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[back to my "Orphancameras" manuals /flash and light meter site](#)

Only one "donation" needed per manual, not per multiple section of a manual !

The large manuals are split only for easy download size.

2 Tele Program AE (TELE 1 – TELE 3)

Tele program's shutter speed/aperture combination is programmed so that the camera chooses the fastest possible shutter speed. It is effective for emphasizing the main subject by making the depth-of-field shallower. It is also well suited to stopping action in, for example, sports photography. When using a telephoto lens, a small amount of blur due to camera shake, becomes accentuated because of its long focal length. This program's fast shutter speeds reduce the risk of blur.

WIDE P-3



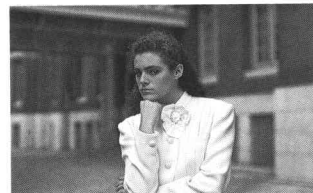
3 Wide Program AE (WIDE 1 – WIDE 3)

The wide program chooses the smallest possible aperture, thus allowing a deep depth-of-field. It is suitable for bringing not only the main subject but also the background and foreground into sharp focus and so is appropriate for landscapes or large group shots.

STANDARD



TELE P-3



There are four other shooting modes, though the FD lens must be removed from the "A" mark.

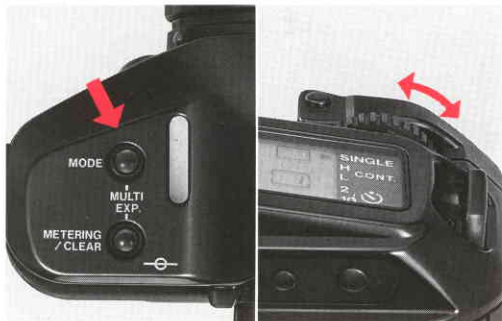
Manual Override (→ p.74)

Stopped-down AE (→ p.75)

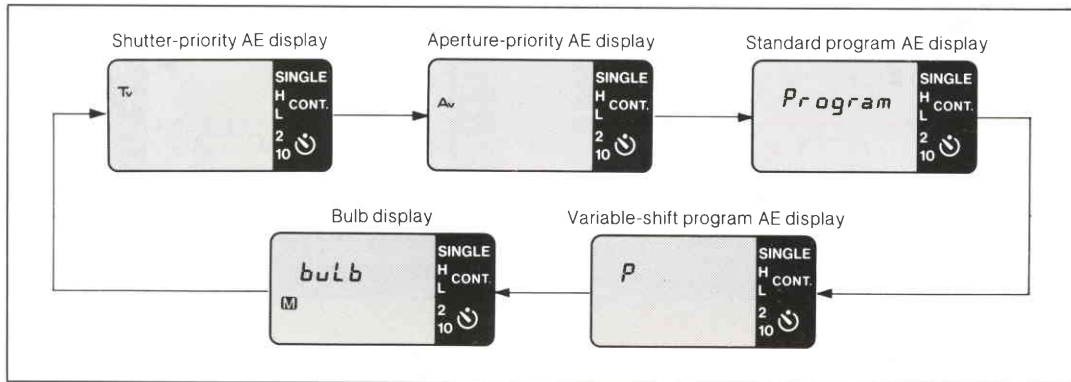
Stopped-down (Fixed Index) Metering (→ p.78)

Bulb (→ p.80)

<Setting Each Mode>



To select a mode, while pressing the shooting mode selector, turn the electronic input dial until the desired shooting mode appears on the display panel. (The display moves in the following cycle.)



1. Setting the shutter-priority AE

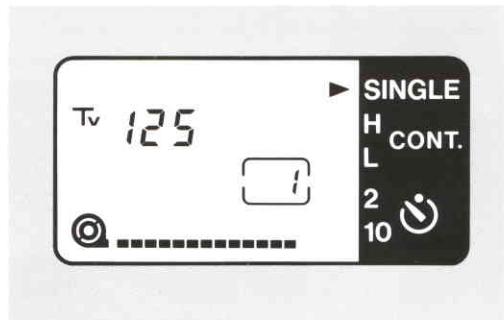
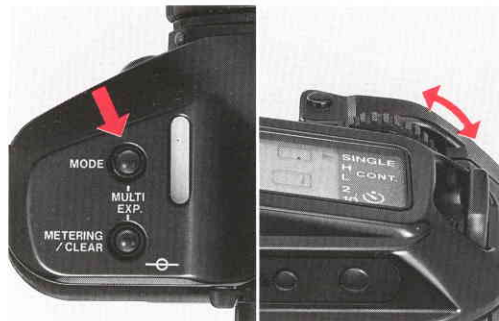
- 1) While pressing the shooting mode selector, turn the electronic input dial until the "Tv" indicating the shutter-priority AE appears on the display panel.
- 2) Remove your finger from the shooting mode selector. At this point, the initial shutter speed setting is always 125. (1/125 sec)
- 3) Turn the electronic input dial until the desired shutter speed is displayed on the display panel.

Shutter speed display

4000	3000	2000	1500	1000	750	500	350	250					
180	125	90	60	45	30	20	15	10	8	6	4	3	2
0"7	1"	1"5	2"	3"	4"	6"	8"	10"	15"	20"	30"		

Note

The shutter speed is automatically set to 1/125 sec when switching to the shutter-priority AE mode from other modes.



2. Setting the aperture-priority AE

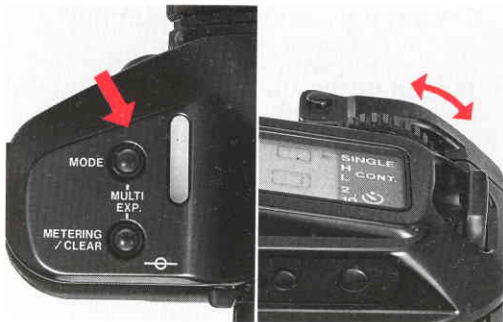
- 1) While pressing the shooting mode selector, turn the electronic input dial until the "Av" indicating the aperture-priority AE appears on the display panel.
- 2) Remove your finger from the shooting mode selector. At this point, the initial aperture setting is always 5.6. (f/5.6)
- 3) Turn the electronic input dial until the desired aperture value is displayed on the display panel.

Aperture value display

1.2 1.4 1.8 2.0 2.5 2.8 3.5 4 4.5 5.6 6.7 8 9.5
11 13 16 19 22 27 32

Notes

- The aperture is automatically set to f/5.6 when switching to the aperture-priority AE mode from other modes.
- Be sure that the aperture value set on the display panel is between the maximum and minimum aperture of your lens. Otherwise exposure will be incorrect. (e.g. when using the FD 50 mm f/1.4 lens, set the aperture between f/1.4 and f/22.)

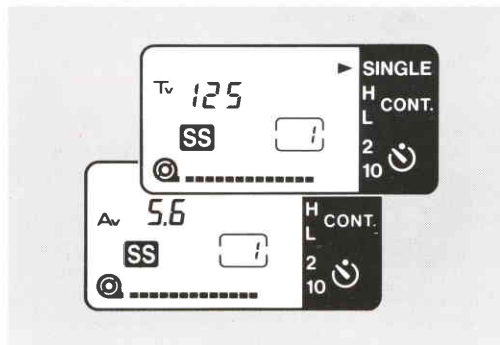


< Setting the Safety Shift Function >

- 1) Set the T90 to the shutter-priority AE (Tv) or the aperture-priority AE (Av).
- 2) Press both the film speed button and the exposure compensation button at the same time for approx. 1 sec.
- 3) The " **SS** " mark indicating the safety shift will then appear on the display panel and the safety shift function will be activated.
- 4) To clear the safety shift function, press both the film speed button and the exposure compensation button again until the " **SS** " disappears.

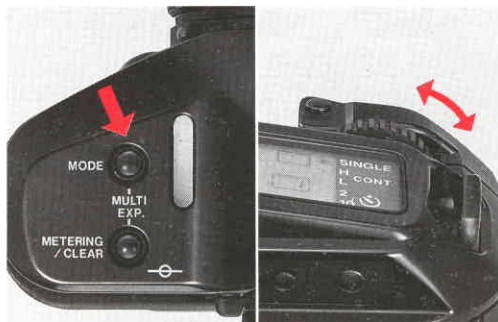
Note

Setting the safety shift function is possible in any mode, but is effective only in the shutter-priority AE and the aperture-priority AE modes.



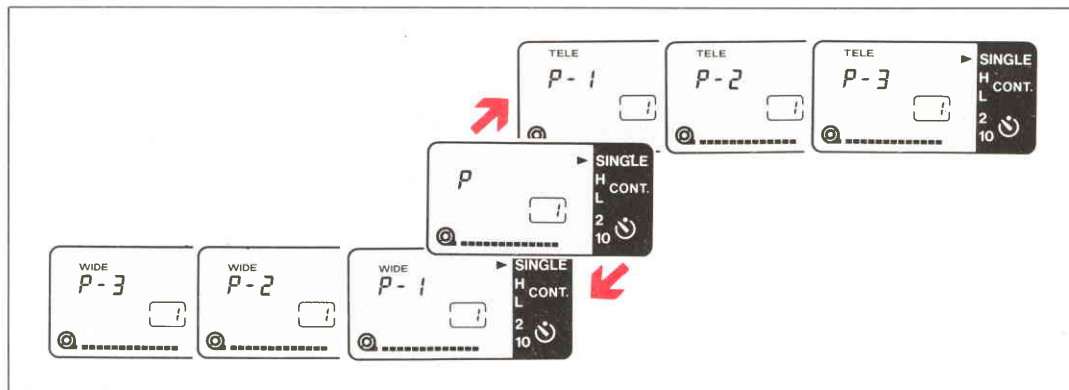
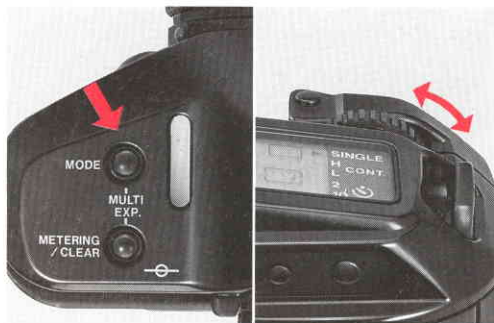
3. Setting the standard program AE

- 1) While pressing the shooting mode selector, turn the electronic input dial until "Program" appears on the display panel.
- 2) Remove your finger from the shooting mode selector.



4. Setting the variable-shift program AE

- 1) While pressing the shooting mode selector, turn the electronic input dial until "P" indicating the variable-shift program AE appears on the display panel.
- 2) Remove your finger from the shooting mode selector.
- 3) Turn the electronic input dial until the desired program AE (any one of seven modes) is displayed on the display panel.



3. Setting the Metering Mode

< Metering Modes of the T90 >

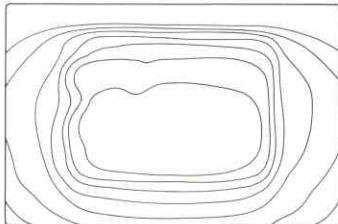
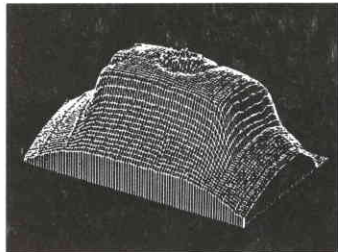
With the T90, the metering mode, i.e., the metering sensitivity pattern, can be changed regardless of which lens you use or the subject you are shooting.

Do not use a linear polarization filter.

1 Center-weighted average metering

This is a convenient metering system for general photography under normal shooting conditions. The meter measures the entire viewing area, emphasizing the central portion where the subject is most likely to be and diminishing toward the edges.

(Metering sensitivity distribution pattern)

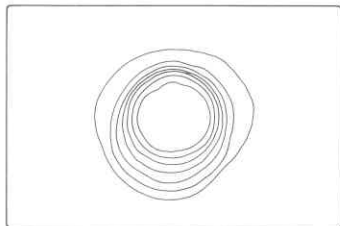
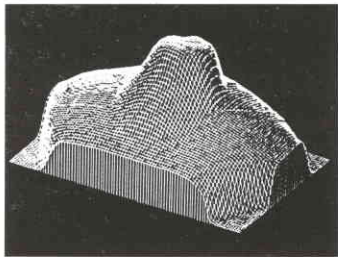


(When using FD 50 mm f/1.4 lens)

2 Partial metering

This system, with its 13% coverage of the field of view, allows you to meter only the central portion of the image in the viewfinder. It is particularly effective for metering backlit subjects, such as a person in front of a bright window.

(Metering sensitivity distribution pattern)

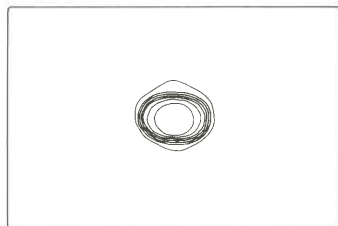
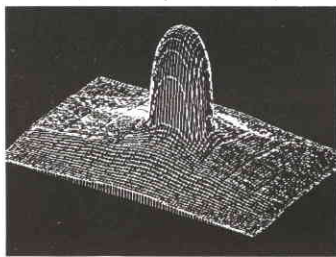


(When using FD 50 mm f/1.4 lens)

3 Spot metering

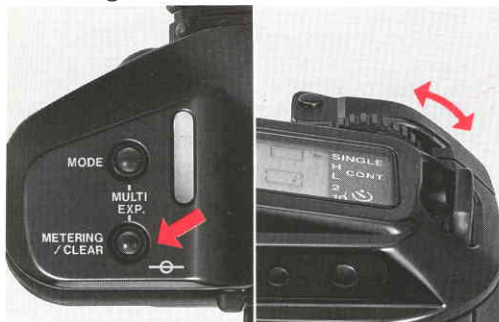
Spot metering is ideal for subjects which require precise measurement. Since the metering area is 2.7% of the field of view, you can select a small, exact area from the overall scene. It is especially advantageous for stage photography, photomacrography and photomicrography.

(Metering sensitivity distribution pattern)

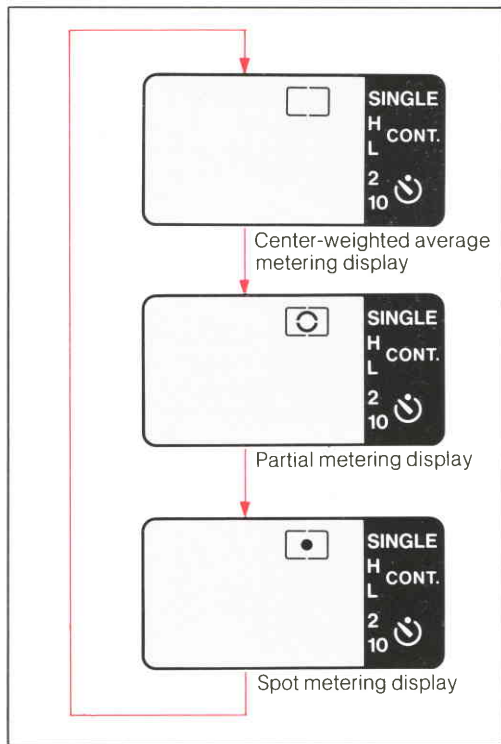


(When using FD 50 mm f/1.4 lens)

<Setting Each Mode >



While pressing the metering mode selector, turn the electronic input dial until the desired metering mode appears on the display panel. (The display moves cyclically.)



4. How to Use the Metering Modes

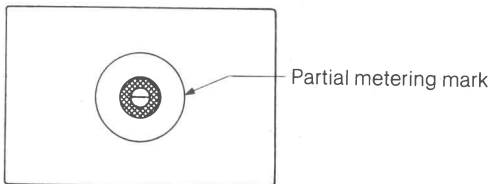
1 Center-weighted average metering

This is the normal setting position used for general photography, and is recommended especially for AE photography.

2 Partial metering

With this metering system, the AE lock mechanism is on as long as the shutter button is being pressed halfway down.

- 1) Put the main subject in the center of the viewfinder so that the partial metering mark covers it.
- 2) Press the shutter button halfway and compose the picture. A red "*" mark (AE lock LED) will then appear in the viewfinder.
 - If desired, while continuing to hold down the shutter button, recompose the picture so that the subject is not in the center. The same exposure value is kept locked in the camera's memory by the AE lock function even when the picture is recomposed.



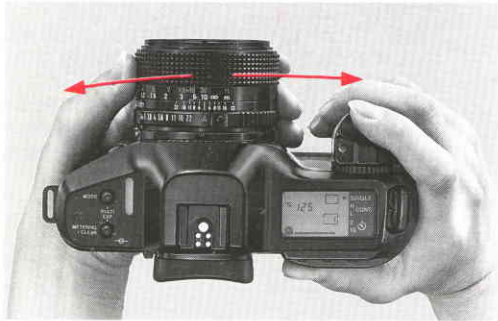


< Sequential AE lock photography >

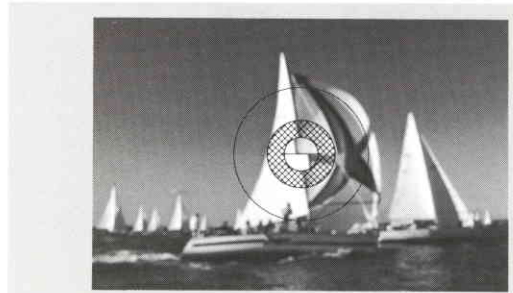
When shooting continuously using the AE lock mechanism in the same lighting conditions (e.g. backlit subjects), it is not necessary to meter the subject for each shot as long as you keep the shutter button pressed halfway down between exposures.

Please see p.64 on how to use the spot metering mode.

5. Focusing



1) While looking into the viewfinder, turn the focusing ring until the main subject is sharp.



2) The subject is in focus when the upper and lower halves of the central split rangefinder merge to become one unbroken image.



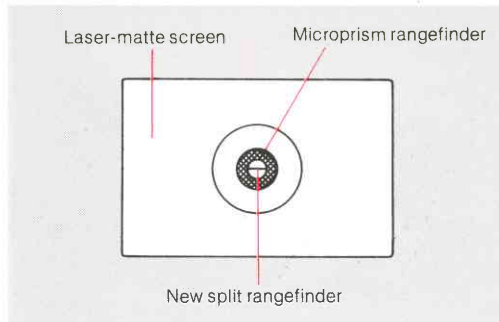
In focus

New split rangefinder

This divides the subject in half horizontally. The subject is in focus when the two halves merge to become one unbroken image.

Microprism rangefinder

This breaks the subject into tiny fragments, causing a shimmering effect when out of focus. The subject is in focus when the image in the microprism ring is clear and not shimmering.

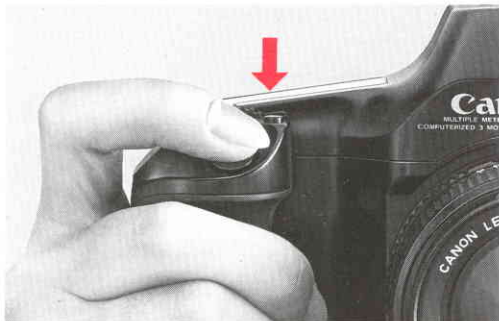


Laser-matte screen

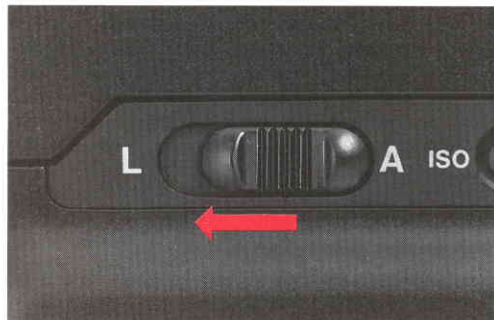
This screen can be used on all surfaces. The subject is in focus when the image is not fuzzy.

The T90's focusing screen can be changed according to the subject you are shooting and the lens in use. (→ p.104)

6. Shooting



- 1) Gently press the shutter button halfway down to check the exposure. Exposure will be correct unless the aperture value and/or the shutter speed blink in the viewfinder.
- 2) Compose the picture and gently press the shutter button all the way to take the picture. The film will be automatically advanced to the next frame.
 - If the correct exposure is not possible, the aperture value and/or the shutter speed will blink in the viewfinder to warn you of incorrect exposure
 - Please see p.111 on the exposure warning displays and how to correct each case.



- 3) Slide the main switch to "L" to turn off the camera when shooting is finished.
 - Press the shutter button GENTLY for the least camera shake.
 - When shooting continuously, the viewfinder information will not be displayed. Your picture, however, will be correctly exposed since exposure will not be affected.
 - The film will be automatically advanced to the next frame after exposure and the frame counter on the display panel also indicates the next frame to be exposed.

<Viewfinder Information Examples >

Correct exposure (solid)

1 2 5 5 . 6

Shutter speed

Aperture

Incorrect exposure (blinking)

1 2 5 1 . 4

Shutter speed

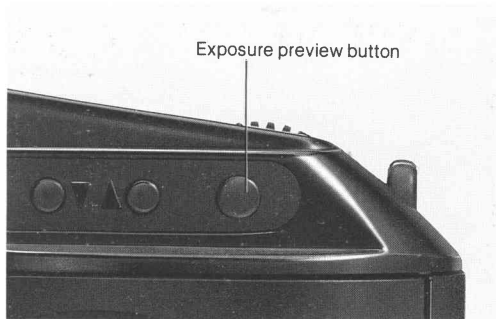
Aperture

8 '' 1 . 4

Shutter speed

Aperture

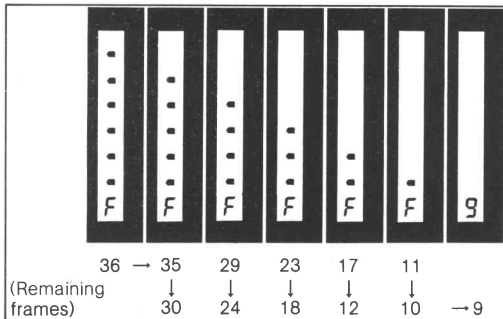
<Exposure Preview Button >



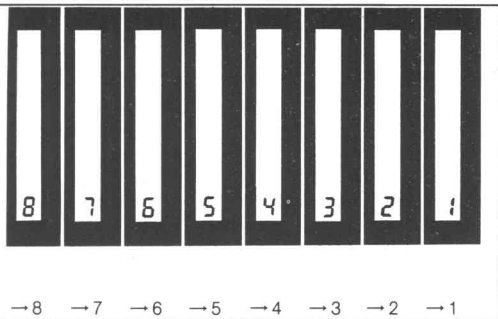
When you only want to check the exposure, press the exposure preview button instead of the shutter button. When the exposure preview button is pressed, the viewfinder information is turned on just as when the shutter button is pressed halfway.

- The exposure preview button is arranged so that you can press it while turning the electronic input dial.

<Remaining Frame Counter >



You can check how many frames remain any time, even during shooting, as displayed on the right of the viewfinder.

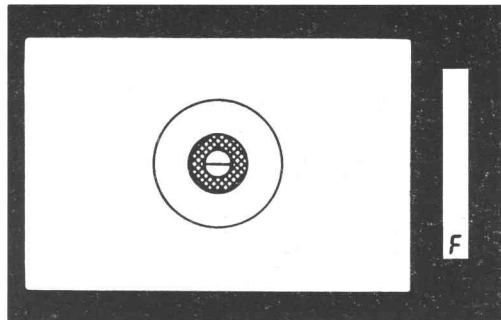


1 When using a film with DX code

The remaining frames are displayed on the right of the viewfinder by the "■" mark, "F" (Film) and the figure.

- The figure display appears only when the remaining frames has become less than 9.

When the T90 is used in the spot metering mode, the stopped-down (fixed index) metering mode or the FE lock mode together with the Speedlite 300TL, "■" mark is not displayed. (Only "F" and the figures from 1 to 9 are displayed.)



2 When using a film without DX code

The display is only "F".

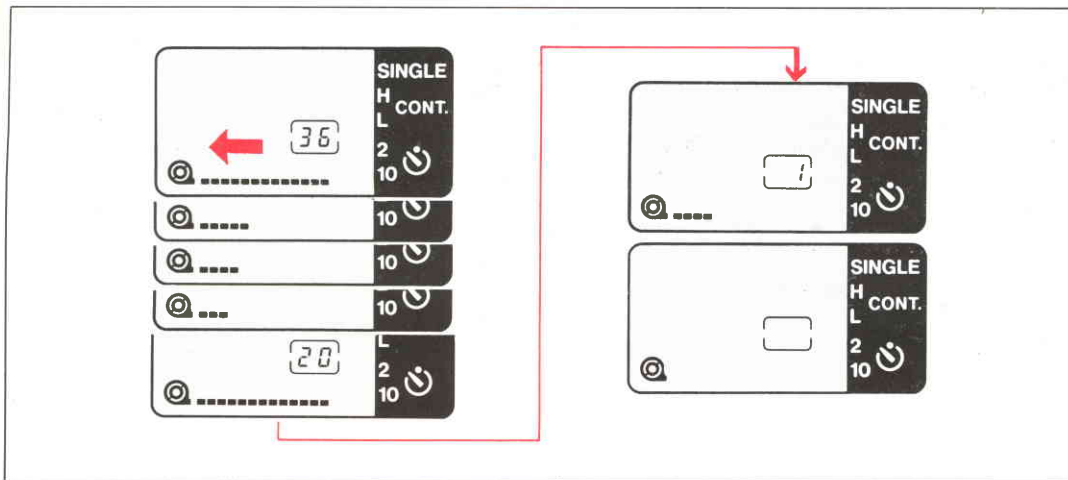
<Viewfinder Display Selector >



All the viewfinder information (both the right and the bottom of the viewfinder) can be turned off to save battery consumption. The whole display panel and the viewfinder information on the right can be illuminated to make shooting in the dark easier. Use the viewfinder display selector inside the palm wing.

- : The entire viewfinder information can be turned ON.
- : The entire viewfinder information can be turned OFF.
- ☀ : The display panel and the viewfinder information on the right are illuminated when the shutter button is pressed half-way.

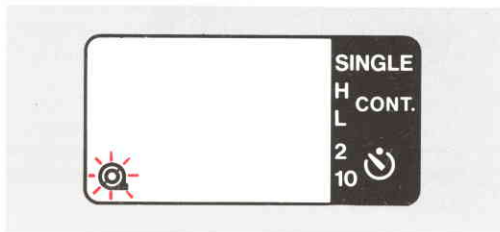
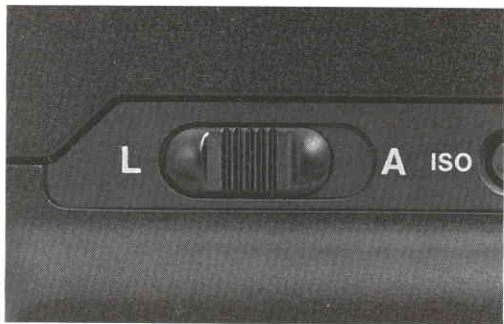
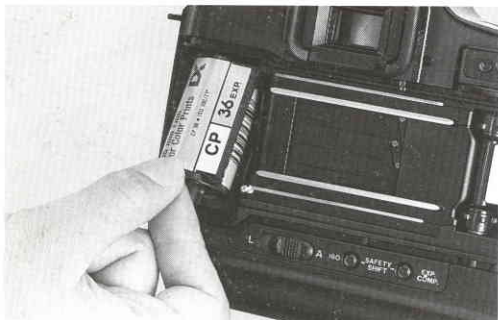
7. Automatic Film Rewind



At the end of the roll, the camera rewinds the film automatically.

1) While the camera is rewinding the film, the film transport bars will move in sequence from right to left to indicate that the film is being rewound. At this time, the frame counter will count down.

2) Film rewind stops automatically when the roll is completely rewound.



3) Open the back cover when the film-load check mark () starts blinking.

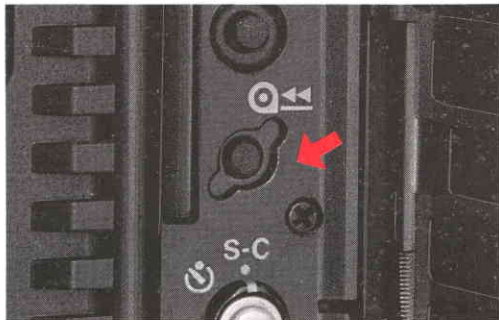
- 4) Remove the film cartridge.
- 5) Slide the main switch to "L" to turn off the camera.


<Manual Film Rewind >



If you want to rewind the film before the end of the roll, manual film rewind is possible.

1) Open the palm wing.



2) As soon as the manual rewind button () is pressed, the camera starts rewinding the film.

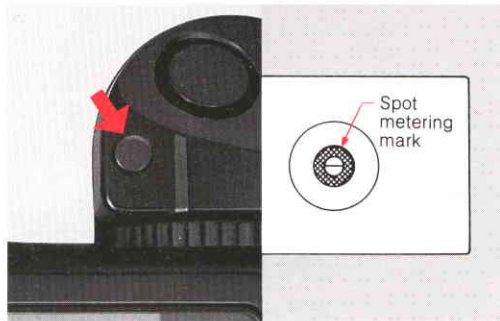
***Shooting with the Lens
Set on “A” Mark
(Intermediate Operation)***

1. Spot Metering

The spot metering can be used in the following three ways:

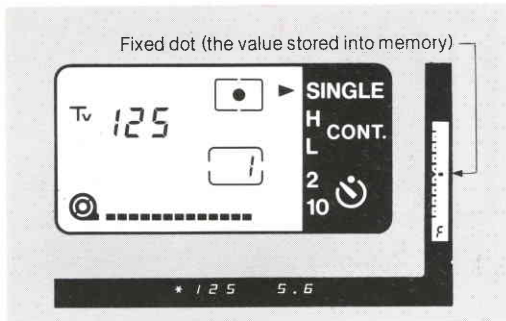
- 1 One-point spot metering
 - 2 Multi-spot metering
 - 3 H/S control
- When the shutter button is pressed halfway, the AE lock function works as well as in the partial metering mode (→p.50), and the sequential AE lock photography is also possible. (→p.51)

1. One-point spot metering

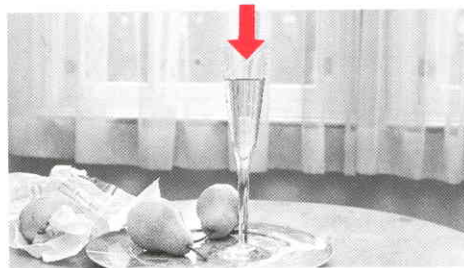
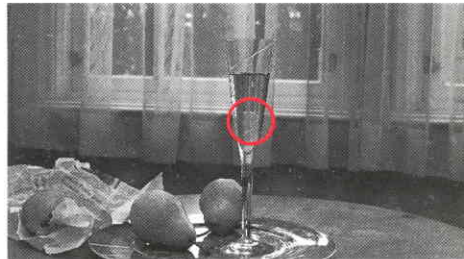


Only one point is measured in the viewfinder.

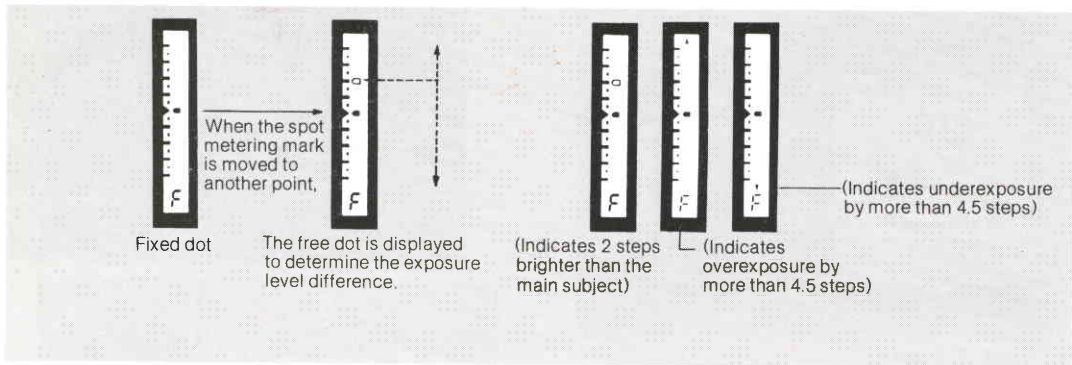
- 1) Put the main subject in the center of the viewfinder so that the spot metering mark covers it.
 - 2) Press the spot metering button. As shown in the photo on the right page, when you want to take a picture of a backlit glass in front of a bright window, press the spot metering button so that it covers the glass. (When the subject with transmitted light is taken, exposure compensation is necessary.)
- When the spot metering button is pressed, both the shutter speed and the aperture are displayed at the bottom of the viewfinder. The fixed dot (●) will then appear at the position of the triangle index on the right of the viewfinder.



- When the spot metering button is pressed, the exposure value is kept locked in the camera's memory for 30 secs after you have removed your finger.
- The exposure value stored into memory in the spot metering mode is cleared under the following conditions:
 1. When more than 30 secs. have elapsed without releasing the shutter after the spot metering button has been pressed and the finger has been removed.
 2. When the metering mode selector is pressed.
 3. When the finger is removed from the shutter button after exposure.



One-point spot metering is also possible by pressing the shutter button halfway. In this case, however, the exposure value is not stored into memory. When you remove your finger from the shutter button, the exposure value is cleared.



< Exposure Level Difference Comparison >

When you move the spot metering mark to another point of the subject after the spot metering button has been pressed, the new metering value (■) will appear to the right of the viewfinder as a free dot. You can check the exposure level difference between the main subject (stored into memory by the fixed dot) and another point of the viewfinder, that exists in the scene before pressing the shutter button.

- The free dot moves in the range of ± 4 steps. If the exposure level difference is ± 4.5 steps or more, the "▲" (+) or "▼" (-) indicator will be displayed instead of the "■" dot.

- In most cases, exposure compensation is necessary for the one-point spot metering. Please read the column of "H/S control" (\rightarrow p.69), too.
- In order to obtain correct exposure in the one-point spot metering, factors such as subject contrast pattern, reflectivity and latitude of the film in use must be carefully considered.

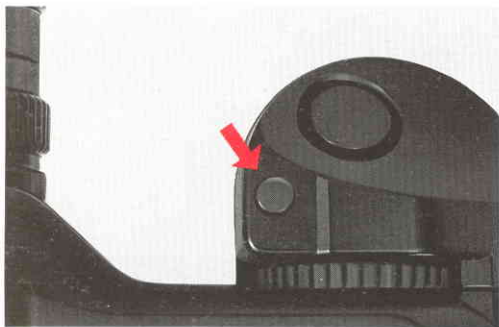
2. Multi-spot metering



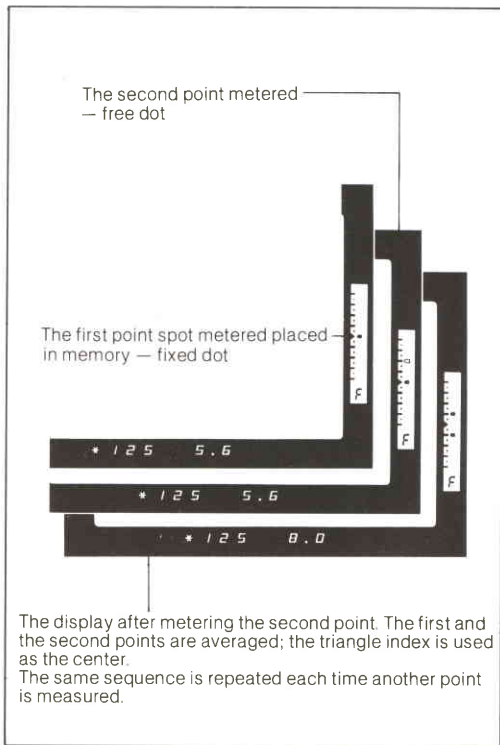
Several points can be measured in the scene in the viewfinder, taking your measuring reference point into account.

- 1) As shown in the photo above, when you just want to obtain correct exposure on her face

and also want to obtain correct exposure even on the background, press the spot metering button twice on her face and once on the background.



- 2) The final exposure is made by averaging each exposure value of the three points. The emphasis of the exposure is put on her face since it is metered twice and the correct exposure can be obtained, while even the exposure on the background can be maintained since it is metered once.
- The digital values of both the shutter speed and the aperture appearing at the bottom of the viewfinder are sequential weighted averages calculated each time a point is metered.
 - The triangle index in the center of the right-hand LCD is also used as the center point around which the other readings also marked by the "■" dot are divided.
 - When three points are measured, three fixed dots are displayed finally.



- The exposure value stored into memory in the multi-spot metering mode is cleared under the following conditions:
 1. When more than 30 secs have elapsed without releasing the shutter after the spot metering button has been pressed last.
 2. When the metering mode selector is pressed.
 3. When the finger is removed from the shutter button after exposure.

Multi-spot metering is only possible by pressing the spot metering button unlike the one-point spot metering. (→ p.65)

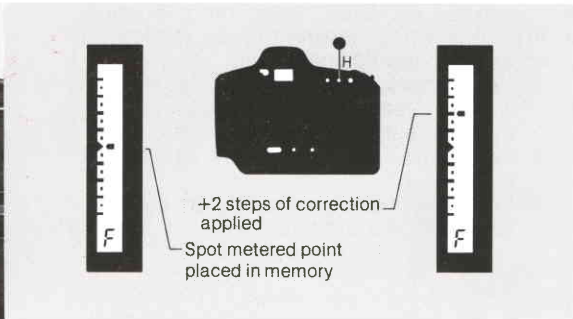
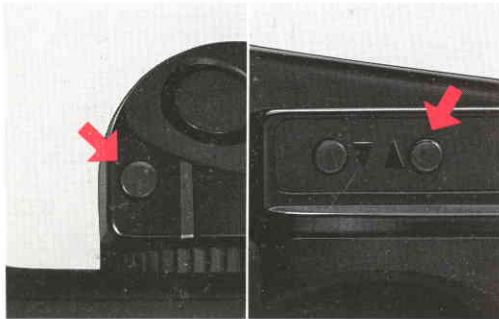
Up to eight points can be metered using the multi-spot metering. Subsequent attempts will be disregarded.

3. H/S control

If your subject is either white or black, the whiteness and the blackness cannot be reproduced faithfully because of their unusual reflectivity of light and the result will both be "gray". The T90's H/S control is advantageous for the exposure compensation in those cases.

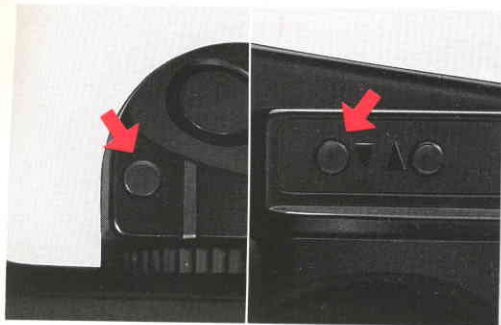
- "H" stands for "highlight" and is used when the subject is white, while "S" stands for "shadow" and is used when it is black.
- The H/S control can be used with both the one-point spot metering and the multi-spot metering. Here is how to use the H/S control in the one-point spot metering explained in consideration of its application.

<Highlight Control >

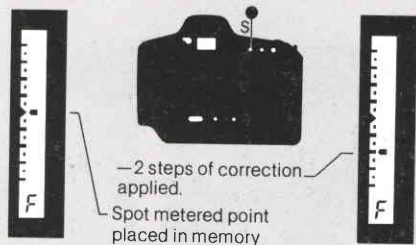


- 1) Press the spot metering button to indicate the fixed dot at the position of the triangle index.
- 2) When the highlight control button at the upper back of the camera is pressed and released, the dot starts moving upward to make compensation. Set the desired amount of compensation according to how bright the subject is.

<Shadow Control >



- 1) Press the spot metering button to indicate the fixed dot at the position of the triangle index.
- 2) When the shadow control button next to the highlight control button is pressed and released, the dot starts moving downward to make compensation. Set the desired amount of compensation according to how dark the subject is.

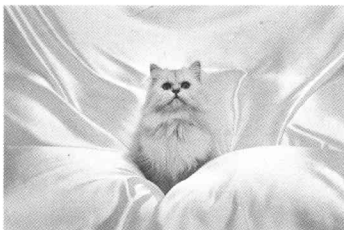


- The range of exposure compensation in the H/S control is up to ± 4 steps. If the amount of compensation is ± 4.5 or more, the "▲" (in the highlight control) or the "▼" (in the shadow control) indicator will be displayed in spite of the "■" dot.
- Each pressing of the H/S control button moves the dot by a 1/2 step. When the button is kept pressed, the dot moves in series by a 1/2 step at approx. 0.3 sec fixed interval.
- The exposure compensation value in the H/S control can be cleared by the same method as the one-point spot metering. (→ p.64)

Highlight Control Examples



0



+2



+2.5

Shadow Control Examples



0



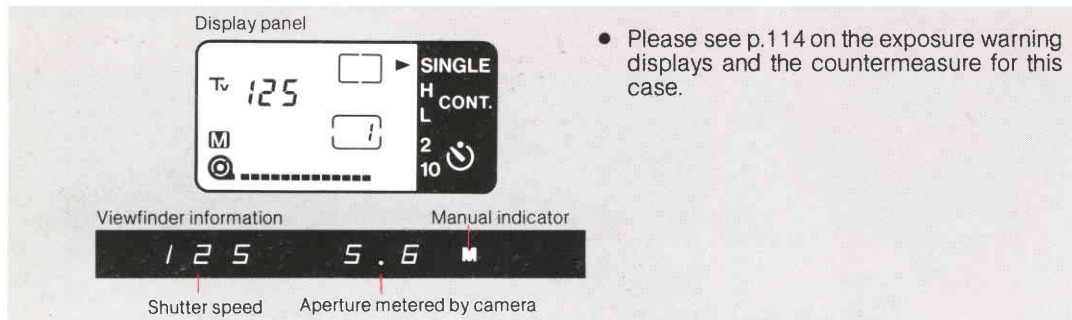
-1



-2

***Shooting with the Lens
off “A” Mark***

1. Manual Override

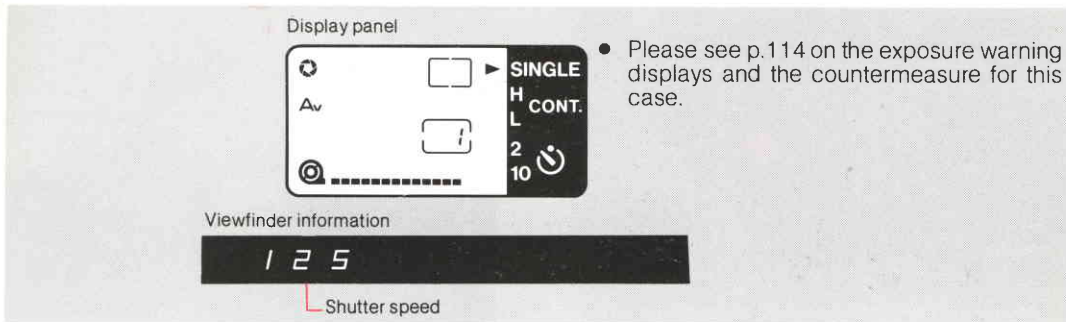


- Please see p.114 on the exposure warning displays and the countermeasure for this case.

This is a creative mode in which you can control exposure by setting both the shutter speed and the aperture as you like.

- 1) Set the display panel to "Tv".
- 2) Set the desired shutter speed by turning the electronic input dial.
- 3) Remove the lens from the "A" mark. An " **M** " will then be displayed on the display panel.
- 4) Set the desired aperture value to the lens manually, referring to the aperture displayed in the viewfinder. You must rely on your own experience for setting the exposure.


2. Stopped-down AE



It is necessary to use the stopped-down AE mode when using close-up accessories which have no FD signal pins, such as extension tubes or bellows in combination with an FD lens. You can take a picture while confirming the depth-of-field by pushing in the stop-down lever. This mode is also useful when using the Canon Reflex Lens or FL lenses and when using simple FD lenses.

- 1) Set the display panel to any one of "Av", "P", or "Program".
- 2) When using an FD lens, remove the aperture ring from the "A" mark.
- 3) Set the desired aperture value to the lens manually.



- 4) Push in the stop-down lever. A "  " mark will then be displayed on the display panel.
- 5) The camera sets the shutter speed automatically according to the aperture you have set on the lens.



If your eye will not be at the viewfinder the moment you press the shutter button, close the eyepiece shutter by pushing the eyepiece shutter lever, to avoid stray light from entering.

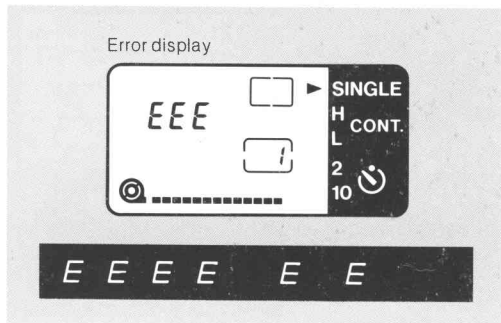
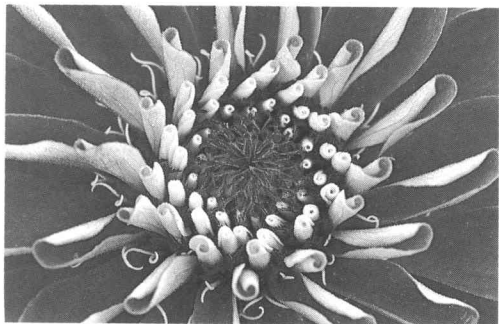
When using the stopped-down metering with an FD lens attached directly to the camera body, use an aperture of f/2.8 or smaller.

<Checking Depth-of-Field >

When you check the depth-of-field with the FD lens, stop down the aperture by pushing in the stop-down lever as mentioned above. When you look through the viewfinder with the lever pushed in, you can see the range of sharpness, i.e. the depth-of-field.

<Error Display >

When you use the stopped-down AE mode with the FD lens, do not push in the stop-down lever with the lens set on the "A" mark. If you do, "E" mark indicating error will appear to warn you of incorrect operation (EEEE EE in the viewfinder and EEE on the display panel), and the shutter is locked.



In this case, either push in the stop-down lever again to clear the stopped-down AE or remove the lens from the "A" mark. The error display will then disappear.

3. Stopped-down (Fixed Index) Metering



- Please see p.115 on the exposure warning displays and the countermeasure for this case.

Correct exposure

125 □ □ M

Underexposure

125 0 P M

Overexposure

125 C L M

The shooting objectives of this mode are the same as for stopped-down AE mode, but this mode needs manual operation.

- 1) Set the display panel to "Tv".
- 2) Set the desired shutter speed by turning the electronic input dial.
- 3) When using an FD lens, remove the aperture ring from the "A" mark.
- 4) Push in the stop-down lever. An "⊙" mark will then be displayed on the display panel.

- 5) Check the exposure in the viewfinder.
 - In the viewfinder, any one of "OP", "OO", or "CL" is displayed as well as the shutter speed you have set. The meaning of each display is as follows:
 - OP : underexposure (Open the aperture.)
 - OO : correct exposure
 - CL : overexposure (Close the aperture.)

- 6) Turn the aperture ring of the lens until the "00" is displayed.
- 7) Press the shutter button.
 - To the right of the viewfinder, "■" dot is displayed and it moves upward or downward as the aperture is changed. When the "00" mark is displayed at the bottom of the viewfinder, the "■" is aligned with the triangle index.

- If the "OP" is still displayed when the aperture ring is turned to the maximum aperture of your lens, set a slower shutter speed on the display panel.
- If the "LL" is still displayed when the aperture ring is turned to the minimum aperture of your lens, set a faster shutter speed.

- Notes for this mode and the situations in which the error is displayed are all the same as for stopped-down AE mode. (→ p.75)
 underexposure display: indicates that the aperture must be opened.
 overexposure display: indicates that the aperture must be closed.

<Manual Diaphragm Control>



Stopped-down metering is necessary whenever you insert accessories, such as Extension Tubes M, between the camera and the FD lens for close-up photography.

- 1) Insert the slot of the accessory manual diaphragm adapter (optionally available) over the tip of the automatic aperture lever at the rear of the lens.
- 2) Push the lever counterclockwise and lower the adapter into the groove.
- 3) Mount the lens as it is onto the accessory.

Do not mount the lens with the manual diaphragm adapter directly onto the camera or the Auto Bellows etc.