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The length of time that the light is allowed to strike the film is determined by the shutter speed. The relationship between shutter speeds is like that between f/stops. As you move from one shutter speed to the next higher shutter speed, exposure is halved. Your image is actually exposed by the opening of the shutter. Shutter speed can be controlled on the A-1 by turning the AT dial. Otherwise the camera controls it.

Now suppose that you have the camera set for a certain exposure value (EV), say the exposure you get with f/4 at 1/60 sec. There are certain other combinations of aperture and shutter speed which will give you the same amount of exposure as that above. Some of these combinations in this example include f/5.6 at 1/30 sec. and f/2.8 at 1/125 sec. You simply move up and down the f/number and shutter speed scales. It is not important to know this relationship when you use the A-1 in an AE mode. The camera will do the figuring for you. But it is an important photographic fact which you may find useful when you use the camera manually or in correcting exposure.

AE Photography

AE photography means automatic exposure. The camera is selecting either shutter speed or aperture or both for you.

The most obvious, unusual feature of this camera is the absence of the shutter speed dial which has been replaced by the AT dial. This dial allows you to set either shutter speed or aperture for any of five different AE modes.

Through-the-lens full-aperture metering

Shutter priority AE

Aperture priority AE

Programmed AE

AE flash photography

Through-the-lens stopped-down metering

Stopped-down AE

In shutter-speed priority AE, you set the shutter speed, and the camera automatically selects the necessary aperture according to lighting conditions for correct exposure. Shutter-speed priority AE is applicable to most subjects but especially useful in action photography.

In aperture priority AE, you set the aperture while the camera automatically selects the necessary shutter speed for correct exposure. It is convenient for the various forms of still photography in which depth of field is of importance.

The camera automatically selects both

aperture and shutter speed in the programmed AE mode. This mode is helpful when your only goal is correct exposure and neither depth of field nor control of movement are very important in the picture. It is the easiest mode for the beginner.

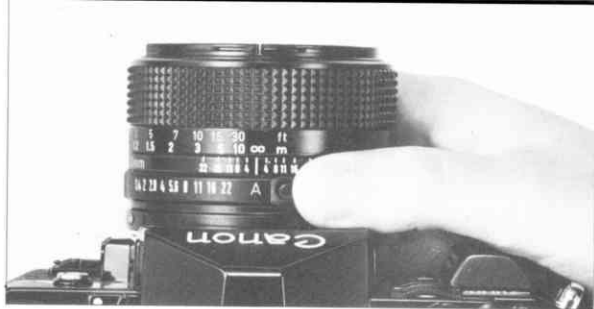
In stopped-down AE, you set the aperture manually on the lens aperture ring while the camera automatically selects a shutter speed for correct exposure. This is a big advantage when using non-FD lenses and in specialized areas of photography such as photomacrography and photomicrography.

AE flash photography is possible with the Canon Speedlite 155A, 166A, 188A, 199A, 533G, 577G or 277T, 299T. In this mode, the camera sets both aperture and shutter speed automatically, eliminating any worries about guide number calculations and flash synchronizing shutter speeds.

The first three AE modes described above are explained in more detail in the following sections. For more information concerning the stopped-down AE and AE flash modes, please refer to the section entitled SPECIALIZED PROCEDURES.

Please note that shutter priority AE, aperture priority AE, programmed AE and AE flash are possible only with an FD lens and only when the lens aperture ring is set to the "A" mark. See **SETTING THE LENS FOR**

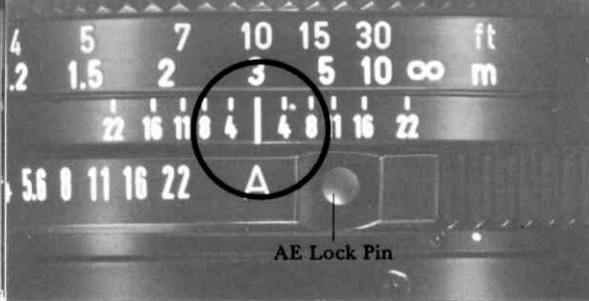
AE PHOTOGRAPHY. ras.com



Setting the Lens for AE Photography

The first four AE modes described above, i.e. shutter priority AE, aperture priority AE, programmed AE and AE flash photography, are performed with full aperture metering through the lens. This means that the diaphragm is fully open during metering for easiest viewing and operation.

For correct operation in these four full-aperture metering AE modes, only an FD lens can be used and the lens aperture ring must be set to the "A" mark. To do this, simply hold in the AE lock pin on the lens while turning the aperture ring from the minimum aperture to the "A" mark. This can be done either before or after the lens is mounted on the camera. At the "A" mark, the aperture ring is locked and cannot be turned to any other setting. Reverse the procedure to disengage the aperture ring from the "A" mark.



Instead of an "A" mark, some earlier FD lenses have a small green circle on the aperture ring for AE photography. Its use is the same as that of the "A" mark, and the procedure is the same as that described above except that some of these lenses may not have an AE lock pin for locking the aperture ring at the automatic setting.



AE Mode Selector

The AE mode selector has two possible settings, Tv (time value) and Av (aperture value). When the AE mode selector is switched to Tv, the camera is set for the shutter priority AE mode. You set the shutter speed and the camera selects the aperture. When switched to Av, the camera is set for aperture priority. Here you set the aperture, and the camera automatically selects the shutter speed.

The AE mode selector click stops at □ for Tv and at ○ for Av.

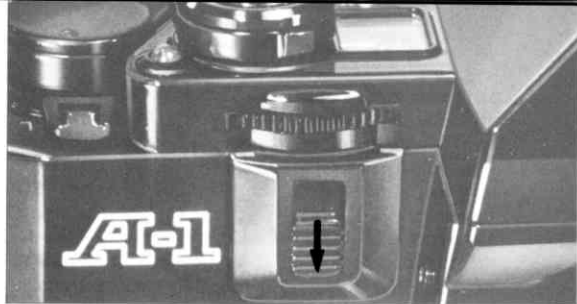


AT Dial

This dial works in conjunction with the AE selector. When the AE selector is set at Tv, it shows the shutter speed scale. When the AE selector is set to Av, it shows the aperture scale.

To operate the AT dial, first slide down the AT dial guard which is designed to prevent accidental movement of the dial. Depending on the setting of the AE selector, turn the AT dial until it click stops at the exact aperture or shutter speed desired so that the setting is aligned with the index mark. The AT dial will not turn past the highest and lowest limits of each scale.

The figure set on the AT dial has priority in determining the exposure. If, for example, you have set a shutter speed on the dial, the camera balances the aperture against the shutter speed you have selected until exposure is correct.



If, on the other hand, you have set an aperture on the dial, the camera selects the necessary shutter speed for correct exposure.



Shutter Speed Scale on the AT Dial

There is a choice of 16 click-stop settings ranging from 1/1000 (sec.) to 30 (sec.) on the AT dial's shutter speed scale. The slow shutter speeds from 2 (sec.) to 30 (sec.) are marked in orange while shutter speeds from 1 (sec.) to 1/1000 (sec.) are in white. The white numbers on the scale are the reciprocals of the true shutter speeds so that a white 2 indicates a speed of 1/2 sec. while a white 1000 indicates a speed of 1/1000 sec. Be careful not to confuse the slower orange range with the faster white range.

Above the highest speed of 1/1000 is the "P" for programmed AE. Below the lowest speed of 30 is the "B" setting. The dial will not turn past the "P" or the "B".

The "B" (Bulb) setting is intended for exposures longer than 30 sec. When the shutter speed is set at "B", the shutter will remain open as long as you press the shutter

button. AE photography is not possible at the "B" setting. The aperture must be set manually. Remember that it is very important to use a tripod and a cable release, preferably with a lock, in long exposures to reduce the chance of image blur. Also, since long exposures present a real drain on the battery, it may be wise to carry a spare.

The A-1 has a hot shoe and PC outlet for an X-sync (flash synchronization) at 1/60 sec. (the $\frac{1}{2}$ position). This shutter speed need not be considered, however, when the A-1 is used with specified Canon flash units (see page 83).

Intermediate settings on the shutter speed scale cannot be used. However, if you accidentally set an intermediate shutter speed, the camera will automatically select the next lower or higher shutter speed as the effective shutter speed, and that shutter speed will be displayed when you take an exposure preview.

If you mistakenly try a time exposure on "bulb" while the lens is still at "A", exposure will take place at the lens minimum aperture.



Aperture Scale on the AT Dial

The aperture scale on the AT dial is calibrated in f/stops ranging from f/22 to f/1.2. The f/1.2 setting is indicated by a dot. The dial click-stops at both full and half f/stops. It will not turn past the largest and smallest f/stops. The maximum aperture indicated on the AT dial is large enough for any Canon lens.

Under certain conditions in the aperture priority AE mode, the maximum and minimum apertures on the lens have priority over the aperture set on the AT dial. For instance, if the aperture you have set on the AT dial is larger than the maximum aperture of the lens in use, the camera will match the shutter speed to the lens maximum aperture rather than the aperture you have set on the AT dial for correct exposure. Thus, if you are using an FD 50mm f/1.8 lens with the AT dial set to f/1.4, the camera will use

f/1.8 as the aperture setting. In this case, the maximum aperture of the lens will be displayed in the viewfinder when you take an exposure preview regardless of the setting on the AT dial. On the other hand, if you have set an aperture on the AT dial smaller than the minimum aperture of the lens, the image will be exposed at the lens minimum aperture but the shutter speed will not be adjusted accordingly, resulting in over-exposure. In this case, the aperture set on the AT dial will be displayed in the digital read-out.

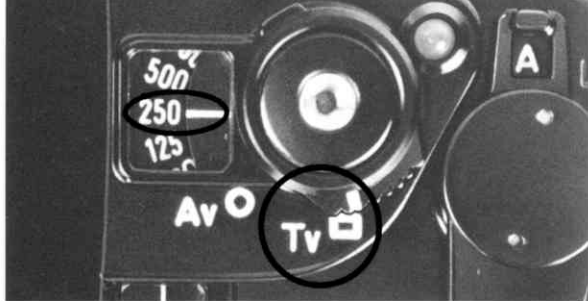
Since the smallest aperture that can be set on the AT dial is f/22, if you want to set an aperture smaller than f/22, switch to stopped-down AE and manually set the aperture on the lens aperture ring.

Shutter Priority vs. Aperture Priority

Having now read how to control the camera for shutter priority and aperture priority AE photography, you might well wonder when it is best to use which mode. Basically, it depends upon what you want your photograph to portray.

Shutter speeds are most effectively used to freeze or emphasize movement. The shutter priority AE mode is applicable to most photographic situations.

Aperture priority is most applicable to still photography such as portraiture and landscape photography in which depth of field is an important factor. Some of the best creative commercial and architectural photographs are taken in the aperture priority AE mode. This, however, does not apply to such fields of photography as close-ups and photomicrography for which you should refer to the section entitled STOPPED-DOWN AE.



Selecting a Shutter Speed

The table below can be used as a general guide in selecting an appropriate shutter speed according to lighting conditions when using a standard 50mm lens and ISO 100 film.

Brightness	Shutter Speed (Seconds)
Indoors	1/30 to 1/60
Outdoors	1/125 to 1/250
Mid-summer Beach or Snow-covered Mountains	1/500 to 1/1000

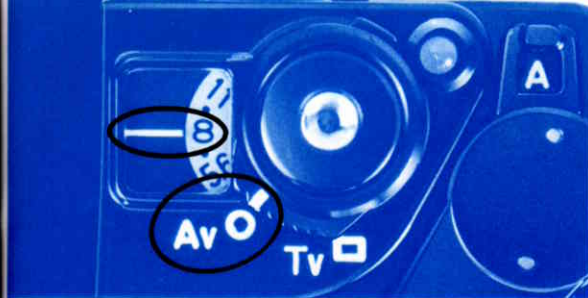
This table does not necessarily apply when using a lens of a different focal length. If you are using a telephoto lens, for instance, any subject movement and the least bit of camera shake can have a magnified effect on image sharpness. For a telephoto it is necessary to use faster shutter speeds than with a standard lens under the same lighting conditions. It is generally said that, for sharp image results in hand-held shooting, the minimum shutter speed should be equal to or faster than 1 divided by the focal length of the lens. This means that for a 100mm lens, the shutter speed should be at least 1/125 sec.; for a 200mm lens, it should be at least 1/250 sec.

There are other considerations in the selection of shutter speed. You can usually freeze the action of relatively slowly moving pedestrians or traffic at a shutter speed of 1/250 sec. The same is not necessarily true of a rapidly moving bicycle. Instead of freezing the action, you may want to emphasize it by blurring some part of the picture. For instance, you could blur a moving subject with a relatively slow shutter speed. Or, using a panning technique, turning the upper part of your body to follow the subject's movement, at a relatively slow shutter speed of perhaps 1/30 sec., you can

blur the background to stress the movement. In this last technique, it is best to continue panning as you release the shutter.

The direction of movement should also be considered. A subject moving directly across in front of the camera will be blurred to a greater degree than a subject which is moving diagonally across or is heading straight for or away from the camera and may require faster shutter speeds than you would use considering speed of movement alone.

In fashion photography, a rapid succession of shots at fast shutter speeds, or using a flash while the model continuously changes the pose, helps to capture natural expression.



Selecting an Aperture

A discussion of how to select an appropriate aperture boils down to an explanation of depth of field. When your subject is in focus, there is only a limited range in the foreground and background of the subject which is also in focus. This zone of sharpness is called depth of field.

Depth of field is governed by three factors: aperture, lens focal length and shooting distance. Remember the following relationships:

- (1) The smaller the aperture, the deeper the depth of field (the other two factors remaining the same).
For example, if the lens focal length and the shooting distance stay the same, the depth of field is much deeper at $f/16$ than at $f/1.4$.
- (2) The shorter the lens focal length, the deeper the depth of field (the other two

factors remaining the same).

For example, comparing a 28mm lens with a 50mm lens at the same aperture and shooting distance, depth of field is deeper with the 28mm lens.

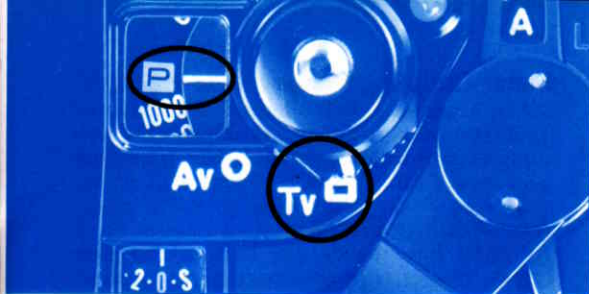
- (3) The greater the shooting distance, the deeper the depth of field (the other two factors remaining the same).

For example, if the subject is photographed from three and then from seven meters away, the zone of sharpness in the foreground and background is greater at seven meters.

Another characteristic of depth of field is that it is generally deeper in the background than in the foreground.

When depth of field is important in your picture, it is best to control the aperture directly using the aperture priority AE mode. Using a small aperture is great for getting sharp overall focus in a landscape or any other type of subject, but shallow depth of field also has its merits. Using a relatively large aperture will make your subject stand out against its surroundings by blurring the background. This is an especially successful technique in portraiture and special effects.

There are ways to check the extent of depth of field. For this information, please refer to page 76.



Programmed AE

When the AE mode selector is set to Tv and the AT dial turned to "P" on the shutter speed scale, the camera is set for programmed AE. Correct exposure, both aperture and shutter speed, is automatically set by the camera according to the brightness of the subject and a programmed set of combinations of apertures and shutter speeds. Metering control is done steplessly from a combination of the highest shutter speed and minimum aperture all the way to slower shutter speeds and larger apertures.

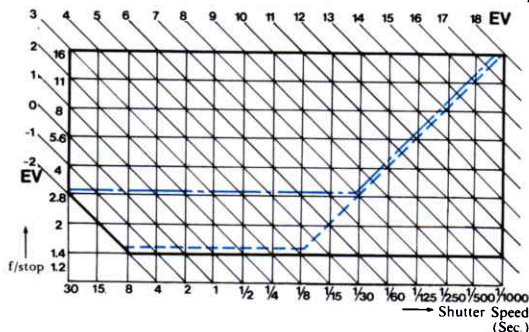
Under some circumstances, the camera behaves as if it were set for aperture priority AE. For example, if lighting conditions are so low that an aperture larger than the maximum aperture of the lens would be necessary, the maximum aperture remains fixed, and the camera's electronic control automatically shifts to slower shutter speeds until the shutter speed is balanced against

the aperture for correct exposure. Of course, if it shifts to a shutter speed lower than 1/60 sec., it is advisable to use a tripod and a cable release or to switch to flash photography.

The advantage of this particular mode is that it takes your mind completely off exposure so that you can concentrate on your subject.

Programmed Combinations of Shutter Speed and Aperture in Programmed AE

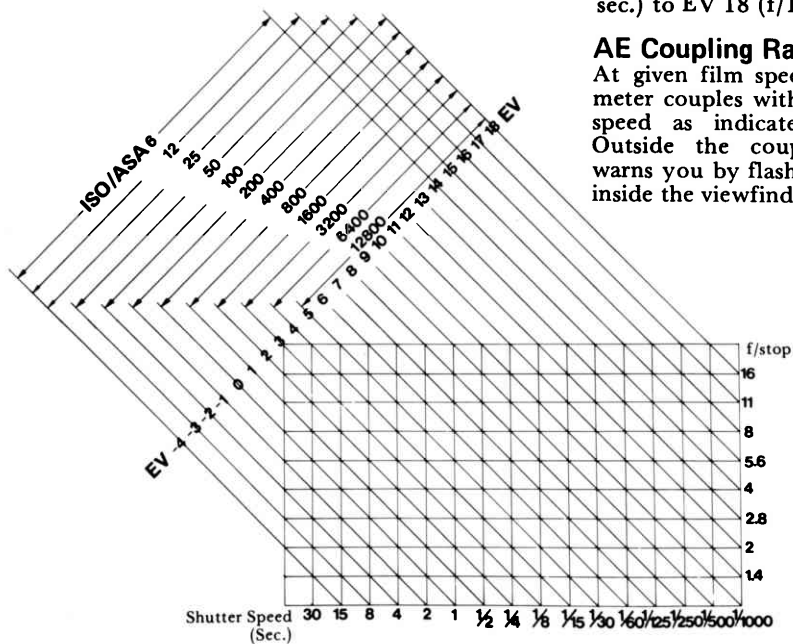
(with ISO 100 film)



--- indicates programmed combinations when a lens with a maximum aperture of $f/2.8$ is used.

..... indicates programmed combinations when a lens with a maximum aperture of $f/1.4$ is used.

**AE Range of Silicon Photocell at Various ISOs
FD 50mm f/1.4 Lens**



Meter Coupling Range

When using the FD 50mm f/1.4 lens and ISO 100 film, the built-in exposure meter couples within a range of EV-2 (f/1.4 at 8 sec.) to EV 18 (f/16 at 1/1000 sec.)

AE Coupling Range

At given film speeds, the built-in exposure meter couples with the aperture and shutter speed as indicated in the chart below. Outside the coupling range, the camera warns you by flashing the photographic data inside the viewfinder.

Metering at Low Light Levels

With AE coupling all the way down to EV-2 (with ISO 100 film), the A-1 is capable of metering and producing a natural rendition of the light in very film lighting conditions.

Since EV-2 is practically the lowest light level at which you can even perceive your subject through the viewfinder, you can basically perform AE photography with the A-1 as long as you can see your subject in the viewfinder when using a film with appropriate sensitivity. This means that the A-1 will usually give you a meter reading even in the most adverse of lighting conditions when performing photomacrography and photomicrography in the stopped-down AE mode.

What this also means is that you will be using very slow shutter speeds and may be subject to failure of the reciprocity law. The reciprocity law is that relationship between apertures and shutter speeds discussed earlier in which several combinations of the two will give the same exposure value. The trouble with this law is that it may not hold true at slow shutter speeds. More exposure may be necessary. You will find information concerning reciprocity law failure and how to correct it in the data sheet that comes with your film. Correction of reciprocity

failure may involve increasing the light level so that higher shutter speeds can be used. Even when following the instructions of the film data sheet, it is advisable to slightly adjust the exposure over several shots to get at least one perfectly exposed image.

Be especially on the alert for reciprocity failure when using color reversal (slide) film which has a smaller exposure latitude than black and white or color negative film. Having a smaller exposure latitude means that it is more touchy about exposure error. Incorrect exposure by only 1/2 exposure step may make a noticeable difference in the image results. Reciprocity failure with color film will result in color shifts as well as underexposure and may require corrective filtration as recommended by the film manufacturer.

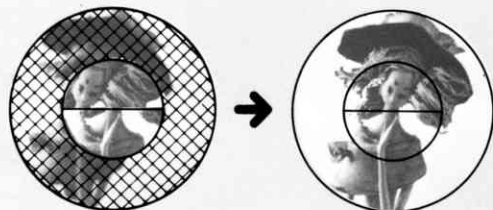
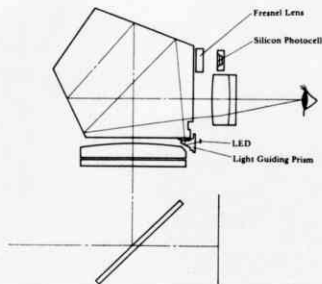
Split-Image Rangefinder

Microprism Ring



250

11



Out of Focus

In Focus

Viewfinder

A less conspicuous, unusual feature of the A-1 is the fact that, unless you are taking a meter reading, the only thing you can see in the bright viewfinder is the viewing area. All other information is eliminated, leaving you undistracted freedom to focus and compose your picture.

The A-1 uses the Central Emphasis Metering method of exposure measurement which reads the entire viewing area with emphasis on the central portion where the subject is most likely to be placed. This metering system ensures correct exposure even when skylight is present in your picture.

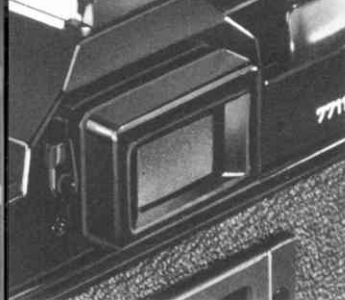
This camera is equipped with a split-image/micropism rangefinder focusing screen.

You can change the focusing screen in the A-1 according to your specific focusing needs. Canon offers seven different types of focusing screens for the A-1. For further details, please see on p. 101.

Viewing and Focusing

To focus, rotate the focusing ring of the lens as you view the subject through the viewfinder. Do not swing your upper body backward and forward as you focus.

The focusing screen is composed of three different focusing aids: a micropism ring in the central area, and a surrounding matte screen. The split-image rangefinder tells you that the image is "in focus" when the image, which is divided horizontally when out of focus, merges to become one complete image. The micropism rangefinder presents a clear, steady image when in focus but a broken, shimmering image when not accurately in focus. When your desired subject is sharp, you know that the focus is correctly set. You can focus with any of these three focusing aids as you like depending on the subject and your preference.



OPTIONAL VIEWING AIDS

Dioptric Adjustment Lenses S

The dioptic adjustment lens S is an accessory which slides into the grooves of the viewfinder eyepiece from above to correct individual eyesight. With them, eyeglass wearers can photograph without glasses.

The A-1's eyepiece has a standard dioptic adjustment of -1 for normal eyesight. The following 10 kinds of dioptic adjustment lenses are optional accessories: +3, +2, +1.5, +1, +0.5, 0, -0.5, -2, -3 and -4 (diopters). The specified diopters of these lenses are recorded as the real power when attached to the camera, reflecting the -1 power of the camera's viewfinder.

You could select the appropriate dioptic lens by choosing the one closest to the number of diopters in your glasses prescription. But, we propose that you actually look

through the viewfinder after placing the dioptic lens over the eyepiece to be sure you have the best one.

Angle Finders A2 and B

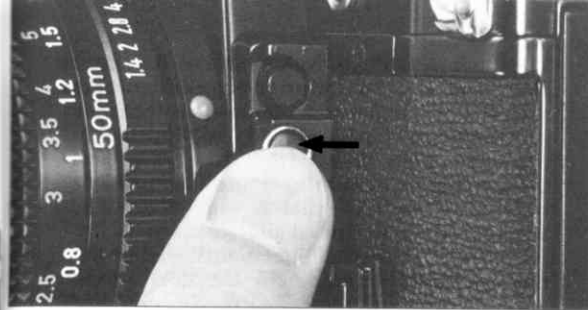
There are some types of photographic subjects for which viewing them through the eye-level viewfinder of the camera is uncomfortable. This is particularly true in the fields of copying, close-ups, photomacrography and photomicrography. Then it might be more convenient to mount one of these angle finders over the camera's eyepiece. Both angle finders rotate 90° for comfortable viewing from above or from the side.

Angle Finder A2 gives a correct image top-to-bottom but reversed left-to-right while the more sophisticated Angle Finder B gives a completely normal image. Both show the entire field of view as well as viewfinder information.



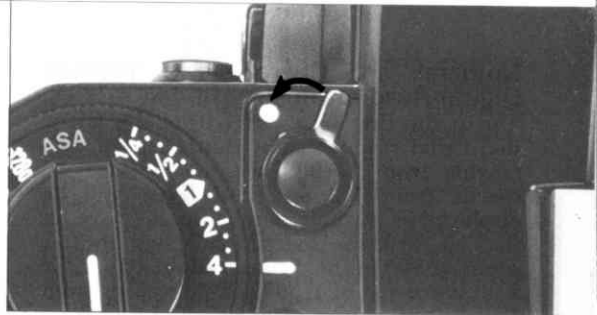
Magnifier S

The Magnifier S inserts into the grooves of the viewfinder eyepiece with its adapter to give a 2.5X magnification of the center of the viewing area for precision focusing in close-up work and wide-angle photography. Its power is adjustable to your eyesight within a range of +4 to -4 diopters. Its adapter is hinged so that the magnifier can be swung upward from the eyepiece after focusing, leaving the entire screen image visible.



brightness, the degree of LED illumination changes in four stages depending on the brightness of the subject seen in the viewfinder. When the subject is brighter, the LED brightness is slightly higher, and it is slightly lower with a darker subject. As a result, the LED maintains an almost consistent degree of brightness to the human eye.

The viewfinder information signal is transmitted to the display every half second. Accordingly, in rapidly varying light conditions, the changes in aperture or shutter speed will be indicated slightly behind time. This is a concession to the adjustment limitations of the human eye, which in no way affects exposure timing.



Cancelling the Viewfinder Display

With the A-1, you have the option of turning off the viewfinder display altogether. This can be done simply by turning the viewfinder display lever to the white dot. Metering is taking place and the shutter can be released for a correctly exposed image even when the display is switched off, but it saves battery power and gives you absolute freedom to focus and compose the image undisturbed.

Numerals and Characters Composing Digital Readout in Viewfinder

Up to the first four digits from the left in the digital readout show shutter speed data ranging from 1/1000 sec. to 30 sec. All speeds from 1/2 sec. and faster will be displayed as a whole number as they are on the AT dial so that an indicated shutter speed of 500 in the digital readout stands for a shutter speed of 1/500 sec. All speeds from 1 sec. and slower will be displayed as a whole number followed by a second mark (") so that an indicated shutter speed of 8" in the digital readout stands for a real shutter speed of 8 sec. When you are in

4 sec. → 4 " 1/4 sec. → 4

aperture priority AE and the camera is calculating the shutter speed, it is possible for intermediate shutter speeds that are not on the AT dial to show up in the viewfinder. In this case, you may see such shutter speeds as 750 (1/750 sec.) or 0" 7 (0.7 sec.) displayed in the viewfinder. It is impossible to set the AT dial to an intermediate shutter speed.

1/750 sec. → 7 5 0 0.7 sec. → 0 " 7

The next two digits following the first four from the left for shutter speed data are reserved for aperture data. The possible apertures to be displayed in the digital readout range from f/1.2 to f/32 even though the minimum aperture it is possible to set on the AT dial is only f/22. The aperture data in the digital readout is displayed in 1/2 f/stop increments, giving numerical values standing for the dots on the aperture scale of the AT dial. An indicated aperture of 9.5, for instance, in the viewfinder stands for the dot between f/8 and f/11 on the AT dial aperture scale. These half f/stops are approximations which are not always exactly halfway between the full f/stops.

f/9.5 → 9 . 5

Although both shutter speed and aperture are indicated in the viewfinder in each 1/2 step increment, they are actually controlled by the camera steplessly for greatest possible precision.

There are other possible displays, including M, buLb, F, bu F, and a flashing EEEE EE. "M" is the last digit on the right in the digital readout. It appears when the camera is not set for AE control. "F" or "bu F" supplements or replaces the shutter speed data in the digital readout when the camera

is set for flash photography while "buLb" replaces the shutter speed data when the AT dial shutter speed scale is set to "B". "M" is also displayed at the "B" setting. The flashing "EEEE EE" appears to warn of error in the stopping-down process and will be explained in more detail later in this instruction booklet.

When switching from one priority to another under the same exposure conditions, it is possible that the new camera-selected variable will differ a half step from the corresponding previously manually-selected value. For instance, a combination of 1/250 sec. and f/5.6 in the shutter priority AE mode may become 1/180 sec. at f/5.6 in the aperture priority AE mode under the same conditions. This is due to the fact that the camera-selected value is rounded off to half steps in the display. However, since the camera actually controls its variable steplessly, this seeming discrepancy will have no effect upon exposure.

Incorrect Exposure Warnings

The types of incorrect exposure warnings depend on what AE mode you are using.

1. In shutter priority AE mode

When exposure is incorrect, the LED digital readout for aperture flashes on and off. Underexposure

Usually the digital readout for aperture

flashes showing the lens maximum aperture to indicate underexposure. At very low shutter speeds, it is possible for a different exposure, turn the AT dial to as lower shutter speed.

Overexposure

Whenever any aperture smaller than f/16 (that is, 19 to 32) appears in the readout, it will always be flashing on and off. Whether or not this indicates overexposure depends on the lens minimum aperture. If the minimum aperture of the lens is equal to or smaller than the flashing aperture, exposure will be correct. If the lens minimum aperture is larger than the flashing aperture, increase the shutter speed for correct exposure.

There is one exception to the above which occurs when the minimum aperture of the lens is f/32. Since f/32 is the smallest aperture which can appear in the readout, it is not immediately apparent whether exposure is correct or not. To find out, increase the shutter speed until the readout shows a flashing f/22. At that point, you may reduce the shutter speed one step for correct exposure at f/32.

There is a rare case where f/16 may flash on and off in the viewfinder. If you are using a lens with an f/16 minimum aperture, the image may be overexposed, so increase the

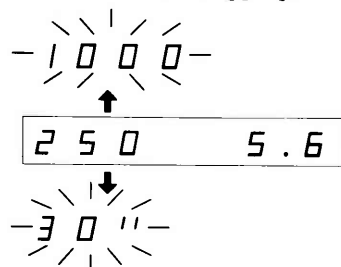
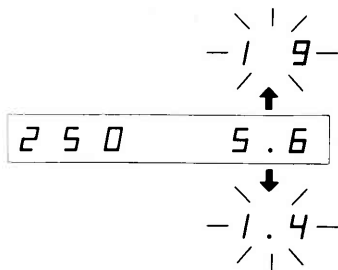
shutter speed. If your lens has a smaller minimum aperture, exposure will be correct.

Outside the Meter Coupling Range

When the light level is so low that it would be outside the meter coupling range regardless of the shutter speed you set, the set shutter speed will flash on and off along with the aperture in the viewfinder. When the light level is too high, a small aperture will flash on and off even when the AT dial is set to the highest shutter speed. In these cases, shooting in the shutter priority AE mode is only possible if you can change the light level accordingly or switch to a more appropriate film.

When the highest shutter speed of 1000 flashes in the viewfinder to indicate overexposure, turn the AT dial to a smaller aperture. When a shutter speed of the slow range flashes in the viewfinder to indicate underexposure, turn the AT dial to a larger aperture. The shutter speed value that flashes to indicate underexposure depends on the speed (maximum aperture) of the lens and ISO film speed.

As in the shutter priority AE mode, when the light level is too low, both shutter speed and aperture data will flash on and off to indicate that no matter what aperture you set, the meter will not couple in an AE mode. When the light level is too high, the shutter speed will flash on and off even when the AT dial is set to the minimum aperture possible. Again, AE photography is still possible if you change the light level or switch to a more appropriate film.

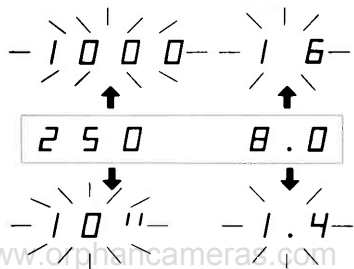


2. In aperture priority AE mode

When exposure is incorrect, the LED digital readout for shutter speed flashes on and off.

3. In programmed AE mode

Both the shutter speed LED and the aperture LED flash on and off simultaneously to warn you of overexposure as well as underexposure. In taking exposure readings, the shutter speed and aperture combination changes as they are programmed in the camera. However, if there should be too little light to be exposed correctly even at the maximum aperture, the maximum aperture of the lens in use will remain fixed, and the camera will work in aperture priority AE, controlling the shutter speed to produce correct exposure. If the camera exceeds the limit of the meter coupling range, the shutter speed and aperture LED values that flash depend on the lens used and the ISO film speed. When the data flashes on and off in programmed AE, photography is no longer possible in that mode unless you change the light level or switch to a more appropriate film.



Double-Check Before Shooting

1. Is the aperture ring of the lens set to the "A" mark?
2. Have you checked the battery power level?
3. Have you properly set the AE mode selector?

The Tv setting (shutter priority AE) is preferable for action photography. The Av (aperture priority AE) is preferable for still photography.)

4. Did you set the film speed properly?

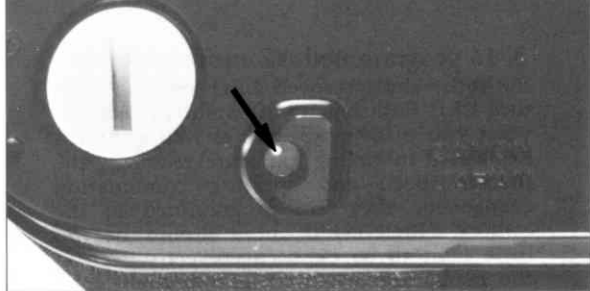
This is essential to the proper operation of the camera. See that the memo holder tells the type of film loaded in the camera.

5. Is the film properly loaded?

You can use the rewind knob as an indicator that the film is properly loaded. Every time you advance the film, the rewind knob should rotate.

6. Is the main switch set to the "A" mark?

At the "L" setting, the shutter button is locked.



Shutter Release

Once you have focused, composed your picture and confirmed correct exposure, gently press the shutter button all the way down to set the shutter in motion. When the shutter is released, the exposure will be stored, so there is no problem in removing your finger from the shutter button even in the slow speed range.

If you press the shutter button in one very quick stroke, the viewfinder display will become invisible and the camera's function may be delayed for an instant, but exposure metering will not be affected and your picture will be accurately exposed. If you press the shutter button with an extremely quick punch, it is possible that the shutter will not be released at all. For proper function and the least camera shake, it is best to press the shutter button gently.

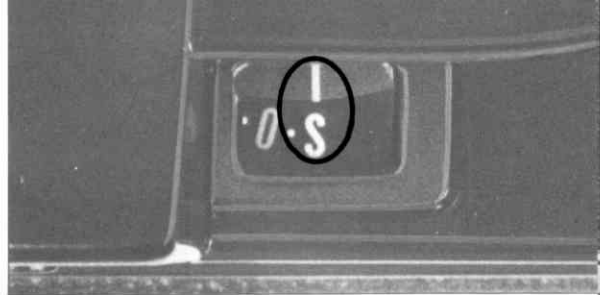
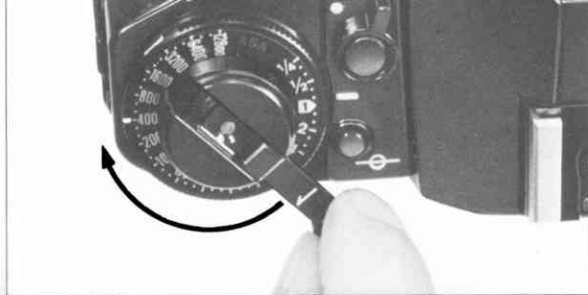
To cancel shutter release, press the battery

check button or return the main switch to "L". Shutter release **WILL NOT** be cancelled in the slow shutter speed range simply by turning the AT dial to a higher shutter speed.

Pressing the shutter button will not make an exposure if the film is only partially advanced or if battery power is too low.

Rewinding the Film

When you have reached the end of the film, the film advance lever will stop suddenly before the end of its stroke. **DO NOT** force the film advance lever beyond this point or the film may become detached from the cartridge or tear, making rewinding impossible and necessitating handling the film in total darkness or a changing bag. Also **DO NOT** open the camera's back cover before rewinding or your film will be totally exposed.



To rewind the film, press in the film rewind button on the bottom of the camera. Once you have pressed it, you can remove your finger. Unfold the film rewind crank and turn it in the direction of the small arrow until the frame counter reaches the "S" mark. At this point only the film leader will not be rewound into the cartridge. *Stop rewinding here if the film is only partially exposed and you want to reload it at some other time. Also, some developing labs prefer the leader to remain protruding, and the leader may also prevent any stray light from entering the cartridge.* Otherwise you may continue to rewind past "S" until you feel no further pressure on the rewind crank. Now pull the rewind knob up sharply to open the back cover and remove the cartridge. It is preferable to place the exposed cartridge back in the canister and to have it developed as soon as possible.

Frame Counter

The frame counter of the A-1 is an additive type. It advances to the next number, indicating the number of frames already exposed, each time the film is wound. It will not advance higher than 38. The numbers 0, 20 and 36 are marked in orange, the latter two as a warning of the end or near-end of films having those numbers of frames. This frame counter is also coupled with the rewinding operation so that it counts back the frame numbers as the film is rewound. It automatically returns to "S" upon opening the camera's back cover.

The frame counter will conveniently stop during multiple exposures so that several exposures on the same frame will not be counted as separately exposed frames.