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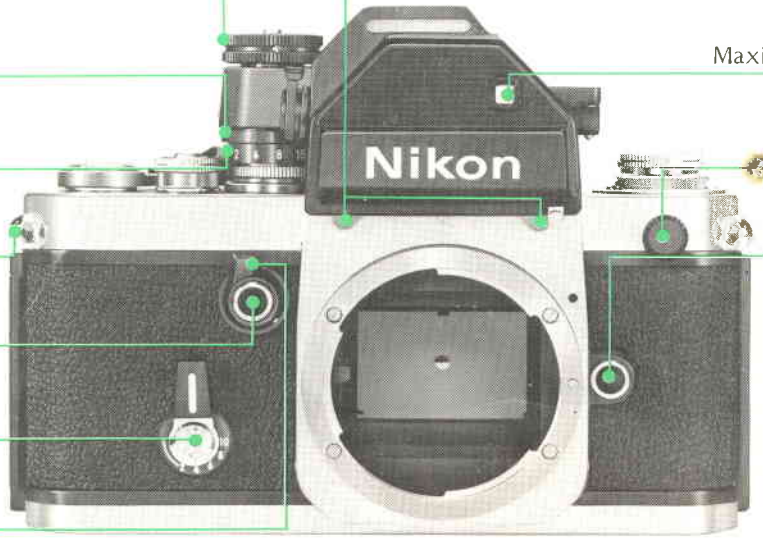
Nikon

F2S

Photomic

INSTRUCTION MANUAL

NOMENCLATURE



Shutter speed selector

Shutter speed selector
(for extra-long exposure)

Shutter speed scale

Neckstrap eyelet

Depth-of-field preview button

Self-timer

Mirror lock

Clamps

Maximum aperture indicator window

Synch terminal

Lens release button

Shutter release coupling*

Film-advance coupling**

Rewind button

Camera back

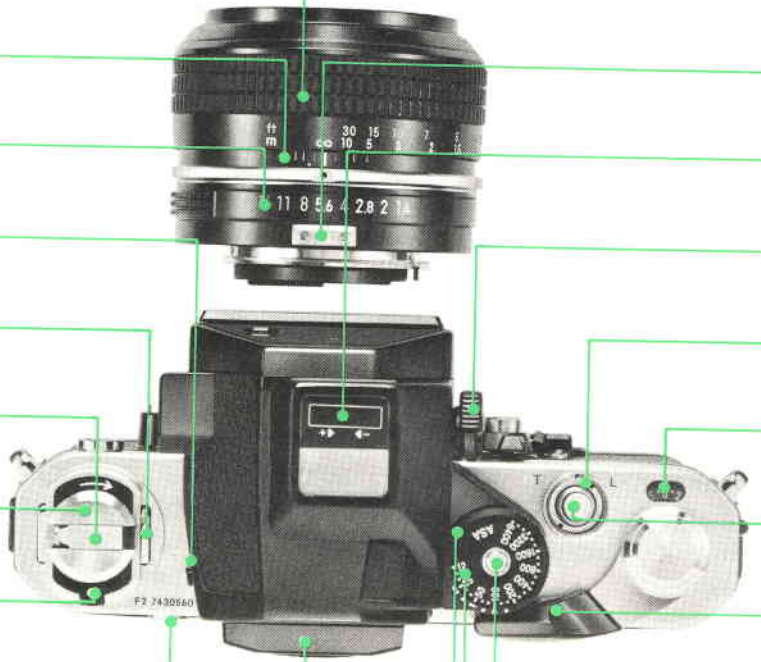
Tripod socket

Battery chamber

O/C key

Memo holder

*Shutter release coupling: connects with the release plunger of the motor drive.



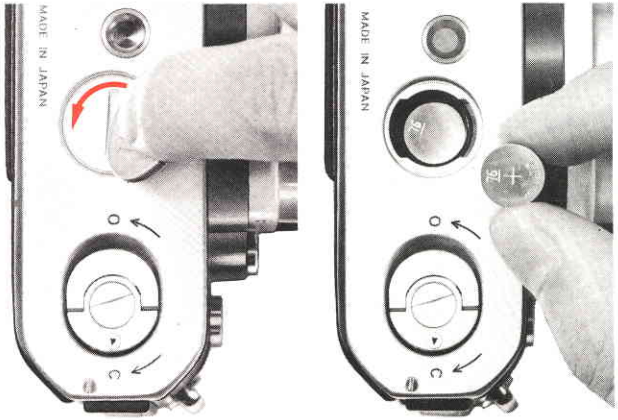
**Film-advance coupling: connects with the drive shaft of the motor drive.

The Nikon F2S Photomic offers the serious photographer the ultimate in quality performance, convenience and versatility. At the same time, it is engineered to take the guesswork out of photography with automatic features anyone can learn to use in minutes. To get the most out of your Nikon F2S Photomic, study the instructions carefully and practice using the controls before you load any film in the camera. Keep this booklet handy for ready reference until you have mastered its basics, and follow the suggestions for camera care given on page 46. The few moments you spend familiarizing yourself with the camera will guarantee you the best results and increase your picture-taking enjoyment many times over.

INSTALLING THE BATTERIES

The exposure meter in the Photomic finder is powered by two 1.5V silver-oxide batteries which are supplied with the camera. To install the batteries, twist the cap on the camera baseplate with a coin or similar object to remove it and drop the batteries into the battery chamber. Make sure that the plus (+) side faces out. Then replace the cap.

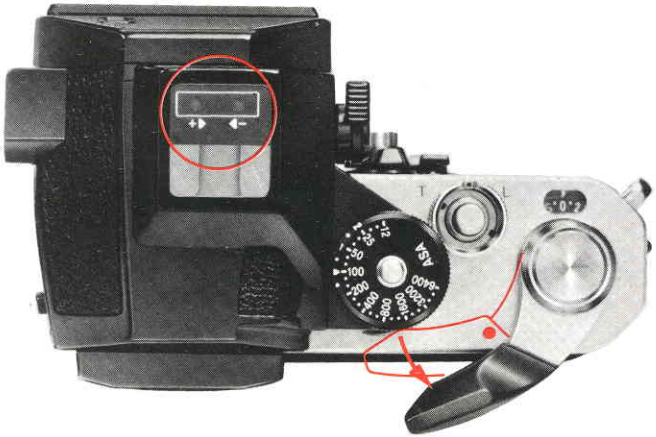
Caution: Remove the batteries when the camera is not used for long periods.
At below-freezing temperatures, the batteries may malfunction or cease to operate until the temperature rises again. Be careful not to expose them to severe cold for long periods of time.



Checking the Batteries

Pull out the film-advance lever just far enough to uncover the red dot on top of the camera and watch the signal lights in the viewfinder or on top of the finder. If either of the two lights glows with a bright red light, the batteries are in good condition. If not, they need to be replaced.

Note: To ensure maximum battery life, try to minimize unnecessary operation as much as possible. This can be done simply by turning off the finder (push in the film-advance lever) when storing the camera and when not metering. With the meter set on continuously, battery life is approximately 10 hours at normal temperatures and EV 12, with a Nikkor 50mm f/1.4 lens attached.



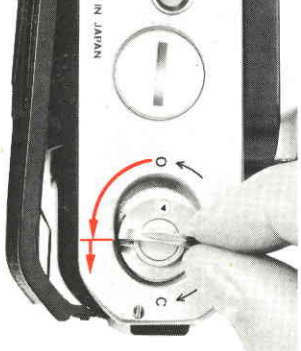
LOADING THE CAMERA

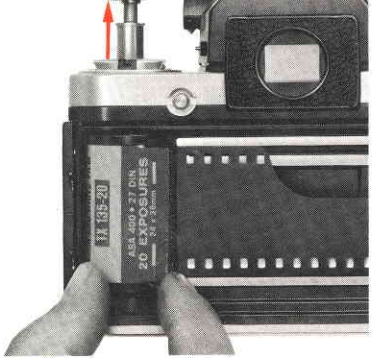
Fold out the O/C key and turn it counterclockwise until the arrow points to the "O" (open) mark and the hinged camera back pops open. Pull up the rewind knob as far as it will go, and drop a film cartridge or loaded cassette into the film chamber with the film leader pointing toward the take-up spool.

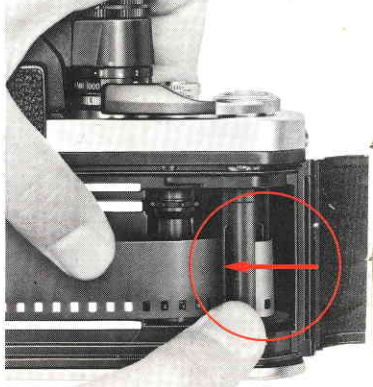
Now, push the rewind knob down to hold the cartridge in place and insert the end of the film leader into any one of the slots in the take-up spool. Stroke the film-advance lever slowly to make sure that the film perforations mesh with the sprockets and that the edges of the film run parallel to the film guide rails.

Close the camera back and lock it by turning the O/C key clockwise until the arrow points to "C" (close). Fold out the rewind crank and turn it gently in the direction of the arrow until you feel a slight resistance. This will take up any slack in the film cartridge.

Advance the film and make two blank exposures to dispose of the first few inches of film which have been exposed during loading. When you do this, watch the rewind knob to make sure it rotates in the direction opposite the arrow while the film is being advanced. This will indicate that the film has been loaded correctly and is being advanced.







The frame counter in the window in front of the film-advance lever should now be at "0". Advance the film one more frame and you are ready to take the first picture.

Caution: Do not load the camera in bright sunlight. If no other shade is available, shade the camera from the sun with your body while loading.

The O/C key can be unscrewed and removed for mounting the Motor Drive MD-1. However, normally it should not be unscrewed, especially when the camera is loaded with film as this may expose the film.

Note: The camera back can be removed from the body by depressing the locking catch on the hinge. Removal of the camera back is necessary when the camera is used with the 250 Magazine Back MF-1, which wraps around the body in place of the back.

Unloading

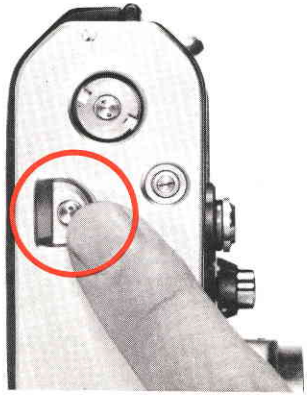
When the frame counter indicates that the last exposure has been made, or when the film-advance lever can no longer be stroked, the roll of film has been exposed and should be removed.

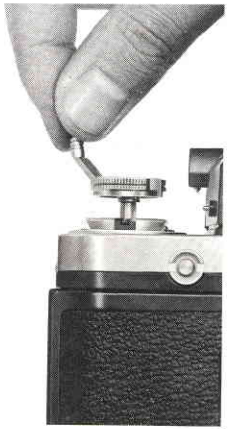
To unload, press the rewind button on the camera baseplate, pull up the rewind knob, unfold the rewind crank and turn it with a constant, gentle pressure in the direction of the arrow until you feel an increased tension.

Give it a few more turns until no more tension can be felt and the crank turns loosely. Now the film has left the sprockets and the camera may be opened. Pull the rewind knob up as far as it will go and the film cartridge will drop out. As soon as the film advance lever is stroked, the rewind button will pop out and the film-advance mechanism will be engaged again.

Caution: Be careful not to push the rewind button (on the camera's baseplate) during film advance operation. Should this occur, temporary stoppage of film transport and double exposure of the negative may result.

Note: The film can also be rewound using the Motor Drive MD-1. For details see the instruction manual for the motor drive.





LOADING THE CAMERA—continued

Film-Plane Indicator

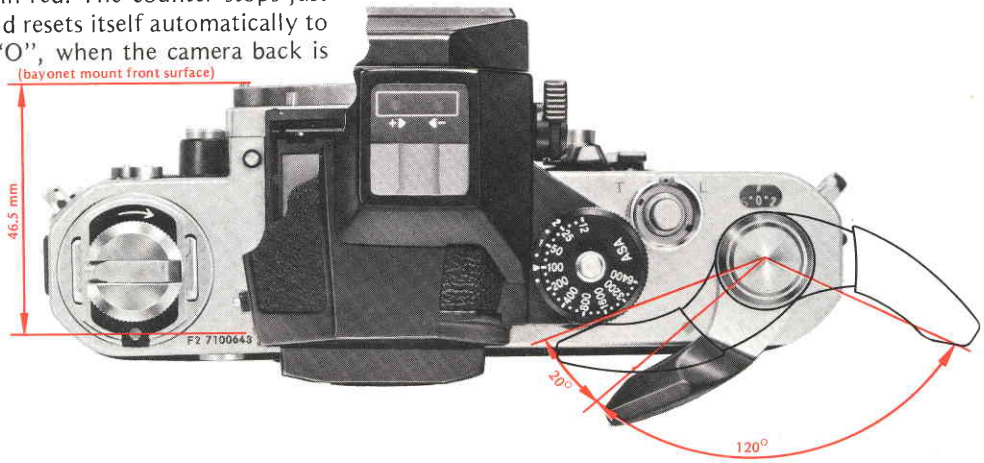
The exact position of the film plane can be determined by picturing an imaginary line drawn along the top edge of the digits which make up the camera serial number. This is important to know when measuring the film-to-subject distance in closeups or macrophotography.

Frame Counter

The frame counter works automatically to show how many frames have been exposed. It is calibrated in even numbers with odd numbers indicated by dots and the figures S, 12, 20 and 36 in red. The counter stops just past the 40-frame mark and resets itself automatically to "S", two frames before "O", when the camera back is opened for reloading.

Film-Advance Lever

The film-advance lever simultaneously advances the film, cocks the shutter and operates the frame counter. It also switches the exposure meter in the Photomic finder on and off. Stroke the film-advance lever with the right thumb in a single stroke of 120° or a series of strokes. A built-in locking device prevents the shutter from being released unless it is fully cocked and the film has advanced a full frame. The lever springs back to its original position, with a 20° angle of clearance for the thumb after each complete stroke.

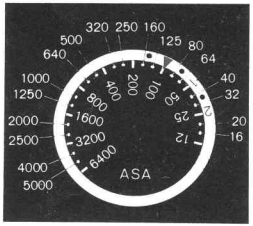


Memo Holder

A piece of paper or the end torn from an empty film carton can be inserted in the metal pocket on the back to serve as a reminder of the film type, speed and number of exposures.

Setting the Film Speed (ASA)

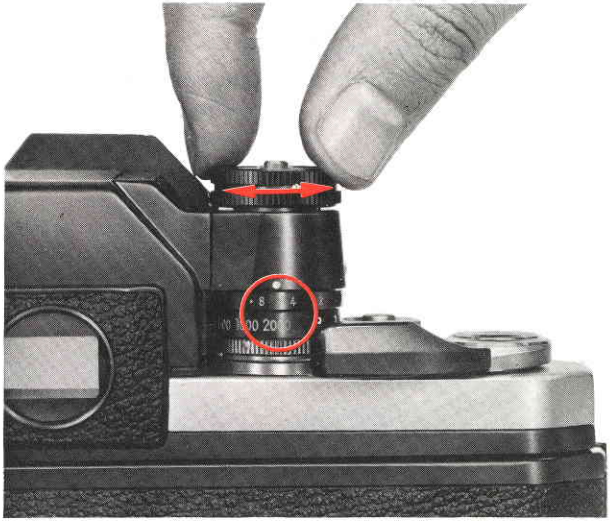
The exposure meter of the Photomic finder must be set for the ASA speed of the film in use, otherwise incorrect exposures will result. Lift up the milled ring around the ASA film-speed dial and turn it until the red arrow points to the speed of the film loaded in the camera. The meter is sensitive within a range of ASA 12 to 6400. The film-speed dial has two dots between each pair of numbers for intermediate settings such as 64, 80, 125, etc.



EXPOSURE CONTROLS

Setting the Shutter Speed

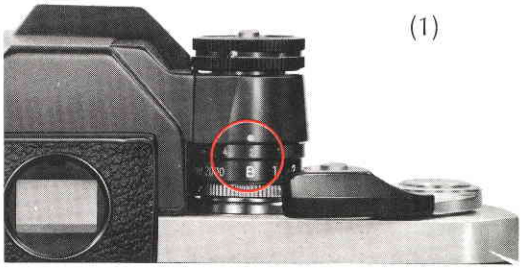
The Nikon F2S Photomic can be set for any shutter speed from 1/2000 to 10 seconds either before or after the shutter is wound. Speeds from 1/2000 to 1 second are set by using the click-stopped shutter-speed selector. The numbers on the shutter-speed scale stand for fractions of a second. The red line between 1/60 and 1/125 indicates the X synchronization setting of 1/80 second, the highest shutter speed which can be used to synchronize with a speedlight. Turn the selector until the desired speed appears opposite the white dot. You can also use intermediate settings for more precise exposure except at speeds slower than 1/80 second. At the B (bulb) setting, the shutter remains open as long as the shutter-release button is held down.



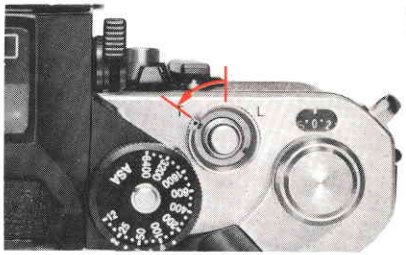
Extra-Long Exposures

For exposures of 2 to 10 seconds, set the shutter-speed selector at "B" (1). Lift up and turn the T-L fingerguard so that the black-dotted slot in the ring points to "T" (2). Then turn the self-timer until the desired exposure time in seconds around the lever appears opposite the black dot (3). When the shutter-release button is pressed, the shutter will remain open for the indicated number of seconds and close automatically. The shutter-release button will pop out again as soon as the film-advance lever is stroked for the next exposure.

Note: When the shutter is not released with the self-timer, the shutter-release button will not return to its normal position until the T-L fingerguard is returned to its original position with the slot between T and L. The self-timer cannot be cocked when the black dot is in the red region.



(1)



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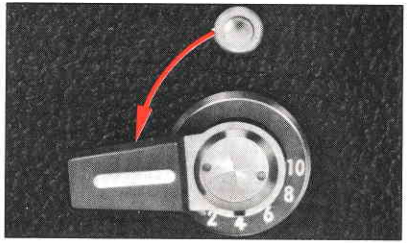


(3)

Time Exposures

To make an exposure longer than 10 seconds, set the shutter speed dial at "B" and turn the T-L fingerguard to "T" as described earlier. Press the shutter-release button to open the shutter. It will remain open until the ring is turned to its normal position.

The ring can also be used to prevent accidental exposure when the shutter is cocked. Pull up and turn the ring so that the slot points to "L" (lock). The shutter cannot be released in this position.

Setting the Lens Aperture

To preset the lens aperture, turn the aperture ring on the lens barrel until the desired f/number is opposite the black dot on top of the milled ring. The aperture diaphragm can be set for intermediate openings between the click-stopped settings for more precise exposure.

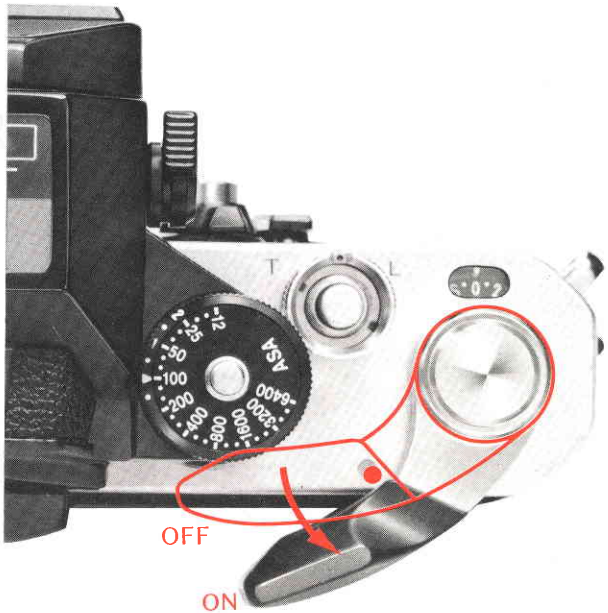
EXPOSURE MEASUREMENT (FULL-APERTURE METHOD)

The exposure meter of the Nikon F2S Photomic features a center-weighted thru-the-lens metering system coupled to the shutter-speed and lens-aperture controls. The meter reads the light over the entire focusing screen but favors a central area. This allows you to make precise reading of the selected subject area.

The meter takes advantage of the automatic diaphragm feature of Nikkor Auto lenses to measure light at the maximum aperture of the lens. This insures a bright viewfinder image for viewing and focusing and minimizes the influence of light entering through the finder eyepiece. In order to measure exposure at full aperture with lenses of different maximum apertures, the meter must be adjusted to the maximum aperture of the lens in use. This is done each time the lens is attached or changed by turning the aperture ring of the lens through its entire range (see p. 34).

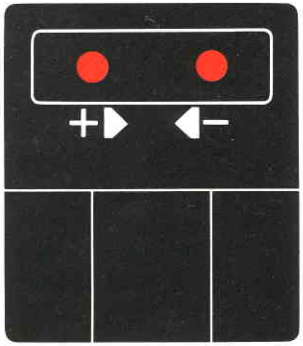
Turning On the Meter

The film-advance lever also serves as an on-off switch for the exposure meter. To turn the meter on, pull out the lever just enough to uncover the red dot on top of the camera. When the meter is not in use, press the lever flush against the camera body to avoid battery drain.



EXPOSURE MEASUREMENT—continued

Correct exposure



Outside window

Eyepiece view

Determining Exposure

The Photomic finder has two signal lights in the finder viewfield, one with the plus (+) sign for overexposure, the other with the minus (–) sign for underexposure. To determine the correct exposure, first switch on the meter and either of the two signal lights comes on. Then turn the aperture ring and/or the shutter-speed selector until both signal lights light up.

The signal lights are arrow-shaped so that by the direction of the arrow you will know at a glance if the exposure must be increased or decreased. For added convenience, the actual shutter speed and aperture selected also appear in the viewfinder.

Either the aperture ring or the shutter-speed selector (except for speeds slower than 1/80 second) permits reliable intermediate settings for more precise exposure.

The signal lights also appear on top of the finder for convenience when the camera is held at waist level or mounted on a tripod.

In low light, the two signal lights may light up at "B" setting on the shutter-speed scale. If so, correct exposure time is 2 seconds.

Choice of Shutter-Speed/Lens-Aperture Combinations

The amount of light reaching the film is determined by the combination of lens aperture and shutter speed. Since the two are interrelated, different combinations will give the same amount of exposure. The best combination depends on the results desired. Use fast shutter speeds to freeze motion or slow ones to create deliberate blur. Small apertures give greater depth of field, large ones let the subject stand out against an out-of-focus background.

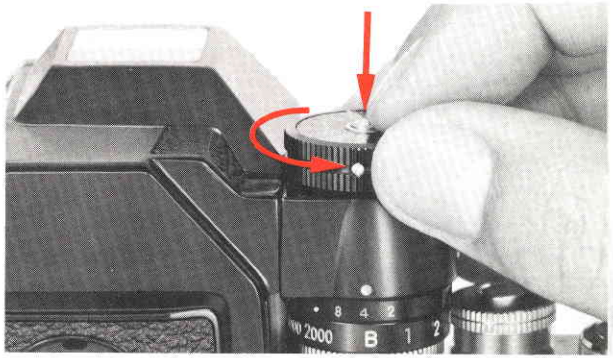
The table below shows how the aperture and shutter speed are interrelated. All the combinations give the same exposure.

Aperture	f/1.4	f/2	f/2.8	f/4	f/5.6
Shutter speed (second)	1/500	1/250	1/125	1/60	1/30

Extreme Low-Light Metering

The Photomic finder allows you to meter light level requiring 2- to 10-second exposure time at the maximum aperture of the lens in use. First set the shutter speed scale at "B". Turn the shutter-speed selector while depressing the locking button in the center of the ASA film-speed dial until both signal lights go on. Read off the number on the extra-long shutter-speed scale appearing opposite the white dot. Then set the shutter at the indicated time using the self-timer on the camera (see page 13). When measurement is made in this way, the shutter speed visible in the viewfinder remains at "B" regardless of the number on the extra-long shutter-speed scale appearing opposite the white dot.

Remember that at lighting levels lower than EV 0 (e.g., 2 seconds at f/1.4 with ASA 100 film), the exposure meter takes 2 to 3 minutes to reach a steady reading.



EXPOSURE MEASUREMENT—continued

Metering Range

If the two signal lights do not go on even after all possible shutter-speed/lens-aperture combinations have been tried, then the available light is too bright or too dim for the meter's range. Switch to a new film that matches the available light or mount a neutral density (ND) filter onto the lens to cut down on the amount of light or use artificial lighting to increase luminosity, whatever the case may be. With the 50mm f/1.4 lens and a film speed of ASA 100, the meter's effective range extends from f/1.4 at 8 seconds to f/8 at 1/2000 second.

Unusual Light Situations

When there are severe brightness differences between the subject and the background, you will often obtain better results by setting up the camera so that the subject fills the central part of the viewfinder during exposure measurement. For example, if the picture includes an unusually bright source of light, such as a light bulb, move the camera to center the subject for reading, or if accessible, move in on the subject and take a close-up reading of the part you want to emphasize, and then move back until the desired composition appears in the viewfinder.

For landscapes which include an expanse of sky, tilt the camera downward during measurement to prevent under-exposure of the main subject caused by the bright skylight.

For backlighted subjects, move up close to and include dark areas of the subject in your reading.

(1)

(2)

(1) Measuring the bright area in the center of the screen will cause underexposure of the main subject.
(2) For correct exposure, first measure the light striking the main subject, then compose and shoot.

Keep out stray light!

The finder is designed to minimize the effect of light entering through the finder eyepiece under normal conditions. However, in the following situations, the use of a finder eyecup is recommended.

- When the camera is in sunlight and the subject is in shade.
- When the stop-down method is used at small apertures.
- When a shaft of sunlight falls between the eye and the eyepiece.

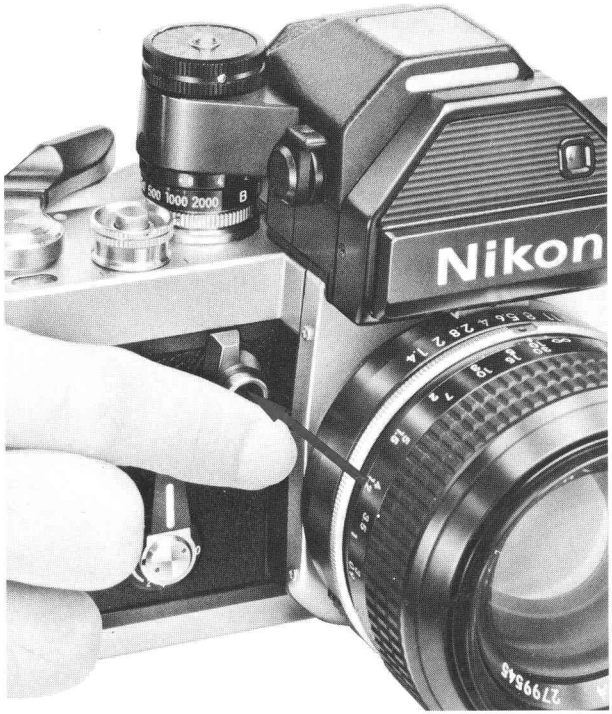
When the signal lights on top of the finder are used to determine exposure, the eyepiece should be covered with the hand to prevent extraneous light from entering the finder.

DEPTH OF FIELD

Depth of field refers to a zone extending in front of and behind the plane of sharpest focus. Within this zone, blur (or lack of definition) will be negligible and everything can be accepted as being in sharp focus. Depth of field extends a greater distance behind the subject in focus than in front. Depth of field depends on three factors: the focal length of the lens, lens-to-subject distance and taking aperture. The smaller the aperture and the shorter the focal length of the lens, the greater the depth of field. Also, the closer the subject, the smaller the depth of field. These three factors can be adjusted independently or in combination to give the photographer creative control over the final picture.

Depth-of-Field Preview Button

The depth-of-field preview button lets you check the depth of field before shooting and make desired adjustments. Press the button and the lens stops down to the preselected aperture to allow you to see how much background or foreground is in or out of focus.

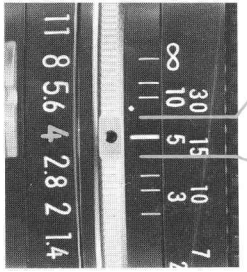


DEPTH OF FIELD—continued

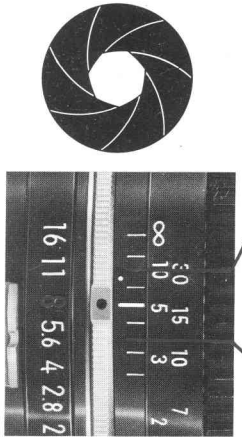
Depth-of-Field Scale

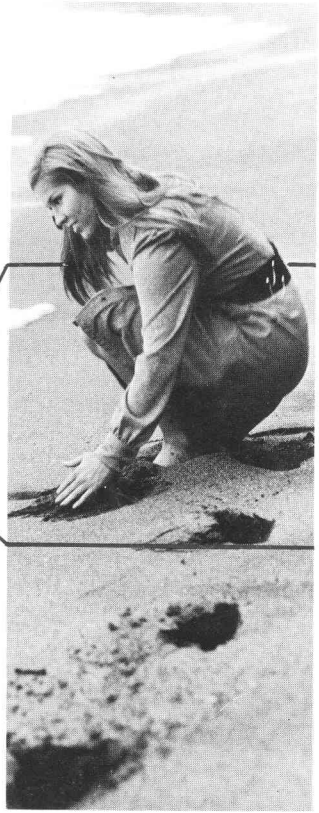
The depth of field can also be read from the color-coded scale engraved on the lens. The pairs of colored lines correspond to f/numbers of the same color. To find the depth of field at a particular aperture, first focus the lens on the subject. Then check the numbers on the distance scale opposite the colored lines which have the same color as that of the taking aperture to find the depth of field at that aperture. For example, f/16 on the aperture ring of the 50 mm f/1.4 lens is blue. With the lens prefocused at 17 feet (5 m), the numbers on the distance scale opposite the blue lines show that the depth of field extends from 9 feet (2.7 m) to infinity (∞).

By stopping down the lens only, the depth of field can be increased, as illustrated by the following three photographs:

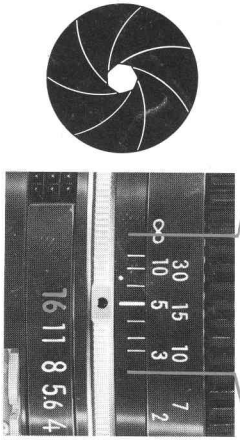


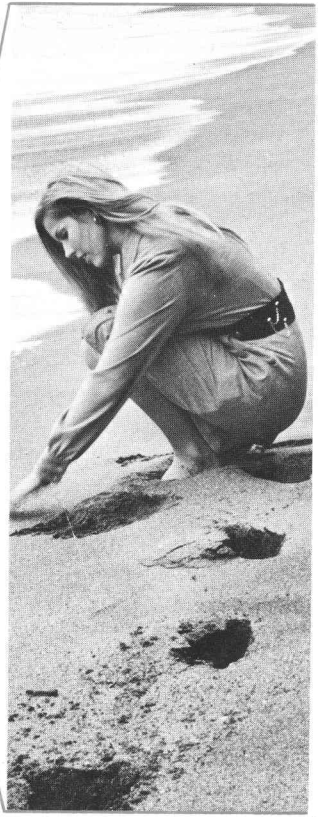
1. Lens at f/4. Small depth of field with only main subject in focus.





2. Lens further stopped down to f/8. Larger depth of field.





3. Lens at smallest aperture. Great depth of field with subject, background and foreground in focus.

HOLDING THE CAMERA

Steady camera holding is important for best results, since even the slightest camera movement at the moment of exposure can result in an appreciable loss of sharpness, especially at slow shutter speeds. The photographs show the best way to hold the camera for rock-steady picture-taking.

Wrap the fingers of the right hand around the camera body so that the index finger rests comfortably on the shutter-release button and the thumb fits between the body and the film-advance lever, and press against your forehead. This way you can stroke the film-advance lever without removing your eye from the viewfinder. Cradle the camera in the left hand for additional support, with the left thumb and index finger grasping the focusing ring. The camera may be switched from horizontal to vertical format in this position.

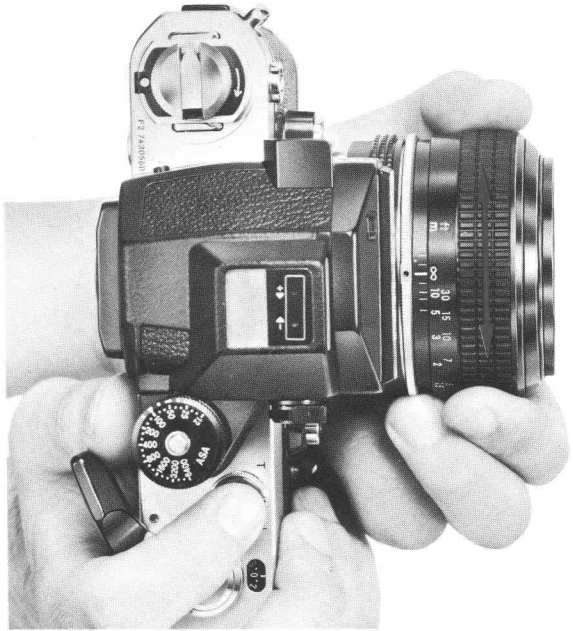
REMINDER CHECKLIST

Now, the camera should be ready for picture-taking. But first, double-check to make sure you have done the following:

- *Installed the silver-oxide batteries in the battery chamber with the plus side facing out.*
- *Loaded the film, locked the camera back securely and made two blank exposures while watching the rewind crank to see if the film is loaded correctly.*
- *Set the ASA film-speed dial for the correct speed of the film loaded in the camera.*
- *Mounted the lens correctly and adjusted the meter for the maximum aperture of the lens (check the maximum aperture indicator).*

FOCUSING AND SHUTTER RELEASE

Focusing is always done at full aperture with Nikkor Auto lenses. This gives the brightest possible image on the focusing screen for easy focusing and composing. It also minimizes depth of field so that the image snaps in or out of focus distinctly.

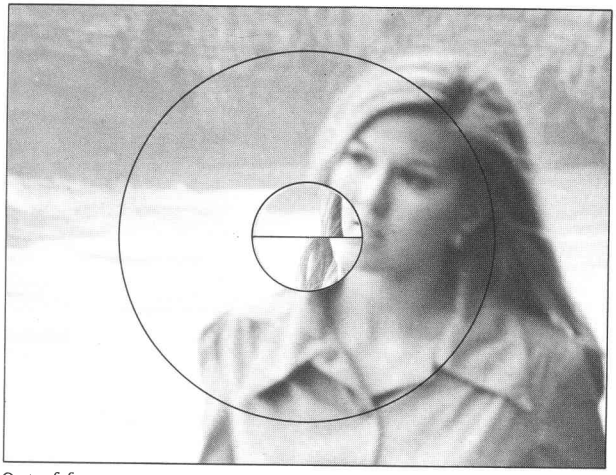


The Nikon Type A Focusing Screen comes with the camera as standard equipment. To focus, turn the focusing ring until the two halves of the rangefinder image coincide to form a single, sharp image. You can also focus on the matte field that surrounds the central rangefinder circle.

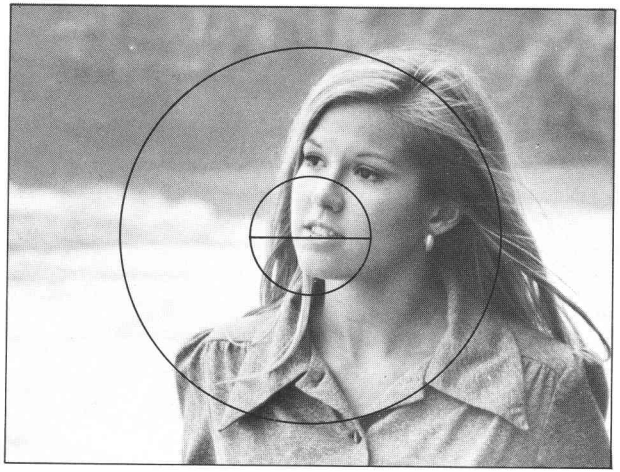
The lens can also be prefocused using the distance scale engraved in both feet and meters on the lens barrel. Line up the white indicator line on top of the lens opposite the camera-to-subject distance as measured or estimated. This technique is useful for candid shots of elusive subjects when time does not permit through-the-lens focusing.

For sharp pictures, correct shutter releasing is just as important as steady camera holding. A quick jab of the finger on the shutter-release button will cause camera movement and the result is a blurred picture. Hold the camera steady as shown previously, relax and squeeze the shutter release with a gentle, even pressure.

For long time exposures with the camera mounted on a tripod, use a cable release. The shutter-release button is threaded to accept the Nikon Cable Release. For hand-held exposures at speeds slower than 1/30 second, greater sharpness can be obtained if the shutter release is tripped by means of the self-timer.



Out of focus



In focus

FLASH SYNCHRONIZATION

The Nikon F2S Photomic is designed to synchronize with various types of flashbulbs at almost all shutter speeds and with electronic flash at speeds up to 1/80 second. Consult the table below to find out which shutter speeds are acceptable with different types of flashbulbs.

Flashbulb	2000	1000	500	250	125	X(80)	60	30	15	8	4	2	1	B
FP														
M*														
MF														
Speedlight														

Synchronized Cannot be used

**Some M-class bulbs have longer flash duration covering all shutter speeds up to 1/2000 sec., except for 1/60 and 1/80 (X) sec.*

The Nikon Flash Unit BC-7 fits directly over the rewind knob and require no synch cord. For other flash units, the flash unit coupler must first be slipped into place over the rewind knob and the synch cord plugged into the synch terminal. The synch terminal is threaded for extra safety.

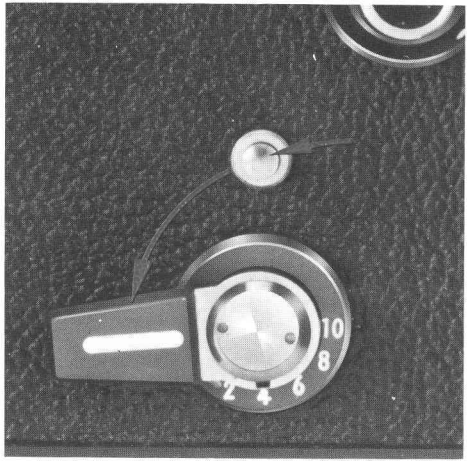
Caution: When the reflex mirror is locked in the up position, the shutter will not synchronize with flashbulbs at speeds higher than 1/125 second.

Ready-Light

The Photomic finder has a built-in ready-light for use with Nikon speedlight unit. The lamp lights up to let you know, without removing your eye from the viewfinder, when the speedlight is fully charged and ready to fire and goes out after the speedlight has fired. The ready-light is connected to the speedlight by means of an optional ready-light adapter. For details, see the speedlight instruction manual.

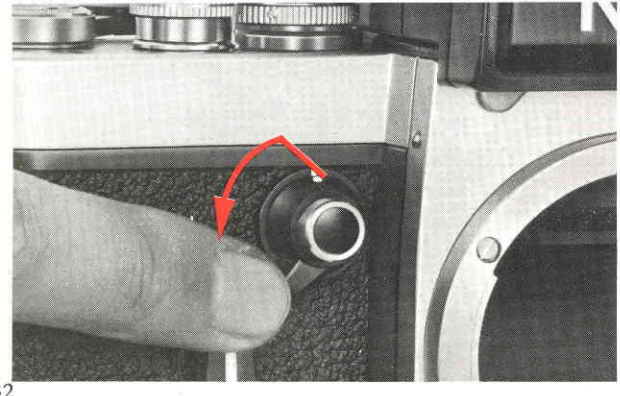
SELF-TIMER

The built-in self-timer can be used to trip the shutter after a delay of 2 to 10 seconds. The numbers marked around the lever indicate the delay in seconds. To cock the self-timer, turn the lever downward until the desired number of seconds delay is opposite the black dot. Pressing the small button located under the end of the lever in its uncocked position starts the countdown. If you decide not to use the self-timer after it is already cocked, use the shutter-release button to make the exposure and to shut off the self-timer. The self-timer can be set either before or after the shutter is wound. It should not be used at the "B" setting.



MIRROR LOCK

The reflex mirror must be locked in the up positon when using either the Fisheye-Nikkor 6 mm f/5.6 or the OP Fisheye-Nikkor 10 mm f/5.6 lenses, since their rear elements protrude into the camera body and interfere with mirror movement. Locking-up is also necessary for shooting with the Nikon Motor Drive MD-1 at its top speed. Press in on the lock-up lever and turn it downward until the white dot is opposite the white line. The mirror will remain locked in the up position until the lever is returned to its original position.



MULTIPLE EXPOSURES

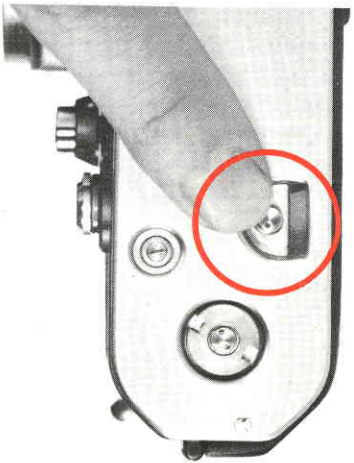
Intentional multiple exposures can be made with the Nikon F2S Photomic as follows: after making the first exposure, depress the rewind button on the baseplate and stroke the film-advance lever. This winds the shutter and cocks the mirror for the second exposure without advancing the film. Repeat the procedure as many times as you wish. Exposure may be made at different shutter speeds. The frame counter remains unchanged during this operation.

When the above procedure is followed, the film may move slightly when the film-advance lever is wound. To avoid this, depress the rewind button and hold it down while you stroke the lever and make the exposure. Repeat this procedure as many times as desired.

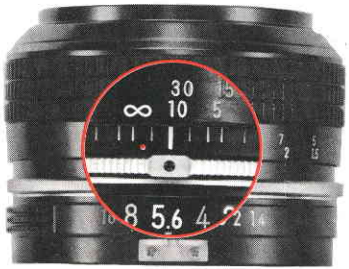
After the last exposure, stroke the film-advance lever once more. This time do not hold the rewind button down. The rewind button will pop out to indicate the film-advance mechanism has been re-engaged. Then cover the lens with a lens cap and press the shutter release button to open the shutter. Now, advance the film to the next frame.

daylight double exposures - double the ASA speed for each exposure to balance out the exposure

INFRARED PHOTOGRAPHY



In infrared photography, the plane of sharpest focus is slightly more distant than the one produced by visible light and seen by the naked eye through the viewfinder. To compensate for the shift in focus, Nikkor lenses have a red dot or line on the lens barrel near the color-coded depth-of-field scale. After focusing the image sharply through the viewfinder, turn the focusing ring to the left until the prefocused distance is aligned with the red dot. For example, in the picture below, the 50 mm f/1.4 lens has been focused at infinity (∞). The focusing ring is turned slightly to the left so that the infinity mark is opposite the red dot. When lenses having a focal length of 50 mm or less are stopped down to f/8 or smaller, no adjustment is necessary: at such small apertures these lenses have enough depth of field to compensate for the shift in focus.



CHANGING THE LENS

To remove the lens from the camera, press the lens-release button. Grasp the lens by the white milled ring and twist it to the right as far as it will go. The lens will come loose and can be lifted out.

To mount a lens, position it in the camera's bayonet mount so that the indicator dots on the lens and the camera are aligned. Twist the lens counterclockwise until it clicks into place. Always shade the camera from the sun with your body when changing lenses.

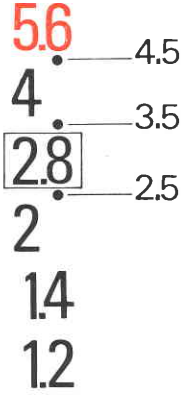
In order to measure light at full aperture with lenses of different maximum apertures, the meter must be adjusted for the maximum aperture of the lens in use. This is done each time a lens is mounted as follows:

Mount the lens as shown previously. Turn the aperture ring all the way to the minimum aperture setting (largest f/number), then all the way in the opposite direction. This step automatically fits the coupling pin of the Photomic finder into the coupling prong on the lens and adjusts the meter to the maximum aperture of the lens.

Maximum Aperture Indicator

The above adjustment can be confirmed by looking at the maximum aperture indicator in the window located at the front right side of the finder. The scale has a range from f/1.2 to f/5.6. For example, if the 28 mm f/2.8 lens is mounted on the camera, the number 2.8 should appear in the window.

Maximum Aperture Scale



CHANGING THE VIEWFINDER

Six interchangeable viewfinders are available for the Nikon F2S Photomic: F2S Photomic, F2 Photomic, Eye-Level, Action, Waist-Level and 6X Focusing Finders. To remove the F2S Photomic Finder, depress the base of the finder-release lever and turn the lever downward, then press the finder-release button on the back of the camera. The finder snaps loose and can be lifted out (1).

To attach a viewfinder other than a Photomic finder, set it in position and press down gently until it clicks into place. To remove, press the finder-release button. The finder comes loose and can be lifted out.

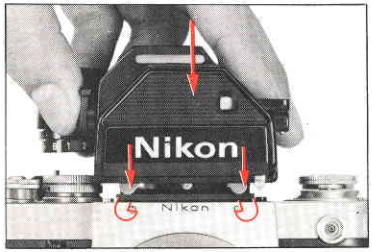
To reattach the Photomic F2S Finder to the camera mounted with a lens, first set the lens-aperture diaphragm at f/5.6 or larger, center the meter coupling pin and loosely place the finder in positon. Then press the finder down gently until it clicks into place and the two clamps settle in position (2).

With the Photomic finder in place, twist the shutter-speed selector left and right until it engages the shutter-speed dial on the camera and the two rotate together (3).

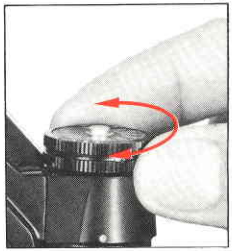
Mounting the finder on the camera body without a lens is simple. Just press the finder down gently until it clicks into place and the two clamps settle into place.

(1)

(2)



(3)



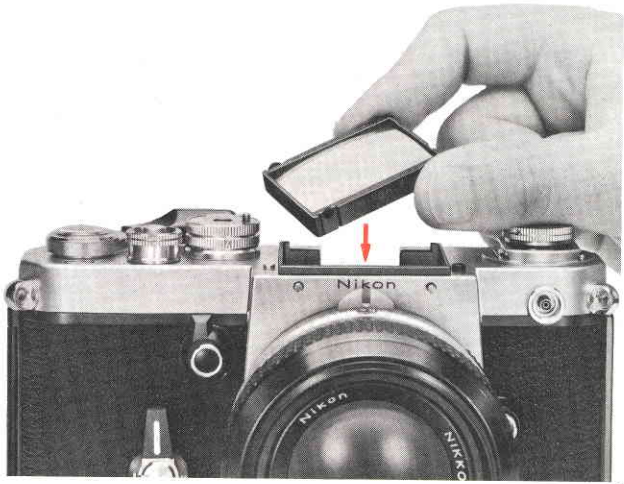
CHANGING THE FOCUSING SCREEN

Nineteen different focusing screens are available for the Nikon F2S Photomic to match exactly any focal-length lens or picture-taking situation. The Type A Focusing Screen comes with the camera as standard equipment and any of the screens may be used with any of the finders available for the camera.

To change the focusing screen, first remove the finder as described earlier. Then turn the camera body upside down and press the finder-release button a second time. The screen will drop into your hand.

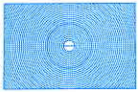
To attach a screen, place it in position with the flat side facing down and the Nikon mark pointing towards the front of the camera. Press the finder-release button and the screen will drop into place.

Caution: When changing a focusing screen, be careful not to touch the surfaces with the fingers as this will result in greasy marks. When removing the screen, it is advisable to place a clean, dry cloth over the palm of the hand for the screen to drop onto.

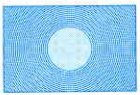


CHANGING THE FOCUSING SCREEN – continued

Interchangeable Focusing Screens



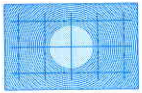
Type A, L
Type A: Matte Fresnel field with 3mmϕ circular split-image rangefinder spot and 12mmϕ circle. Rapid and accurate focusing. Excellent for general photography.
Type L: Same as Type A screen but with split-image rangefinder line at a 45° angle. Best for subjects with horizontal lines.



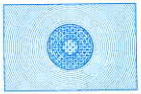
Type B: Matte Fresnel field with 12mmϕ fine-ground matte focusing spot in the center. Good for general photography, especially with long lenses.

Type C: Fine-ground matte field with 4mmϕ clear spot and cross hair. For photomicrography, astrophotography and other high-magnification applications, and for parallax focusing on aerial images.

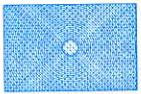
Type D: Overall fine-ground matte field. For specialized close-up photography and for use with long lenses.



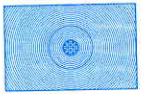
Type E: Matte Fresnel field with 12mmϕ fine-ground matte spot and etched horizontal and vertical lines. Ideal for architectural photography.



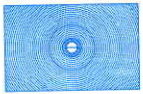
Type G: Clear Fresnel field with extra-bright 12-mmϕ microprism focusing spot for viewing and focusing in poor light. Four models (G1-G4) are available corresponding to specific focal length lenses. Depth of field cannot be observed.



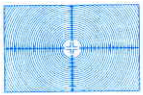
Type H: Clear Fresnel field with microprism focusing pattern over the entire screen area. Permits rapid focusing on any part of the screen with optimum edge-to-edge brightness in poor light. Available in four models (H1-H4) corresponding to particular focal length lenses.



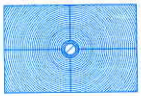
Type J: Matte Fresnel field with central microprism focusing spot and 12mmϕ circle. Good for general photography.



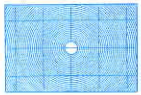
Type K: Combination of Type A and J screens. Matte Fresnel field with 3mmϕ split-image rangefinder spot surrounded by 1mm-wide microprism doughnut. Rapid and accurate focusing for subjects with both straight lines and ill-defined contours. Suitable for general photography.



Type M: Fine ground Fresnel field with 5.5mmϕ clear spot and double cross hair for use in parallax focusing on aerial image, plus millimeter scales for calculation of individual magnification of objects or for measuring objects. Brilliant image in dim light. Suitable for close-ups, photomicrography and other high-magnification applications.



Type P: Same as Type K but with split-image rangefinder line at a 45° angle and etched horizontal and vertical lines as an aid to composition. Rapid and accurate focusing for subject with horizontal or vertical lines or ill-defined contours. Suitable for general photography.



Type R: Same as Type A but with rangefinder prisms of sloping surfaces at a smaller angle and horizontal and vertical lines to aid proper composition. Works best with lenses having maximum aperture of from f/3.5 to f/5.6

■ = Excellent
▒ = Acceptable
The image is brilliant from edge to edge, but the central rangefinder, microprism or cross-hair area is dim. Focus on the surrounding matte area.
▒ = Acceptable
Slight vignetting or moire phenomenon (in the case of the microprism) affects the screen image. But the image on film shows no traces of this.
■ = Acceptable
Incompatible with any lens having a maximum aperture larger than f/2.8 since this discreases the efficiency and accuracy of the screen rangefinder. The in-focus image in the central spot may prove to be slightly out of focus on film. Focus on the surrounding matte area.

Caution: The rear surface of the screen is made of acryl resin. Special care should be taken to protect it from scratching or excessive pressure.

Focusing Screen Selector Chart

Lens \ Screen		A/L	B	C	D	E	G1	G2	G3	G4	H1	H2	H3	H4	J	K/P	M	R
Fisheye	6mm f/2.8	■	■	▒	■	■	■	■			■	■			■	■		■
	8mm f/2.8	■	■			■	■	■			■	■	■		■	■		■
	16mm f/3.5	■	■			■	■				■				■			■
Wideangle	15mm f/5.6	▒	■			■		■				■			■	▒		■
	18mm f/4	■	■			■	■				■				■	■		■
	20mm f/4	■	■			■	■				■				■	■		■
	20mm f/3.5	■	■			■	■				■				■	■		■
	24mm f/2.8	■	■			■	■	■			■	■			■	■		■
	28mm f/3.5	■	■			■	■				■				■	■		■
	28mm f/2.8	■	■			■	■	■			■	■			■	■		■
	28mm f/2	■	■			■	■	■			■	■			■	■		■
	35mm f/2.8	■	■			■		■			■	■			■	■		■
	35mm f/2	■	■			■	■	■			■	■			■	■		■
	35mm f/1.4	■	■			■	■	■			■	■			■	■		■
Normal	50mm f/2	■	■			■	■	■			■	■			■	■		■
	50mm f/1.4	■	■			■	■	■				■			■	■		■
	55mm f/1.2	■	■			■	■	■				■			■	■		■
Telephoto	85mm f/1.8	■	■			■	■	■			■	■			■	■		■
	105mm f/2.5	■	■			■	■	■				■			■	■		■
	135mm f/3.5	■	■	▒	▒	■	■	■				■			■	■		■
	135mm f/2.8	■	■	▒	▒	■	■	■	■			■	▒	▒	■	■		■
	180mm f/2.8	■	■	▒	▒	■	■	■	■			■	▒	▒	■	■		■
	200mm f/4	■	■	▒	▒	■	■	■				■			■	■		■
	300mm f/4.5	■	■	▒	▒	■	■	■	■			■	■	▒	■	■		■
	400mm f/5.6	▒	■	▒	▒	■	■	■	■	■				▒	■	▒		■
	400mm f/4.5	■	■	▒	▒	■	■	■	■	■				▒	■	■		■
	600mm f/5.6	▒	■	▒	■	■	■	■	■	■			▒	■	■	▒		■
	800mm f/8	▒	■	▒	■	■	■	■	■	■			▒	■	▒	▒		▒
	1200mm f/11	▒	■	▒	■	■	■	■	■	■			▒	■	▒	▒		▒
Zoom	28~45mm f/4.5	■	■			■	■	■			■				■	■		■
	43~86mm f/3.5	■	■			■	■	▒				■			■	■		■
	50~300mm f/4.5	■	■			■	■	■	■	■			▒	■	■	■		■
	80~200mm f/4.5	■	■			■	■	■	▒	■		■			■	■		■
	200~600mm f/9.5	▒	■	▒	■	■	■	▒	▒	■		■	▒	■	▒	▒		▒
GN	45mm f/2.8	▒	■			■	■			■					■	■		■
Micro	55mm f/3.5	▒	■			■		▒				▒			▒	▒		▒
	105mm f/4	▒	■			■			▒	▒			■	▒	▒	▒		▒
PC	28mm f/4	▒	■			■									▒	▒		▒
	35mm f/2.8	▒	■			■									▒	▒		■
Bellows	105mm f/4	▒	■	▒	■	■			▒					▒	▒	▒	■	▒
Medical	200mm f/5.6	▒	■			■						■	▒		▒	▒		▒
Reflex Telephoto	500mm f/8	▒	■	▒	▒	■									▒	▒		▒
	1000mm f/11	▒	■	▒	▒	■							▒	▒	▒	▒		▒
	2000mm f/11	▒	■	▒	■	■			▒	■				■	▒	▒		▒

EXPOSURE MEASUREMENT: SPECIAL CASES

Stop-Down Exposure Measurement

With the following lenses and accessories, full-aperture exposure measurement is not possible, either because the lens has no auto-diaphragm or because the diaphragm will not couple with the meter. Therefore, the stop-down method must be used. This means measuring exposure with the lens-aperture diaphragm stopped down to the taking aperture.

First, push the coupling pin up into the Photomic finder with a coin or similar object so that f/number 5.6 appears in the maximum aperture indicator window. Mount the lens or lens/accessory setup to the camera and switch on the meter in the usual way.

Bellows Focusing Attachments, Extension Rings and Focusing Unit

To determine exposure, select the desired shutter speed and stop down the lens manually until the two signal lights glow.

Preset Lenses

Use the same procedure as above for lenses having a preset diaphragm, such as the PC-Nikkor 35 mm f/2.8.

Auto Lenses Without Coupling Prong

Some lenses, like the Zoom-Nikkor Auto 200-600 mm f/9.5, have an auto diaphragm but no coupling prong. Use the depth-of-field preview button to stop down the lens until the two signal lights glow.

Reflex-Nikkor Lenses

The Reflex-Nikkor 500 mm f/8, 1000 mm f/11 and 2000 mm f/11 lenses have no aperture diaphragm. Adjust the shutter speed until the two signal lights glow.

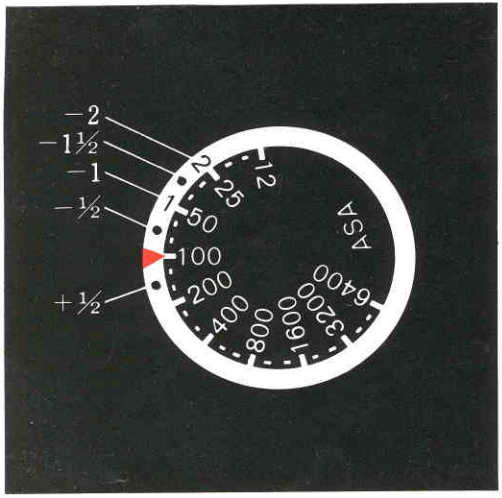
Note: Since focusing may be difficult or impossible at small aperture due to image darkening on the screen, first open the lens to full aperture to focus. Then determine the correct exposure by the stop-down method.

Repro-Copying, Slide-Copying and Photomicrography

Some exposure correction may be necessary depending on the type of film and the subject or the original slide. The numbers in the table below show the exposure correction in f-stops. Readjust either the shutter speed or the lens diaphragm according to the indicated numbers, or reset the film speed. Three marks on the film-speed dial are equivalent to one f-stop. If the table indicates a one-stop increase with a film rated at ASA 100, reset the red arrow opposite the number 50.

Original / Type of film	Repro-copying & slide-copying			Photo-micrography
	B&W or color photo	Letters or figures on light background	Letters or figures on dark background	
Panchromatic film for general use	No compensation necessary	+1 $\frac{1}{2}$ stops	−1 $\frac{1}{2}$ stops	+1 stop

EXPOSURE MEASUREMENT: SPECIAL CASES—continued



Exposure Correction for Special Lens/ Focusing-Screen Combinations

Because the light-transmitting properties of some focusing screens differ from those of ordinary screens, certain lens/screen combinations require exposure correction to compensate for the influence of the screen. The numbers in the table at right show the exposure corrections in f-stops. With the Photomic finder, the method used is to set the film speed (ASA) against the proper compensating mark engraved on the film-speed index ring. For example, the table indicates a half-stop decrease (−1/2) for the Fisheye-Nikkor Auto 6 mm f/2.8 lens with the Type C Screen. If the film speed is ASA 100, lift up the index ring and set the number 100 on the film-speed dial opposite the −1/2 mark.

When no exposure correction (0) is indicated, the ASA rating for the film in use should be opposite the red arrow.

= *Measure exposure by the full-aperture method.*
= *Use the stop-down measuring method.*
= *Neither method will work. With these lens-screen combinations the viewfinder can be used only for focusing, not exposure measurement.*

Combinations represented by a blank space are unusable because of image darkening or considerable moire over the screen area.

Lens		Screen A/L	B	C	D	E	G1	G2	G3	G4	H1	H2	H3	H4	J	K/P	M	R
Fisheye	6mm f/2.8	0	0	−1/2	−1/2	0	0	0			0	0			0	0		0
	8mm f/2.8	0	0	−1/2	−1/2	0	0	0			0	0	0		0	0		0
	16mm f/3.5	0	0			0	−1/2				0				0	0		0
Wideangle	15mm f/5.6	0	0			0		−1-1/2				−1/2			0	0		0
	18mm f/4	0	0			0	−1				−1				0	0		0
	20mm f/4	0	0			0	−1				−1/2				0	0		0
	20mm f/3.5	0	0			0	−1/2				0				0	0		0
	24mm f/2.8	0	0			0		0			+1/2	0			0	0		0
	28mm f/3.5	0	0			0	−1/2				0				0	0		0
	28mm f/2.8	0	0			0	−1/2				0				0	0		0
	28mm f/2	0	0			0	+1/2	+1/2			+1/2	+1/2			0	0		0
	35mm f/2.8	0	0			0	0				0	0			0	0		0
	35mm f/2	0	0			0	+1/2	0			+1/2	0			0	0		0
	35mm f/1.4	0	0			0		+1/2			+1/2	+1/2			0	0		0
Normal	50mm f/2	0	0			0	+1/2	+1/2			+1/2	+1/2			0	0		0
	50mm f/1.4	0	0			0		+1/2				+1/2			0	0		0
	55mm f/1.2	0	0			0		0				0			0	0		0
Telephoto	85mm f/1.8	0	0			0		+1/2			+1/2	+1/2			0	0		0
	105mm f/2.5	0	0			0		0			+1/2	+1/2			0	0		0
	135mm f/3.5	0	0	0	0	0		−1				0			0	0		0
	135mm f/2.8	0	0	0	0	0		0	0			+1/2			0	0		0
	180mm f/2.8	0	0	0	0	0			0			0	0	0	0	0		0
	200mm f/4	0	0	0	0	0		−1-1/2				−1			0	0		0
	300mm f/4.5	0	0	0	0	0			−1-1/2			−1-1/2	−1	−1-1/2	0	0		0
	400mm f/5.6	0	0	0	0	0									0	0		0
	400mm f/4.5	0	0	0	0	0									0	0		0
	600mm f/5.6	0	0	0	0	0									0	0		0
	800mm f/8	0	0	0	0	0									0	0		0
	1200mm f/11	0	0	0	0	0									0	0		0
Zoom	28~45mm f/4.5	0	0			0									0	0		0
	43~86mm f/3.5	0	0			0		−1/2				−1/2			0	0		0
	50~300mm f/4.5	0	0			0			−2				−1-1/2		0	0		0
	80~200mm f/4.5	0	0			0			−1			−1-1/2	−1/2		0	0		0
	200~600mm f/9.5	0	0	0	0	0									0	0		0
GN	45mm f/2.8	0	0			0	0				0				0	0		0
Micro	55mm f/3.5	0	0			0									0	0		0
	105mm f/4	0	0			0									0	0		0
PC	28mm f/4	0	0			0									0	0		0
	35mm f/2.8	0	0			0									0	0		0
Bellows	105mm f/4	0	0	0	0	0									0	0		0
Medical	200mm f/5.6	0	0			0									0	0		0
Reflex Telephoto	500mm f/8	0	0	0	0	0									0	0		0
	1000mm f/11	0	0	0	0	0									0	0		0
	2000mm f/11	0	0	0	0	0									0	0		0

ACCESSORIES

Lens Hoods

The use of a lens hood is recommended at all times to prevent extraneous light from striking the lens surface and causing flare or ghost, and to protect the lens against damage. Nikon lens hoods come in four types, depending on the lens: screw-in, snap-on, slip-in and built-in. They are calculated precisely for each focal-length Nikkor lens to provide maximum protection against stray light.

To attach or remove the snap-on hood, first depress the spring latch—which is marked with an arrow—and slide it in the direction of the arrow. The hood will also fit directly over a screw-in filter, so both can be used on a lens at the same time. When not in use, the snap-on hood can be reversed for storage on the lens, and the lens and its hood can be stored together in the eveready case.

Filters

Nikon filters are made of optical glass, ground and polished so that both surfaces are optically flat and parallel. Nikkor lenses and Nikon filters are made for each other. For best results, use Nikon filters on Nikkor lenses. The filters are available in both screw-in and series mounts, depending on the lens.

Except for the R60, no Nikon filter requires exposure compensation when used with the Nikon F2S Photomic. When using the R60 filter under tungsten light, increase the exposure by one f-stop more than indicated by the exposure meter.

Note: If you wish to leave a filter on the lens to protect the lens against accidental damage, the use of the L37 or L37C filter is recommended.

If the lens is pointed toward the sun or toward a very bright light at night, it is best to remove any filter, since light reflected from the filter surface may form ghost on the film.

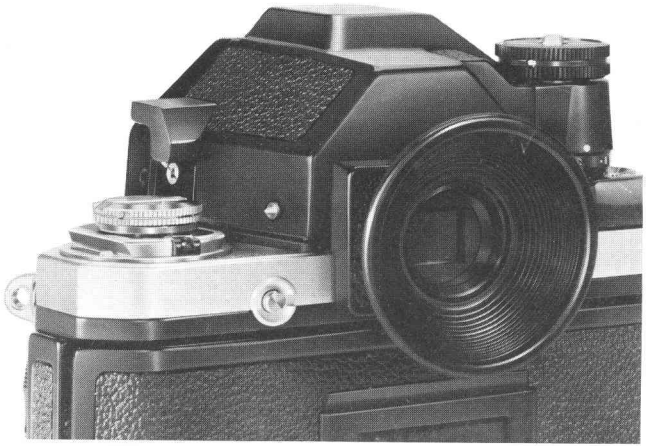
Eyepiece Correction Lenses

The nine eyepiece correction lenses are designed to permit nearsighted and farsighted users to view and focus without their glasses. Available in −2, −3, −4, −5, 0, +1, +2 and +3 diopters, each representing the combined dioptry of the lens and the finder. Simply screw into the finder eyepiece.

Finder Eyecup

The soft rubber finder eyecup screws directly onto the finder eyepiece to prevent extraneous light from entering the viewfinder.

When using an eyepiece correction lens with a finder eyecup, it is recommended to use the Nikkormat type eyecup. First, fit the lens into the eyecup in advance. Then screw the assembly onto the finder eyepiece.



Good camera care is primarily common-sense care. Treat your Nikon F2S Photomic as you would any valuable precision instrument and it will last a lifetime.
Although the Nikon F2S Photomic is ruggedly constructed to stand up for years under normal use, it may be damaged by shock, heat, water or misuse. The following are some basic tips for keeping your camera in top condition.

Keep the camera in an eveready case or compartment case when not in use to protect it from dust.
Avoid storing the camera in excessively hot, cold or damp places. Always attach a body cap when the camera body is stored separately. Do not leave film in the camera for a long period. Never leave the shutter or self-timer cocked if the camera is to be stored overnight or longer.

Brush the inside of the camera periodically using a soft brush. Do not exert pressure on the shutter curtain as this may damage it. Keep the mirror free from fingerprints and dust.

Keep the lens surface free from fingerprints and dust as far as possible. Use lens tissue to remove dust, never use cloth or ordinary tissue. If smudges or fingerprints persist, use lens tissue moistened sparingly with alcohol.
Remember: Even an approved lens cleaner can cause damage if it seeps into the lens mount.

Avoid excessive moisture. When using the camera near water, guard against splashes, especially salt-water spray.

Lubrication should be left to an authorized serviceman. Prior to taking a holiday trip or being assigned an important photo job, test your camera by making a few trial exposures. Check the meter in the Photomic finder. Remember, it takes at least two or three weeks for processing the test film and making any needed repairs or adjustment. Follow this important precaution and you will have pictures to remember.

35 mm single-lens reflex camera

Nikon F bayonet mount.

Interchangeable F2S Photomic Finder with 100% frame coverage, exposure data visible in the viewfinder. Type A Focusing Screen supplied as standard equipment.

Titanium focal-plane shutter with speeds from 10 to 1/2000 sec., plus B, T and X synch.

Coaxial with mirror lock.

Automatic instant-return type with lock-up feature.

Can be set for 2-, 4-, 6-, 8- and 10-second delay.

Winds film, cocks shutter and operates frame counter with a single stroke or a series of strokes. Also switches meter on or off. Play angle of the lever is 20° and working angle 120°.

Additive, automatic reseting.

At any speed except B, X and T with flashbulbs, and speeds up to 1/80 sec. with electronic flash.

Hinged, detachable type.

Provided.

Complete interchangeability.

TTL CdS meter featuring center-weighted metering at full aperture with Nikkor auto lenses; two light-emitting diodes indicate correct exposure; ASA range 12 to 6400; metering range EV-2~17 at ASA 100 (8 sec. at f/1.4 to 1/2000 sec. at f/8 with 50 mm f/1.4); aperture coupling range, f/1.2~f/32; maximum aperture setting range, f/1.2~f/5.6; shutter-speed coupling range, 1~1/2000 sec., plus B, on direct coupling, and 10~2 sec. with manual override; powered by two 1.5V silver-oxide batteries. Has built-in ready-light for use with Nikon speedlights.

152.5 mm long x 65 mm wide x 110 mm high

880g without lens

The Nikon Worldwide Service Warranty Registration Card which identifies your camera by its serial number is your guarantee that the Nikon F2S Photomic camera you buy is a new one. When you return this card to a Nikon distributor you will receive your Nikon Worldwide Service Warranty Certificate, which entitles you to a one-year warranty anywhere throughout the world, subject to the conditions listed in the certificate.

Only an authorized Nikon dealer can provide you with a Nikon Warranty Registration Card. We cannot guarantee any camera or lens sold to you by an unauthorized dealer without a Warranty Registration Card, since it may be second-hand equipment.