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The large manuals are split only for easy download size.

Nikon

*Stop for
Control*
(28)

F1E2

INSTRUCTION MANUAL

NOMENCLATURE

1 Shutter speed/mode selector locking button

Shutter speed/mode selector dial 19

2 Shutter release button

Aperture direct readout (ADR) window 20

3 Shutter release fingerguard

Film rewind knob 21

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14 Shutter curtains

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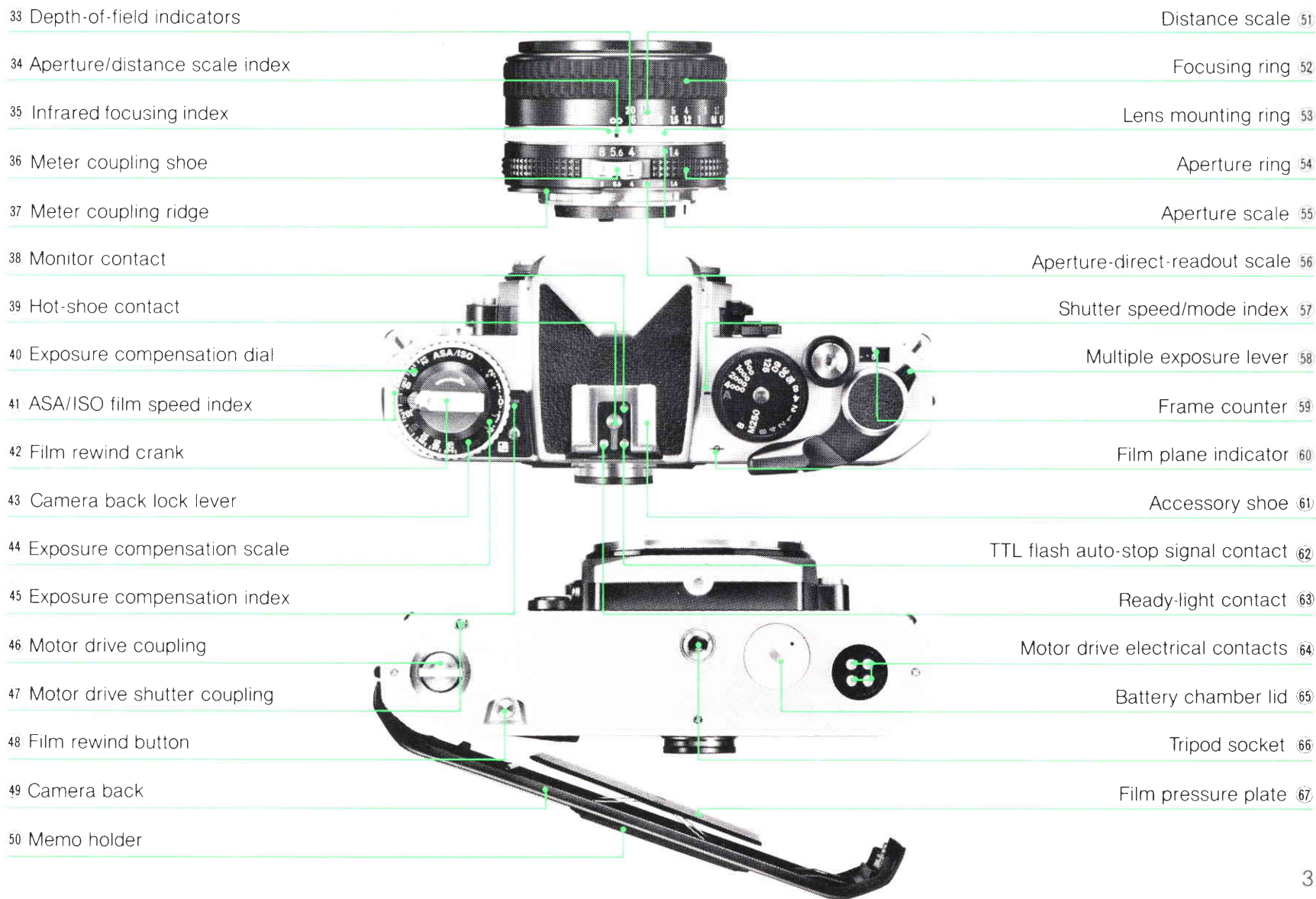
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FOREWORD

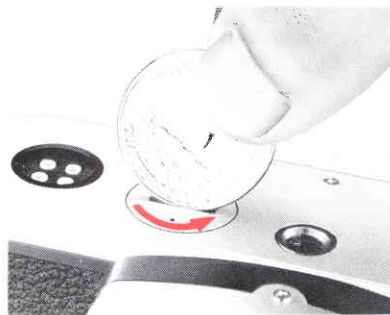
Congratulations! You now own the fastest SLR camera on the market today. With a maximum shutter speed of 1/4000 sec., you can halt the most fleeting action literally in its tracks. Complemented by a flash synchronization speed of 1/250 sec., the fastest in 35mm SLR photography, the FE2 makes it easy to fill in the shadows in strong daylight. These speeds are made possible by Nikon's advanced camera technology, employing lightweight honeycomb-etched, vertical-traveling, titanium shutter curtains.

In addition to aperture-priority automatic exposure from 1/4000 sec. to 8 sec., the FE2 offers full manual exposure control with accuracy ensured by digital quartz timing. The camera also has a battery power-saving feature: a light touch of the lockable shutter release button activates the meter, which then automatically switches off 16 seconds later.

Other exciting features include three bright interchangeable focusing screens, automatic TTL flash photography with a Nikon dedicated flash unit, plus rapid film advance up to 3.2 frames per second with a motor drive.

To obtain the best results, keep this instruction manual handy until you've become thoroughly familiar with the FE2's operation. A few minutes wisely invested now will pay off later in many years of rewarding photographic experiences.

BASIC OPERATION



1. Remove the battery clip.

Turn the camera upside down and use a coin to unscrew the battery clip lid in a counterclockwise direction.



2. Install the battery.

Wipe battery terminals clean and insert the battery into the battery clip in accordance with the marks provided in the clip, making sure the + sign is up. Usable batteries are:

1) one 3V lithium battery; 2) two 1.55V silver-oxide batteries (3.1V), or 3) two 1.5V alkaline-manganese batteries (3V).

Caution: Keep batteries away from infants and small children. In case a battery is accidentally swallowed, call a doctor immediately as the material inside the batteries can cause serious problems.

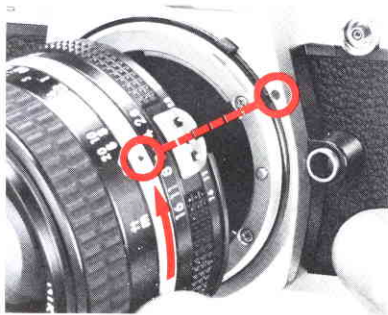


3. Put the battery clip back into place.

Slip the battery clip back into the camera body baseplate and screw the lid clockwise tightly into place.

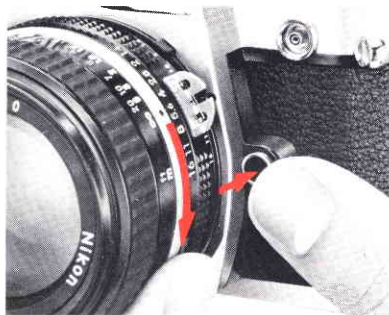
Note: For more information on batteries, refer to page 59.

Note: The small numbers in the circles identify parts of the camera as listed in the NOMENCLATURE section.

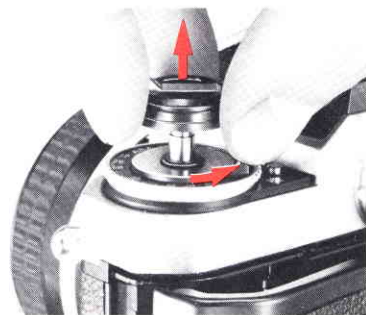


4. Mount the lens.

Place the lens on the camera, lining up the aperture/distance index on the lens ³⁴ with the lens mounting index on the camera body ²³. Then twist the lens mounting ring counterclockwise until the lens clicks into place. Confirm that the aperture/distance index is right on top.



To remove: While pushing the lens release button ²⁴, turn the lens mounting ring ⁵³ clockwise until the lens comes off.



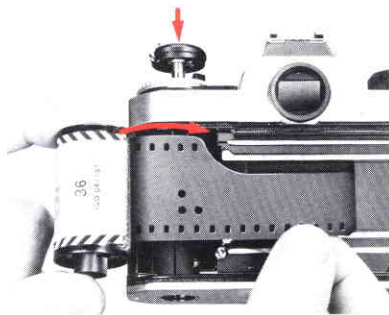
5. Open the camera back ⁴³.

While pushing the camera back lock lever ⁴³ counterclockwise with your finger, pull up the film rewind knob ²¹. Then lift up further until the camera back pops open.

Notes:

- 1) When changing lenses with film loaded in the camera, be careful not to expose the mirror box to direct sunlight.
- 2) This camera is designed exclusively for use with AI lenses. Non-AI lenses cannot be used, with a few exceptions; please refer to page 19 for more details.

BASIC OPERATION—continued

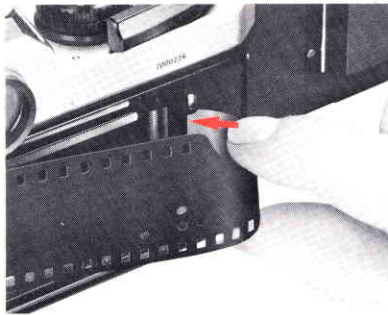


6. Install the film cartridge.

Position the film cartridge in the film cartridge chamber 15 with the film leader pointing towards the takeup spool, and push the rewind knob back down to secure the cartridge in place.

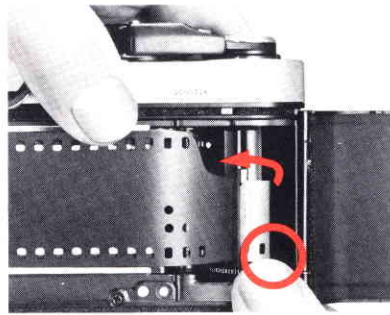
Notes:

- 1) You can use any 35mm film cartridge available on the market.
- 2) Avoid loading film in direct sunlight. If there is no shade available, turn your back to the sun and use your own shadow to shield the camera.



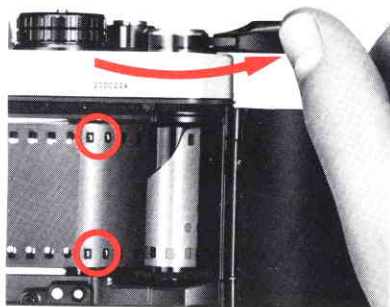
7. Insert the film leader in the takeup spool 30.

Pull the leader across the camera and insert it into any one of the slots in the takeup spool.



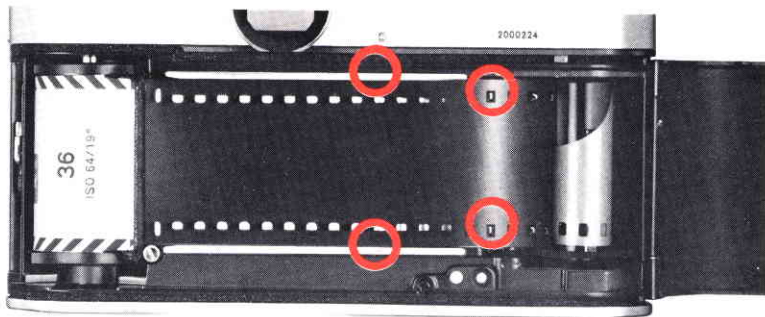
8. Engage the film's perforations with the sprocket teeth 28.

Turn the takeup spool slightly with your finger, so that the first or second perforation at the bottom edge of the film is engaged with the small tooth at the bottom of the slot in the takeup spool and the top and bottom perforations mesh securely with the film sprockets.



9. Advance the film with the film advance lever ²⁷.

Pull out and wind the film advance lever, making sure the perforations on both film edges are securely engaged with the sprocket teeth and the film is advanced properly. Also confirm that the film is located properly between both film guide rails ¹⁷ and there is no film slack.

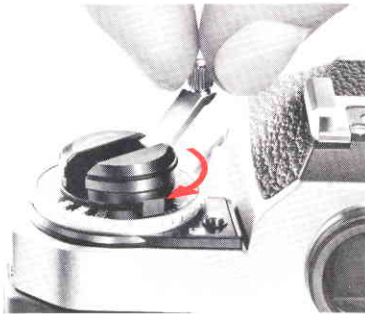


BASIC OPERATION—continued



10. Close the camera back.

Snap the camera back shut.



11. Take up film slack.

Fold out the film rewind crank ⁴² and rotate it gently in the direction of the arrow on the film rewind knob until you feel a slight resistance. Then fold the crank back in.

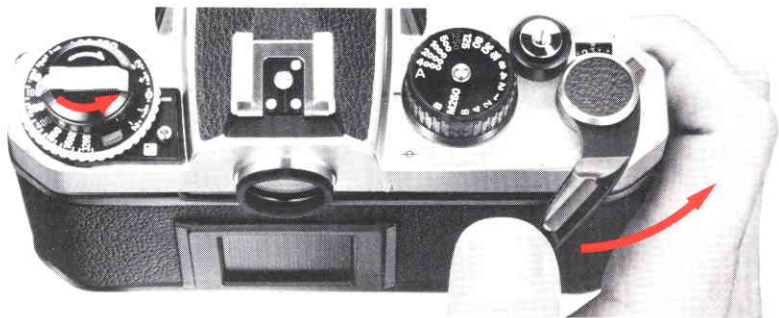


12. Set the ASA/ISO film speed ring ⁴³.

Lift up the ASA/ISO film speed ring and rotate it in either direction until the index dot ⁴¹ is opposite the film speed in use. Make sure the exposure compensation dial ⁴⁰ is set at 0. These actions are essential to activate the camera's exposure meter for correct exposure of the film in use.

Notes:

- 1) The film speed is printed on the film carton and the cartridge itself.
- 2) If the exposure compensation dial is not at 0, refer to page 36 for details.



13. Make blank exposures until the frame counter reaches frame "1."

The film advance lever doubles as a shutter release button lock: to unlock the shutter release button 12, pull out the film advance lever to the stand-off position as shown in the photo. To dispose of the first few frames exposed during film loading, continue to alternately advance the film and depress the shutter release button until the frame counter reaches frame "1." Check that the rewind knob is rotating, indicating the film has been loaded correctly and is being advanced. If the knob does not rotate, reload the film.

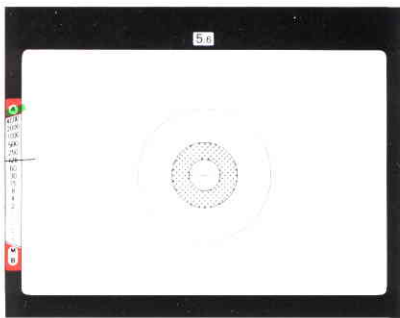
Notes:

- 1) Set the shutter speed/mode selector dial 19 to A or a fast shutter speed while making blank exposures.
- 2) Up to frame "1," the meter needle in the viewfinder does not move and this indicates that the meter is not functioning; therefore do not take pictures prior to the first frame.



14. Press the shutter release button lightly to switch the exposure meter on.

The shutter release button activates the exposure meter when lightly pressed. The meter stays on for approx. 16 sec. after you have taken your finger off the button.

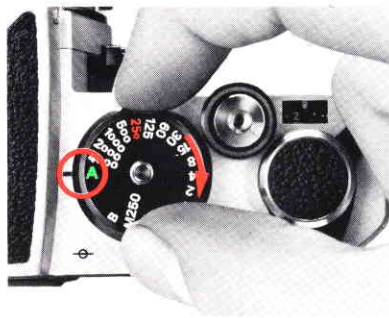


15. Check battery power.

While looking through the viewfinder ¹² after switching the exposure meter on, if the black meter needle swings into the shutter speed scale range, this indicates that the exposure meter is working properly.

Notes:

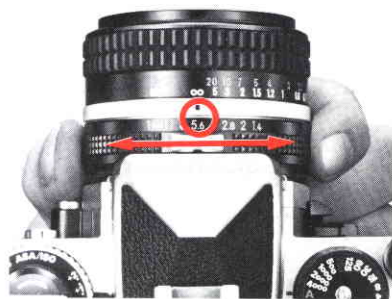
- 1) When the shutter speed dial is set at B (Bulb) or M250 (1/250 sec.), the black meter needle doesn't move; therefore you cannot check the batteries. Be sure to set the dial to another position. If the black meter needle still doesn't move, either the battery is improperly installed (in which case you should install it properly) or battery power is not sufficient (in which case you should change the battery).
- 2) You cannot check the battery power until the frame counter reaches "1."



16. Set the shutter speed dial to "A" (for automatic operation).

Rotate the shutter speed dial until the "A" is opposite the shutter speed/mode index ⁵⁷. The built-in locking mechanism ensures that the dial cannot be accidentally shifted from the "A" (auto position) during shooting.

Note: The Nikon FE2 camera has one more shooting mode besides aperture-priority auto exposure: manual operation. For details about shooting in this mode, refer to pages 25—26.



17. Set the lens aperture.

Turn the lens aperture ring $\frac{34}{\circ}$ until the desired f-number is opposite the aperture/distance index on the lens. The selected f-number appears in the viewfinder through the ADR (aperture direct readout) window for convenient reference. Intermediate settings on the lens aperture ring can be used.

Use the following suggestions as a guide in setting the f/stop on the lens (when a 50mm f/1.4 is used with ASA/ISO 100 film speed):

Outdoors (cloudy): f/2.8~f/5.6

Outdoors (clear): f/5.6~f/11

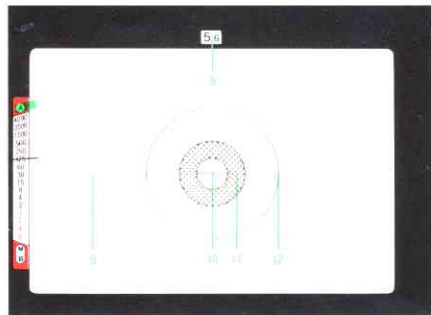
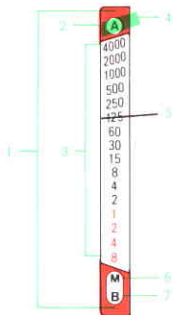
Outdoors (clear at the beach or in the mountains): f/11~f/16

Note: The depth of field as well as the shutter speed can be controlled by your selection of the shooting aperture. For more information, refer to pages 38—39.



18. Hold the camera steady.

Many blurred shots are caused by unsteady holding of the camera. Basic holding posture: Use your left hand to cradle the camera, with your fingers wrapped around the lens and elbow propped against your body for support, as you look through the viewfinder. Use your right hand's index finger to depress the shutter release button and your thumb to wind the film advance lever. Wrap the other fingers of your right hand around the camera body. You can adapt this basic posture to both horizontal- and vertical-format shooting. To hold the camera steady, it is advisable to lean on or against something strong and stable (e.g., a wall). Also, you can look through the viewfinder with the right or left eye, with the other eye open or closed.



19. Compose and focus on the subject.

The FE2 is provided with the Type K2 focusing screen as standard for all-purpose photography. While looking through the viewfinder, compose your photo with the main subject in the center to assure correct exposure. Then turn the focusing ring of the lens ⁵² until the subject looks clear. For precise pinpoint focusing on subjects with distinct contours, use the central split-image rangefinder; turn the focusing ring until the split image becomes whole (A). For rapid focusing and for subjects with indistinct outlines, use the microprism collar; turn the focusing ring until the shimmering image becomes sharp (B). When taking close-ups or macrophotography or shooting with telephoto lenses of maximum apertures of approx. f/4.5 or smaller, the split-image spot and microprism collar are likely to darken. Therefore, use the matte portion of the screen; turn the focusing ring until the image looks sharp (C).

① Outside-exposure-range warning marks

② A (Auto)

③ Shutter speed scale

④ Shutter speed/mode indication needle

⑤ Meter needle

⑥ M250

⑦ B (Bulb)

⑧ f-number in use

⑨ Fine matte/Fresnel field

⑩ 3mm dia. split-image spot

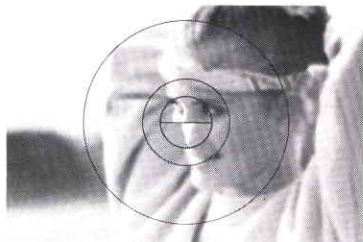
⑪ 1mm-wide microprism collar

⑫ 12mm dia. area

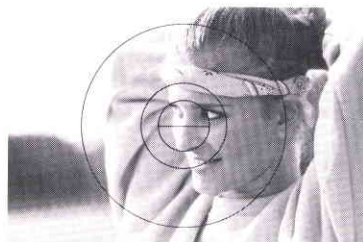
Notes:

- 1) The shutter speed scale in the viewfinder is color coded: black numbers indicate reciprocal shutter speeds; i.e. 60 means 1/60 sec., while red shows actual shutter speeds.
- 2) The finder coverage of the FE2 is approx. 93%. The actual image size will be slightly larger than the image seen in the viewfinder.

(A) Split-image focusing

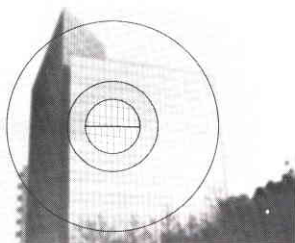


Out of focus

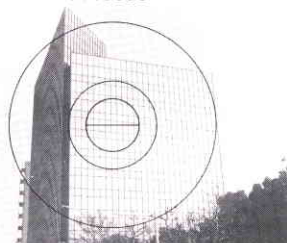


In focus

(B) Microprism focusing

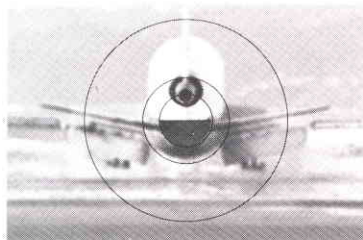


Out of focus

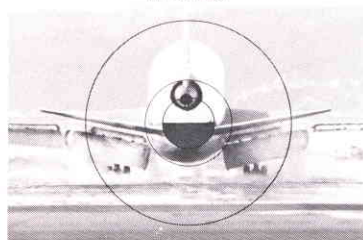


In focus

(C) Matte field focusing

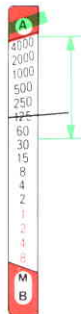


Out of focus



In focus

BASIC OPERATION—continued



20. Take the photograph.

Look through the viewfinder and depress the shutter release button halfway. The shutter speed, in accordance with the subject brightness, is then indicated inside the viewfinder by the black meter needle. If the shutter speed needle points above 1/30 sec., depress the shutter release button all the way. If the shutter speed is 1/30 sec. or below, turn the aperture ring on the lens to make the speed at least above 1/30 sec. If you cannot obtain such a speed, refer to page 24.

Notes:

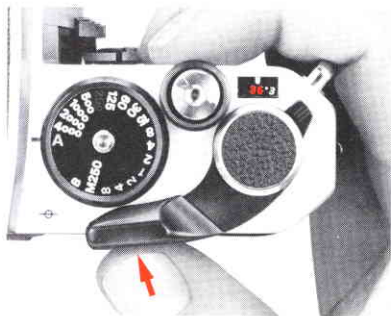
- 1) A blurred photo may result if you take the shot at a shutter speed between 1/30 sec. and 8 sec.
- 2) If the black meter needle is on either of the red exposure warning marks, the shutter speed is out of the metering range. In this case, you cannot obtain the correct exposure. See page 24 for more details.



21. Advance the film.

Wind the film advance lever as far as it will go to transport the film to the next frame and ready the camera for the next shot. Do not apply excessive pressure in winding the lever.

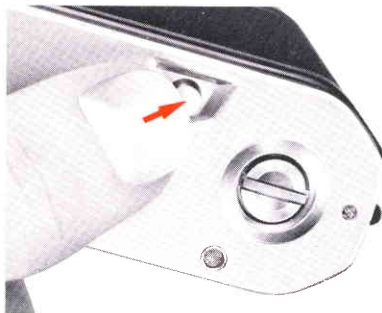
Note: Don't press the film rewind button , or certain frames may be double exposed.



22. Push the film advance lever back into place.

After the last exposure has been made, the film advance lever won't move. Then push the film advance lever flush against the camera body. By so doing the shutter release button is locked and keeps the exposure meter switched off. This action prevents inadvertent shutter release.

Note: Even if the black meter needle remains inside the shutter speed scale after the meter switch is off, it will automatically be switched off in approx. 16 sec., and the exposure measuring circuit will simultaneously be cut off.



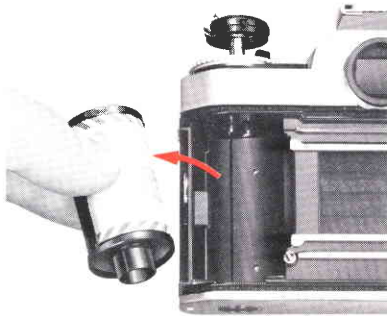
23. Press the film rewind button.

To rewind the exposed film back into the film cartridge, turn the camera upside down and press the film rewind button. You don't have to depress the button all the way.



24. Rewind the film.

Fold out the film rewind crank and turn it gently in the direction of the arrow until you feel an increase in tension. Give it a few more turns until the tension is gone and the crank turns freely, indicating the film leader is rewound completely back into the cartridge.



25. Remove the film cartridge.

Open the camera back by pulling up the rewind knob and take out the film cartridge. Avoid unloading in direct sunlight. If there is no shade available, turn your back to the sun and use your own shadow to shield the camera.

Note: Do not open the camera back before film rewinding is completed.

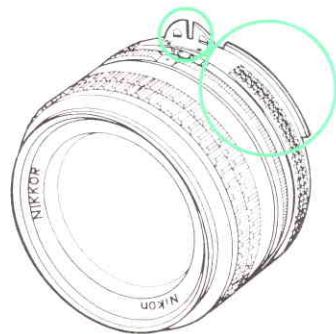
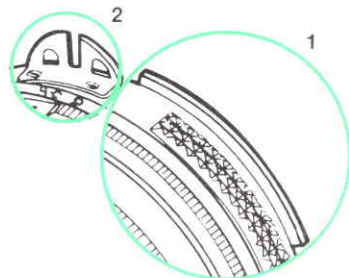
IMPORTANT!

The Nikon FE2 is an AI-type (Automatic Maximum Aperture Indexing) camera which performs full-aperture metering with AI-type lenses such as AI-Nikkor and Nikon Series E lenses. The aperture rings of these lenses are fitted with meter coupling ridges ³⁷ (see illustration 1). Almost all lenses now manufactured by Nikon are the AI-type. However, please confirm whether or not your lens is AI before using it with the FE2. AI-Nikkor lenses are identified by the two holes in the meter coupling shoe ³⁶ (see illustration 2).

Although almost all Nikkor lenses that have the Nikon bayonet mount, as well as Nikon Series E lenses, can be mounted on the FE2, the camera cannot be used with Nikkor lenses that have not yet been modified to offer the AI facility nor with a few special-purpose lenses, because the FE2's meter coupling lever is fixed and the FE2 does not have a mirror lock-up mechanism. For particulars, refer to the table below.

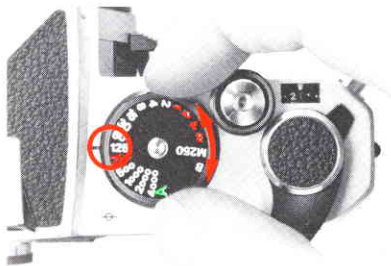
Lens	Reason	Remarks
Fisheye-Nikkor 6mm f/5.6	Requires mirror up	Not usable
Fisheye-Nikkor 10mm f/5.6 OP	Requires mirror up	Not usable
PC-Nikkor 28mm f/4	Hits camera's meter coupling lever	Serial No. 180901 and higher usable
PC-Nikkor 35mm f/2.8	Hits camera's meter coupling lever	Serial No. 906201 and higher usable Serial No. 851000 and lower usable
Reflex-Nikkor 1000mm f/11	Hits camera's meter coupling lever	Serial No. 143002 and higher usable
Reflex-Nikkor 2000mm f/11	Hits camera's meter coupling lever	Serial No. 200311 and higher usable
Zoom-Nikkor 200-600mm f/9.5	Hits camera's meter coupling lever	Serial No. 300491 and higher usable
Zoom-Nikkor ED 180-600mm f/8	Hits camera's meter coupling lever	Serial No. 174167 and higher usable
Zoom-Nikkor ED 360-1200mm f/11	Hits camera's meter coupling lever	Serial No. 174088 and higher usable
Focusing Unit AU-1	Hits camera's meter coupling lever	Not usable
Other Nikkor lenses that have not been modified to offer the AI facility	Hits camera's meter coupling lever	Requires AI modification

Note: The modification at reasonable cost of most non-AI lenses having a meter coupling prong is available for the convenience of Nikkor lens users. For further information concerning AI lens modification, please contact your local authorized Nikon dealer.



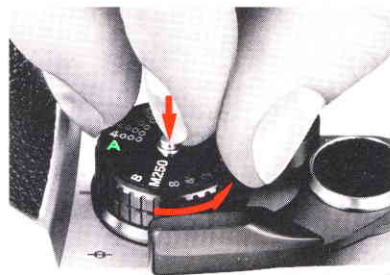
AI-Nikkor Lens

CONTROLS IN DETAIL



Shutter Speed/Mode Selector Dial 19

The Nikon FE2 offers aperture-priority automatic mode operation and manual control of all shutter speeds from 8 to 1/4000 sec., including the M250 (mechanically controlled—1/250 sec.) and B (bulb) settings. To set the desired shooting mode or shutter speed, rotate the shutter speed/mode selector dial until the desired setting click-stops opposite the shutter speed/mode index. At the A setting, a locking mechanism is provided to prevent accidental shifting of the setting. To rotate the dial from the A setting, depress the lock button (i) provided. Note that shutter speeds between engraved numbers (i.e., intermediate speeds) cannot be used. Since you can see the shutter speed in use inside the viewfinder, it's not necessary to look at the shutter speed dial as you turn it. The dial has the following settings:



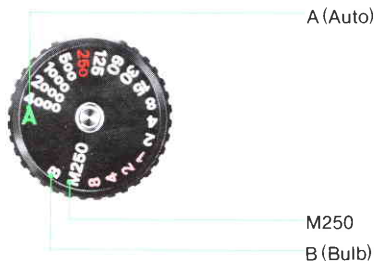
2000224

A (Auto):

Used for aperture-priority automatic mode shooting. You manually set the f/stop first; then the camera automatically selects the matching electronically controlled shutter speed steplessly between 8 and 1/4000 sec., depending on the scene brightness and the film speed in use.

1/4000—8 sec. (Manual):

Used for full manual control of both f/stop and shutter speed. All sixteen speeds indicated on the dial are available with timing accuracy assured by a quartz oscillator. Yellow numbers on the dial indicate actual shutter speeds, while white ones are reciprocals, i.e., 2 means 1/2 sec., and 4000 means 1/4000 sec. The 250 is indicated with red which means the fastest sync speed for an electronic flash unit. A one-stop change will either halve or double the exposure; e.g., a shutter speed of 1/125 sec. lets in twice as much light as a setting of 1/250 sec. and half as much light as 1/60 sec.



M250 (Mechanical— 1/250 sec.):

At this setting, the shutter operates mechanically at 1/250 sec.; this is used when the battery is exhausted and other shutter speed modes are not operable.

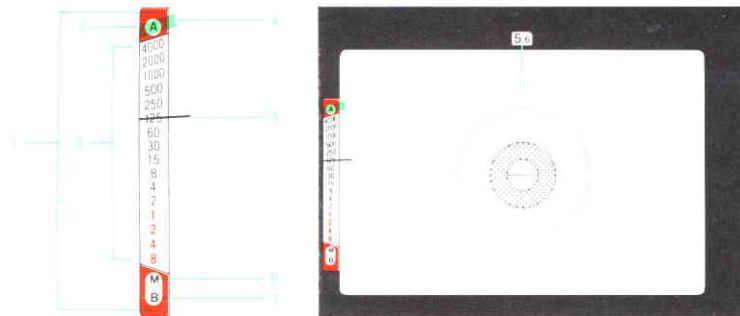
B (Bulb):

At this mechanical setting, the shutter curtains ④ remain open as long as you depress the shutter release button. B is especially useful for making long time exposures with a cable release and a tripod.

Exposure metering system

The Nikon FE2 employs a through-the-lens (TTL) center-weighted full aperture exposure metering system which measures the light passing through the lens at maximum aperture, thus assuring a bright finder image during shooting. Exposure measurement emphasis is placed especially on the brightness in the 12mm dia. central area, although the meter reads the light over the entire focusing screen. Correct exposure is assured when the main subject is placed in this central area.

CONTROLS IN DETAIL—continued



- ① Outside-exposure-range warning marks
- ② A (Auto)
- ③ Shutter speed scale
- ④ Shutter speed/mode indication needle
- ⑤ Meter needle
- ⑥ M250
- ⑦ B (Bulb)
- ⑧ f-number in use

Exposure indications

The exposure indications appearing on the shutter speed/mode scale at the left-hand side of the viewfinder indicate the necessary information for the correct exposure. Also the f/stop in use appears through the ADR window 20 above the viewfinder frame.

Meter needle

As soon as the shutter release button is depressed halfway to switch on the meter, the black needle automatically swings up to show the correct shutter speed, according to the subject brightness and the f/stop set on the lens. Please note that the needle doesn't move before the frame counter reaches frame "1" or when the shutter speed/mode selector dial is set at M250 or B.

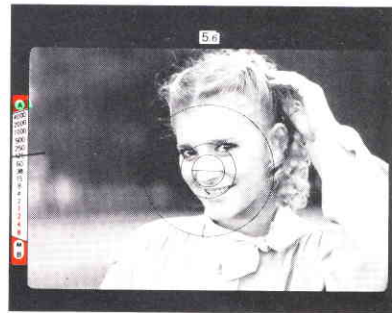
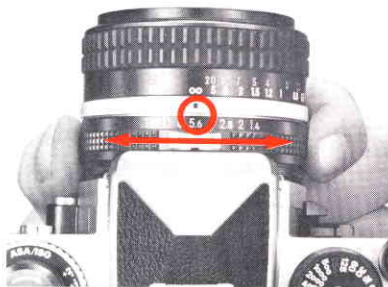
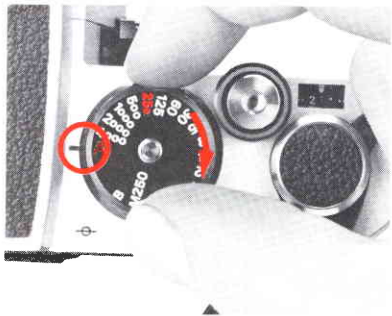
Shutter speed/mode indication needle

This green needle moves accordingly as you turn the shutter speed/mode selector dial. For example, turn the shutter speed/mode selector dial to A and the indication moves to the A position to indicate automatic operation.

Outside-exposure-range warning marks

Both the upper and lower portions of the shutter speed scale are in red to indicate an exposure that is outside the meter's range. If the black meter needle is located in either of these red areas after metering, adjust the f/stop on the lens until the needle moves out of these areas.

For more information refer to page 24.



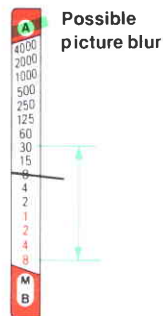
Automatic exposure photography— aperture priority shooting

With the FE2 set at A, you select the f/stop and the electronically controlled metering circuit matches it with the correct stepless shutter speed. The A mode is especially useful, because it allows you to control depth of field while using the camera on automatic to assure perfect exposure. Deeper depth of field (or a greater zone of sharp focus in front of and behind the main subject) is achieved as you stop down the lens to smaller apertures (indicated by numerically larger f-numbers). Shallower depth of field (where the focus is restricted to the main subject) results when larger apertures are used. (Refer to page 38 for more information.)

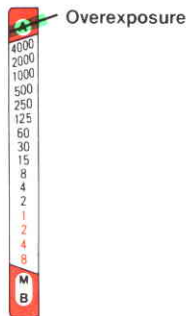
Shooting on auto

- 1) Set the shutter speed/mode selector dial at A.
- 2) Set the desired f/stop on the lens.
- 3) Look through the viewfinder and place the main subject in the center of the frame.
- 4) Pull out the film advance lever and depress the shutter release button halfway.
- 5) Confirm the position of the meter needle. If the shutter speed is above 1/30 sec., but not over 1/4000 sec., depress the shutter release button all the way. The correct exposure will be obtained.

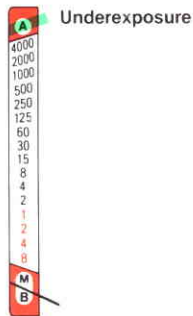
CONTROLS IN DETAIL—continued



Possible picture blur

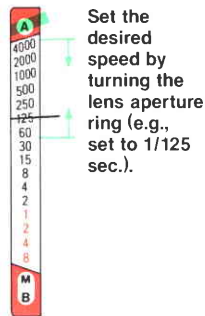


Overexposure



Underexposure

- When the meter needle is between 1/30 and 8 sec. the picture will probably come out blurred if you attempt to take the shot while hand holding the camera. In this case, turn the aperture ring to obtain a larger aperture. If after opening up the lens all the way, the shutter speed does not go above 1/30 sec., use a tripod to steady the camera. As alternatives, use electronic flash or change to a higher speed film.
- If the meter needle is in the upper warning area, use a smaller aperture. If, after you have stopped the lens down all the way and the needle still remains in this area, use a neutral density filter or change to a slower speed film.
- If the meter needle is in the lower warning area, use a larger aperture. If, after you have opened the lens up all the way and the needle still remains in this area, use electronic flash or switch to the B setting to make a time exposure.



Set the desired speed by turning the lens aperture ring (e.g., set to 1/125 sec.).

Automatic exposure photography—Shutter priority shooting

For shooting moving subjects, the FE2 also enables you to select the shutter speed on Auto either to freeze the action and produce sharp outlines with a faster shutter speed, or to cause an intentional blur by choosing a slower shutter speed. To operate the FE2 in this way, depress the shutter release button halfway; then match the meter needle with the speed you desire by turning the lens aperture ring.

Manual exposure photography

Manual operation allows you to shoot at your choice of any combination of f/stop and sixteen speeds on the camera's dial. By varying these combinations, you can achieve not only correct exposure but also such special effects as under- or over-exposure, blurred action, etc. Manual is also valuable in developing your photographic skills, and is additionally recommended when an electronic flash other than the Nikon dedicated flash unit is used. B and M250 settings also offer manual exposure photography.

How to select the f/stop and shutter speed

Exposure is determined by the combination of shutter speed and aperture. As the numbers on either the aperture ring or shutter speed dial increase by one increment, the amount of light striking the film is reduced by approximately one half. For example, the amount of light at 1/125 sec. is one half that at 1/60 sec., and the amount of light at f/16 is one half that at f/11. Brighter scenes require either faster speeds or smaller apertures or a combination of both which will give the same amount of exposure; darker scenes require the reverse. For example, 1/1000 sec. at f/5.6 is the same as either 1/4000 sec. at f/2.8 or 1/125 sec. at f/16.

Shutter speed/aperture combinations that give the same exposure

Shutter speed (sec.)	1/4000	1/2000	1/1000	1/500	1/250	1/125
Aperture (f/number)	2.8	4	5.6	8	11	16



Shooting on manual

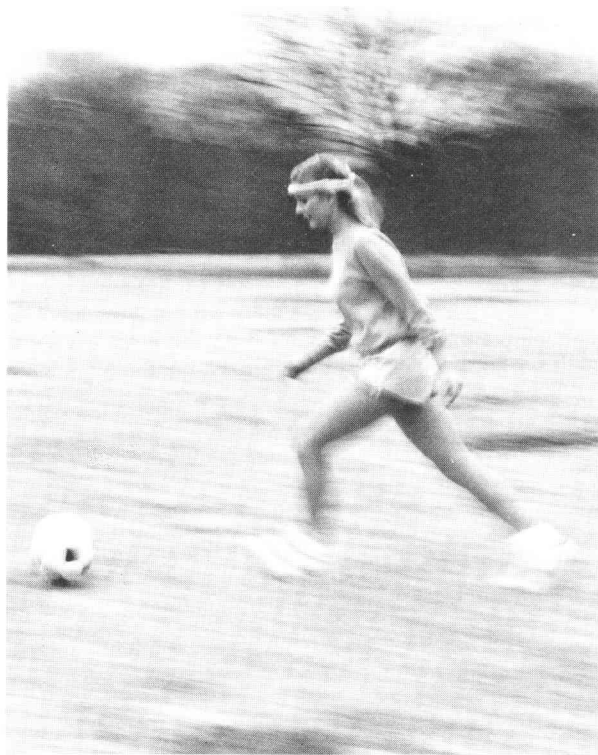
- 1) Turn the shutter speed/mode selector dial to any of sixteen numbered settings or set the f/stop you desire. Faster shutter speeds will freeze moving subjects while slower ones cause the action to blur. (Note that you cannot use the shutter speed/mode selector dial in between the indicated settings.)
- 2) While looking through the viewfinder, place the subject in the center of the frame; then pull out the film advance lever, depress the shutter release button halfway, and check both the black meter needle and green shutter speed/mode indicator needle.
- 3) If both are apart, to get the correct exposure, rotate the aperture ring and/or the shutter speed dial so that they are aligned.
- 4) Depress the shutter release button all the way to take the picture.

Notes:

- 1) Because the aperture ring can be set in between the engraved f-numbers, slight adjustment to obtain the correct exposure should be made by turning the aperture ring of the lens.
- 2) At the mechanical settings of M250 and B, the meter does not function and the meter needle will not move.
- 3) If you wish to create intentional under- or overexposure, set either the aperture ring or shutter speed/mode selector dial so that both needles in the viewfinder are not aligned.



A fast shutter speed freezes the action.



A slower speed allows everything to blur.

CONTROLS IN DETAIL—continued

Stop-Down Exposure Measurement

Stop-down exposure measurement must be made whenever the aperture ring of the lens doesn't couple with the meter coupling lever of the camera. After focusing and switching on the meter, follow these procedures:

For lenses with automatic diaphragms

On auto:

Depress the depth-of-field preview lever ⑤ all the way and, while holding it in, take the shot.

Or depress the depth-of-field preview lever to take a meter reading. Then, while holding it in, push the self-timer lever ⑥ towards the camera body to lock in the exposure setting. With the exposure locked in, release the depth-of-field preview lever and take the shot. (Refer to page 37 for more details about the memory lock.)

On manual:

While holding in the depth-of-field preview lever, determine the correct exposure by turning the shutter speed/mode selector dial or the aperture ring of the lens. Then release the depth-of-field preview lever and take the shot.

For lenses without automatic diaphragms

When the automatic diaphragm doesn't couple with the meter coupling lever of the camera, such as when a PC-Nikkor or bellows attachment is used, focusing should be done with the

lens wide open while exposure measurement and shooting must be done with the lens stopped down.

On auto:

Take a shot with the lens stopped down.

With a PC-Nikkor, the correct exposure must be determined before shifting. To do so, first use the memory lock, then the lens can be shifted to take the shot.

On manual:

Stop down the lens to determine the correct exposure, then take the shot.

For lenses with fixed apertures

Since the aperture is fixed when using Reflex-Nikkor lenses, or in photomicrography or telescopic photography, it is impossible to change the exposure by varying the aperture.

On auto:

Take the shot by simply depressing the shutter release button.

On manual:

Turn the shutter speed dial to set the correct exposure. If a correct exposure can't be obtained, use either an ND filter if the scene is too bright or supplementary illumination if too dark.

Notes:

- 1) Keep the depth-of-field preview lever firmly depressed when you release the shutter.
- 2) If you attempt to make a stop-down exposure measurement when an AI lens is mounted directly on the FE2, incorrect exposure will result.

EV Range of the Camera

The camera's meter may be used only within the shutter speed range covered by the exposure value (EV) range of the meter, which varies with the aperture and ASA/ISO setting.

The chart on page 31 shows the relationships between the f/stop, shutter speed and film speed, indicating the usable functioning shutter speed (for metering purposes) with any film speed/aperture combination.

Careful attention to the following instructions will assure precise exposure, automatically, over the complete exposure control and meter range capabilities of your Nikon FE2.

What is EV?

Exposure value (EV) is a number representing the available combinations of shutter speed and aperture that give the same exposure effect when the scene brightness and ASA/ISO remain the same.

At ASA/ISO 100, a shutter speed of one second at f/1.4 is defined as EV 1. If the aperture is stopped down by one full f/stop or the shutter speed is one step faster, the EV increases by one; if the aperture is opened up by one full f/stop or the shutter speed is one step slower, EV decreases by one. Using ASA/ISO 100 as an example, 1 sec. at f/2 is EV 2, 1 sec. at f/5.6 is EV 5, while 1/125 sec. at f/5.6 is EV 12. As the exposure is the same, 1/30 sec. at f/11 and 1/1000 sec. at f/2 are also EV 12.

CONTROLS IN DETAIL—continued

How to read the EV chart

Section A of the chart shows the usable EV range depending on the lens' maximum aperture in full-aperture metering, while it also indicates the usable EV range for aperture settings in stop-down metering. Section D shows the value for the ASA/ISO film speeds, Section B the aperture settings for various film speeds, and Section C the shutter speeds. In practice, you will find that it is generally the high end and the low end of the metering range which require a careful check. The EV range of the Nikon FE2 encompasses most lighting situations, and it is only under very dim or very bright picture-taking situations that you need pay any special attention.

■ Full-aperture metering

Use the Nikkor 50mm f/1.4 lens and a film speed of ASA/ISO 100 as an example. By referring to the f/1.4 column in Section A and the EV value indicated for ASA/ISO 100 in Section D, you will find that the FE2's EV range in this case is 1 to 18.

If the lens is set at f/5.6, refer to Section B and single out the f/5.6 indication for ASA/ISO 100. Go diagonally down until the protruding line intersects with Section C's vertical line for a shutter speed of 8 sec. (the FE2's slowest shutter speed). From this point of intersection, follow the horizontal line that leads to Section D's EV value for ASA/ISO 100, and you will obtain an EV value of 2. Start again from the f/5.6 indication for ASA/ISO 100 in Section B, and go down diagonally until the protruding line intersects with Section C's vertical line for a shutter speed of 1/4000 sec. (the FE2's fastest shutter speed) this time. Then follow the horizontal line that leads to Section D's EV value for ASA/ISO 100, and you will get a reading of EV 17. This means that at an f/stop of f/5.6 at ASA/ISO 100 and at shutter speeds

from 8 to 1/4000 sec., the effective metering range is EV 2 to 17, which is well within the FE2's metering range of EV 1 to EV 18.

■ Stop-down metering

For stop-down metering, Section A indicates the usable EV range for various aperture settings. For example, if the lens is stopped down to f/8 at ASA/ISO 100, refer to the f/8 column in Section A and the EV values indicated for ASA/ISO 100 in Section D, and you will find that the EV range for f/8 is EV 6 to 23. Now single out f/8 at ASA/ISO 100 in Section B. Go diagonally down until the protruding line intersects with Section C's vertical line for the shutter speed of 8 sec. From this point of intersection, follow the horizontal line that leads to Section D's EV value for ASA/ISO 100, and you will obtain an EV reading of 3. This means that an f/stop of f/8 at ASA/ISO 100 and a shutter speed of 8 sec. give an EV value outside the metering range. To find out the slowest shutter speed usable, follow the f/8 indication for ASA/ISO 100 in Section B diagonally down until it intersects the horizontal line in Section C that leads to Section D's EV value of 3 for ASA/ISO 100, and you will find that the slowest shutter speed usable is 1 sec. In other words, at f/8 at ASA/ISO 100, the available shutter speed range is from 1 to 1/4000 sec., which has an effective EV range from EV 6 to 18 (indicated by the broken line in Section C)—well within the metering range.

These EV charts indicate the performance of the FE2 under normal temperatures and give the usable ranges for all shutter speed/film speed combinations.

EV Chart

