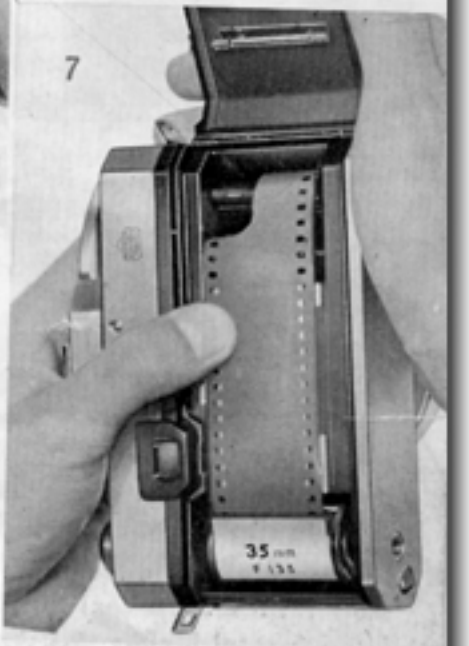
Pull film leader out of the cartridge over the film-guides about 4 inches (Fig. 6). The dull (emulsion) side of the film faces towards the lens. Insert the end of the leader into the slit on the take up spool as far as possible.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Make sure that the teeth of the sprocket fit into the holes (perforation) in the film, and make about one rotation of the take-up spool. Then slowly turn the rewind knob in the direction of the arrow to take-up the film slack in the cartridge.

Close the camera back. A click will tell you it is closed properly.

EXPOSURE COUNTER

The picture frame counter returns automatically to pre-zero (s) position when the camera back is opened. After loading and closing the camera, flick the film advance lever and shoot one or two blank shots unitl the counter registers 1 (Fig. 8). While doing this, note that the rewind knob rotates in the direction opposite to the arrow on the knob, indicating that the film is correctly loaded and is being advanced. The camera is now ready for the first shot. Thereafter, the counter will move a number for each picture.


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FILM SPEED SETTING


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Holding the shutter speed ring turn the film speed ring found at the front end of the lens to bring the speed rating of the loaded film opposite the red index (Fig. 9). It can be set for either color or black-and-white film according to the film speed rating.

EXPOSURE SETTING

Besides the ASA film speed ring, there are two adjusting rings (Fig. 10) around the lens barrel, one for lens opening and the other for exposure time. The lens aperture ring is marked with a series of numbers known as the F-numbers. F-numbers are marked so that each aperture number admits half the light of its neighbor. For example, F : 4 lens opening allows twice as much light as the opening F : 5.6.

Numbers on the shutter speed ring represent the actual shutter speed. For example, 125 on the ring represents 1/125 th second. The shutter speeds are arranged so that each consecutive marking halves the speed of the shutter.

First, turn either the aperture or shutter speed ring* until the desired figure is opposite the white index mark found between the rings. Then, pointing the camera towards the subject to be photographed, rotate the other ring until the moving needle in the exposure meter window on top of the camera comes to the center. The camera is now ready for photographing that scene.


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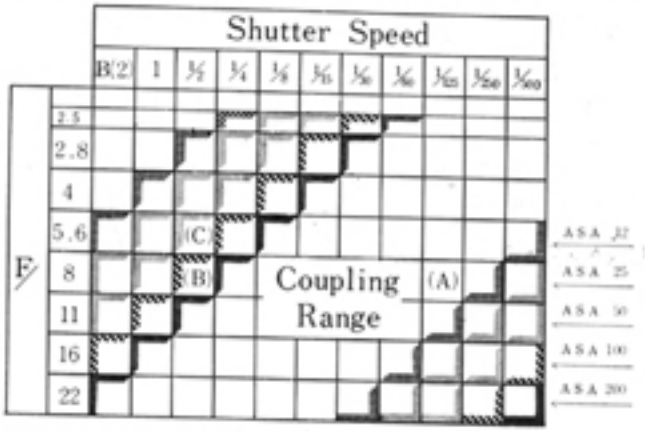
The exposure meter needle is also visible through the view finder eyepiece on top of the focusing screen of the camera (Fig. 11).

If the needle keeps stopping or makes incontinuous jump, it indicates that the lighting is not within the coupling range of the exposure meter.

Coupling Range of Built-in Exposure Meter of Nikkorex



It is shown by a position (A) in the above table, that the meter couples to the shutter speed 1/125 sec. and to the aperture diaphragm F : 8.

When using the film of ASA100, the meter couples to the diaphragm aperture and the shutter speed, as far as the exposure is within the range (B). If an exposure is in the range (C), i. e. out of the coupling range, the coupling does not occur.

The needle moves in the same direction as the aperture ring rotates. If both the aperture ring and the shutter speed ring are held together and rotated simultaneously in the same direction (Fig. 12), we can choose other correct ex-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posure combinations of aperture (F number) and shutter speed.

* The shutter speed ring click stops at each marked setting. The camera shutter does not give intermediate exposure time. Therefore, if the exposure meter needle does not come exactly to the center at the moment the shutter speed ring click stops, correct the deviation of the needle by revolving the aperture ring.

B-SETTING

When the exposure time required is longer than 1 second, the shutter ring will stop at B. In this position, if the exposure meter needle sets exactly at the center, the correct exposure will be 2 seconds. If the needle has not yet reached the center, a longer exposure time than 2 seconds may be required.

With the shutter speed ring set at B, the shutter will remain open for as long as the shutter release button is held depressed.

FOCUSING AND COMPOSING

Once the film advance lever is wound (Fig. 13), the lens aperture opens fully, and you will see the image of the subject on the focusing screen through the finder eyepiece on the camera back. If the viewfinder still remains dark, advance the lever once more, this time completely.


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Focus the lens by turning the focusing ring (Fig. 14) on the lens barrel to the right or the left, until the screen image seen in the viewfinder (Fig. 15) becomes sharp and at the same time the split-image in the center of the viewfield becomes complete and continuous (Fig. 16, right). When out of focus, subjects are seen as a split-image (Fig. 16, left) and simultaneously the images in the surrounding mat area are blurred.


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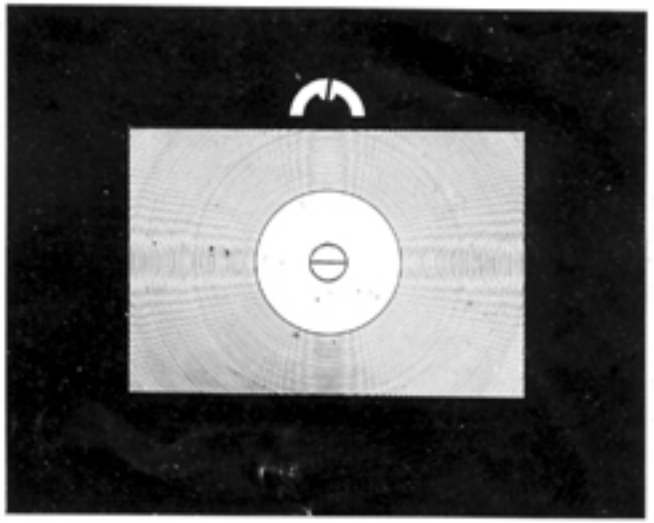
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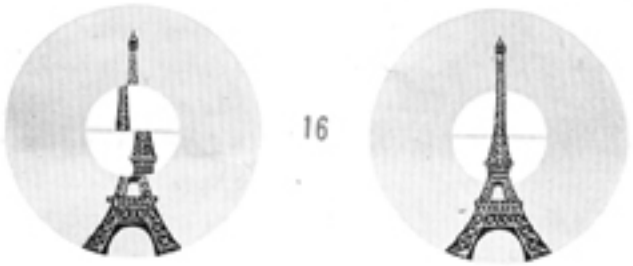
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For very sharp focusing, when holding the camera horizontally, focus on vertical lines on the subject; when holding the camera vertically focus on horizontal lines.

If you wish to determine the exact distance from the camera to the subject on which you are focused, look at the figures on the distance scale (in white for foot and in yellow for meter calibration), opposite the white indicator line. The depth of field can be read by the color-coded lines on either side of the white index (See p. 11).

Compose the picture on the finder screen. Since the "taking" lens of the single lens reflex camera is also used as the "viewing" lens, the viewfinder shows the exact picture that will appear on your film, and no problem of parallax arises at whatever distance the picture is shot.

PICTURE TAKING

With a single stroke advance the film lever as far as it will go. This one stroke also winds the shutter and opens the lens aperture for viewing and composing the shot. If the winding lever has not been wound completely, the view field remains dark. Wind it once more fully, and the finder image will be seen.

When holding the camera in the horizontal position, place your left hand under the camera, with your forefinger on the focusing lever of the lens (Fig. 17a). Grasp the camera with your right hand, cradling the lower right hand corner of the camera in the palm of your hand.

Use your thumb to advance the film and your fore finger for the shutter release button.

Focus the lens and compose the picture in the viewfinder, and press the shutter release button with a squeezing action while holding the camera steady. Fig. 17b shows the correct finger positions when the camera is held vertically.

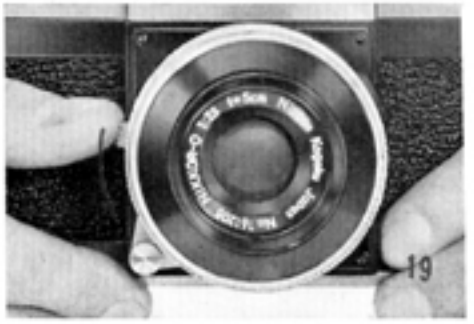
The camera is designed so that the aperture diaphragm automatically closes down to the pre-selected aperture when the shutter is released, and the viewfinder will then be dark. When the film advance lever is released it will not swing back completely so that it is conveniently available to advance for the next shot. Be sure, however, to permit it to swing back as far as it will go.

Do not advance the lever while depressing the shutter release button, as this will only advance the film without winding the shutter, resulting in a waste of one film frame. For speed slower than 1/30 second, a tripod or some other support and a cable release (Fig. 18) should be used to avoid any possibility of jarring the camera and thus blurring the picture.

SELF-TIMER

The self-timer delays the action of the shutter for approximately 10 seconds after the shutter release button is pressed. To set the self-fimer, **first* wind up the film advance lever** and then push the self-timer lever (Fig. 19) on the right side of the lens downwards as far as it will go.

To start the timer, depress the shutter release button on top of the camera. When about 10 seconds have elapsed, the shutter is automatically released. The self-timer should not be used for B setting.



* Never try to operate the self-timer lever before the film advance lever is wound up !

DEPTH OF FIELD

Depth of field is the range of the distance between the closest and the farthest limits of a subject within which sufficient sharpness of image is attained. The sharpest image is at the point at which the lens is focused. The depth of field varies with the lens opening (F-number) and with the focus distance. The larger the F-number used, the greater the depth of field; in reverese, the smaller the F-number, the smaller the depth of field. Depth of field also increases as the distance from the camera to subject increases.

The Nikkorex Camera has a color-coded depth of field scale engraved on the lens barrel opposite to the distance scale, permitting easy reading of depth of field for the selected aperture. Each set of differently colored lines, one to the right and one to the left of the middle white indicator line, represents a different F-number of the color that matches the colored F-number figure on the aperture scale.

For example (Fig. 20), when you are taking a picture with the distance scale setting at 10 feet (in white) or 3 meters (in yellow) and with an F : 8 opening (F : 8 is shown in orange), the depth of field indicated by the orange-colored lines on either side of the white indicator line will be between 8 feet or 2.5meter and 13 feet or 4 meters (approx.).

This means that a picture taken at F : 8, with the lens focused at 10 feet or 3 meter, will show a range of acceptable sharpness between 8 and 13 feet or 2.5 meter and 4 meters. The sharpest focus will be at 10 feet or 3 meter.

SHUTTER SPEED

You obtain the same exposure by adjusting simultaneously both the aperture and the shutter speed to any one of a series of combinations. By suitable choice of the lens aperture, the depth of field can be varied, while the sharpness of moving subjects should be controlled by adjusting the shutter speed.

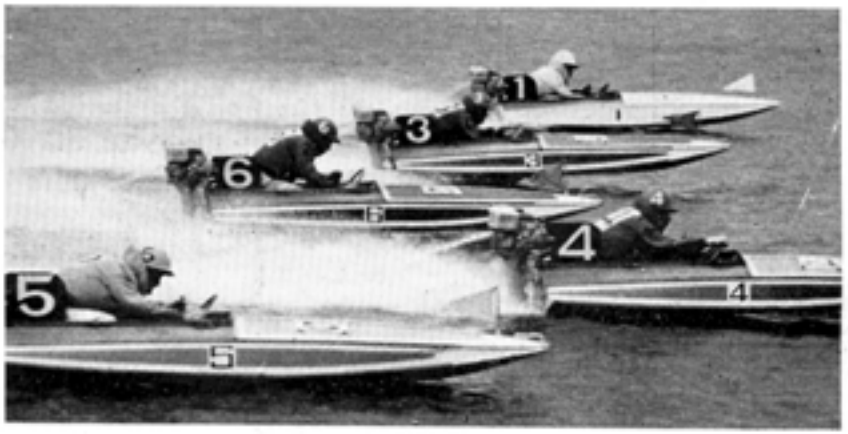
The shutter speeds required for giving sharp pictures of moving subjects depends on the speed of movement and on the distance of the subject as well as on its direction of movement.

The shutter speed given below apply to movements across the viewfinder of the camera at the distance of about 50 feet (15 meters). For subjects moving towards or away from the camera shutter speeds four times as slow can be used (e. g. 1/60 instead of 1/250 second).

For oblique movement use intermediate speeds.

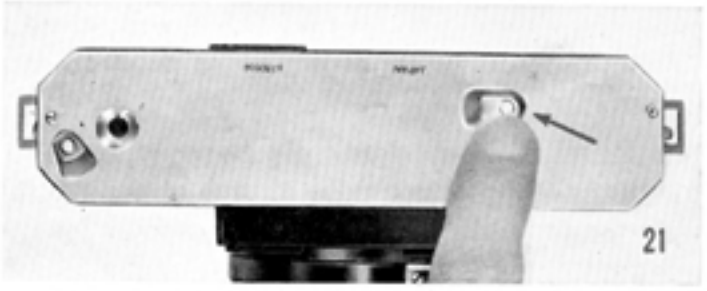
Pedestrian (3 miles per hour)	1/30 sec.
Sprinter or trotting horse (10 m. p. h.)	1/60
Cyclist, yacht or motor boat (12～15 m. p. h.)	1/125
Skier, car or motor cycle (30 m. p. h.)	1/250
Flying bird (40 m. p. h.)	1/500
Train (50 m. p. h.)	1/500

Since intermediate speeds can not be set on the camera's shutter speed scale, use the next faster speed.



UNLOADING THE CAMERA

When the exposure counter indicates that 36 or 20 picture frames, depending on the film used, have been exposed, the exposed film should be rewound back into the original cartridge. Otherwise, if the winding be made forcibly, the film would release from the spool or the advance lever could not be brought back. Rewinding is done before opening the camera back. Before the winding of the film advance lever becomes difficult, Sstop further winding and rewind.



To rewind, first push in the rewind button (Fig. 21) found on the bottom of the camera (not the camera back release button), then lift the rewind crank (Fig. 22) and turn in the direction of the arrow. As the film is being rewound, a slight resistance will be felt and the depressed button on the bottom will rotate. Continue turning until the resistance stops and the button stops turning.

Now the film is completely in the cartridge and the camera back can be opened. Do not open the camera back in direct sunlight.

Remove the film from the camera by pulling the rewind knob up. If possible, rewrap the exposed film in its original packing.

CHANGING PARTLY EXPOSED FILM

Before rewinding and removing the partly exposed film from the camera, note the number of the exposed frames on the automatic exposure counter of the camera.

When you wish to use the remaining part of the film, load the camera with the film in the usual way. Then put the front cap on the lens of the camera, and repeat winding and shooting blank shots until the exposure counter registers the number indicating one more after the last previously exposed frame. The camera is now ready for shooting the remainder of the film.

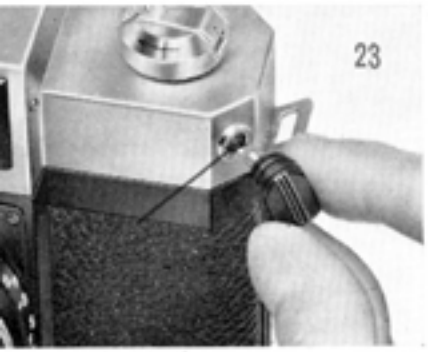
INFRA-RED PICTURE

When taking infra-red pictures the distance setting obtained by focusing on the screen has to be adjusted before shooting. This is done by rotating the lens slightly, until the focused point on the distance scale is changed to align with the red dot engraved on the color-coded depth of field scale.

For example, the lens focused at infinity is to be rotated slightly so that the infinity marking ∞ is now aligned with the red dot.

FLASH SYNCHRONIZATION

On the front left side edge of the camera (Fig. 23) there is a synchro-socket which accepts a regular flash unit or an electronic flash unit, provided with a standard flash cord plug.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For synchronization with a regular flash (Fig. 24), push the synchro-selector (Fig. 25) found on the left side of the lens barrel towards M as far as it will go*. M class bulbs are synchronized at all shutter speeds.

For setting the correct lens opening and shutter speed, look up the "Guide Number" which will be found in the instruction furnished with your flash unit.


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For synchronization with an electronic flash unit or when using F class bulb (at 1~1/60 sec.), push the synchro-selector on the side of the lens towards X as far as it will go*.

* Take care not to set the selector at an intermediate position.

HOODS

Use of the lens hood is recommended at all times even when the camera is not aimed towards the light, or even when there seems to be no stray light present.

The hood is screwed on the front of the lens (Fig. 26), and will also fit directly over the 40.5mm screwing filter or the close-up lens (see p. 18), permitting use of both units with the lens at the same time.

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The lens hood is supplied with a leather case which has also a room for keeping the close-up attachment lens. This leather case can be carried by attaching to the neck strap of the camera.

The 69mm screw-in hoods for use with the Tele- and Wide-Conversion Lenses, (see p. 19 and 20), are also available at your camera store.

SLV MODEL
SETTING
V (GREEN) FOR SELF TIMER
FLASH M FOR M CLASS BULB (YELLOW)
X ELECTRONIC
V " " plus SELFTIMER

FILTERS

The filter used on the lens is to be 40.5 mm in diameter (pitch = 0.5mm). Filters are available in the following colors and shades.

Color and Shade		Denomination engraved on the filter	Filter Factors	
			Daylight	Artificial Light (Tungsten)
Yellow	Light	Y43, Y44, Y45	1.5	1
	Medium	Y47, Y48, Y49	1.7	1.2
	Dark	Y51, Y52, Y53	2	1.5
Orange		O55, O56, O57	3	2.5
Red		R59, R60, R61	6	
Green	Light	X0	2	1.7
	Dark	X1		2
Ultra-Violet		L38, L39, L40	1	1
Neutral	ND4X	ND4X	4	
	ND8X	ND8X	8	

Filter reduces the amount of light transmission. Therefore, an increase in exposure is necessary when using them. This increase is expressed as a factor, and by this factor the film speed rating, once set on the film speed ring of the camera, is to be rectified as shown in the following example (Fig. 27):

When a film with an ASA speed of 100 is loaded and a filter whose factor is 2 is used, turn the filter speed ring to set the film speed figure 100 at 2 instead of ▲, holding the shutter speed ring firmly.

Don't forget to reset the film speed ring for the proper film speed as soon as you have removed the filter.

CLOSE-UP PHOTOGRAPHY

The shortest focusing distance of the normal camera lens is 2 feet or 0.6 meter. For small object work, i. e., to take picture at distances of less than the above, a special close-up lens (Fig. 28) should be used. This is available at your camera store.

This close-up attachment lens is screwed on the front of the camera lens, enabling to shoot the subjects as close as up to 1 feet or 35 cm.

While accurate focusing is important in all photography, it is especially critical at close working distances, since as the subject approaches the camera, the depth-of-field rapidly decreases. Usually, the aperture of the lens is closed down for the depth of field and for maximum sharpness.

TELE-PHOTOGRAPHY

Tele-Conversion Lens 90mm F : 5.6, is available. This is screwed onto the front of the camera lens (Fig. 29), permitting the taking of pictures with image size 1.8 times as large as that taken with the camera lens alone from the same shooting point. It is useful for landscape, animal and sports photography as well as for portraiture.

In this case, too, the viewfinder of the camera enables you to focus sharply and clearly shows the subject area included. However, the distance scale on the normal camera lens is not usable. Focusing distance when using the Tele-Conversion Lens are indicated below for the distances set on the scale of the normal lens.

Set on the normal lens scale		Distance when using Tele-C. Lens	
Infinity		Infinity	
10 meters	30′	32.7 meters	98′
5	15′	26.3	49′
3	10′	9.7	32′
2	7′	6.4	22′6″
1.5	5′	4.8	15′11″
1.2	4′	3.8	12′7″
1.0	3′6″	3.1	10′11″
0.9	3′	2.8	9′4″
0.8	2′6″	2.5	7′8″
0.7		2.1	
0.6	2′	1.8	6′1/8″

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The lens is supplied with a slip-on front cap in the leather case.

The 69mm screw-in hood and filter are used on this lens, which are available at your camera store.

WIDE-ANGLE PHOTOGRAPHY

Also available is a conversion lens, Wide-Conversion Lens 35mm, F : 5.6 for wide-angle photography.

This lens attached on the camera lens (Fig. 30) produces images of smaller size but covers a picture area 1.5 times (in diagonal) as wide as that taken with the normal camera lens alone from the same shooting point. Therefore, the lens is an invaluable aid for interior and architectural shots. The use of the wide-Conversion lens is the same as that described previously for the Tele-Conversion Lens.

Set on the normal lens scale		Distance when using Wide-C. lens	
Infinity		Infinity	
10 meters	30′	5.2 meters	16′
5	15′	2.6	8′
3	10′	1.6	5′4″
2	7′	1.1	3′10″
1.5	5′	0.8	2′9″
1.2	4′	0.7	2′3″
1.0	3′6″	0.6	2′
0.9	3′	0.52	1′9″
0.8	2′6″	0.47	1′6″
0.7		0.41	
0.6	2′	0.36	1′3″

Note : When using the conversion lens, the camera's built-in exposure meter does not couple to the aperture diaphragm opened larger than F : 5.6, even if it measures the exposure up to F : 2.5.

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The lens is supplied with a slip-on front cap in the leather case.

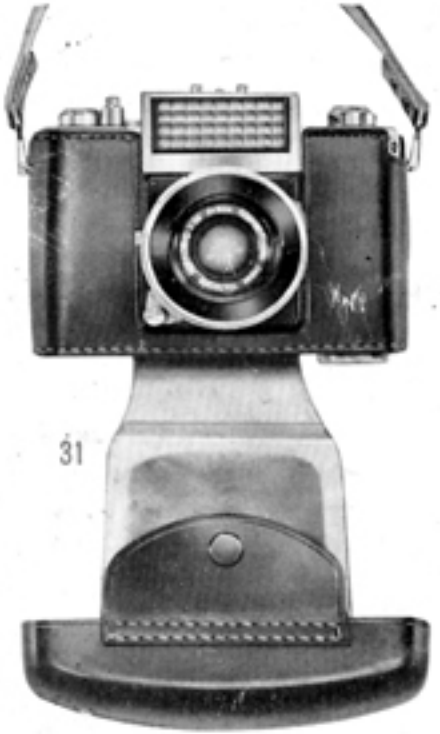
The 69mm screw-in hood and filter are used on this lens, which are available at your camera store.

EVEREADY CASE FOR NIKKOREX

After putting the camera in the case (Fig. 31), fasten the locking screw nut found on the bottom.

This nut is threaded so that the camera can be attached to a tripod without removing from the case.

The eveready case permits the use of camera by simply detaching its snap-on front only.



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CARE OF CAMERA

Care should be taken in handling and carrying the camera, especially avoiding the use of force. Protect it from shock.

Avoid direct vibration in car, train or motor cycle. This is especially harmful to the built-in exposure meter of the camera.

Don't leave the front exposure meter window in the sun any more than you can help, to avoid excessive light and heat effect.

To clean the lens, remove dust with a feather or handblower, and then use soft washed-out linen. When cleaning the mirror, be careful not to apply too much pressure.

Finger marks or glease on the lens surface can be removed by means of cloth sparingly soaked with alcohol.

Do not try to dismantle the lens. If there is any question concerning your equipment, refer to your dealer or to the manufacturer.

Do not lose the guarantee card which bears the serial number of the camera. It is also advisable to keep a record of this serial number in the event that you lose the camera.

No.

No.