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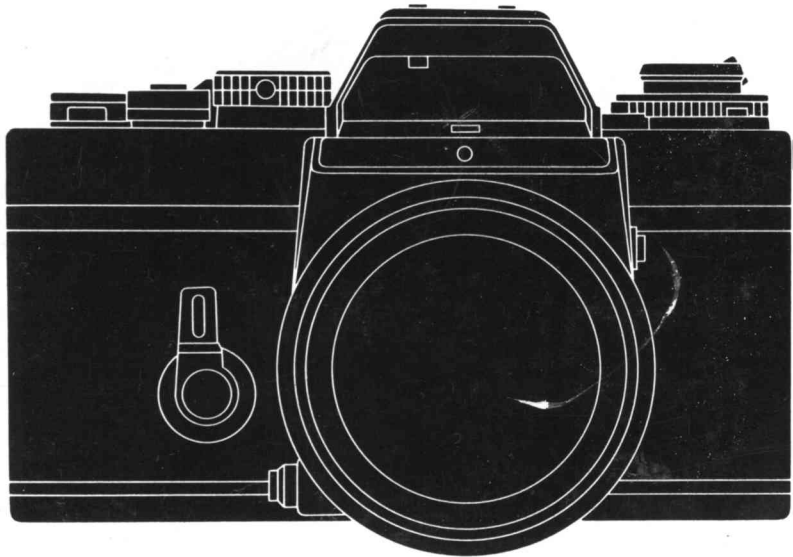
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MINOLTA XE-1



OWNER'S MANUAL

E



Your Minolta XE-1 is a top-quality single-lens reflex camera whose electronic system will control exposure for you automatically, freeing you for more enjoyment or greater creativity. You can also control exposure manually, with or without reference to the meter indication. In either case, your XE-1 offers full control of all camera exposure variables, and all necessary information is visible without taking your eye from the finder. This eminently refined and well-thought-out camera with its unique new electronic shutter lets you enjoy easy handling, utmost smoothness and quietness, and considerate "fail-safe" features throughout. Further, your XE-1 is an integral part of the Minolta SLR system and uses all interchangeable lenses and applicable system accessories. It is thus ready to grow with you and your needs for utmost versatility even in advanced, professional, or specialized scientific or technical use.

Before using your camera for the first time, study this manual carefully all the way through — or at least all the sections needed to cover your own photographic needs. As you read, attach the lens to the camera body (see p. 50), load batteries, and handle your XE-1 and acquaint yourself with its parts and features. Then load it with film and proceed to actual picture taking. In this way, you can take good photos and begin to realize the broad potential of your XE-1 right from the start. Be sure to keep this manual for reference later as necessary.

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MAIN FEATURES

Outstanding electronic exposure system

Incorporating the electronic auto-exposure control system developed for Minolta's top XM model, the XE-1 covers a wide range of photographic conditions with high accuracy and very low power consumption. It resists temperature and humidity and maintains high performance from general photography through highly specialized work. The XE-1's system features:

- Fully automatic exposure by stepless shutter speeds from 1/1000 to four full seconds, plus metered and full manual
- Monolithic-IC memory and control circuits
- Minolta's exclusive contrast-compensator metering
- Better operation at high and low temperatures
- Two tiny silver batteries as a power source

High-performance new shutter

The XE-1's unique new "CLS" ("Copal-Leitz Shutter") is a metal-blade vertical-run type providing high precision and durability. It operates more quietly and smoothly and offers admirable compactness.

With basic design by Germany's Ernst Leitz GmbH, the CLS was developed through joint work with Japan's Copal Co., Ltd., who further contributed experience and original ideas. Minolta supported and cooperated with both Copal and Leitz in this project.

Complete information-center viewfinder

- Focusing can be done in three ways: By the split-image or microprism focusing aid or on the mat field.
- Shutter speed, aperture figure, exposure mode, coupled limits, and metering information are all visible while you view.
- Metered-manual exposure control is possible by matching shutter-speed numbers in the finder.

Minolta SLR bayonet lens mount

- Virtually all existing Rokkor interchangeable lenses can be used in either automatic or manual operation, the current line including some thirty models from 16mm fisheye through 1600mm extreme telephoto. Attaching is simple, quick, and sure, with full-aperture metering for MC lenses, stop-down type for others.
- The XE-1 also uses all applicable system accessories of the more than 150 currently available.

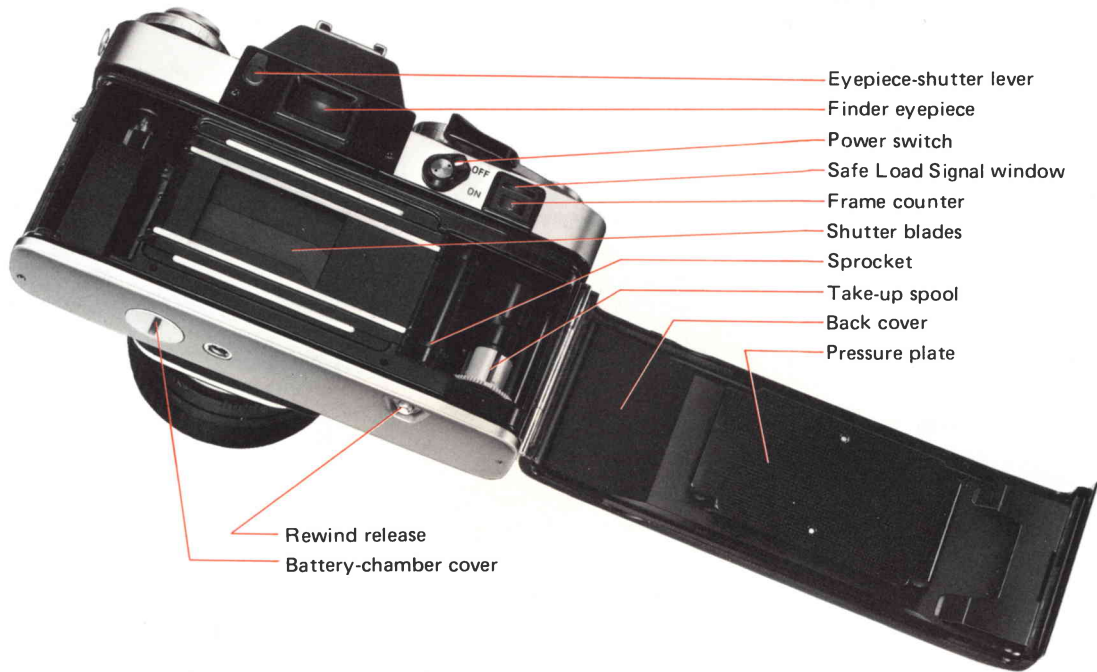
Versatile, easy, "fail-safe" operation

- Unusually smooth, positive multiple exposures without frame-counter advance
- Up to two stops' continuous exposure adjustment over or under the normal electronic setting
- X or FP flash synchronization through the hot shoe or single terminal with switch

- Self-timer with adjustable delay for auto or manual exposure control
- Eyepiece shutter for unmanned or similar operation
- Oversize mirror; image cutoff negligible even with 1600mm RF Rokkor lens
- Exclusive Safe Load Signal monitors film alignment and advance.
- Shutter release locked when power switch off
- Mirror stays up, no exposure made when battery power insufficient.
- "X" (1/90 sec. with X/MF sync.) and "B" (bulb) settings operate without battery power.
- Safety locks on "AUTO" setting, ASA dial, and exposure-adjustment control
- Handy memo holder and ASA/DIN conversion scale on back
- Unusually smooth short-stroke film advance

NAMES OF PARTS





Eyepiece-shutter lever

Finder eyepiece

Power switch

Safe Load Signal window

Frame counter

Shutter blades

Sprocket

Take-up spool

Back cover

Pressure plate

Rewind release

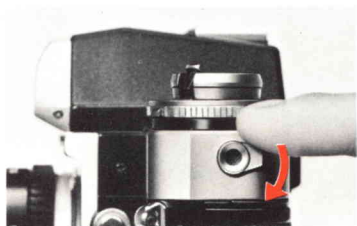
Battery-chamber cover

SUMMARY OF OPERATION (ON "AUTO")

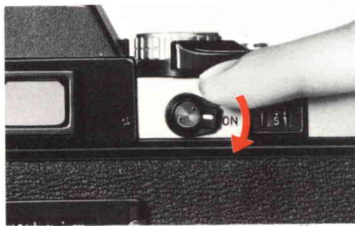
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The steps pictured on this page outline use of your XE-1 on automatic mode. They give a general idea of how very easy it is to get

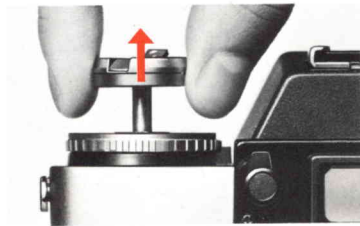
perfectly exposed pictures with this camera and are keyed to corresponding sections of the manual for ready reference. This brief guide



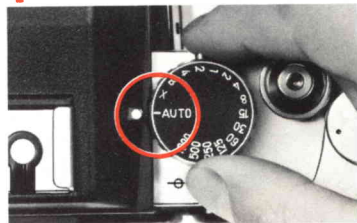
1 Check batteries (see p. 12).



2 Move power switch to "ON" (p. 12).



3 Open back cover (p. 14).



7 Set selector dial to "AUTO" (p. 25).



8 Set lens aperture (p. 25).



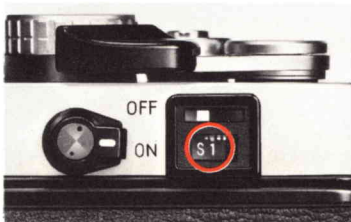
9 Adjust focus (p. 33).

may also be useful as a quick refresher for good results after you have not used the camera for some time. It is not, however, a substitute for

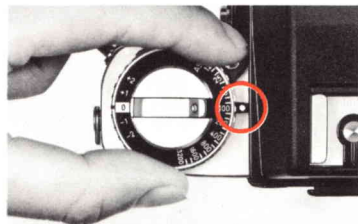
the detailed instructions in the rest of this manual, which should be thoroughly studied for best results.



4 Load film properly; close cover (p. 15).



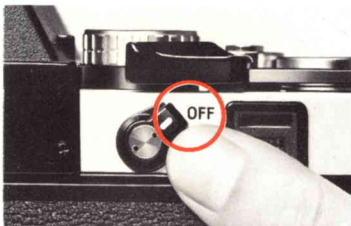
5 Advance film to "1" (p. 16).



6 Set film speed (p. 18).



10 Release shutter (p. 36).



11 Turn power off (p. 12).



12 Rewind and remove film (p. 38).

BATTERIES AND POWER

Two 1.5-volt silver-oxide batteries, Mallory MS-76 or Eveready S-76 or equivalent, supply the power for the meter, electronic exposure control, and electronic shutter settings.

IMPORTANT:

Should viewing become impossible because the mirror of your XE-1 remains up after the shutter has been released, it does NOT mean that the camera is out of order. This occurs automatically to warn you when there is insufficient battery power for proper operation at electronic shutter settings. To return the mirror for viewing, simply turn the shutter-speed/function selector to "X" or "B." For further details, see p. 13.

Installing batteries

1. Using a coin or similar object, turn the battery-chamber cover counterclockwise and remove it.
2. After cleaning terminals with a clean dry cloth and handling only by the edges, insert two of the specified batteries plus (+) side

out into the sleeve on the inside of the cover. (If batteries are inserted improperly, they will not make contact, and no current will flow.)

3. Replace the cover and screw it in clockwise as far as it will go.

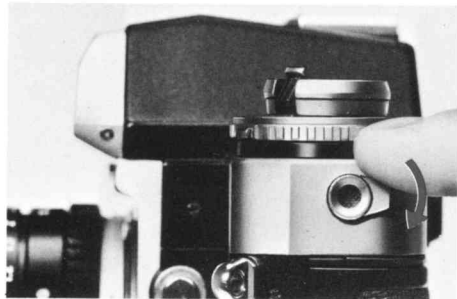


Testing batteries

Depress the battery-checker lever toward the bottom of the camera. If the red lamp lights, batteries are serviceable.

Test batteries immediately after installing them. If the lamp does not light, make sure that they are fresh and have been inserted correctly.

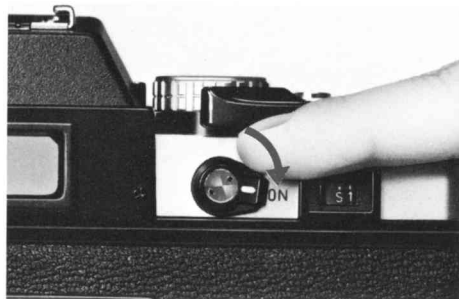
Batteries should be tested from time to time thereafter, preferably before starting each new roll of film and particularly before starting picture-taking sessions or trips. A set of batteries will generally last for about one year in proper normal use.



Power switch

To operate the camera, move the power switch to "ON." This will unlock the shutter-release button and cause the meter needle in the finder to move if there are sufficient light and battery power.

When not operating the camera, always be sure to move the power switch to "OFF." This will lock the shutter release against accidental exposures and prevent needless battery drain.



Cold-weather operation

Batteries by nature tend to decrease in capacity as the temperature goes down. Though the silver-oxide batteries used for the XE-1 are superior to most others in this respect, it also happens with them.

If *old* batteries are used at temperatures below 0°C (32°F), the camera's electronic operation may not be satisfactory. You should thus replace older batteries with fresh ones before using your XE-1 in cold weather and carry spare fresh batteries with you during such use.

Low-voltage warning

Your XE-1 is equipped with a device to warn you and prevent wasted film if battery voltage becomes insufficient while the shutter-speed/function selector is at an electronic setting (i.e., any one other than "X" or "B"): If the shutter is released when voltage is too low, no exposure will be made on the film, and the mirror will remain up to prevent viewing.

Turning the shutter-speed/function dial to either "X" or "B" (mechanical settings) will reset the mirror to its viewing position. The camera may then be operated at either of these mechanical settings without replacing batteries or at any electronic or mechanical setting after inserting serviceable batteries. In either case, use the multiple-exposure lever (see p.45) to recock the shutter without wasting a frame of film. (The mirror will also reset automatically after film has been advanced in the usual way and the shutter released once.)

NOTE:

If the camera is not to be used for more than two weeks, it is advisable to remove the batteries.

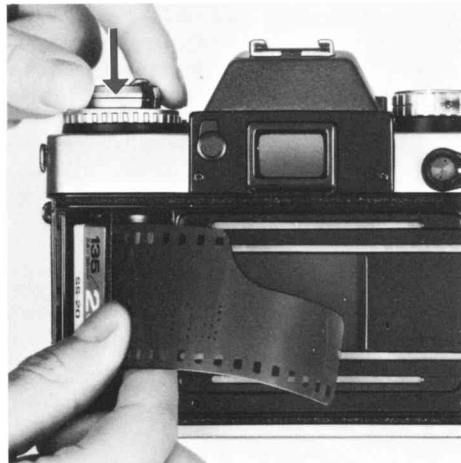
LOADING AND ADVANCING FILM

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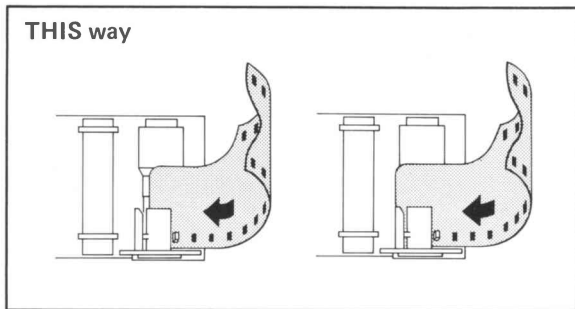
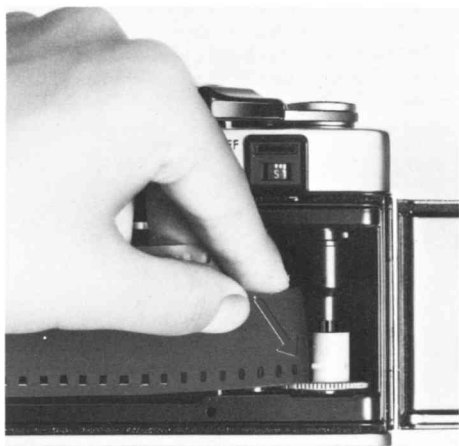
1. Pull out on the back-cover release knob until the camera back springs open.



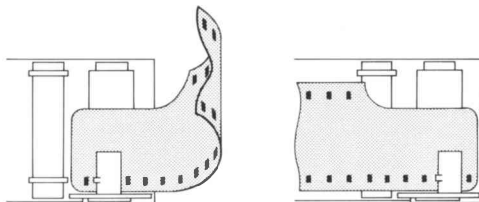
2. Leaving the knob pulled out, position a film cartridge in the chamber with the projecting-spool end toward the bottom of the camera. Then push the back-cover release knob all the way in, rotating it slightly to do so if necessary.



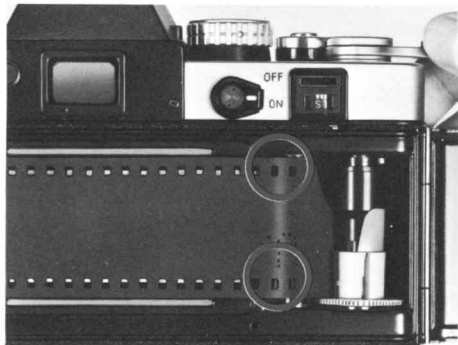
3. Insert the end of the film leader as shown into one of the slots in the take-up spool so that the tooth is engaged with a sprocket hole near the end of the leader. Make sure that the end of the leader does not project from another slot between tabs on the spool.



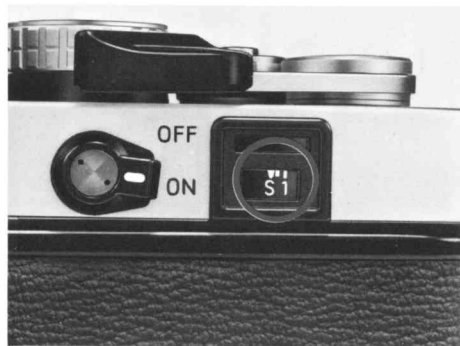
NOT this way



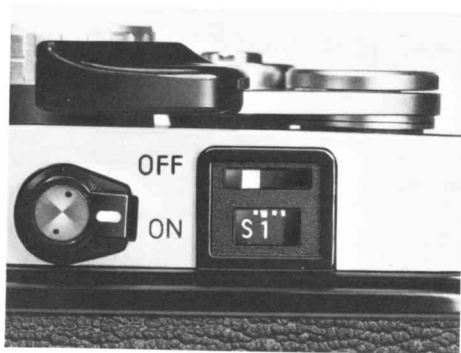
4. Operate the film-advance lever slowly until the film has begun to wind firmly around the take-up spool and the sprocket teeth are engaged with holes on both edges of the film. If the advance lever stops at the end of a full stroke during this procedure, release the shutter and continue.



5. Close the camera back and push in on it until it clicks locked.
6. A red "S" should now appear opposite the index in the frame-counter window. Advance film and release the shutter until the index points to "1" on the frame-counter dial.



7. A red bar should also now appear at the left in Safe Load Signal window. This indicates that the film is loaded and winding properly on the take-up spool. If the Safe Load Signal does not appear or swings far to the right in the window, repeat steps 1 through 6 to assure that film is properly engaged on the spool. As you continue to take pictures, the red signal will move gradually toward the right in the window, indicating that film is advancing properly.



CAUTION:

Film should be handled and loading done in subdued light — at least shaded from direct sunlight by the body.

Film-advance lever and frame counter

The film-advance lever is designed with 30° unengaged movement before the beginning of its engaged stroke to allow swinging it out from the body so that the right thumb will fit comfortably behind it. Continuing to move the lever through its engaged angle of 130° until it springs back to the unengaged position advances film and frame counter and cocks the shutter for the next exposure. (To cock the shutter without advancing film, see page 45.)

When the lever stops and resists further movement at the end of a film, never attempt to force it farther. (See page 38 for instructions on rewinding and unloading film.)

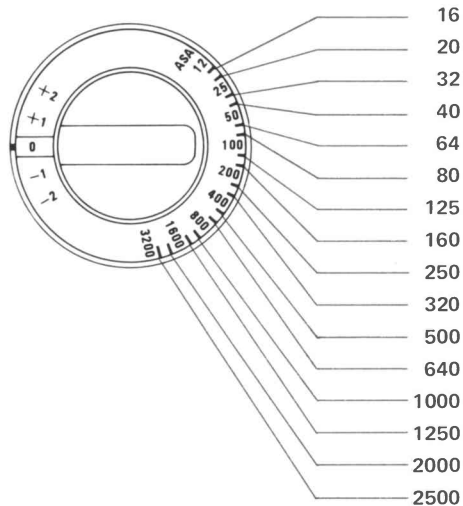
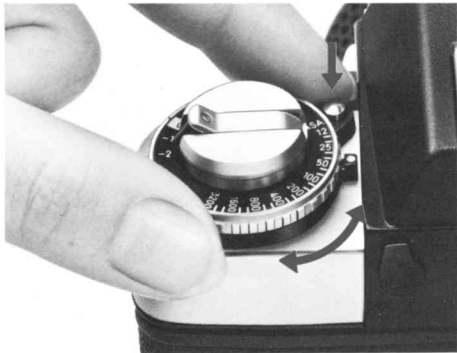
The frame counter does not advance when two or more exposures are made on the same frame. The counter automatically resets for film loading when the camera back is opened.

FILM SPEED

Film-speed selector

Each film on the market has an ASA or DIN exposure-index number to indicate its sensitivity to light. For correct exposure, the meter must be set for the effective exposure index of the film in use.

To do this, depress the selector release and turn the film-speed selector until the proper ASA value indication clicks into place opposite its index. Dots between numbered graduations indicate ASA numbers as shown:



CAUTION:

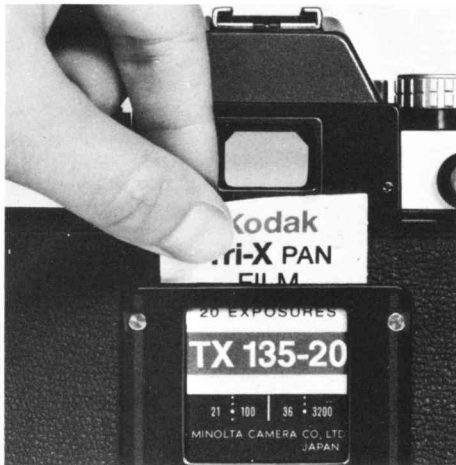
When setting film speed, the index of the exposure-adjustment control (see p. 47) should generally be locked at its zero position.

ASA/DIN conversion scale

A convenient scale for converting DIN to ASA film-speed ratings is located on the back cover of the camera.

Memo holder

Around the ASA/DIN conversion table is a convenient frame that can be used to keep memos handy with the camera. It is just the right size to hold the film-box end, which can be inserted as a reminder of the film in use.



EXPOSURE-CONTROL FUNDAMENTALS

The two camera exposure-control settings are lens opening (aperture) and shutter speed. The size of the aperture determines the amount or volume of light reaching the film from a given subject and lighting. The shutter speed determines the length of time this light acts upon the film. Apertures are expressed in f-numbers, which are larger for small openings and vice versa (e.g., f/16 represents a small opening, f/2 a large one). Shutter speeds are expressed in seconds or fractions thereof, which are generally the reciprocals of the numbers shown shutter-speed scales. (e.g., 60 = 1/60 sec., but 2s = 2 full seconds). At usual apertures, each f-number setting (e.g., f/8) lets in twice as much light as the next numerically larger one (f/11) and half as much as the next smaller (f/5.6). Similarly, each shutter speed (e.g., 1/60 sec.) allows light to strike the film twice as long as the next higher speed (1/125) and half as long as the next lower one (1/30). The interval between two standard f-numbers (say, f/4 and f/5.6 or shutter speeds (say, 1/15 and 1/30) is one "stop." Total exposure on the film is determined by the combination of aperture and speed. Other things being equal,

using the next smaller f-number (i.e., giving one stop more exposure) will balance using the next higher shutter speed (i.e., giving one stop less exposure), and so on. A great range of combinations (e.g., f/5.6 at 1/30, f/4 at 1/60, f/2.8 at 1/125, f/2 at 1/250, etc.) will thus yield the same total exposure. The specific combination you choose under given lighting conditions will depend upon the degree to which you want the greater depth of field (see p. 34) of smaller apertures and the greater movement-blur preventing ability of faster speeds (p. 29).

XE-1 METERING POINTERS

Minolta's exclusive contrast-compensator metering system employs two CdS cells mounted on the pentaprism to take separate, overlapping light readings. These cells are circuited so that the reading of each affects that of the other to automatically yield optimum exposure in both normal and most high-contrast situations. For best results, the photographer should thus generally not make compensatory adjustment for such differences. One exception is that exposure should generally be decreased one to two stops if the most important subject area is much brighter than the rest of the picture (e.g., is in a spotlight or shaft of sunlight). Some photographers also prefer to increase exposure a half stop or more with a backlighted subject or one whose most important area is considerably darker than the area surrounding it. (For further details, see p.48).

Though the XE-1's special system and finder are designed to minimize the effect on the meter of light entering through the finder eyepiece under usual conditions, care must be exercised to prevent this especially if you wear eyeglasses. Use of a rubber finder eyecup is further recommended when the subject is in

shade and the camera is in sunlight, when bright sidelight falls between eye and eyepiece, or when stop-down metering is used, particularly at small apertures. When viewing is unnecessary, the eyepiece shutter (see p. 26) can be used to completely eliminate this problem.

Besides offering exceptionally long service life and consistent conversion of light to electrical values, the CdS cells in your XE-1, like all others, have characteristics comparable to human vision. They are able to "see" about the same light and color as your eyes and photo film can; this is a great advantage for accurate exposure. Like your eyes, however, their time of response varies with the intensity of the light falling on them. It thus takes them a while to become accustomed to low light levels after exposure to bright light. For accurate exposure, you should thus be careful not to point the camera at very bright natural or artificial light sources before making exposures. And you should give your CdS electric eyes a short time to get accustomed to darker conditions, when, for example, taking pictures in shadow or indoors after shooting in bright sunlight.

STOP-DOWN BUTTON

The stop-down button on the XE-1 has two positions: Inner for full-aperture metering and outer for stop-down metering (see right) or depth-of-field preview (see p. 35).

Pushing the button once will set it at one of these positions; pushing it again will set it at the other.

At full aperture



METERING METHODS

With MC Rokkor lenses, metering is done at full aperture, with the stop-down button at its inner position (see left), for greatest sensitivity and accuracy. The viewfinder thus remains at maximum brightness for utmost ease of composing and focusing, with the automatic diaphragm closing down only at the moment of exposure to the aperture preset on the aperture ring.

Stop-down metering is used for other Rokkor lenses (see p. 51).

Stopped down



HOLDING THE CAMERA

Your camera should be held in a comfortable position that will provide sufficient steadiness. A recommendable way that permits ready operation of important controls is shown here.

To hold the camera horizontally, cradle the bottom of it in the palm of the left hand with the thumb and index or middle finger on the focusing grip of the lens. The thumb and middle or ring finger of the same hand can be used to turn the aperture ring. Grasp the



camera body firmly with the right hand as shown so that the index finger rests on the shutter-release button. In this position, the thumb can conveniently operate the film-advance lever.

The camera may be rotated to a vertical position when held this way, the only difference being that its rewind-crank end will rest in the palm of the left hand.



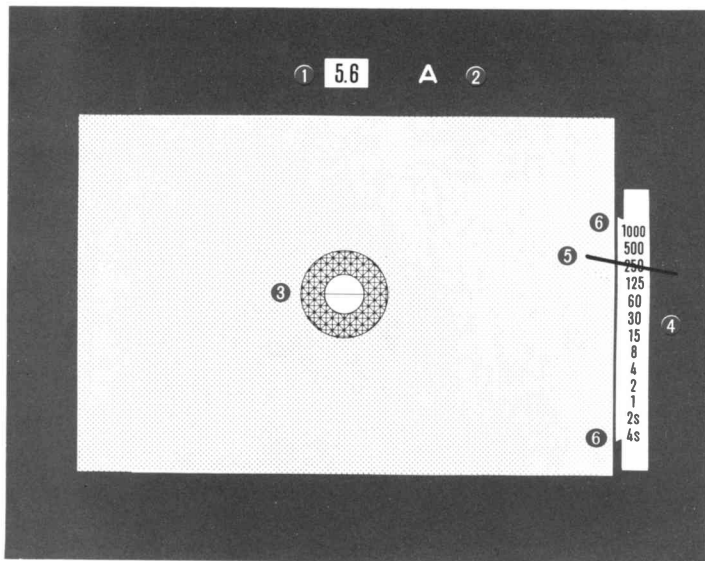
VIEWFINDER

24

As you look through the viewfinder of your XE-1, you can see:

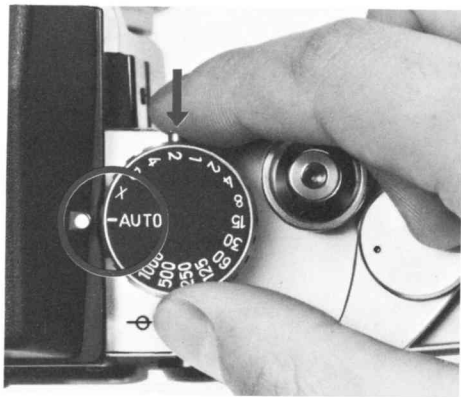
- ① **F-number** of lens aperture set,
- ② Shutter setting ("A" for automatic; "X," or "B," or speed number for manual mode),
- ③ **Split-image / microprism focusing spot**,
- ④ **Shutter-speed scale**,
- ⑤ **Indicator needle** (shows speed being set on automatic mode; indicates correct exposure when aligned with same scale number as speed manually set), and
- ⑥ **Meter coupling range limits.**

For operation details, see the following sections on exposure control and focusing.



AUTOMATIC EXPOSURE CONTROL

1. Turn the shutter-speed/function selector to align "AUTO" with the index, at which point it is locked to prevent accidental movement. The letter "A" will appear as the shutter-setting indication at the right above the finder frame.



2. Set the desired lens opening by turning the aperture ring on the lens barrel. The f-number set will appear centered above the frame in the finder, and the shutter speed as indicated by the needle at the right of the frame will vary automatically and steplessly to yield proper exposure for the aperture and other settings with the light being metered.



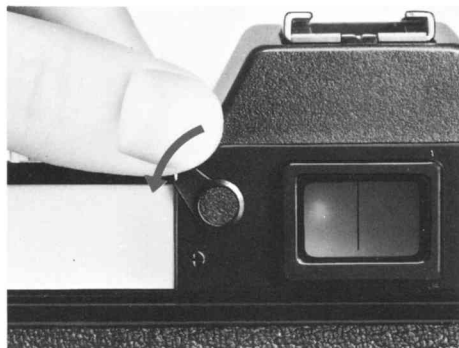
3. It is then only necessary to confirm focus, compose your picture, and release the shutter.
4. The accurate range of shutter operation on automatic mode is 1/1000 to 4 sec., as indicated by the indentation on the left side of the shutter-speed scale. When the needle moves above or below this indentation, correct exposure will not be obtained, and the aperture or other conditions should be adjusted so that it points to a value within the coupled range.

NOTE:

To continuously provide more or less exposure on automatic mode, see page 47.

Eyepiece shutter

For remote or unmanned operation or when the camera is set on a support and used without viewing on automatic mode, be sure to rotate the lever at the left rear on the finder as indicated to close the eyepiece shutter. This will prevent unwanted light from entering through the eyepiece and affecting the meter reading and exposure when the eyepiece is not being shielded by the photographer's head, as it normally would be.



WAYS OF USING AUTO MODE

On AUTO mode, your XE-1 will set the precise shutter speed for proper exposure for you automatically. Even so, you have considerable control over results and can adjust aperture and shutter speed over considerable ranges to suit the conditions and yourself.

General use

For usual good personal pictures with a minimum of care where no particular effect is desired, simply turn the aperture ring to set a medium aperture (say, about f/8) that will provide as much depth of field (see p.34) as possible while producing a shutter speed (say, about 1/125 sec.) fast enough to stop any motion necessary in the subject and guard against blur from camera movement (see p.36).

Aperture priority

There may be times when it will be most important to set the lens aperture to obtain a particular effect, such as rendering a certain range in sharp focus or emphasizing a subject against an out-of-focus background. In this case, set the desired aperture, and let the

A: Large lens opening



camera select the shutter speed. Small f-numbers yield a shallow field of sharp focus, as in Example A below, while large f-numbers give greater depth of field, as in Example B. To determine actual depth of field, use the depth-of-field scale (see p.34) or stop-down button (p.22).

B: Small lens opening



Shutter priority

At other times, the subject or effect you want may make the shutter speed more important. In this case, turn the aperture ring until the needle indicates the required speed on the finder scale; exposure will automatically be correct. High shutter speeds such as 1/500 to

1/1000 sec. can "freeze" fast action, as in Example C below. Such slow speeds as 1/2 to 1 sec. can be used to emphasize subject flow or motion, as in Example D.

No matter how the camera is used, it is important to support it (see p. 23) and release the shutter properly (p. 36).

C: High shutter speed



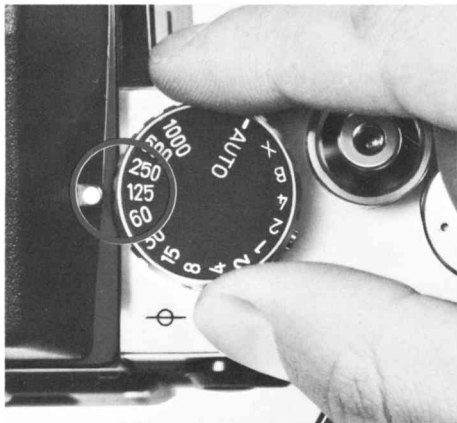
D: Low shutter speed



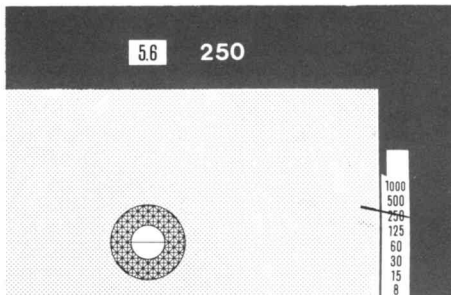
METERED/MANUAL EXPOSURE CONTROL

Metered/manual operation

1. While depressing the AUTO-setting release if from the "AUTO" setting, turn the shutter-speed/function selector to align any step indication from "1000" through "4s" with the index. The number of the speed set will appear as the shutter-setting indication at the right above the finder frame.
2. To set proper exposure for light as metered, turn the aperture ring until the needle extends through the center of the number on the shutter-speed scale that corresponds to the shutter-setting number appearing above the frame. If necessary alignment cannot be attained, adjust the shutter-speed setting or other conditions to permit it.



Correct metered-manual exposure



3. Needle alignment can of course be disregarded and any shutter-speed and lens-aperture combination set for full manual operation.

Full-manual setting

