

A new generation.

Canon AE-1





A new generation. Electronic system photography catches up with technology.

Imagine with the mere flick of one finger. . .power surging instantly throughout your SLR's sophisticated electronic circuitry, activating a vast array of complex sensory functions. . .immediate response metering with shutter-speed priority. . .easy-to-read exposure information right in the viewfinder. . .split-second automatic exposure (AE) aperture setting. . .silent electromagnetic shutter release. . .power film winding at two frames per second for continuous shooting. . .automatic flash synchronization at 1/60 of a second. . .perfect flash exposure with the preselected aperture automatically set. . .soft triggering of the 10-second electronic self-timer. . .automatic data recording. All at once. And all with one finger.

Incredible as it may seem, this is the new Canon AE-1. It is the culmination of truly outstanding technological achievements, a camera that has completely revolutionized the modern concept of the SLR right down to its very foundations. It is an experience of new possibilities and incomparable advantages that photographers have heretofore never known.

This is, to be sure, the remarkable Canon AE-1. And the dawn of a new age. . .



The World's Premier Electronic SLR

The whole concept of an SLR camera will never be the same. With the debut of the Canon AE-1, a new chapter in the history of the single lens reflex camera has been written.

For the first time in the world, camera functions are under the command of a Central Processing Unit (CPU). Applied electronics used for control automation have achieved undreamed-of high levels in the AE-1. Electronics are used not only for determining the exposure, but also for automatic control of practically every working part.

Furthermore, completely automatically controlled operation has become a reality with the various accessories that make the AE-1 the world's foremost system camera. These are features totally unprecedented in the history of SLR cameras. For example, the Power Winder A can be quickly attached for power-driven, automatic film winding at a pace of two frames per second to handle any action situation, no matter how fast the movement. The automatic exposure CPU-controlled Speedlite 155A, the first of its kind in the world, requires but an instant to mount it on the camera, extending the automatic functions of the camera all the way into the twilight.

The spontaneous performance that the AE-1 delivers will actually change the technique of shooting with an SLR, from deliberate, fixed photography to an active pursuit of the subject, no matter how fast the action. From a static approach to true involvement with the moving subject. We call this new way of shooting "rapid-fire" shooting.

And, it is definitely the direction in which future photography is headed. The AE-1 has revolutionized conventional photography, taking the leadership in a new generation of SLR design.

1 The SLR with a Central Processing Unit

- * The World's Latest Breakthroughs in Electronic Technology.
- * Central Processing Unit.
- * Functional Power Distribution.
- * Automated Precision Assembly.

2 True Shutter-Speed Priority AE

- * Immediate Response Metering.

3 Exceptional Versatility Plus Incomparable Handling Ease

- * Incredibly Lightweight, Compact Body.
- * Quick, 120° Short-Throw Film Advance Lever.
- * Convenient Finger Grip Bar for Better Stability.
- * Easy-to-Read Viewfinder Information.
- * Automatic Exposure Preview with the Shutter Release Button.
- * New, Unique Electronic Self-Timer.
- * New Film Frame Counter

4 Electronic Command of an Entire Photographic System

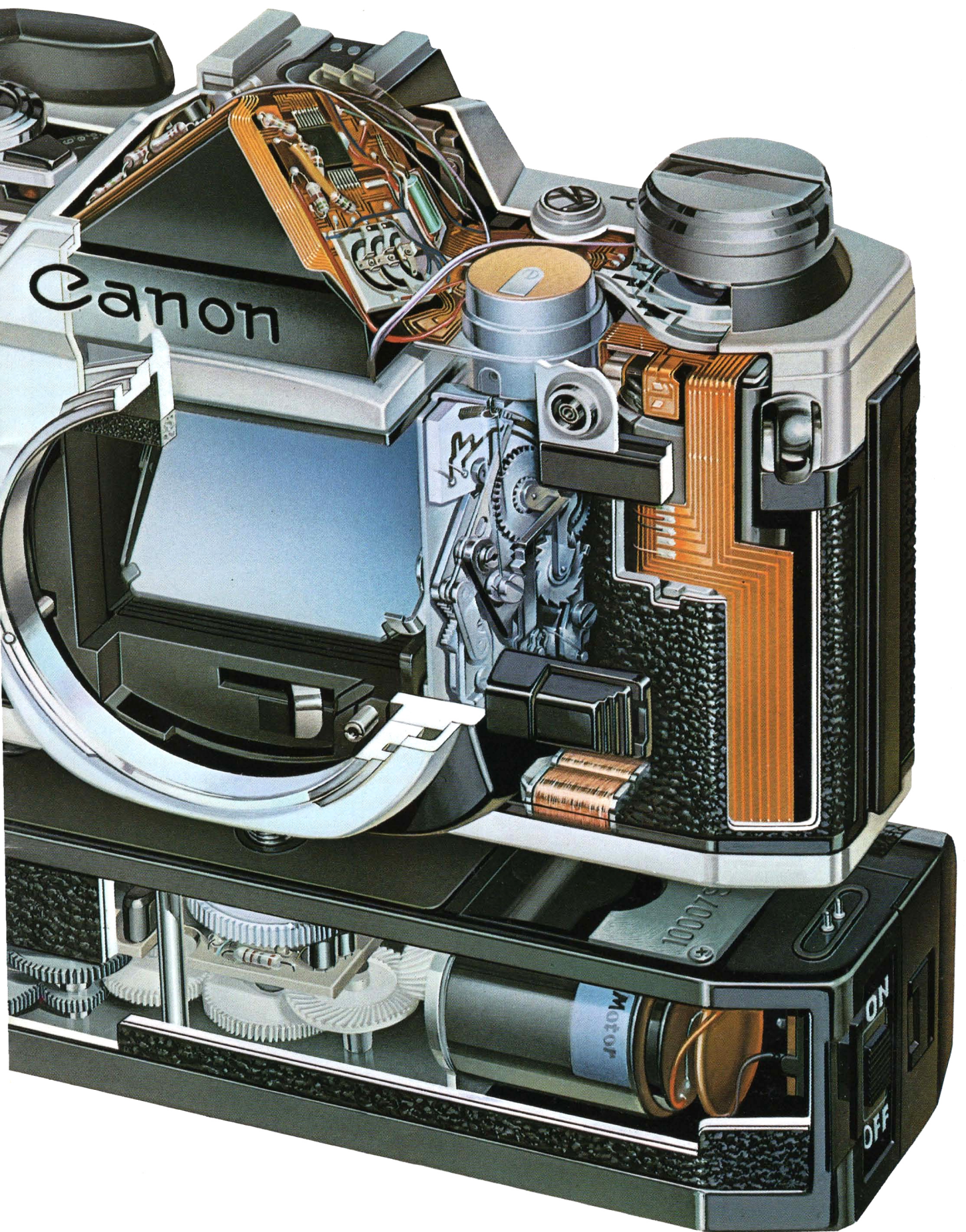
- **Power Winder A for Continuous Shooting.**
- * Automatic Exposure with Power Film Advance.
- * Continuous or Single Frame Shooting.
- * Compact for Great Ease of Handling.
- * Four Penlight-Battery Power Source.
- * Shutter Release Button Control.
- * Film End Warning.
- **CPU-programmed Flash Photography.**
- * Automation of Shutter Speed and Aperture Setting.
- * Aperture Selection Switch.

5 Classifying Photographs with the Data Back A

6 Making the Most of Canon FD Lenses

7 Accessories for All Kinds of Photographic Purposes

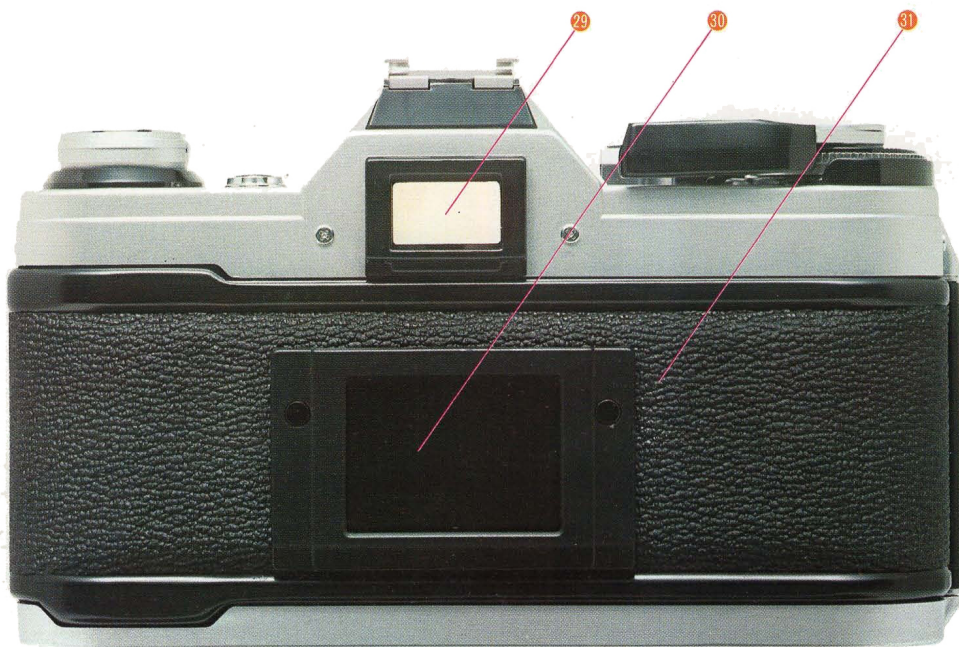




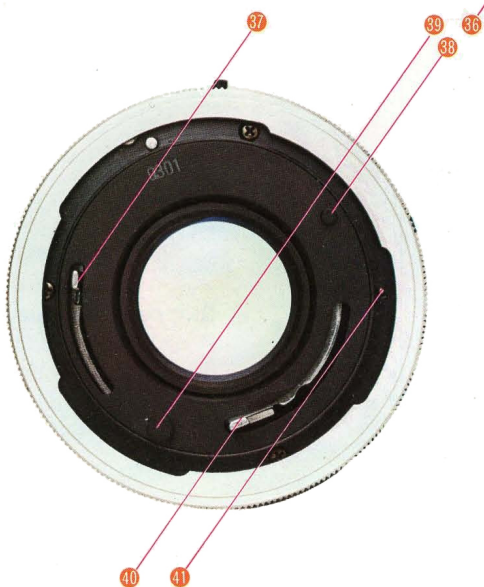
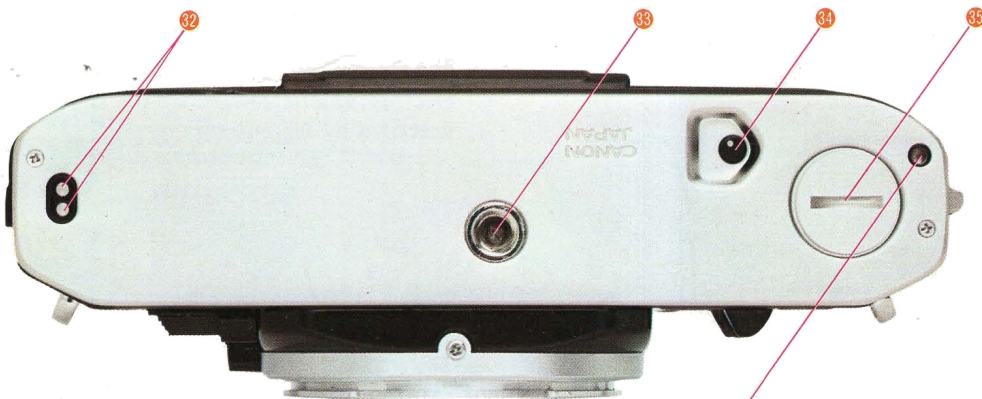
An Anatomy of Performance

- ① Shutter Dial Guard
- ② Film Speed Set Ring
- ③ Self-Timer Lamp
- ④ Aperture Signal Coupling Lever
- ⑤ Backlight Control Switch
- ⑥ Flash Terminal
- ⑦ Finger Grip Bar/Battery Chamber Cover
- ⑧ Alignment Hole for the EE Switch Pin
- ⑨ Stopped-Down Coupling Lever
- ⑩ Lens Speed Adjustment Pin
- ⑪ Exposure Preview Switch
- ⑫ Stopped-Down Lever
- ⑬ Shutter Speed Dial
- ⑭ Film Advance Lever
- ⑮ Synchronization Contact
- ⑯ Battery Check Button
- ⑰ Film Plane Indicator
- ⑱ Film Rewind Crank
- ⑲ Film Speed Window
- ⑳ Frame Counter
- ㉑ Shutter Release Button
- ㉒ Electronic Self-Timer Lever/Shutter Release Lock
- ㉓ Breech-Lock Mount Ring
- ㉔ EE Lock Pin
- ㉕ "A" Mark and Aperture Ring
- ㉖ Depth-of-Field Scale
- ㉗ Distance Scale
- ㉘ Focusing Ring

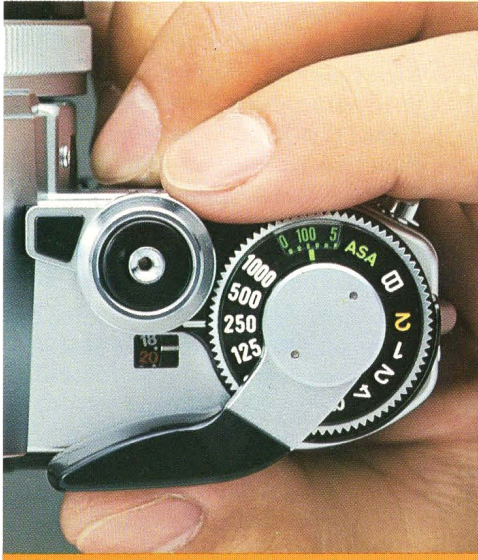




- 29 Viewfinder
- 30 Memo Holder
- 31 Back Cover
- 32 Winder Terminals
- 33 Tripod Socket
- 34 Film Rewind Button
- 35 Winder Coupler Cover
- 36 Winder Guide Hole
- 37 Aperture Signal Lever
- 38 Reserved Pin
- 39 Full Aperture Signal Pin
- 40 Automatic/Manual Aperture Lever
- 41 EE Switch Pin

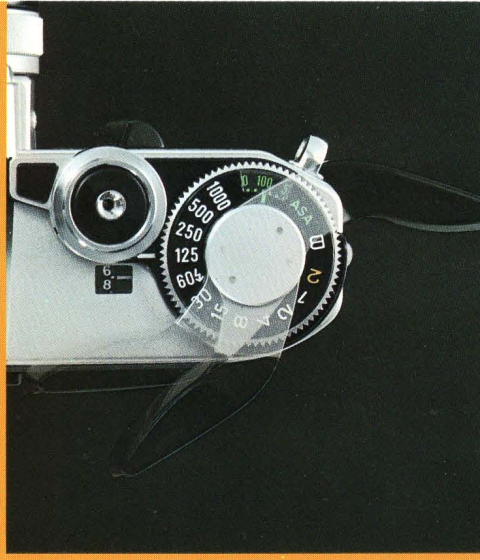


Main Features



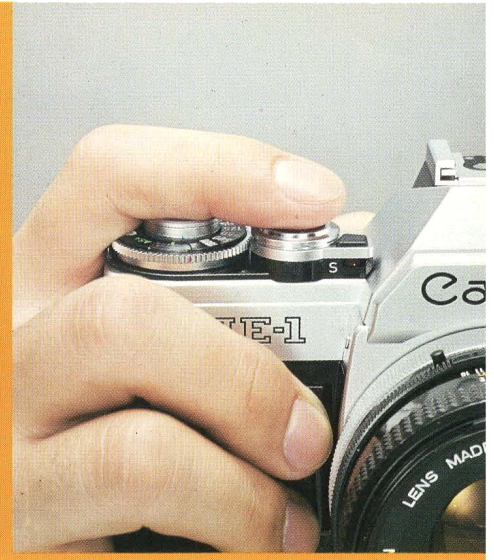
Large Shutter Speed Dial with Protective Guard

The shutter speed dial is especially large to enable finger-edge control as the camera is held. A protective guard prevents unintentional movement of the dial, and the ASA ring is located underneath.



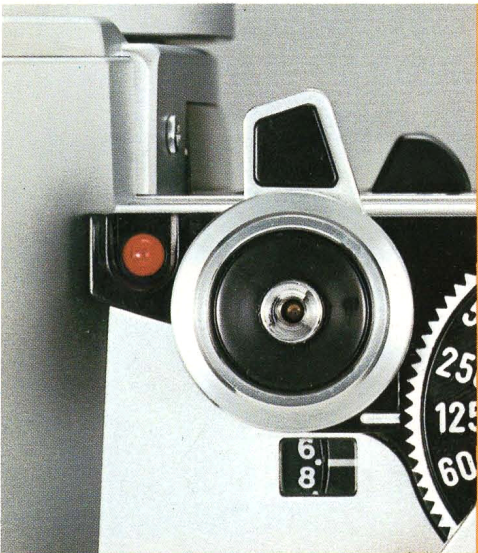
Comfortable, Short-Throw Film Advance Lever

A short-throw, 120° film advance lever allows the film to be rapidly advanced for action photography. It also features a comfortably molded, plastic tip.



Two-Step Electromagnetic Shutter Release Button

This special two-step shutter release button permits one-finger, sequential control of all of the camera's automatic functions. A semi-depression activates the exposure meter; a full depression triggers electromagnetic release of the shutter, preceded by AE aperture setting.



Electronic Self-Timer

The governor mechanism of the conventional self-timer has been replaced by solid state circuitry in the AE-1. The electronic self-timer releases the shutter after a lag of 10 seconds, while a red LED signal flashes to indicate its operation.



Convenient Finger Grip Bar

The raised contour of the battery chamber cover conveniently provides a firm, handy grip for excellent security in action situations.



Stopped-Down Lever

A convenient sliding stopped-down lever is provided for checking the depth-of-field. It also features a locking button which can fix it into stopped-down position.



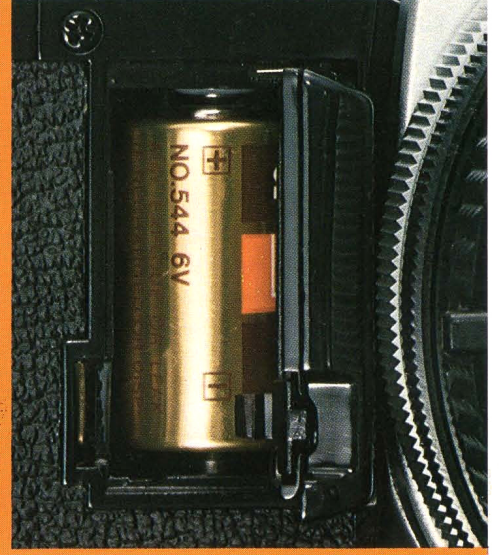
Backlight Control and Exposure Preview Switches

The AE-1 features a backlight exposure compensation of +1.5 f/stops with a convenient button switch for shooting against bright light. Below it is the exposure preview switch to check the AE aperture setting that is displayed in the viewfinder.



Battery Check Button

By pressing the battery check button, the battery's charge can be ascertained by reading the exposure meter needle in the viewfinder. It also serves to cancel operation of the electronic self-timer.



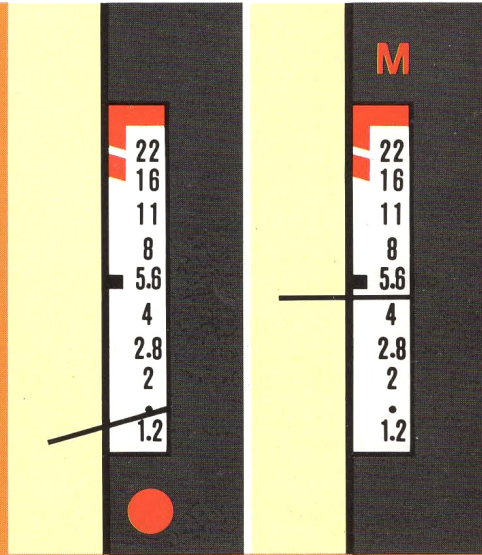
Compact, 6V Battery

Only one, compact 6V silver oxide or alkaline manganese battery is required to power all of the AE-1's marvelous electronic features. Its large voltage capacity is actually 4 times that of conventional cadmium batteries.



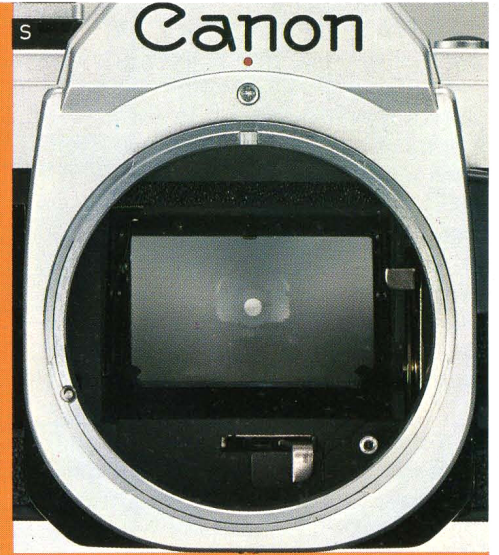
Handy Memo Holder

A memo holder is featured on the back cover. The end tab of the film carton may be inserted as a memo to indicate the film type and number of exposures.



Complete Information in the Viewfinder

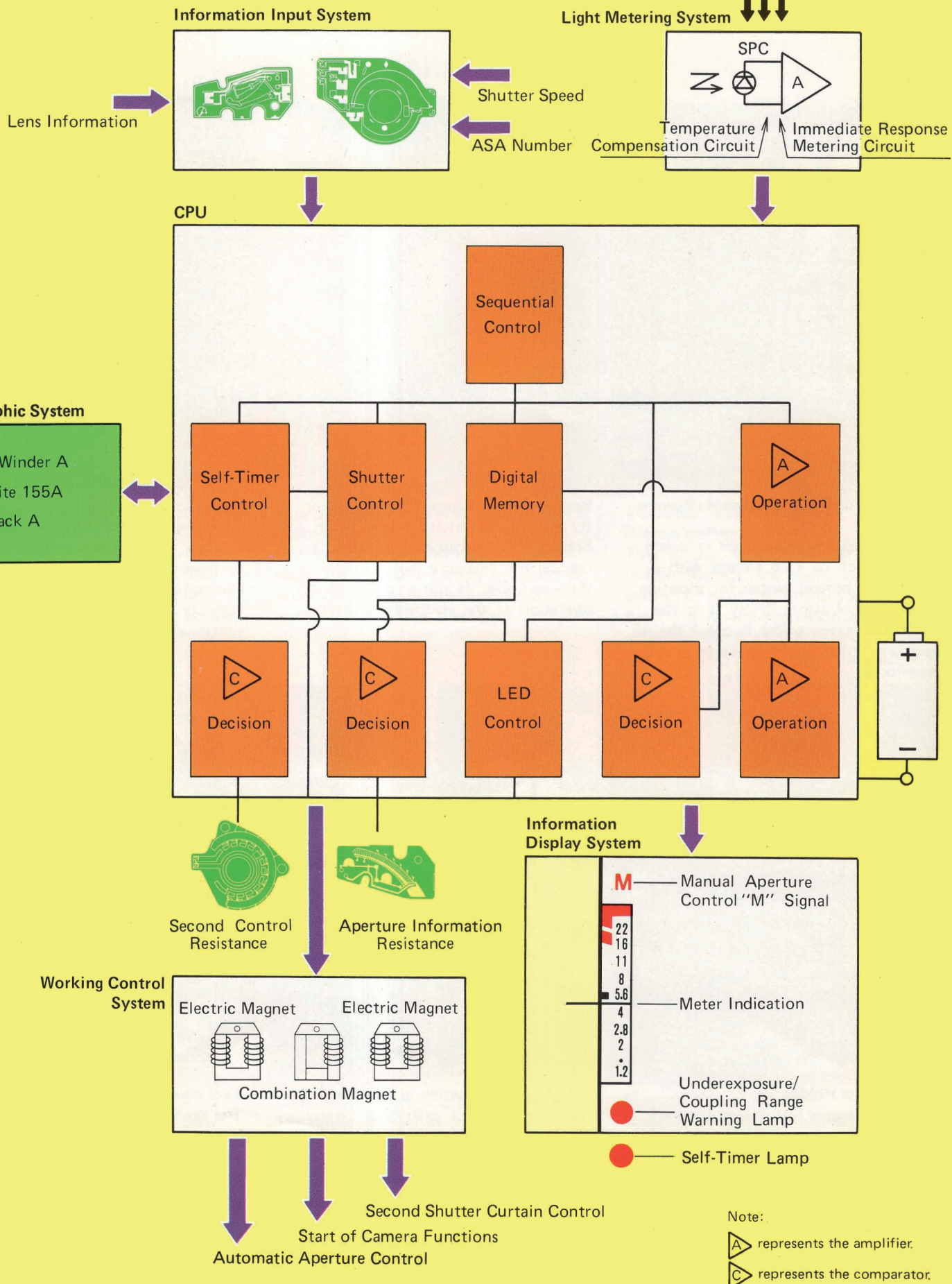
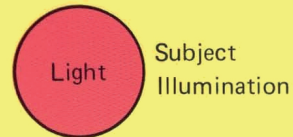
The AE aperture setting is clearly displayed in the viewfinder aperture scale which includes two red warning zones to indicate overexposure. Flashing red LED signals give vivid visual indication of manual ("M") aperture setting and underexposure ("●", below the aperture scale).



Exclusive Canon Breech-Lock Mount

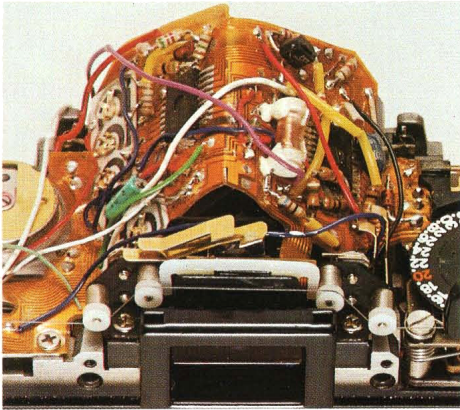
The breech-lock mount, found on every high-quality Canon FD lens, enables rapid changes from one lens to the next, according to the demands of the situation.

Canon AE-1 Electronic Circuit Block Diagram



Note:
 represents the amplifier.
 represents the comparator.

1 The SLR with a Central Processing Unit



The World's Latest Breakthroughs in Electronic Technology

The new Canon AE-1 has adopted some of the world's latest breakthroughs in electronic technology to completely revolutionize the concept of the SLR camera, totally transforming it into an integrated system of incredible precision. As nearly as possible, formerly mechanical controls have been replaced by smaller, electronically automated ones which render more reliable service and lightning-fast precision performance. Such a sophisticated degree of electronic control enables the AE-1 to instantly give a total response to any shooting situation. All major performance features are automatic, especially those essential for actual shooting, such as light metering, exposure computation, memory, information transmission and display, film winding, flash system, warning signals and safety mechanisms.

The AE-1's electronic circuitry has several times higher integration than could be possible by solely using conventional LSI (Large Scale Integration). Its special I²L (Integrated Injection Logic) performs functions that are equivalent to well over a thousand elements, all within a tiny 3mm square chip. This technological breakthrough by Canon has made it possible to reduce the size of the circuitry and minimize power consumption.

The CPU and the light metering circuit have been incorporated into two ICs and one LSI, enabling greatly improved performance and accuracy while eliminating conventional mechanical parts. One of these ICs contain the highly sensitive silicon photocell and MOS-BI logarithmic amplifier, a design which assures quick response, amazing accuracy and excellent

reliability.

In addition, hyperbolic function resistance, far more effective than conventional linear resistance, provides excellent, full-range performance. Canon is the first to employ this high-precision, variable resistance in the electronic circuitry design of an SLR. Another innovation is the adoption of a flexible wiring substrate with the CPU. This completes all electrical contacts between its circuitry, eliminating the former need for wire conductors and solder connections, with the results being greater circuit reliability and compactness.

Central Processing Unit

The CPU, the single most essential component in any modern computer, makes its debut for the first time in an SLR with the AE-1. It is the brain of the sophisticated electronic system which handles all signal information and gives all commands for an immediate response to any picture-taking situation. Not only is its performance incomparably precise and reliable, it is virtually infallible. It is composed of highly integrated circuits including two bi-polar ICs and an LSI which contains more than a thousand elements. This achievement owes greatly to the adoption of I²L.

As opposed to the conventional transmission of exposure information by mechanical means, all information is converted into electrical signals. Thus, the CPU is able to extremely accurately process a complex variety of information simultaneously ("real time", in computer terminology) so that every camera function totally responds to the actual shooting conditions.

The operational amplifier of the CPU is equivalent to a miniature analog computer and the computed value is stored in the digital mode.

Since data stored in the digital mode is not affected by any external conditions, the indicated value given by the CPU is always unerringly transmitted to the aperture control system.

At the same time that the CPU memorizes a computed value, it issues commands. First, it indicates the appropriate aperture value, shown by the meter needle in the viewfinder information display, and activates the flashing LED

should it be required. Next, the computed value is sent to the analog comparator of the aperture control system and the signal sent back from it again determines the preset aperture. Upon tripping the electronic shutter, the CPU activates the travel of the first shutter curtain and after the time interval corresponding to the selected shutter speed it activates closing of the second shutter curtain in flawless sequence. With such excellent electronic precision, you will never miss a shot with the AE-1.

Functional Power Distribution

The Canon AE-1 features electronic controls for a higher degree of speed, accuracy, reliability, compactness and vibrationless operation than could be otherwise possible. Yet, despite its many electronic features, the AE-1 offers remarkable battery economy through the use of LSI and I²L circuitry and sequential control of the camera's functions. The power is sequentially switched on-off only upon depression of the two-step shutter release button so that power consumption is absolutely minimized. In this way, it is supplied only to the necessary systems as required and automatically discontinued to systems not in actual use. Another innovation is the application of a combination magnet, that is one constructed of an electromagnet and a permanent magnet, for the electromechanical interface of the AE-1's electronic shutter. Since it can be triggered with only a slight electrical pulse, it also results in a tremendous power saving. Thus, normal life of the 6V silver oxide battery is prolonged approximately one year, or approximately 20,000 exposures.

Automated Precision Assembly

The internal mechanism of the AE-1 is comprised of 5 main units and 25 sub-units. Such modularization permits automated assembly for higher quality and precision. Furthermore, the computer has been extensively utilized, both in the design and production processes, setting impeccable tolerance standards for the manufacturing, assembly and inspection of each component at every step of the way. An IC tester controlled by computer checks 230 crucial points essential to the performance of the LSI and IC circuitry and insures perfect quality control.



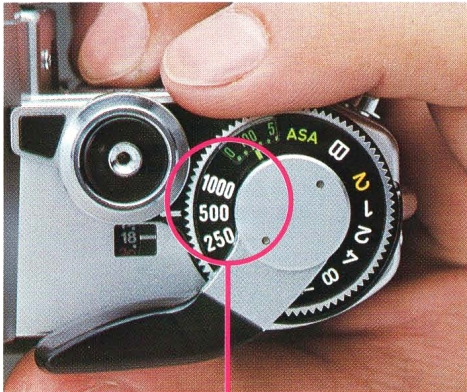
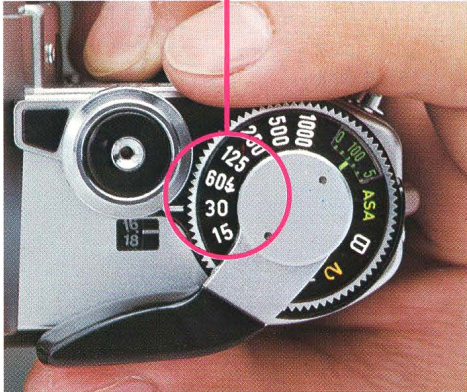
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2 True Shutter-Speed Priority AE

1/30 sec.

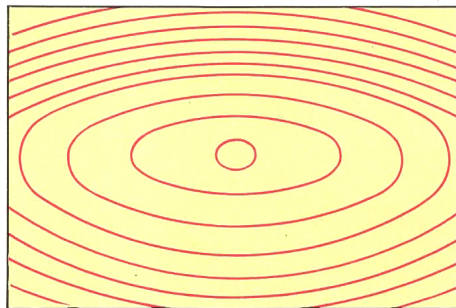


1/500 sec.

Automatic exposure (AE) lends its greatest advantage in action photography, where time-consuming manual adjustments become virtually impossible. And in order to capture action at its fastest, the right shutter speed is much more important than the aperture opening which merely influences the depth-of-field. Thus, shutter-speed priority AE has proven to perform far more effectively than the aperture priority systems of other camera makers. And this is exactly what the AE-1 offers.

Shutter-speed priority AE allows you to call the shots. It puts you on top of the action. Whether you want to dramatically stop time and freeze action or create an impressionistic blur of motion, the Canon AE-1 leaves the choice to you. Just select the shutter speed according to the precise image you have in mind. The CPU then automatically determines the correct aperture which is displayed right before you in the viewfinder. Upon releasing the shutter, perfect exposure is guaranteed. And with just the right effect you intended.

Moreover, the Canon AE-1 uses the Central Emphasis Metering method for which Canon's fine SLR cameras are



already well-known. The light is measured with special emphasis on the center portion of the picture frame. This method has proven to be the most reliable way of assessing the correct exposure for flawless results.

Immediate Response Metering

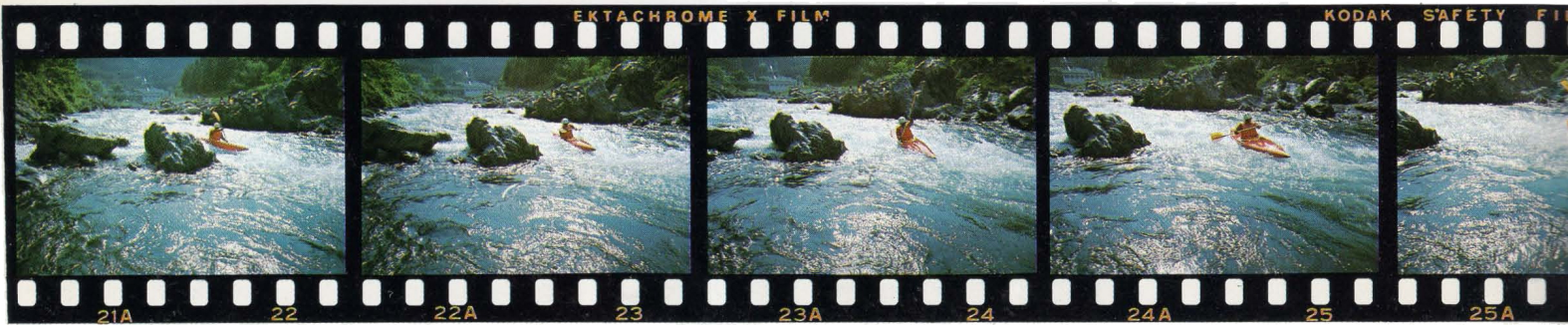
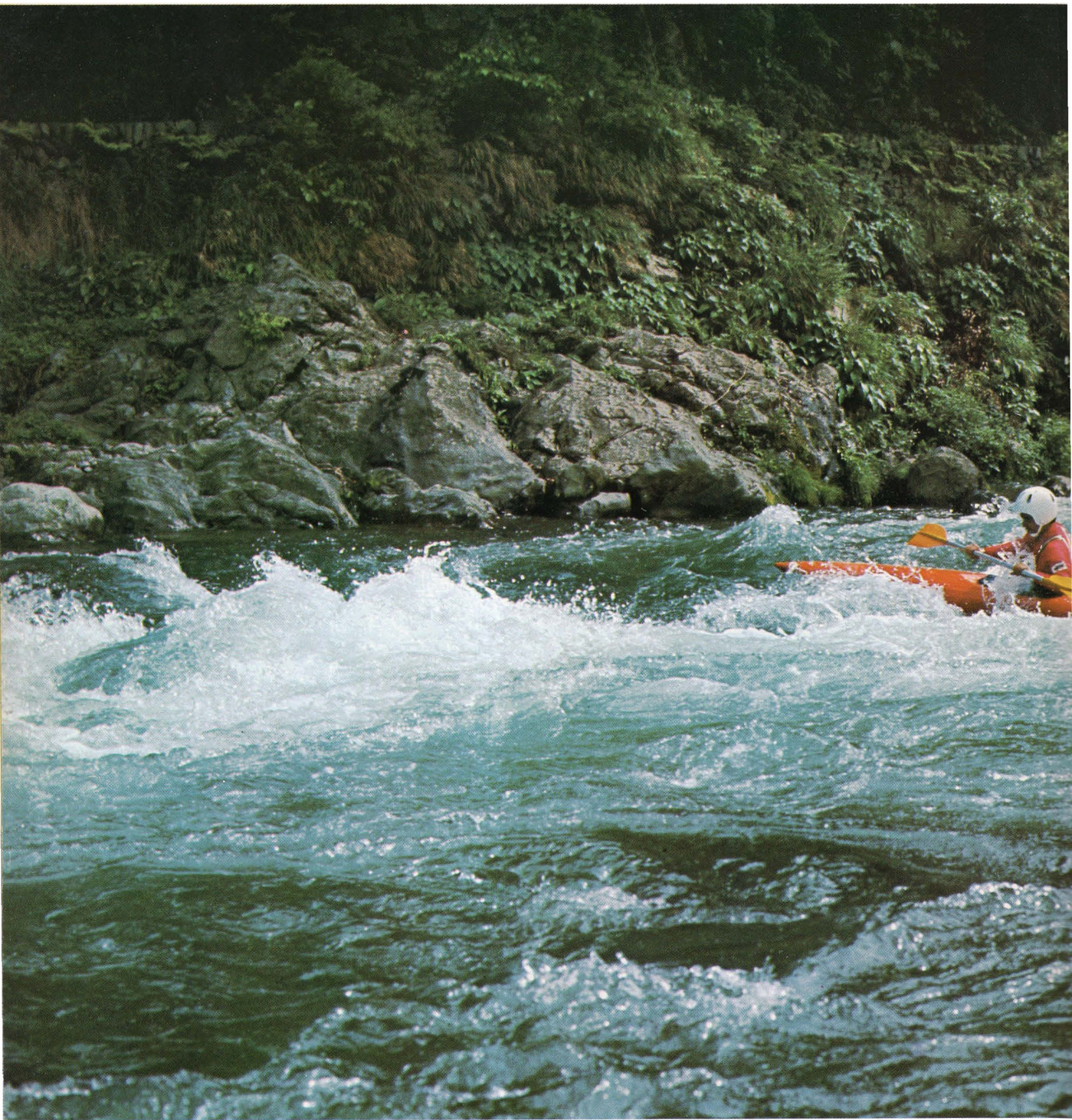
The AE-1 is unique in that it meters and sets the aperture immediately before the shutter is released. It incorporates an ultra-sensitive silicon photocell and MOS-BI amplifier coupled to an electric discharge circuit that give quick response to whatever exposure conditions you may be faced with.

The AE-1's metering system employs a



highly sensitive silicon photocell which is quicker and much more responsive to a greater metering range. It offers excellent overall performance and is considerably more sensitive than the conventional CdS photocell, especially under dim light conditions.

Its output signal is amplified by a MOS-BI logarithmic amplifier constructed in a single IC which is stable against changes in temperature, humidity and noise. In this way, the aperture value is automatically determined and set within a split-second (40 milliseconds at EV1, to be exact) before the shutter is released, thereby eliminating any possibility of error due to a sudden change of lighting conditions. With the great assurance that this exceptional feature affords, you will never miss a shot with your Canon AE-1.



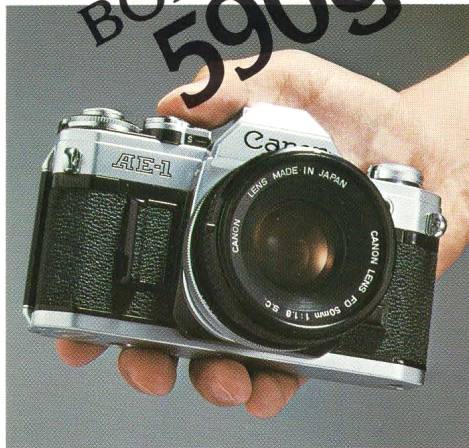




3 Exceptional Versatility Plus Incomparable Handling Ease

Incredibly Lightweight, Compact Body

The AE-1 features an extremely well-balanced, lightweight body with all controls perfectly located at fingertip command. It is an SLR designed to function as a part of the photographer himself, not only through the greater freedom which its automated features allow, but in its ease of handling and operation too. Every aspect of its remarkable design reflects the greatest consideration given to form and function for the very act of picture-taking itself. You can't help but



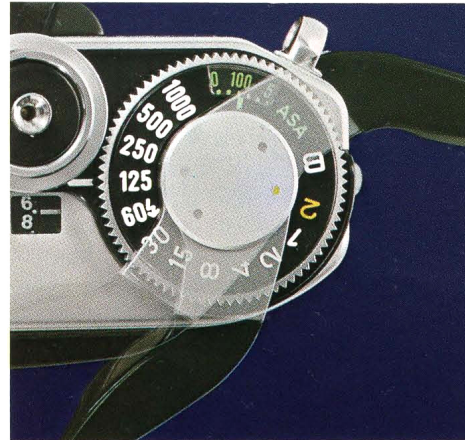
take notice of the streamlined operation of its many features, several of which double as two or more functions. For example, the electronic self-timer lever serves also as a shutter release lock, while it can also trip the shutter during the self-timer cycle as an override feature; the functions of a main switch, metering switch and shutter release have all been combined into one button that permits sequential control in exactly the proper order; the battery check button functions also to cancel the operation of the self-timer should you suddenly decide to postpone the shot. For fast, fool-proof attachment, two main accessories, the Power Winder A and the Speedlite 155A feature direct contacts which immediately complete all electrical connections and totally eliminate the need for troublesome, conventional coupling cords. Each of these innovations allow you unprecedented freedom and ease so you can devote your whole attention to

creative photography. And since it only weighs a very lightweight 590g, the AE-1 is extremely easy to hold and carry.

Quick, 120° Short-Throw Film Advance Lever

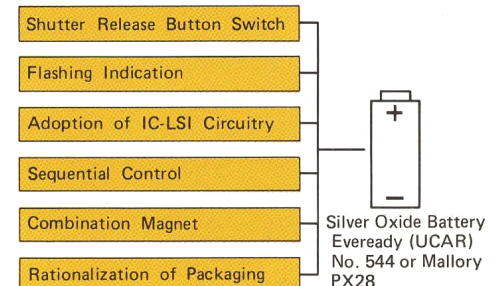
The superbly designed film advance lever of the Canon AE-1 smoothly winds the film for the next shot with a quick, 120° throw—the shortest film advance available ever with an AE SLR. In action photography, this can be of tremendous advantage, allowing you to rapidly advance the film in a real barrage of rapid-fire shooting. Yet, in addition to the speed it lends you, the beautiful smoothness of this lever's action assures completely trouble-free operation. There's absolutely no chance of malfunction.

Moreover, the AE-1's film advance lever has 30° stand-off angle which keeps it always ready for the photographer's reflexive responses to subjects in action. Of course, the film can be wound in a rapid succession of short strokes, too. And the tip of the film advance lever has a comfortably molded, plastic tip that is perfectly shaped to your thumb.

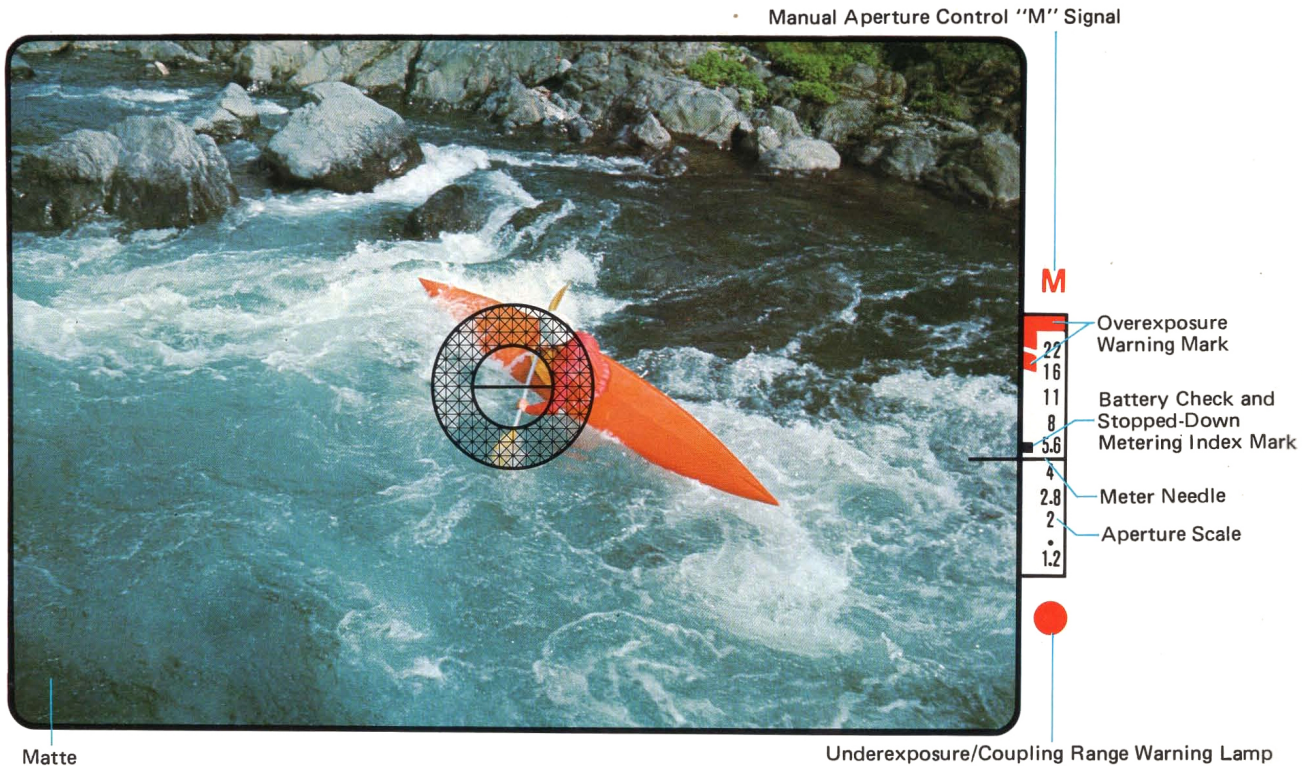


Convenient Finger Grip Bar for Better Stability

The battery chamber cover has a raised contour which serves as a firm, handy grip. This enables both better stability for slow shutter-speed exposures and excellent mobility in action situations. Your fingers can therefore get a good grasp on the camera which is one advantage you will certainly appreciate whether shooting with or merely carrying the AE-1. This innovative feature is hailed as another remarkable example of good camera design.



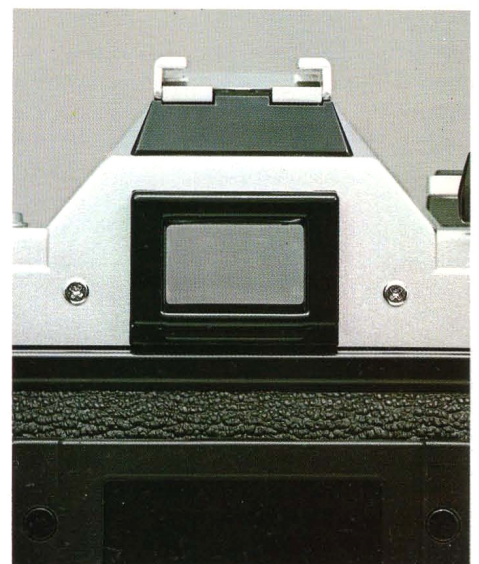
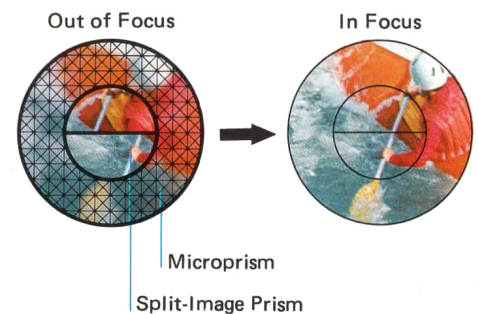
The latest electronic technology has enabled a prolonged battery life of approximately one year.



Easy-to-Read Viewfinder Information

The AE-1's viewfinder has a split-image/microprism focusing screen with all information conveniently arranged around the visual field in order to enable an immediate assessment of shooting conditions at a glance. The AE-1's information display consists of a calibrated aperture scale and exposure meter needle to indicate the AE aperture setting while two CPU-controlled LEDs flash to give the photographer clearly visible warnings. The aperture scale begins at f/1.2 and includes two red warning zones to indicate overexposure with respect to lenses having f/16 or f/22 minimum apertures. The meter needle in the viewfinder instantly responds to show the correct AE aperture setting when the shutter release button is pressed halfway to switch on the camera's metering circuit. As the CPU simultaneously computes and processes the exposure by the light metering system and activates the exposure meter, the aperture value is indicated instantaneously without any loss of time from the moment the metering circuit is switched on to the actual disposition of exposure information. When the aperture value computed by the CPU is larger than the full aperture

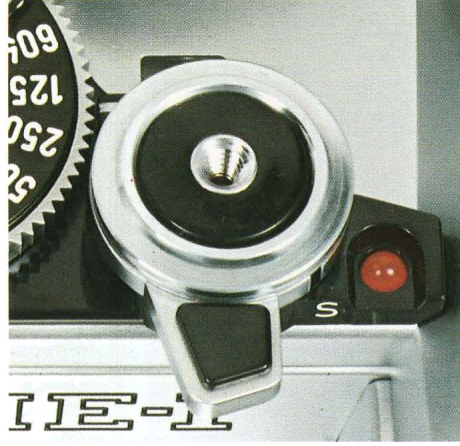
f/stop of the lens in use or when it is out of the meter coupling range, the LED below the aperture scale flashes as a warning to indicate that correct exposure cannot be obtained with the given shutter speed. When the aperture ring of an FD lens is set for manual aperture setting, that is, it is not set at the "A" automatic aperture setting, the "M" LED located above the aperture scale flashes to indicate this function. Automatic exposure, in this case, will not be performed. With the incredible clarity and precision of the Canon AE-1's unique information display, you always know just how every shot lies, without ever removing your eye from the viewfinder.





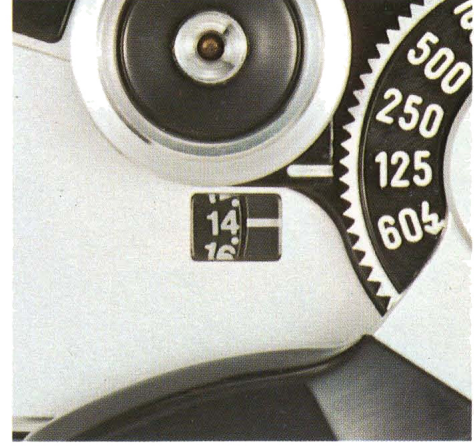
Automatic Exposure Preview with the Shutter Release Button

The shutter release button of the AE-1, besides serving as the camera's main switch and shutter release, enables you to preview the correct AE aperture setting before shooting. This is truly one of the most ingenious innovations of this new SLR design. It precisely advises you of the exposure setting accurately computed by the CPU. This is something which transpires instantaneously, without the slightest delay between processing and control since these functions occur simultaneously. You can therefore assess exposure conditions in less than a second and make any shutter speed adjustments you wish in even the same time. And with a full depression of the shutter release button, you have the exactly shot you want. All camera functions are performed in the logical sequence of picture taking: power on, exposure metering and shutter release. There's never a moment to lose with the Canon AE-1.



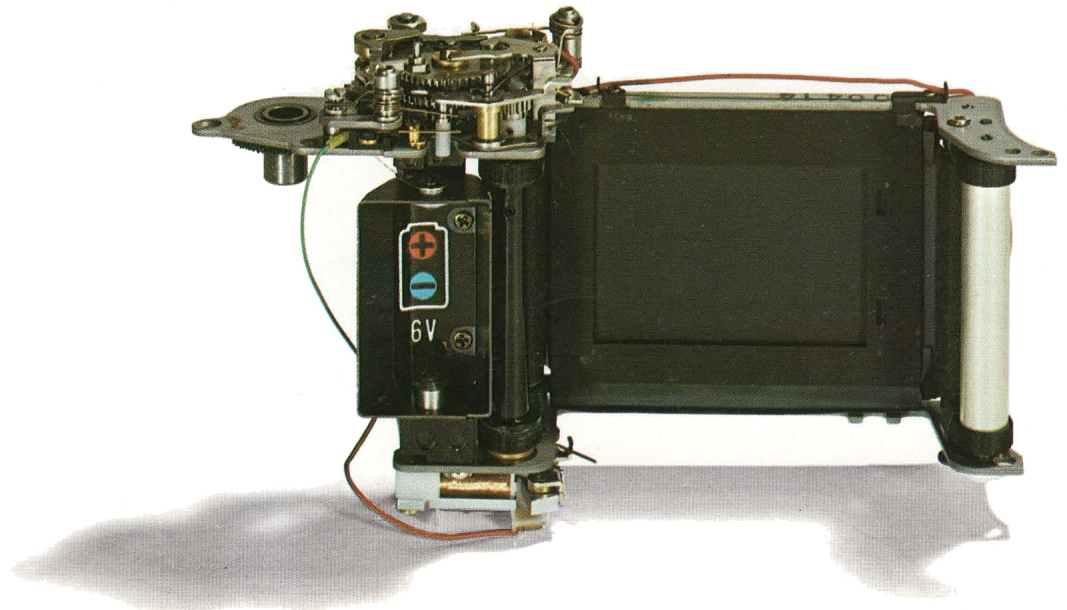
New, Unique Electronic Self-Timer

The conventional SLR self-timer mechanism consists of a mechanical governor which in the Canon AE-1 has been replaced by solid state circuitry that offers greater reliability, compactness and smoother, more precise operation. It employs the timer circuit that is incorporated into the CPU. The electronic self-timer is set by pressing the self-timer lever forward. After pressing the shutter release button, the self-timer automatically releases the shutter after a lag of 10 seconds, while a red LED revealed behind the lever flashes to indicate its operation. You can release the shutter prematurely, should the moment so require, by simply returning the self-timer lever to its original position. Or you can cancel its operation with the battery check button provided just in case you change your mind about the shot. No other SLR allows so many possibilities, so much freedom for shooting.



New Film Frame Counter

The window of the film frame counter is conveniently located next to the film advance lever. Figures are clearly marked for even number frames from 0-38, with 0, 20 and 36 indicated in orange to call your attention to the last exposure on the roll. It counts every consecutive frame and automatically resets itself when the back cover is opened. As the film is rewound, it counts down in retrogression so that you know exactly when or how much the film is rewound into the cartridge. Thus, you may safely leave the film leader exposed and, if you do your own developing, directly wind the film onto developing tank reel without needing to later pry open the cartridge. With the AE-1, you save time at every step of the way.

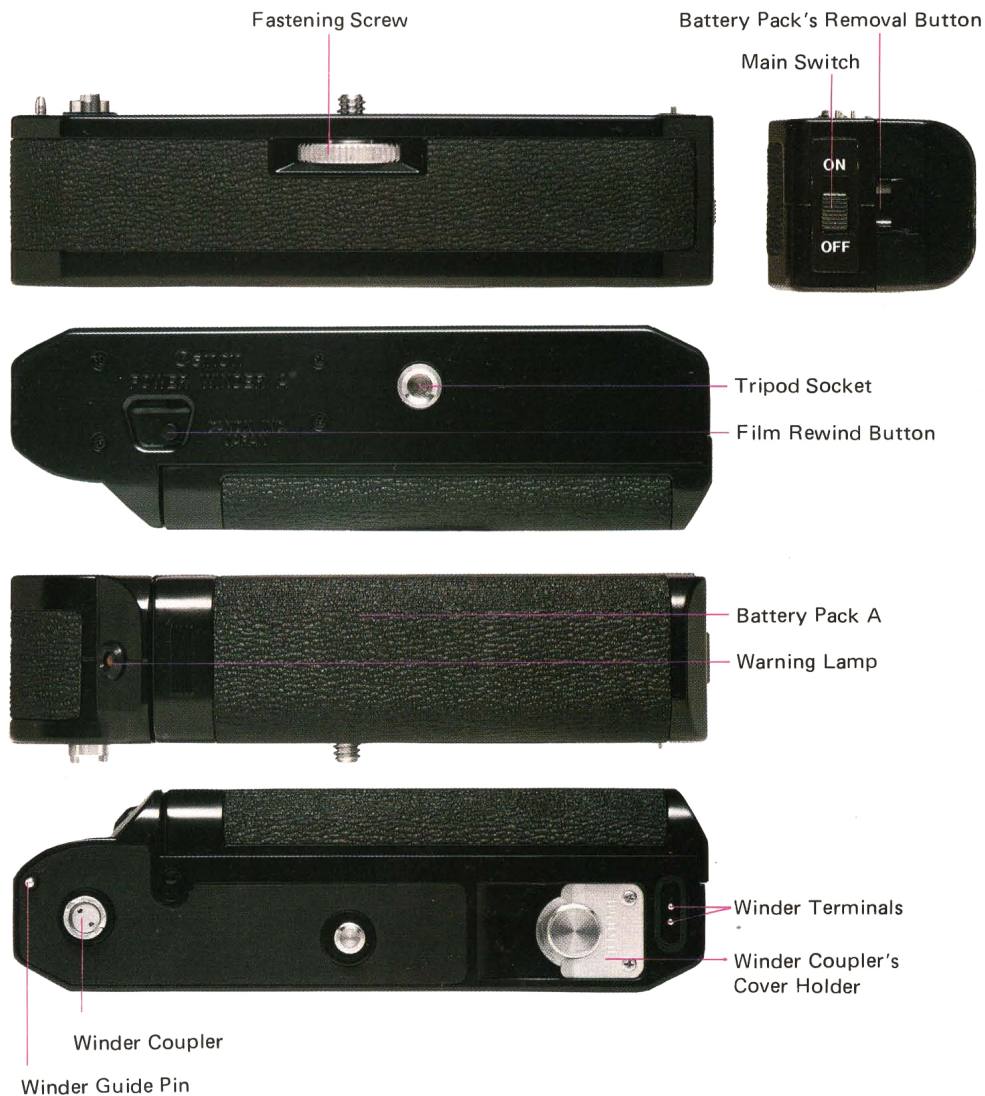




4 Electronic Command of an Entire Photographic System

The Canon AE-1 can expand into a complete photographic system with the many special electronic accessories available. They were designed exclusively for the AE-1 in order to derive the maximum benefits from its remarkable automatic features. The range of possibilities are enlarged and enhanced for a totally new experience in SLR photography. You are now able to pursue a moving subject and sense the amazing relativity of shooting in motion with motion. The proverbial chance-of-a-lifetime shot will never pass you by given the tremendous capabilities of this outstanding system of photographic accessories.

Power Winder A for Continuous Shooting.



POWER WINDER A

Specifications

Winding Speed: About 0.5 second.

Operation: Activated by the shutter release button of the camera.

Shutter Speed Coupling Range: 1/60 to 1/1000 second for continuous photography. "B" to 1/1000 second for single frame photography. (However, "B" setting is not coupled for AE photography).

Frame Counting: By the frame counter of the camera.

Automatic Cut Off Circuit: At the time of completion of a roll of film or when battery power is insufficient, the Power Winder A automatically stops and its LED flashes.

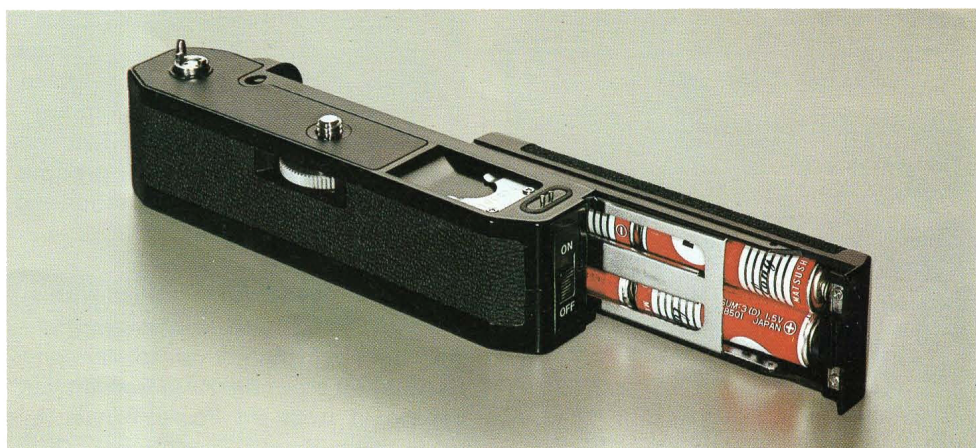
Mounting: Attached via the tripod socket after the winder coupler cover has been removed.

Power Source: Four penlight batteries (size AA); good for more than 20 rolls of 36-exposure film under normal temperatures.

Size: 141mm (W)x42mm(D)x34mm(H). (5-9/16"x1-5/8"x1-5/16")

Weight: 300g (10-9/16 ozs.) (including batteries)

Subject to change without notice.



Automatic Exposure with Power Film Advance

The Canon Power Winder A was developed for the demands of fast SLR photography, in order to lend best advantage of the AE-1's other automatic features. It quickly attaches to the AE-1 body and can continuously and rapidly advance the film for shot after shot upon depression of the shutter release button. The Power Winder A advances the film automatically at a rate of approximately two frames per second with full advantage of the automatic exposure control afforded by the AE-1's electronic CPU circuitry. Shutter speeds from 1/60 to 1/1000 sec. are AE coupled during continuous shooting.

When attached, it enables to make full use of the AE-1's extraordinary rapid-fire shooting capability. Thus, you can shoot as fast as you like with complete assurance of perfect exposures under all conditions.

Continuous or Single Frame Shooting
Besides continuous shooting at up to 2 frames per second with all the advantages of the AE-1's automated controls, the Power Winder A can advance the film only one frame as well when single frame shooting is preferred over sequence shooting. This is simply done by lifting your finger off the camera's shutter release button as soon as the shutter is released. The "B" position of the shutter speed dial is not coupled for AE photography but all other shutter speeds couple in frame-by-frame shooting for AE photography.



Yet, even with the use of the Power Winder A, you can shoot one, two, three or more frames at a time, depending upon just how long you hold your finger on the shutter release button. It affords you terrific ease in shooting.

Compact for Great Ease of Handling

Weighing only 300gr. even with batteries fully loaded, the addition of its 141 x 42 x 34mm dimensions do not affect in the least the great ease of handling and mobility you have with the AE-1 in fast action situations. It is a truly beautifully balanced accessory, since the batteries loaded in the back provide the necessary counterballast for the weight of the lens in front. It is extremely fast and easy to mount and you can always carry with you ready whenever the action calls for it.

Four Penlight-Battery Power Source

Power consumption with the Power Winder A is so low as to require only four penlight batteries loaded in an exclusive battery pack for handiness and convenience. Under normal conditions, they can power film drive for more than 20 rolls of 36-exposure film. They are extremely easy to change and load. Just remove the battery pack from the Power Winder A and insert them in the indicated direction. Upon replacement of the battery pack, you have a full charge of power. Furthermore, penlight batteries are inexpensive and readily obtainable anywhere.

Shutter Release Button Control

To afford the greatest freedom for responding to lightning-fast action, the Power Winder A is activated whenever the shutter release button is depressed while display of the correct AE aperture setting and the actual shutter release occur simultaneously. This serves to eliminate unnecessary power consumption, since power is only used when required for shooting. And with such simplified control, you also save fractions of precious time in capturing just the expression and moment you're after.

Film End Warning

The Power Winder A is provided with a red LED lamp as a film end warning so that the photographer can totally concentrate on shooting. An automatic cut off circuit stops the Power Winder A when film ends, or battery charge is less

than the voltage prescribed, and the LED indicator lights. For rapid-fire shooting, you just don't have time to continually check what number the exposure is that you are shooting. And this little feature provides all that you need to know.



SPEEDLITE 155A

CPU-programmed Flash Photography.

Automation of Shutter Speed and Aperture Setting

The Speedlite 155A is a computerized electronic flash specially designed for the AE-1. Since it is integrated into the range of functions under the Central Processing Unit, and couples to the camera's circuitry, one-finger control of flash photography is another feature at your disposal with the AE-1. Once mounted, it automatically adjusts shutter speed at the synchronization value of 1/60 sec., and sets the preselected aperture to ensure correct exposure, and decides flash duration in communication with the CPU. A pilot lamp turns on to indicate that flash photography can be performed, and turns off to indicate that only the camera's usual automatic exposure control is available.

Aperture Selection Switch

The Speedlite 155A has an aperture selection switch which allows to obtain more accuracy in exposure and depth-of-field according to the sensitivity of the film in use.

This cordless clip-on type Speedlite 155A is extremely easy to mount. It actually takes an instant and all couplings are ready to start shooting. It operates with a direct contact and locks securely in position. Its design places particular importance on compactness, in keeping with the overall handiness of the AE-1's system.

Specifications

Type: Computer thyristor (energy-saving) flash with series control and direct contact connection.

Guide Number: 17 (m. ASA 100)

Recycling Time: Less than seven seconds with alkaline batteries; or less than five seconds when using Ni-Cd batteries.

Pilot lamp glows when flash is ready.

Number of Flashes: More than 300 using alkaline batteries. More than 90 using Ni-Cd batteries.

Flash Control: A sensor measures the amount of light reflected from the subject.

Aperture Selection Switch: Three Settings; Red (f/2.8 at ASA 100), MANU., and Green (f/5.6 at ASA 100)

Effective Distance Range: 0.5m to 6m at

f/2.8 (ASA 100) 0.5m to 3m at f/5.6 (ASA 100)

Illumination Angle: More than 45° vertically. More than 60° horizontally (adequate for a 35mm lens).

Color Temperature. Approximate to that of sunlight.

Power Source: Four AA size batteries.

Usable Film Speeds: ASA 25 to ASA 800

Aperture Scale: 1 to 32

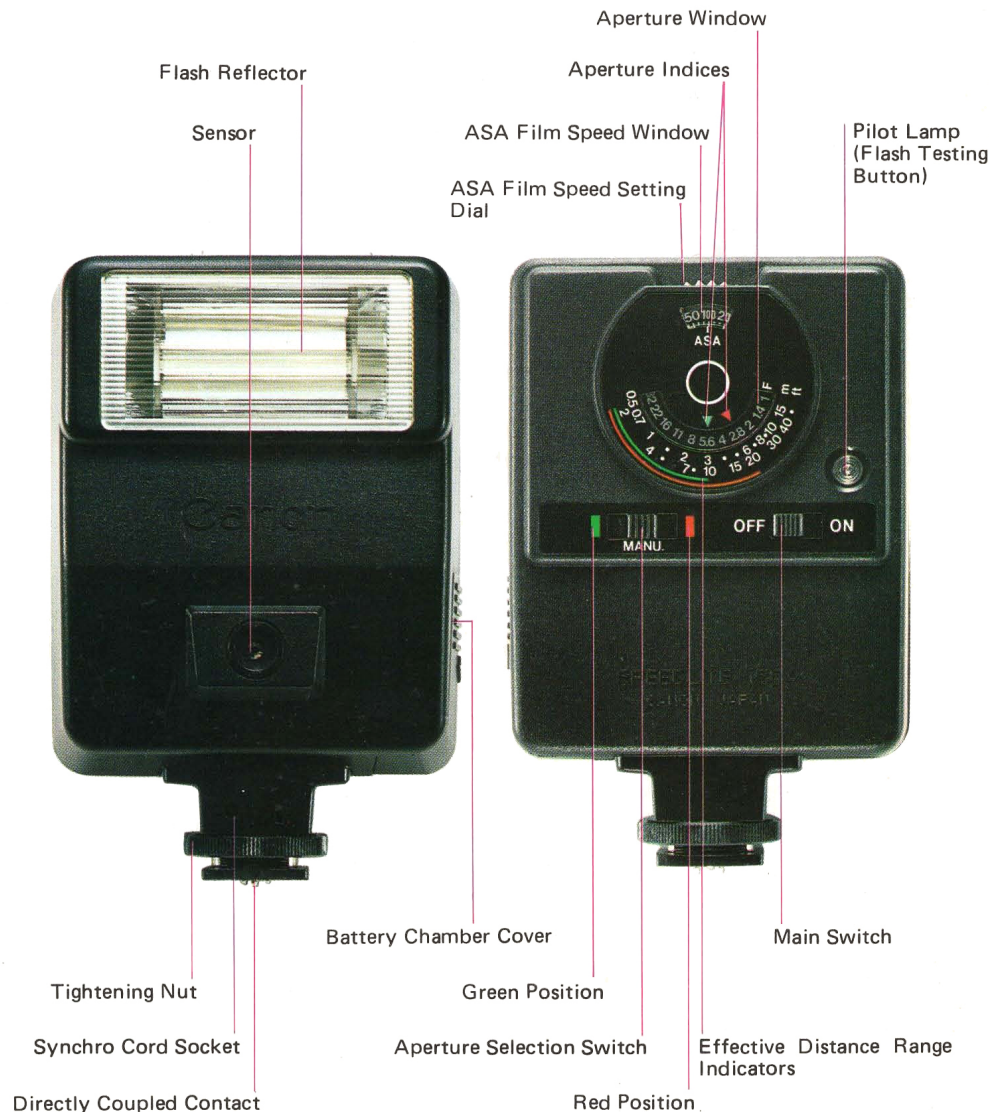
Distance Scale. 0.5 to 15m

Size: 70mm(W)x51mm(D)x105mm(H). (2-3/4"x2x4-1/8")

Weight: 300g (10-9/16 ozs.) (including batteries)

Accessories: Synchronization cord A and case. (Sold separately)

Subject to change without notice.



5 Classifying Photographs with the Data Back A (To be marketed in the near future)



Canon's development of a special process enabling a camera to imprint data on the film being exposed at the very moment the picture is taken has been hailed all over the world as a remarkable technological feat.

Widely known through its applications in the F-1 system and some of Canon's popular camera, this process has been adapted to create a true system of classifying photographs with the AE-1. The Data Back A imprints dates—day, month and year, letters of the alphabet and Roman numerals, on the lower right hand corner of the picture. There are three sets of data arrangements to choose from, by using the three dials on the Data Back A.

Imprinting is perfectly synchronized with the exposure of the film and can also be performed manually when so desired. Besides, the Data Back A can couple with the Power Winder A.

There are three settings to choose in accordance with the film in use, black-and-white, color ASA 64 to 160, and color ASA 25 to 50. Besides, a red LED lamp turns on in evidence that imprinting took place.

Here, too, electronics have made low energy consumption possible so that a battery lasts for a year or more than 8,000 exposures.

The Data Back A and the AE-1 combine for an ideal system of photograph classification, from chronological arrangement to codes and serial numbers for scientific purposes.



Specifications

Attachment: Replacement of the AE-1's back cover.

Data Setting Dials:

Right dial: 32 figures and blanks (0 to 31, and □□).

Central dial: 39 figures and blank (0 to 31, A to G and □).

Left dial: 39 figures and blank (0 to 9, 76 to 87, "I" to "X", "a" to "g", and □).

Data Imprinting: Special synchronization cord connection. The built-in lamp

imprints the necessary data on the film from the back. By pressing the manual button, the data can be also imprinted.
Exposure Adjustment: Three different positions.

B.W.: Black-and-white films.

Color 1: ASA 64-160 color films.

Color 2: ASA 25-50 color films.

Indicator Lamp: An LED indicates data imprinting.

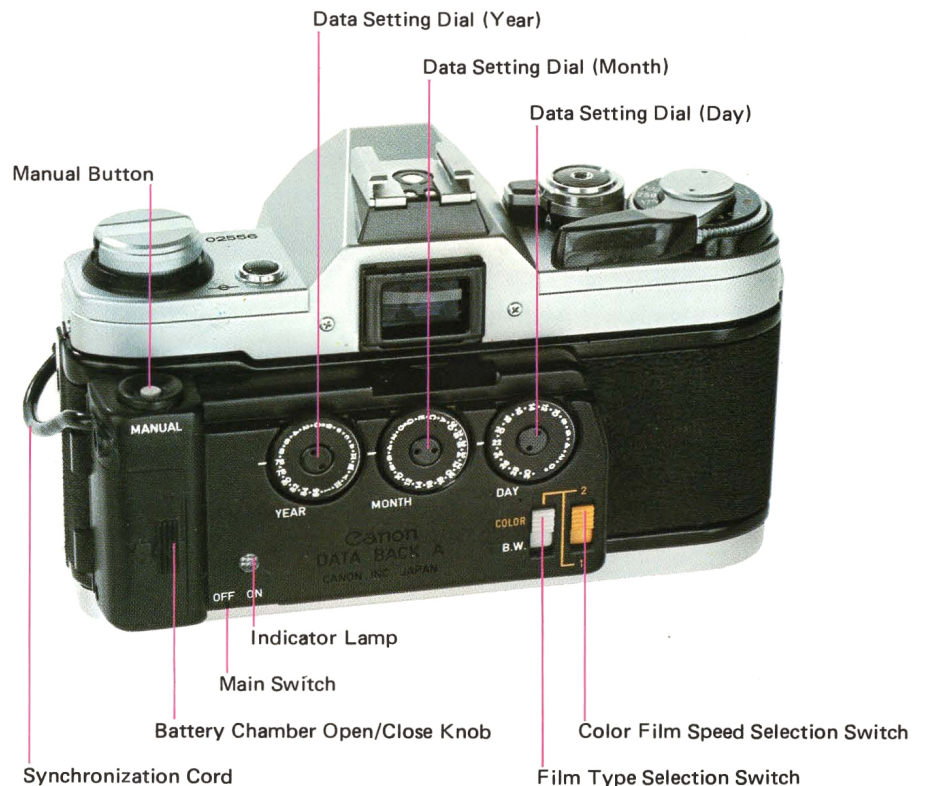
Power Source: One 6V silver oxide battery (Eveready or UCAR No. 544 or Mallory PX28) or alkaline battery (Eveready or UCAR No. 537 or Mallory 7K13) which is good for more than 8,000 exposures.

Size: 100mm (W) x 48.5mm (D) x 14.5mm (H) (3-15/16"x1-15/16"x9/16")

Weight: 160g (5-5/8 ozs.) (including battery)

Accessories: Special synchronization cord and case.

Subject to change without notice.



6 Making the Most of Canon FD Lenses



One of the most outstanding advantages of the AE-1 is that it uses the full range of Canon's FD Lens Series. Canon makes superb quality lenses for every possible photographic application and every possible photographic effect. FD lenses have been designed to meet the most stringent requirements of professional photographers and in quality and precision are second to none. Canon lenses are especially famous for the sharpness of image they maintain throughout the entire focusing range. They eliminate spherical aberration, usually a problem in close distance photo-

graphy, as well as the phenomena of ghost and flare. Coated with Canon's special Spectra and Super Spectra Coatings, FD lenses give brilliant results in color photography not to mention black-and-white photography.

The design of the Canon lenses stresses compactness and lightness without sacrificing any aspect of performance, and are unsurpassable in handling ease and efficiency. Their breech-lock bayonet mounting makes them totally stable and able to be mounted simply and quickly.

FD Series (For Full-Aperture Metering or AE Operation)

Type	Lens	Construction Elements Groups		Angle of View	Minimum Aperture	Closest Focusing Distance (m) (ft.)		Filter Size (mm)	Hood	Length (mm) (ins.)		Weight (g) (lbs.) (ozs.)		
Full-Frame Fish-Eye	Fish-Eye FD 15mm f/2.8 S.S.C.	10	9	180°	f/16	.3	1	Built-in	Built-in	60.5	2-3/8	485	1	1
Super Wide-Angle	FD 17mm f/4 S.S.C.	11	9	104°	f/22	.25	.9	72	—	56	2-3/16	450	1	0
	FD 20mm f/2.8 S.S.C.	10	9	94°	f/22	.25	.9	72	—	58	2-5/16	345		12
	FD 24mm f/1.4 S.S.C. ASPHERICAL	10	8	84°	f/16	.3	1	72	—	68	2-11/16	500	1	2
	FD 24mm f/2.8 S.S.C.	9	8	84°	f/16	.3	1	55	†BW-55B	52.5	2-1/16	330		12
Wide-Angle	***FD 28mm f/2 S.S.C.	9	8	75°	f/22	.3	1	55	†BW-55B	61	2-3/8	343		12
	FD 28mm f/2.8 S.C.	7	7	75°	f/22	.3	1	55	†BW-55B	49	1-15/16	280		10
	*FD 35mm f/2 S.S.C.	9	8	63°	f/22	.3	1	55	†BW-55A	60	2-3/8	345		12
	*FD 35mm f/3.5 S.C.	5	5	63°	f/22	.4	1.5	55	†BW-55A	49	1-15/16	236		8
Standard	*FD 50mm f/1.4 S.S.C.	7	6	46°	f/16	.45	1.5	55	†BS-55	49	1-15/16	305		11
	*FD 50mm f/1.8 S.C.	6	4	46°	f/16	.6	2	55	†BS-55	38.5	1-1/2	200		7
	FD 55mm f/1.2 S.S.C.	7	5	43°	f/16	.6	2	58	†BS-58	52.5	2-1/16	510	1	2
	FD 55mm f/1.2 S.S.C. ASPHERICAL	8	6	43°	f/16	.6	2	58	†BS-58	55	2-3/16	575	1	4
Macro	FD 50mm f/3.5 S.S.C. Macro with Extension Tube FD 25	6	4	46°	f/22	20.5 (cm)	8.1 (in)	55	None Necessary	59.5	2-5/16	310		11
	***FD 100mm f/4 S.C. Macro with Extension Tube FD 50	5	3	24°	f/32	.4	1.31	55	None Necessary	112	4-7/16	530	1	3
Short Telephoto	***FD 85mm f/1.2 S.S.C. ASPHERICAL	8	6	28°30'	f/16	1	3.5	72	—	71	2-13/16	756	1	11
	FD 85mm f/1.8 S.S.C.	6	4	28°30'	f/16	.9	3	55	†BT-55	57	2-1/4	425		15
	FD 100mm f/2.8 S.S.C.	5	5	24°	f/22	1	3.5	55	†BT-55	57	2-1/4	360		13
Telephoto	FD 135mm f/2.5 S.C.	6	5	18°	f/22	1.5	5	58	Built-in	91	3-9/16	630	1	6
	FD 135mm f/3.5 S.C.	4	3	18°	f/22	1.5	5	55	†BT-55	83	3-1/4	465	1	0
	FD 200mm f/2.8 S.S.C.	5	5	12°	f/22	1.8	6	72	Built-in	140.5	5-9/16	700	1	9
	FD 200mm f/4 S.S.C.	6	5	12°	f/22	2.5	8	55	Built-in	133	5-1/4	675	1	8
	***FD 300mm f/2.8 S.S.C. FLUORITE with Extender FD 2X	6	5	8°15'	f/22	3.5	12	Exclusive Insertion Type	Built-in	230	9-1/16	1,900	4	3
	FD 300mm f/5.6 S.C.	6	5	8°15'	f/22	4	13	58	Built-in	173	6-13/16	1,125	2	8
	***FD 400mm f/4.5 S.S.C.	6	5	6°10'	f/22	4	13	Exclusive Insertion Type	Built-in	282	11-1/8	1,300	2	14
	***FD 600mm f/4.5 S.S.C.	6	5	4°10'	f/22	8	27	48	Built-in	460	1'6-1/8	4,200	9	4
	***FD 800mm f/5.6 S.S.C.	6	5	3°06'	f/22	14	45	48	Built-in	572	1'10-1/2	4,250	9	6
Zoom	FD 35–70mm f/2.8-3.5 S.S.C.	10	10	63°–34°	f/22	†††1	3.5	58	†W-69	120	4-3/4	575	1	4
	FD 85–300mm f/4.5 S.S.C.	15	11	28°30'–8°15'	f/22	2.5	8	Series IX	Built-in	243.5	9-9/16	1,695	3	12
	FD 100–200mm f/5.6 S.C.	8	5	24°–12°	f/22	2.5	8	55	Built-in	173	6-13/16	765	1	11

FL and Manual Series (For Stopped-Down Metering)

Type	Lens	Construction Elements Groups		Angle of View	Minimum Aperture	Closest Focusing Distance (m) (ft.)		Filter Size (mm)	Hood	Length (mm) (ins.)		Weight (g) (lbs.) (ozs.)		
Circular Fish-Eye	Fish-Eye 7.5mm f/5.6 S.S.C.	11	8	180°	f/22	Fixed Focus		Built-in	—	62	2-7/16	380		13
Tilt and Shift	TS 35mm f/2.8 S.S.C.	9	8	63°/79°	f/22	3	1	58	†BW-58B	74.5	2-15/16	545	1	3
Super Telephoto	**FL 400mm f/5.6	7	5	6°10'	f/32	4.5	15	††48	Exclusive	338	1'1-5/16	3,890	8	9
	**FL 600mm f/5.6	6	5	4°10'	f/32	10	35	††48	Built-in	448	1'5-5/8	5,000	11	0
	**FL 800mm f/8	7	5	3°06'	f/32	18	60	††48	Built-in	508	1'8	5,360	11	13
	**FL 1200mm f/11 S.S.C.	7	5	2°05'	f/64	40	130	††48	Built-in	853	2'9-9/16	6,200	13	11
Artificial Fluorite Telephoto	FL 300mm f/5.6 FLUORITE	7	6	8°15'	f/22	4	13	58	Built-in	168	6-5/8	850	1	14
	FL 500mm f/5.6 FLUORITE	6	5	5°	f/22	10	33	95	Built-in	300	11-13/16	2,700	5	15

S.S.C. = Super Spectra Coating S.C. = Spectra Coating

*Equipped with a coupling pin for Canon Auto Tuning System

**Front component interchangeable type. Focusing adapter (2 elements, 1 group, FL automatic diaphragm, with A-M ring)

***New lenses.

†FD lens hoods are of bayonet mount.

††Filter is of insertion type with holder.

†††Macro focusing capability to 30 cm (1 ft.) from film plane.

Subject to change without notice.

Specifications

Type: 35mm SLR (Single-Lens-Reflex) camera with electronically controlled AE (Automatic Exposure) and focal plane shutter.

Picture Size: 24 x 36mm

Interchangeable Lenses: Canon FD series with full aperture metering and AE coupling. Canon FL series with stopped-down metering.

Lens Mount: Canon Breech-Lock mount. Canon FD, FL and R lenses can be used.

Viewfinder: Fixed eye-level pentaprism.

Field of View: 93.5% vertical and 96% horizontal coverage of the actual picture area.

Magnification: 1:0.86 at infinity with a standard 50mm lens.

Viewfinder Information: Split-image/microprism rangefinder, aperture scale with meter needle and stopped-down metering index mark doubling as battery power level check mark. Two red zones to warn of overexposure, manual aperture control "M" signal and underexposure/coupling range warning lamp.

Finder Attachment: Angle finder, magnifier, 10 dioptic adjustment lenses and eyecup.

Mirror: Instant-return, large reflector mirror with shock absorbing mechanism.

AE Mechanism: Shutter-priority, electronically controlled AE metering system.

Light Metering System: TTL (Through-The-Lens) Central Emphasis Metering Method employing a silicon photocell as photo-sensitive element.

Exposure Meter Coupling Range: With ASA 100 film, EV1 (f/1.4 at one second) to EV18 (f/16 at 1/1000 second).

Film Speed Dial: ASA 25 to ASA 3200.

Exposure Correction: By pressing the backlight control switch, exposure is corrected by opening the diaphragm 1.5 gradations more on the aperture scale than the actual setting.

Exposure Preview: Exposure can be confirmed in the viewfinder when the shutter release button is depressed halfway or the exposure preview switch is pressed.

Shutter: Cloth focal plane shutter with four spindles. Shock and noise damping mechanism is incorporated. All shutter speeds are electronically controlled.

Shutter Speeds: 1/1000 ~ 1, 2, B.

Shutter Speed Dial: The number 2 for two seconds is marked in orange; other numbers are in white. There is a shutter dial guard to prevent unintentional movement of the dial. The ASA ring is located underneath the shutter speed dial.

Shutter Release Button: A large button type magnetic release switch. Depressing the shutter release button halfway switches on the light metering circuit, while full depression releases the

shutter. The shutter release button has a locking device, besides a socket for the cable release in the center.

Self-Timer: Electronically controlled self-timer. It releases the shutter after a lag of 10 seconds. A red LED lamp revealed blinks on and off to indicate its operation.

Stopping-Down the Lens: Stopping-down the lens can be performed by pushing the stopped-down lever after setting the aperture ring.

Power Source: One 6V silver oxide battery (Eveready or UCAR No. 544 or Mallory PX28) or alkaline manganese battery (Eveready or UCAR No. 537 or Mallory 7K13). The battery lasts approximately one year under normal use.

Battery Check: Battery power level can be checked by the meter needle in the viewfinder after the battery check button is depressed.

Flash Synchronization: X synchronization is at 1/60 second. M synchronization is at 1/30 second and below.

Flash Terminal: The accessory shoe has a synchronization contact and automatic flash control contacts. On the front of the camera body is the flash terminal, JIS-B type for flash units with cords. It has a built-in protective rim to prevent electrical shock.

Automatic Flash: With the Canon Speedlite 155A, the shutter speed and aperture are automatically set. The amount of light is automatically controlled for correct flash exposure.

Back Cover: The camera's back cover has a memo holder. It can be replaced by the Canon Data Back A. It opens when the rewind crank is pulled up.

Film Loading: Easy film loading with multi-slot take-up spool.

Film Advance Lever: Single stroke with 120° throw and stand-off angle of 30°. Film can be wound with several short strokes. The Canon Power Winder A winds film automatically.

Frame Counter: Additive type, automatically resets itself when the back cover is opened. While rewinding film, it counts the frame numbers downward.

Film Rewinding: Performed by pressing the rewind button on the bottom and by using the rewind crank on the top. The rewind button is automatically reset when the film is advanced.

Safety Devices: The camera does not function when the battery power is drained. The film cannot be wound while the shutter is in operation.

Size: 141x87x47.5mm (5-9/16"x3-7/16"x1-7/8") (body only)

Weight: 590g (20-13/16 ozs.) (body only) 790g (27-7/8 ozs.) with the 50mm f/1.8 S.C. standard lens.

Subject to change without notice.

Canon

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