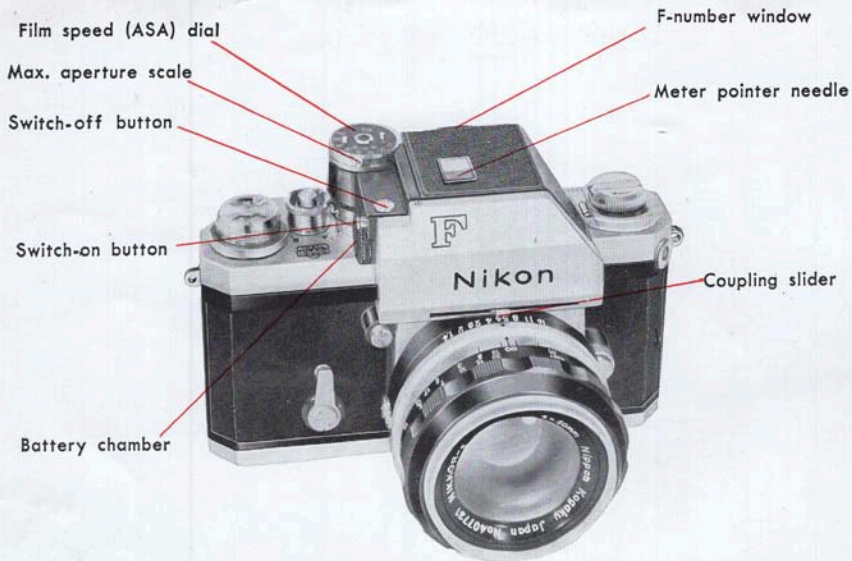




*Photomic* - **T** Finder

**INSTRUCTIONS**



Eye correction lens  
attaching screw

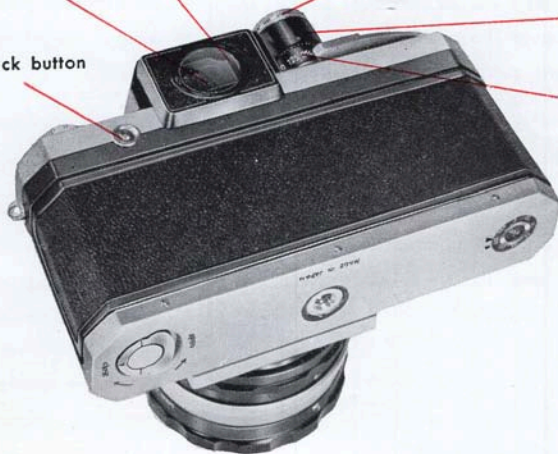
Shutter speed selector

Finder eyepiece

Shutter speed index

Finder lock button

Shutter speed scale



## NIKON PHOTOMIC-T FINDER FOR NIKON F

Photomic-T Finder is an eyelevel viewfinder incorporating a CdS exposure meter, designed to be a "Through-The-Lens" system exposure meter. It measures the average brightness over the entire picture field of whichever interchangeable lenses.

Mounted on the top of the Nikon F camera, the meter couples to both the shutter speed dial on the camera and aperture diaphragm in the lens, showing its indicator needle on the outside top of the camera and inside the viewfinder field as well.

No consideration is needed about exposure factors in the use of filter, in close-up focusing, in photomicrography, etc.

## CHARACTERISTICS

Type :	Through-The-Lens system
Measuring range of average brightness :	0.5~16000 cd/m <sup>2</sup> (with F/1.4 lens) EV2~17 (corresponds to F/1.4, 1/2 sec.~F/11, 1/1000 sec.) with the film speed ASA 100
Aperture scale :	F/1.4~F/22
Shutter speed scale :	2 sec. (with B) ~ 1/1000 sec.
Film speed scale :	ASA 25 ~ 6400
Adjustable range of max. aperture of lens :	F/1.2 ~ F/4.5
Mercury batteries :	2.6 V (1.3 V × 2)
Weight :	230 g

## MOUNTING THE FINDER

Set the shutter speed dial on the camera to any speed except T, and the aperture ring of the lens to F/5.6. Move the slider at the bottom of the Finder to a position, so that the figure 5.6 appears in the aperture window on the back of the Finder.

Then, mount the Finder onto the camera top. Press it in position until a click is heard.



**Note:** To mount the Photomic-T Finder onto the earlier type (up to serial No. 6700000) of Nikon F camera, contact your dealer.

Rotate the shutter speed selector of the Finder, until the small pin on the camera shutter speed dial fits the groove on the selector. The selector can be turned together with the dial. Be sure that the slider is coupled to the prong on the aperture ring of the lens.

To detach the Finder from the camera, press the lock button on the back of the camera.

## EXCHANGING THE LENS

For attaching or detaching the lens, it needs to set the aperture ring to 16. First bring the slider at the bottom of the Finder to the right limit (as viewed toward the front). Attach the lens onto the camera by bayonet fitting and engage the prong on the aperture ring to the slider.

### **Full-aperture measurement**

The Photomic-T Finder is so ingeniously designed that, so far as the lens is coupled to the Finder with the prong, the exposure can be determined with the aperture of the lens fully open, no consideration being required as to the pre-selected aperture, to take advantage of using the "Auto" lens, which permits getting view of the brightest finder image in focusing and composing.

### **Stop-down measurement**

When a lens which is not provided with the coupling prong or when the coupling is prevented by any intermediate attachment between the lens and the camera, the exposure setting should be made with the aperture of the lens stopped down to the aperture actually being used (see p. 19).



## ORDER OF USING THE FINDER

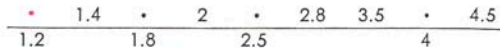
The use of the Finder proceeds in the following order:

- 1) Set the film speed (ASA) to the max. aperture of the lens (see p. 10).
- 2) Push side button on the Finder to switch on the meter (see p. 11).
- 3) Look in Finder eyepiece to focus and compose the picture.
- 4) Set pointer needle inside the viewfinder or outside the Finder, by revolving shutter speed selector on the top and/or aperture ring of the lens.

## SETTING FILM SPEED TO THE MAX. LENS APERTURE

Be sure that the speed (ASA) of the film being used is set to the max. aperture of the lens. If it is not, turn the film speed (ASA) dial on the top of the shutter speed selector, using two pins, so that the film speed (ASA) lines up with the max. F-number of the lens engraved on the edge. For example, the ASA 100 is set to the max. aperture F/1.4 as shown in the top figure, and to F/2.8 in the bottom figure.

The intermediate dots in the film speed scale and in the max. aperture scale correspond to the F-number as below:



## DETERMINING THE EXPOSURE

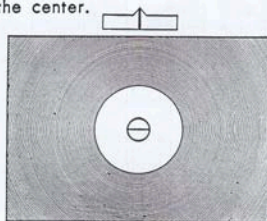


First, depress the side button so that the top button pops up, showing a red band around. The red color will serve to arouse attention.

Viewing the finder field, rotate the shutter speed selector and/or the aperture ring of the lens, until the pointer needle inside the viewfinder comes to the center.

The needle moves in the same direction as the shutter speed selector and the aperture ring rotate. The meter pointer needle is also visible in the outside top window.

The camera is now ready for taking picture of the subject.



## IMPORTANT!

- After the camera has been used, depress the top button so that the side button pops up, to avoid unnecessary drain of the mercury battery.
- The shutter speed selector clicks at each marked setting. The shutter does not give an intermediate exposure time. Therefore, if the needle does not come exactly to the center at the moment the shutter speed selector clicks, correct the deviation of the needle by slightly revolving the aperture ring of the lens.
- When the needle comes to the center at B-2 setting on the shutter speed selector, the correct exposure time will be 2 seconds. Depress the shutter button for 2 seconds at the B-2 position. In this exposure, use a tripod to avoid camera movement. T-exposure cannot be made with the Photomic-T Finder mounted on the camera. For this purpose, use the B-2 setting and a cable release.



## USING FILTER OR CLOSE-UP ATTACHMENT

It is one of the great advantages of the Photomic-T Finder that the exposure factor need not be considered in using a filter or close-up attachment lens attached on the lens, because the exposure decrease caused by it will give the same effect to the meter and to the film. The correct exposure is always obtained by the meter setting without any alteration.

For the same reason, the adjustment of F-number, which is required when the lens is extended for close-ups such as in the case using an extension ring or bellows, can be disregarded. In these cases, however, it is necessary to observe the order: Set the exposure after focusing. It is also important that no picture should be taken with the filter removed after the exposure is set with the filter attached.

The Photomic-T Finder measures the average brightness over the entire image area of the finder. Therefore, if a subject much brighter than the main subject is included in the finder viewfield, or any bright or dark scene occupies a large part of the image field, the measuring result will be incorrect. For example :

- Bright sky ; snow ; white wall ; sand beach, etc. extending over one-thirds of the finder image area.
- Electric lamp ; bright window ; etc. illuminating as back light.
- Black wall ; dark scene ; etc. occupying one-thirds of the finder field.

Measurement should be made by slightly changing direction of the camera or by approaching the subject, so that the aimed subject or scene covers a large part of the finder viewfield.

## COUPLING RANGE OF METER

It may happen that by an extremely bright or dark scene, the meter needle stops or make a discontinuous movement and cannot be set to the center. This does not indicate any disorder but the fact that the brightness of the scene is out of the coupling range of the meter. For example, when using a lens of  $F/1.4$  and a film of ASA 100, a brightness over the aperture  $F/22$  at the shutter speed  $1/500$  sec. or under  $F/1.4$  at 1 sec. will not be within the coupling range.

The same movement of the needle may be possible even within the coupling range when the combination of aperture and shutter speed is selected too far away from the correct exposure toward the opposite limit. In this case, reset the shutter speed to  $1/15$  or  $1/60$  sec. and try again the measurement, then the correct centering will be obtained.

Note: The least coupling brightness varies with the max. aperture of the lens in use. Therefore, for example, if the  $F/4$  lens is replaced with the  $F/1.4$  lens, a brightness under  $F/4$ , 1 sec. will become out of the coupling range of the meter.

## INFLUENCE BY FINDER SCREEN

Some types of the finder screens exert an influence upon the measuring result of the meter. To compensate the influence, change the film speed setting to the figure as shown by the number printed in bold black in the table (see opposite page), depending upon the type of the lens being used. However, for the lenses of small max. aperture, where such adjustment goes beyond the limit of the max. aperture adjustment, it must be made by decreasing the exposure determined by meter as many steps as shown by the red numbers in the table, the film speed being set to the max. aperture of the lens. For example, when using the lens 300 mm F/4.5 and the finder screen type H2, the necessary adjustment will be  $1\frac{1}{2}$  steps with the film speed set to F/4.5. Then, provided the meter setting is obtained with the shutter speed 1/125 sec. and the aperture of lens stopped down to F/8, change the shutter speed to 1/250 sec. and the aperture setting to the position halfway between F/8 and F/11, or with the shutter speed unchanged, set the aperture to the position between F/11 and F/16. When the readjustment is a whole number, it can be done only by changing the shutter speed.



TYPE OF LENS		TYPE OF FINDER SCREEN													
		A	B	E	F	C	D	G1	G2	G3	G4	H1	H2	H3	H4
55 mm	F : 1.2	1.2	1.2	1.2	1.2				1.2				1.2		
50 mm	F : 1.4	1.4	1.4	1.4	1.4				1.2				1.2		
58 mm	F : 1.4	1.4	1.4	1.4	1.4				1.2				1.2		
85 mm	F : 1.8	1.8	1.8	1.8	1.8				1.4			1.2	1.2		
50 mm	F : 2	2	2	2	2			1.4	1.4			1.4	1.4		
35 mm	F : 2	2	2	2	2			1.4	1.4			1.4	1.4		
105 mm	F : 2.5	2.5	2.5	2.5	2.5				2			2	2		
135 mm	F : 2.8	2.8	2.8	2.8	2.8	2.8	2.8		3.5				2.5		
35 mm	F : 2.8	2.8	2.8	2.8	2.8			3.5				2.8	2.8		
135 mm	F : 3.5	3.5	3.5	3.5	3.5	3.5	3.5		4.5				3.5		
Zoom	43~86 mm F : 3.5	3.5	3.5	3.5	3.5				3.5			3.5	3.5		
Micro	55 mm F : 3.5	3.5	3.5	3.5	3.5				3.5				3.5		
	28 mm F : 3.5	3.5	3.5	3.5	3.5			2				4			
	200 mm F : 4	4	4	4	4	4	4						2	4	
Zoom	50~300 mm F : 4.5	4.5	4.5	4.5	4.5										
Zoom	85~250 mm F : 4~4.5	4.5	4.5	4.5	4.5										
	300 mm F : 4.5	4.5	4.5	4.5	4.5	4.5	4.5						1 1/2	4.5	4.5

The screen in  should not be used for exposure measurement with the Photomic-T Finder.

## LIGHT ENTERING THE EYEPiece FROM BEHIND

As the Photomic-T Finder is designed ingeniously to eliminate an objectionable influence of light coming from behind the finder eyepieces, there is no need of worrying about such an influence under the normal conditions. Under the special conditions as below, the use of the eyecup on the eyepiece is recommended so as to avoid as much as possible the entrance of intense light into the eyepiece.

- When exposure measurement by the "stop-down" method is made with the lens stopped down to quite a small aperture.
- When a dark subject or scene is measured from the camera located in a bright place, e.g. a subject or scene in the shade taken from the camera placed in the sun.  
When bright light directly enters one eye, it is also effective to look into the finder with the other eye.
- When exposure determination is made by looking the pointer needle in the outside meter window on the camera top, cover the finder eyepiece with the hand.

## STOP-DOWN MEASUREMENT



Some interchangeable Nikkor lenses of extremely long focus and other special purpose lenses have no coupling prong on their aperture ring. Even when they are provided with the coupling prong, they are sometimes used with the prong not coupled, on account of the attachment inserted between the lens and the camera, such as the extension ring, bellows or for any other reason. In these cases, proceed as follows

Set the film speed (ASA) (for example, ASA 100 in the figure) to the red dot (corresponding to F/1.2 position). Move the slider at the bottom of the Finder to the right until it clicks in position slightly before it comes to the limit. Determine the exposure (P. 11) with the aperture of lens stopped down to that to be actually used.

In this "stop-down" method, the screens G or H series cannot be used. For the use of Micro-Nikkor 55 mm F/3.5, refer to the next page.

## MICRO-NIKKOR-AUTO 55mm F/3.5

When Micro-Nikkor-Auto 55 mm F/3.5 is used with the Photomic-T Finder, engage the coupling prong on the aperture ring of the lens to the slider. Fully open the aperture and set the speed (ASA) of the film to the max. aperture (F/3.5) of the lens. Then, after the exposure is determined, reset the diaphragm a half stop smaller for the reproduction range  $1:9 \sim 1:4$  and one stop smaller for  $1:4 \sim 1:2$ .

The "stop-down" method can also be used. Use special caution, however, to prevent light from entering the finder eyepiece from behind.

When M-ring is used for a magnification between  $1/2$  and  $1/1$ , set the film speed (ASA) to the red dot and apply the "stop-down" method.

The above descriptions are tabulated as follows:

Repro. ratio	F/3.5 (Fully open)	F/4.5	F/8	F/11	F/16	F/22	F/32
$\infty \sim 1:9$	<div>Engage coupling pin to prong.</div> <div>Stop down 1/2 stop more, after exposure setting.</div> <div>Set the film speed to F/3.5</div> <div>Stop down 1 stop more, after exposure setting.</div>						"Stop-down" method is used.
$1:9 \sim 1:4$							
$1:4 \sim 1:2$							

Although the "stop-down" method can be employed for repro ratios shown by 1:9 up to 1:2, the full-open measurement followed by stopping more will be preferable for 1:9~1:2, when taking picture of rather dark subjects.

## MERCURY BATTERY

One of the outstanding features of the Photomic-T Finder is that it can afford its everlasting efficiency by exchanging the mercury batteries. Mercury batteries will keep good over one year so far as the meter is properly used.

To exchange the batteries, open the battery chambers by unscrewing the lid. Inserting a new battery into the chamber each with the plus (+) side turned outward, screw in the lid with the inside plus (+) mark in contact with the outside battery.

The mercury batteries to be used for the Finder are chosen

from Mallory PX-13 RM-625R

Eveready E625

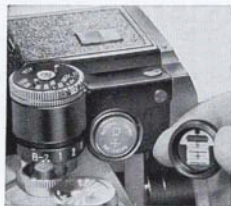
G.E. No. 625

National

Toshiba

M-ID

TH-MC (except type Y)



- If the meter is exposed to bright light at a low temperature (below  $0^{\circ}\text{C}$ ) for a long time, the meter may show a great error or even stop its function. This abnormal condition will naturally be rectified when the temperature rises again. Therefore, in the cold weather, take caution not to leave the side button depressed longer than 3 minutes at a time.
- The motive power of the mercury battery will suddenly drop when the life is ended, causing no more movement of the pointer needle.
- No old battery should be thrown into the fire. Avoid heating it.
- Never form a short circuit between the plus and minus sides of the batteries.
- Never try to disassemble or recharge the battery.
- If the camera will not be used for a long time, it is advisable to remove the battery from the Finder.



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