

Specifications

Type and Major Components

Type: 35mm focal plane shutter SLR (Single-Lens Reflex) camera with autofocus, auto exposure and built-in motor drive.

Lens Mount: Canon EF Mount (electronic signal transfer system).

Usable Lenses: Canon EF lenses.

Viewfinder: Fixed eye-level pentaprism.

Gives approx. 100% vertical and horizontal coverage of actual picture area and 0.72X magnification with 50mm lens at infinity.

Focusing Screen: Laser-matte screen with AF frame.

Six optional interchangeable screens are available.

Dioptric Adjustment: Adjustable (-3dpt — $+1\text{dpt}$) by turning knob

Eye point: 20mm

Shutter: Vertical-travel metal type focal plane shutter;

all speeds electronically controlled.

Shutter Speed: 1/8000-30 sec. and bulb. X-sync is 1/250 sec.

Can be set in 1/3-step increments.

Mirror: Quick return type half-mirror

Autofocus

AF Control System: TTL-CT-SIR (Cross Type-Secondary

Image Registration) phase-detection type. Two modes available: One-shot and Servo AF with Focus Prediction. Manual focusing possible.

AF Working Range: EV-1 — 18 at ISO 100.

AF Auxiliary Light: Specified Canon Speedlites automatically project light through an ultra-bright LED (peak sensitivity: 700nm) when required.

Exposure Control

Light Metering: TTL full aperture metering using SPC (Silicon Photocell).

Four metering patterns available:

1. 6-zone evaluative metering
2. Center-weighted average metering
3. Partial metering (approx. 5.8% of the picture area)
4. Spot metering (approx. 2.3% of the picture area)

Metering Range:

Spot metering: EV 2—20 at ISO 100
Other meterings: EV 0—20 with f/1.4 lens
at ISO 100 or equivalent

Exposure Modes:

1. Shutter-Priority AE
2. Aperture-Priority AE
3. Depth-of-Field AE
4. Program AE with Variable Shift
5. Manual
6. Flash AE (A-TTL and TTL program flash AE with specified Canon Speedlites)

Exposure Compensation: ± 3 stops in 1/3-step increments.

Auto Exposure Bracketing: ± 3 stops in 1/3-step increments.

Depth-of-Field Preview: With Depth-of-Field check button

Film Transport

Film Speed Setting: ISO 25-5000; automatically set in 1/3-step increments according to DX code. ISO 6-6400 can also be set manually.

Film Loading: Automatic

Film Wind: Automatic. Two modes available: S (Single Frame) and C (Continuous) at up to 2.5 frames per second.

Film Rewind: Automatic (approx. 8 sec. with 24-exp. film). Mid-roll rewind possible.

Power Source

Battery: One, six-volt lithium battery pack (2CR5). Replaced by removing grip.

For memory backup: One CR1220

Battery Check: By pressing the battery check button. Three energy levels are shown by the bar marks in the display panel.

Shooting Capacity: (with 24-exp. film)

Normal (68°F/20°C): 75 rolls

Low ($-4^{\circ}\text{F}/-20^{\circ}\text{C}$): 12 rolls

Other

Custom Function Control: 8 functions selectable

Flash Contact: Direct contact at accessory shoe and PC socket (JIS-B type)

Remote Control: By using Remote Switch 60T3.

Data Display: In the viewfinder and LCD display panel.

Multiple Exposures: Up to nine exposures can be preset.

Self-timer: Electronically controlled with a 2 or 10-sec. delay.

Dimensions

Size: 6-5/16" (W) $\times$ 4-3/16" (H) $\times$ 2-13/16" (D)

(161 $\times$ 106.6 $\times$ 71.8mm)

Weight: 1.9 lb. (850 g) without battery.

2 lb. (890 g) with battery.

■ The following specifications change when mounting the Power Drive Booster.

Film Wind: Three modes; S (Single Frame), CH

(Continuous at up to 5.5 fps) and CL (Continuous at up to 3 fps).

Shooting Capacity: (with 24-exp. film)

Temperature	Alkaline	Ni-Cd
Normal (68°F/20°C)	100 rolls	45 rolls
Low ($-4^{\circ}\text{F}/-20^{\circ}\text{C}$)	6 rolls	30 rolls

Power Source: Eight AA-size alkaline-manganese (LR6) or Ni-Cd (KR15/S1) batteries

Dimensions (EOS-1 + Power Drive Booster)

Size: 6-5/16" (W) $\times$ 5-15/16" (H) $\times$ 3-1/16" (D)
(160.5 $\times$ 150.4 $\times$ 78mm)

Weight: 3.3 lb. (1490 g) with battery

All data are based on Canon's Standard Test Method. Subject to change without notice.

"The New Classic"

The EOS-1 is Canon's first truly professional EOS camera. As such, it represents the culmination of over 50 years of optical and mechanical innovation. The new EOS-1 has been designed to accommodate future development as well, and it will remain current far into the future.



Improved Operability

2 electronic input dials handle a wide selection of operations, including user-selectable shutter speed/aperture value combinations during metered manual operation.

Custom Function Control

8 separate functions can be easily selected by the photographer, resulting in a highly personalized camera.

Autofocus

AF performance that is faster, more precise, and more reliable even in dim lighting.

Sophisticated Metering & Exposure Control

6-zone evaluative metering offers the best automatic control.

Plus spot metering, partial metering, and center-weighted averaging.

Designed Reliability

Designed to meet the toughest standards of working professional photographers, with selected gold-plated and dual electrical contacts.

High-quality Lenses

A growing selection of superior lenses, including very bright L series lenses.

Canon

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Automatic operation plus sophisticated manual control.

The new Canon EOS-1 has been created to fulfill the requirements of the most demanding professional and advanced amateur photographers. It will become the classical standard against which other cameras must be measured, because it offers both the EOS system's highly-regarded automatic operation and a variety of "manual" options that permit fine tuning. Custom Function Control lets the photographer customize certain aspects of the camera's automatic operation to meet specific needs. Autofocus is faster and more reliable. And a selection of metering modes, AE modes, and film winding modes provides the serious photographer with total control over the entire photographic process.



Auto/Manual Control

The Main Electronic Input Dial

The EOS-1 is the first camera to incorporate two electronic input dials.

The main dial sets the shooting mode, the AF mode and the metering mode. It selects shutter speeds or aperture values during shutter-priority or aperture-priority operation. It selects the film winding mode, number of multiple exposure presets, and manual film speed settings. It sets the auto exposure bracketing values and exposure compensation. And it also selects the EOS-1's unique Custom Function Controls.



The Quick Control Dial

In the AE mode, the quick control dial can be used to set exposure compensation values. In the manual exposure mode, this dial can be used to manually set aperture value or shutter speed — depending on the custom function selected — with the main dial setting the other value. A switch allows the dial to be disengaged.



Metered Manual Control

The two electronic input dials make metered manual operation easy to control. In this mode, the shutter speed is set using the main dial while the aperture is set by the auxiliary dial. These values are displayed digitally in the viewfinder. And the metered manual exposure's deviation from the correct exposure indicator is clearly indicated by the moving marker on the exposure scale in the viewfinder for instant confirmation. The "matching-

needle" feel of the system has a mechanical sense that is reliable and reassuring.

Equally reassuring is the fact that the viewfinder provides virtually 100% coverage. This, plus instant depth-of-field preview, allows the photographer to be sure of the final results.

100%



Manual Focus

All Canon EF lenses have a switch on the lens barrel that activates manual operation. But the L series lenses with ultrasonic motors also allow manual focusing in the One-Shot AF mode in conjunction with AF operation. Because the electronic focusing ring system can be used even in the AF mode, the photographer can always make the final decision on focus. The manual focusing feel is pleasingly smooth, too, without the rasping operation common to some AF lenses. The complete range of USM lenses covers focal lengths from 28mm to 600mm, including zooms, and features the extraordinarily bright 50mm f/1.0L.

■ One-shot AF + USM lenses



Customized Operation

Custom Function Control

1. Automatic film rewind can be canceled. This eliminates the possibility of rewind noise when shooting in very quiet areas.

2. The film leader can be left outside the film cartridge after automatic rewind is completed, making it easy to retrieve film during development. Film cartridges can also be partially used, removed then easily reloaded later.

3. Automatic DX-coded film speed setting can be canceled. This is useful for photographers who frequently adjust film speed or use non-DX

cartridges.

4. Autofocus can be initiated by pressing the AE lock button. By separating focusing and metering operations, focus-lock shooting becomes more flexible.

5. Sets the aperture value with the main electronic input dial and the shutter speed with the auxiliary dial during manual exposure mode operation. (The opposite of regular operation.) The photographer can decide the combination that's easiest for the way he or she holds the camera.

6. Sets the shutter speeds and aperture values in 1-step increments. (Normal operation is in 1/3-step increments.)

7. Prevents manual focusing after completion of one-shot AF mode operation. (The system thus offers the photographer a choice when using USM lenses, and makes it possible to select the degree of "automation" during AF operation.)

8. Switch from evaluative metering to center-weighted average metering.

Shutter "Feel" Adjustment

The shutter button height and release stroke can be easily adjusted at a Canon service facility, without disassembling the camera.

Custom Function Control Chart

Control		User-selected Operation	Regular Operation
1	Film rewind	Cancels automatic film rewind	Film rewind starts automatically at end of roll
2	Film leader positioning	Leaves film leader outside cartridge after rewind	Film leader reword inside cartridge
3	Film speed setting	Cancels automatic film speed setting for DX-coded film	Film speed set by camera according to DX-code
4	Autofocus operation	Activates autofocus by pressing AE lock button	Autofocus starts by pressing shutter button halfway
5	Manual exposure operation	Aperture Set by electronic input dial only	Set by manual aperture set button or EL button and electronic input dial
		Shutter Set by manual aperture set button or EL button and electronic input dial	Set by electronic input dial only
6	Shutter/Aperture input increment	1 step	1/3 step
7	Manual focusing	Prevents manual focus changes after autofocus for USM lenses	Allows manual focus adjustments after autofocus for USM lenses
8	Full-frame metering	Center-weighted average metering	Evaluative metering

The control number appears in the display panel. Set control combinations as desired.

Improved Autofocus

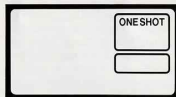
Focusing Modes

The new AF system incorporated in the EOS-1 is faster. It works better under low-light conditions, and it's more precise.

There are three focusing modes:

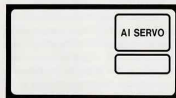
1. One-shot mode

AF operation is completed and locked once in-focus is achieved. When shooting in this mode, the shutter will not release until AF is completed. (This feature can be overridden by using Custom Function No. 4.) With evaluative metering, AF lock and AE lock occur simultaneously. Metering continues until just before the exposure is made when using spot metering or partial metering.



2. Predictive AI servo mode

This sophisticated mode enables focus prediction control for moving subjects. The photographer initiates the first shutter release in a motor-drive sequence, subsequent exposures are made after the lens is adjusted to compensate for the subject's movement.



3. Manual mode

A switch on the lens barrel permits the change from AF to manual operation. The green LED indicator in the viewfinder still lights up to indicate that the subject is in focus.

The incorporation of Custom Function Control technology makes

the AF system more flexible, since it is possible to select independent operation. AF is initiated by pressing the AE lock button instead of the shutter button.



Speed

The AF system on the EOS-1 focuses even faster than the system used on the EOS 630. This higher speed enables AI servo shooting at up to 4.5 frames per second when using the Power Drive Booster E1 plus an ultrasonic motor lens or one of the newly developed L series lenses.

4.5/sec.



High-precision Focusing

Conventional AF systems can only detect vertical lines. A newly-developed cross-type BASIS solves this problem by also being able to detect horizontal lines. Use of this cross-line system greatly reduces the number of difficult subjects for AF. It also results in much more precise focusing, particularly when using lenses with maximum apertures of f/2.8 or larger.

Improved Low-light Performance

The AF system operates comfortably at low-light levels down to EV-1 (With lenses having maximum apertures of f/2.8 or larger and film speed set at ISO 100). Having accurate AF operation available even for low-light conditions creates new possibilities for sophisticated available-light photography.

EV-1

Moving Subject Predictive Control

The EOS-1's AF system is better at tracking moving subjects. When using ultrasonic motor lenses or the newly developed L series lenses, AF tracking continues until just before exposure begins. Depending on the speed of the moving subject, the camera automatically activates the focus predict system.



Ranged position



Predicted position

Metering Systems

The EOS-1's four metering modes are quickly selected by using the main electronic input dial.

1. Fine spot metering

The most selective of the metering modes, fine spot metering reads only the light within the smaller circle (5mm dia.) and thus limits the input value to 2.3% of the screen surface, allowing very precise readings of selected parts of a photographic composition.

Metering is more precise than that of competitive cameras because the spot metering sensor is located on the AF sensor.



2. Partial metering

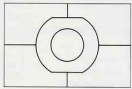
The partial metering mode limits selectivity to the area within the outer (8mm dia.) circle in the viewfinder, approximately 5.8% of the viewfinder screen. It can be used effectively when there is a strong light contrast between the main subject and the rest of the scene, such as photographs with a particularly light or particularly dark background.



3. Evaluative Metering

The six-zone evaluative metering mode provides exceptionally precise metering under difficult photographic conditions, making it easy to handle backlit subjects. In this mode, light is measured separately in six zones. Ambient light, subject size and subject pattern are input and "evaluated" by

a microprocessor using a highly complex algorithm that determines the correct exposure.



4. Center-weighted Average Metering

By increasing the value of the light in the center of the framed area — the place where the main elements are most likely to be — more selective metering can be accomplished under conventional lighting conditions.

Custom Function No. 8 replaces the default evaluative metering mode with center-weighted average metering.

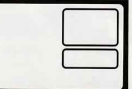


Automatic Exposure

A complete selection of AE choices provides the kind of operating flexibility the busy photographer needs. The main electronic input dial makes shifting AE modes easy.

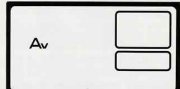
1. Shutter-priority AE

The photographer selects the shutter speed and the camera chooses the correct aperture value for existing conditions. Shutter speeds can be set in 1/3-step increments, ranging from 30 seconds to 1/8000 second.



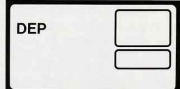
2. Aperture-priority AE

The photographer selects the aperture value and the camera sets the correct shutter speed. As with shutter speeds, aperture values can be set in 1/3-step increments that are adjustable to 1-step by Custom Function No. 6.



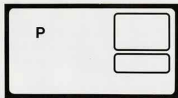
3. Depth-of-Field AE

The photographer focuses on the nearest element that is to be in focus, then to the farthest element, locking these two settings in memory. The camera then automatically selects the correct AF distance (about 7:10 of the distance between nearest point and farthest), the aperture required to keep everything between the two points in focus, and the correct shutter speed for lighting conditions.



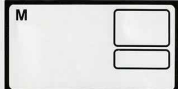
4. Intelligent Program AE

This mode calculates both shutter speed and aperture value by taking into consideration the focal length of the lens being used, which is input automatically to the main microprocessor from the lens microprocessor as soon as the lens is installed. Automatically calculating the minimum possible shutter speed for the lens in use provides reasonable protection against camera-shake. With zoom lenses, information is transferred simultaneously for any focal length selected, and the program is adjusted to match that focal length. Program shift is possible in 1 EV steps.



Manual Exposure

Metered manual using the bar dot display in the viewfinder can be operated with the main dial selecting shutter speeds and the quick control dial handling the aperture values. (Custom Function No. 5 reverses this, with the main dial handling the aperture and the quick control dial inputting shutter speeds.)



Shutter Release Time Lag

Shutter release time lag is only 55ms, regardless of the lens being used. Image loss time is also minimal.

Shutter Speeds

The EOS-1's vertical-travel metal focal-plane shutter provides a full range of electronically-controlled shutter speeds. The blazingly fast 1/8000 second shutter speed stops practically anything in mid-flight. Shutter speeds range in 1/3-step increments from 30 seconds to 1/8000 second and appear in the display panel. When shooting in the bulb mode, elapsed time is displayed up to a total of 120 seconds.

1/8000

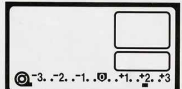
1/250 Second Flash Sync Speed

The fast flash-sync shutter speed of 1/250 broadens the possibilities of daylight fill-in flash photography and reduces ghost images from fast-moving flash subjects.

1/250

Exposure Compensation

Conventional manual exposure compensation adjustments can be set ± 3 steps in 1/3 step increments, which are confirmed on the display panel.



Auto Exposure Bracketting

Auto exposure bracketing is a way of handling tricky exposure problems. The AEB function automatically makes three continuous exposures, shifting the exposure value up and down from the exposure determined by the camera's light meter. The function can be set within a range of ± 3

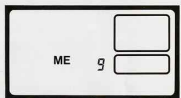
Corrected values are related to the exposure mode, as shown below:

Exposure mode	TV	AV
① Shutter-priority AE	—	•
② Aperture-priority AE	•	—
③ Depth-of-field AE	•	—
④ Program AE	•	•
⑤ Manual	Standard Function	—
	Custom Function	—

steps in 1/3-step increments. AEB is set according to the film winding mode, so photographers can control the release timing. And since it can only be canceled manually, continuous auto exposure bracketing is possible.

Multiple Exposures

The multiple exposure function presets up to nine exposures on the same frame. The number of exposures is easily set by using the main input dial and checking operation on the display panel. The function can be canceled or reset during mid-operation. Motor drive-powered continuous multiple exposures offer a great range of creative effects.



EL Illumination

An integrated EL illumination function fills the display panel with a soft blue light, making it easy to read even in the dark.

Mid-roll Rewind

Film can be easily rewound before the last exposure has been made by pressing the mid-roll rewind button. Using this feature along with Custom Function No. 2 is particularly convenient, since the film leader is left outside the cartridge for easy re-loading at a later time.



Self-timer

The self-timer provides a choice of two release times — 2 seconds or 10 seconds.



Power Drive Booster E1

The Power Drive Booster E1 raises the film advance speed to 5.5 fps, enabling very rapid-fire continuous shooting. (EOS-1 body alone advances film at 2.5 fps.) The rugged, sure-grip power drive booster has a shutter button and AE lock button positioned on the base so that operating the camera vertically feels the same as when holding it horizontally. The booster's AA battery pack replaces the standard lithium battery.



Command Back E1

The Command Back E1 provides the photographer with sophisticated timer control operations and allows various types of data imprinting to be carried out. The timer functions allow the photographer to capture periodic scenery changes over a fixed length of time. A special self-timer function releases the shutter after a predetermined period of time. The interval timer releases the shutter at fixed intervals, spaced anywhere from 1 second to 23 hours 59 minutes apart. The long release timer holds the shutter open for a preset period of time during bulb operation. And the frame counter setting stops the camera after a set number of exposures has been made.

Data imprint functions include the date, time of day,



a frame counter number, or an arbitrary 6-digit number plus the letters A through F.

When the Command Back E1 is being used, functions assigned to the quick control dial are handled by the main electronic input dial in conjunction with the exposure compensation button.

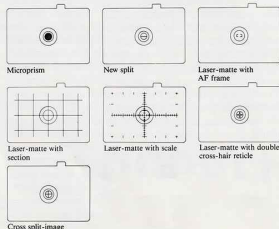
430EZ

The new Speedlite 430EZ has been designed to take advantage of the EOS-1's A-TTL auto-flash program. An AF auxiliary light enables positive autofocus even in total darkness. And a high-quality external battery pack is now available to provide power for extended photography sessions. Flash-fill ratio control is possible in 1/3-step increments, and flash charging time is less than 1.5 seconds. Second curtain sync works with slow shutter speeds, and the stroboscopic function allows the flash to fire up to 10 times a second. The flash zooms internally to match the focal length of the lens being used. The flash head can be adjusted for bounce flash, and a lock pin holds it securely. A display panel provides key data, with EL illumination making it easy to read in the dark.

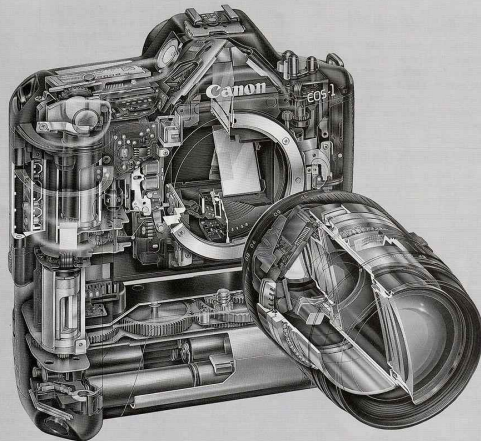


Interchangeable Focusing Screens

Seven focusing screens are available to handle a variety of specialized photography tasks.



EOS 1



"An astonishing technological achievement that brings together the world's most advanced optics, electronics and high-precision engineering skills."

Superior Reliability

The new EOS-1 has been designed specifically to handle the heavy-duty work loads of a professional photographer. Performance is ensured from -4°F (-20°C) up to 113°F (45°C) at 85% humidity.

1. Thicker Body Material

Composed of extra-tough, glass fiber-reinforced polycarbonate, the body cover is approximately 25% thicker than other models. A base plating composed of nickel and copper adds support, while a black chrome plating completes the camera body, making it tough enough to withstand rough handling. Thick sections of non-slip rubber make holding secure.

2. Moisture-resistant Design

The camera is also highly dust- and moisture-resistant, thanks to a cover sealing mechanism and the use of push buttons, levers, and revolving dials that are more effective at preventing water from entering. (Much better than conventional external slide switches.) Rubber seals and guards protect all possible moisture entry areas.

Even if moisture should enter, important electrical contacts are placed so as not to be affected. Shutter blades and important electrical-contact areas are coated with a water-repellent lubricant, too.

3. Double Electrical Contacts

All important electrical contacts have double terminals to ensure proper operation. Surfaces of data-transmitting contacts are gold plated for optimum contact.



4. Self-diagnosis Functions

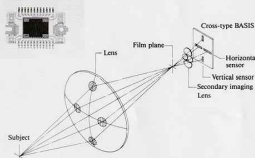
All camera sequence control operations are monitored by the main microprocessor to ensure reliability. If trouble is detected, the sequence is halted and a "be" warning appears on the display panel. (Other cameras may not offer this safety feature, which prevents improper operation.)

There's no problem with power, either. Automatic battery checks are done during sequence operation to ensure adequate power for finishing a process. Moreover, pressing the battery check button under the palm door gives an instant readout of battery power on the display panel.

Other warnings also ensure real reliability. The display panel presents a row of blinking dashes as a warning if the film is not loaded properly, for example. And a row of dashes coming out of the cartridge symbol indicates correct film advance and film rewind.

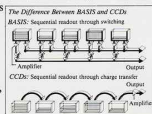
TTL-CT-SIR AF Ranging System

The TTL-CT-SIR (TTL Cross-Type Secondary Image Registration) phase detection system determines focus by driving the lens after completing a sophisticated process of signal detection and calculations. The system splits light rays into four beams — two horizontal and two vertical — that form images on the surfaces of four sensors. Focus is determined first by analyzing horizontal and vertical image data. This extra information speeds up the focus process. Once this has been completed — a matter of microseconds — the lens motor focuses the lens.



Cross Ranging Sensor BASIS

The new BASIS (Base-Store Image Sensor) was created to be accurate enough and reliable enough to meet the standards of professional photographers. The result of extensive research, it consists of two, 47-bit horizontal line sensors and two, 29-bit vertical line sensors, plus associated amplifier circuitry that is housed in a clear-molded package. By integrating an amplifier with each individual element of the sensor instead of just having an amplifier section at the output stage as CCDs do, BASIS preserves signal integrity by amplifying the electrical signals before they are read out through switching. Signal purity is thus maintained, with minimum noise and minimum loss of information. In addition, the new BASIS is equipped with an extra circuit that boosts the signal ten times in order to improve sensitivity and S/N ratio. The sensor pitch is also 10% finer than that of previous BASIS sensors, providing improved narrow-line detection ability. Also, anti-reflection film coats the sensor's light-sensing areas in order to stabilize signal detection. Innovations like the cross ranging sensor BASIS result in improved accuracy and better efficiency, making possible reliable low-light level operation down to EV-1, light dimmer than most people can see clearly.

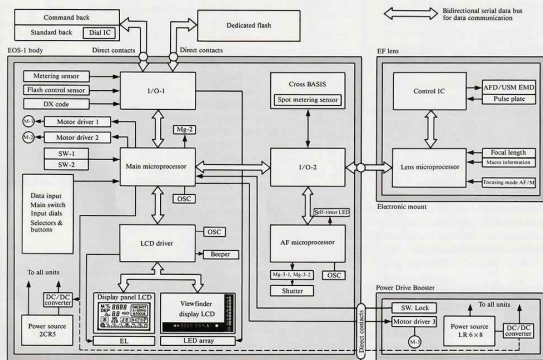


Two Microprocessors

The EOS-1 employs an information processing system composed of two microprocessors. One is a high-speed super-microprocessor that is dedicated to AF operation

only. The other microprocessor is in charge of AE and sequence controls. The two microprocessors can handle data independently and simultaneously. As a result, overall electronic operation is highly reliable, and AF operation speed and accuracy is obviously superior.

Block Diagram of Electronic circuits



6-zone Evaluative Metering

This new evaluative metering system divides the frame into six zones. The EOS system's main microprocessor uses an algorithm which evaluates luminance in each of the six sections to determine the correct exposure by comparing differences in brightness between the various metered areas, comparing center to immediate and immediate to peripheral. This comparison estimates subject size and the conditions in which the subject is situated, considerations which are factored-in to make the final exposure decision. The system also detects variations in subject reflective luminance level. When the luminance level is high, it compensates to obtain high-lighted depiction, and when the luminance is low, it compensates to obtain shadow depiction. Since the camera automatically focuses on the object to be photographed, AE is calculated and locked automatically as soon as focusing is completed.



The EF Lenses

Canon's system of sophisticated autofocus lenses are widely recognized as setting the standards for superior optical performance. The large-aperture L series EF lenses provide an even wider choice of professional-use autofocus lenses.

EF 50mm f/1.0L EF 85mm f/1.2L EF 20-35mm f/2.8L

Large-aperture lenses are often essential for serious photography. With the EF 50mm f/1.0L, Canon has created a lens with brightness capabilities surpassing those of the human eye. The EF 85mm f/1.2L is also an exceptionally fast short telephoto lens that serves as an excellent portrait lens. The EF 20-35mm f/2.8L is a super wide-angle zoom lens which remains bright during zooming.

■ Aspherical Elements

These new L series lenses use aspherical elements manufactured with Canon's high-level polishing technology in order to achieve an image quality that is virtually free of the spherical aberrations that can cause diminished sharpness in large aperture lenses.

■ Floating Element construction

The optical system employs a floating element construction to compensate for curvature of field during focusing and ensure high image quality at all shooting distances. Good color balance is attained through the use of a new, exclusively-developed multi-layer coating for the high-refractive index glass. Designed for full-aperture photography, Canon's new L Series lenses offer superlative image quality, brightness and blur effect, plus great wide-angle coverage with the EF 20-35mm f/2.8L.

EF 80-200mm f/2.8L

The large aperture EF 80-200mm f/2.8L features an outstanding zoom range for high image quality and superior operability to meet the needs of professionals. During zooming the aperture does not change, making it ideal for a variety of applications — from outdoor photos to studio shots that require flexibility.

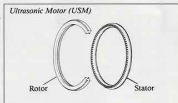
■ Three UD Glasses

The optical system consists of three elements of UD glass that maintain high image quality and compensate for the chromatic aberrations which often occur with large-aperture telephoto lenses.

Ultrasonic Motor

Some L series lenses employ an ultrasonic motor to handle AF operation within the lens. USM incorporates a ring-shaped motor that maintains the traditional lens shape. As it is a direct-drive system with no gearing units, operation is astonishingly fast, reliable and virtually silent. Greater compactness and operational simplicity are realized by using low rotational speed and high torque, thereby eliminating the need for a braking unit. And the speed and noiseless operation has to be experienced to be fully appreciated.

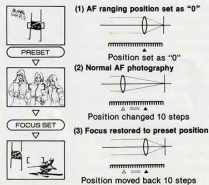
The electronic focusing rings on USM lenses work together with the AF mechanism to provide superior operability. The focusing motor is driven according to the electrically-detected rotation of the focusing ring. It's a system of power-assisted focus, since as the ring is turned, pulse signals are generated by an encoder that instructs the microprocessor in the lens to drive the USM accordingly. With the EF 200mm f/1.8L, the EF 300mm f/2.8L, and the EF 600mm f/4L, there's a 3-step variable focusing rate, making it possible to focus rapidly for quick-moving subjects or to select high-precision focusing control as the situation warrants.



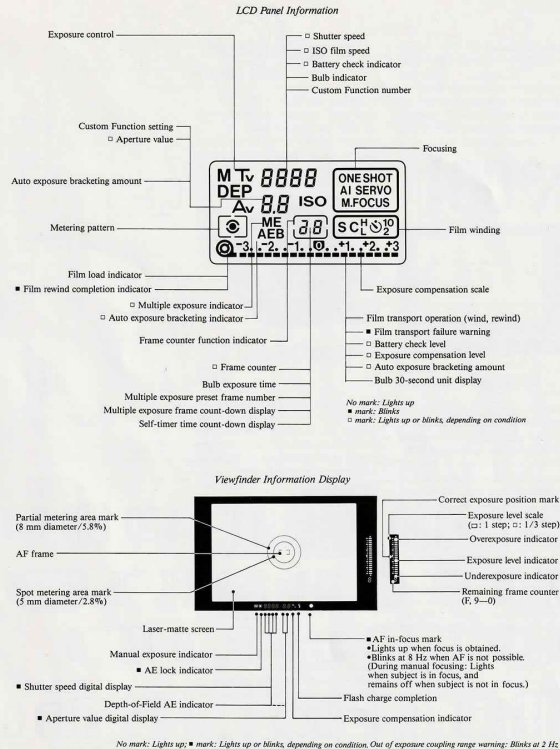
Focus Preset

Selected large-aperture telephoto lenses — the EF 200mm f/1.8L, the EF 300mm f/2.8L, and the EF 600mm f/4L — have a focus preset function that can "lock in" a focus setting. The photographer can focus on other shots, then when necessary return immediately to the preset focus at the touch of a button.

Focus Preset Operation



UNDERSTAND THESE DATA DISPLAYS



Lens	Focus Drive		Angle of View	Construction	Minimum Aperture	Closest Focusing Distance		Filter Size (mm)	Length		Weight		
	AFD	USM				(ft.)	(m)		(in.)	(mm)	(oz.)	(g)	
Fluorite EF 15mm f/2.8	●	●	180°	7-8	22	0.7	0.2	Filter Holder	2-7/16	62.2	11.6	330	
EF 24mm f/2.8	●	●	84°	10-10	22	0.8	0.25	58	1-15/16	48.5	9.5	270	
EF 28mm f/2.8	●	●	75°	5-5	22	1	0.3	52	1-11/16	42.5	6.5	190	
EF 50mm f/1.8	●	●	46°	3-6	22	1.5	0.45	52	1-11/16	42.5	6.7	190	
EF 50mm f/1.8 (Ultrasonic)	●	●	46°	9-11	16	2	0.6	72	3-3/16	81.5	22.0	985	
Compact-Macro EF 50mm f/2.5	●	●	46°	8-9	32	0.748	0.228	52	2-3/2	63	9.9	280	
EF 85mm f/1.2L (Ultrasonic)	●	●	28°30'	7-8	16	3.1	0.95	72	3-5/16	84	23.0	1,025	
Softfocus EF 135mm f/2.8	●	●	18°	6-7	32	4.3	1.3	52	3-7/8	98.4	33.0	900	
EF 200mm f/1.8L (Ultrasonic)	●	●	12°	10-12	32	8.2	2.5	48 (drop-in type)	8-3/16	208	6.8	3,000	
EF 300mm f/2.8L (Ultrasonic)	●	●	8°15'	7-9	32	9.8	3	48 (drop-in type)	9-9/16	253	6.3	2,855	
EF 600mm f/4L (Ultrasonic)	●	●	4°10'	8-9	32	19.7	6	48 (drop-in type)	17-15/16	456	13.2	6,000	
EF 20-35mm f/2.8L	●	●	84°	40-51	22-15	22	1.6	0.5	72	3-1/2	89	19.1	540
EF 28-70mm f/3.5-4.5L	●	●	75°	34-41	10-10	22-29	1.3	0.39	52	3	75.6	16.1	285
EF 28-80mm f/2.8-4.0L (Ultrasonic)	●	●	75°	30-41	11-12	22	1.6	0.5	72	4-11/16	119.5	21.0	945
EF 35-70mm f/3.5-4.5	●	●	63°	34-41	8-9	22-29	1.3	0.39	52	2-1/2	63	8.6	245
EF 35-70mm f/3.5-4.5A	●	●	63°	34-41	8-9	22-29	1.3	0.39	52	2-1/2	63	8.1	230
EF 35-105mm f/3.5-4.5	●	●	63°	23-20*	11-14	22-29	3.1	0.95	58	3-1/4	81.9	16.1	475
EF 35-135mm f/3.5-4.5	●	●	63°	12-16	22-29	3.1	0.95	58	3-3/4	94.5	16.8	470	
EF 50-200mm f/3.5-4.5	●	●	46°	12*	13-16	22-29	3.9	1.2	58	5-3/4	146.4	24.4	690
EF 50-200mm f/3.5-4.5L	●	●	46°	12*	14-16	22-29	3.9	1.2	58	5-3/4	145.8	24.5	695
EF 50-210mm f/4	●	●	34°	11-20*	8-11	32	3	1.2	58	5-7/16	137.6	21.4	605
EF 80-200mm f/2.8L	●	●	30°	12*	7-16	32	5.9	1.8	72	7-5/16	185.7	29.9	1,330
EF 100-200mm f/4.5A	●	●	24°	12*	13-10	32	6.2	1.9	58	5-1/8	130.5	18.4	520
EF 100-300mm f/5.6	●	●	24°	4*15*	9-15	32	4.9	1.5	58	6-9/16	166.8	24.2	685
EF 100-300mm f/5.6L	●	●	24°	4*15*	10-13	32	4.9	1.5	58	6-9/16	166.6	24.5	695
Extender EF 2X	—	—	—	5-7	—	—	—	—	2	50.5	8.5	240	
Extender EF 1.4X	—	—	—	4-5	—	—	—	—	1-1/16	27.3	7.1	200	
Life-Size Converter EF	—	—	—	3-4	—	—	—	—	1-3/8	34.9	5.6	160	

*Extender EF 2X is for exclusive use with EF 200mm f/1.8L and EF 300mm f/2.8L. •Extender EF 1.4X is for exclusive use with EF 200mm f/1.8L, EF 300mm f/2.8L and EF 500mm f/4L.
•Life-Size Converter EF is for exclusive use with Compact-Macro EF 50mm f/2.5. •“A” series lenses are autofocus only.