

# Canon EOS 1

The New Classic



You are about to discover the advent of a brilliant creative tool. A camera that provides the ultimate in control. Then lets you decide for yourself how to use it.



# EOS 1



# The new EOS-1 combines total automatic operations with sophisticated manual control.

In the accelerating evolution of modern camera technology, even minor improvements seem like major events. But now there truly is a major event. The new Canon EOS-1. Created to meet the needs of the most demanding professional and advanced amateur photographers. And to become the classical standard against which all others must be measured.





# The new EOS-1 with multiple modes plus Custom Function Control becomes your personalized photographic tool.

This is what the new Canon EOS-1 provides so brilliantly: Full automation for the tasks that are tangential to the creative process of making photographs.

Plus an ability to manually control the camera.

Custom Function Control lets you define certain aspects of the automatic operation for your individual photographic needs.



**Canon**

EOS-1



Now there's an advanced autofocus system that is reliable enough to improve your "success ratio" in critical situations.

You may distrust autofocus technology. You may not see why you need it, for one thing. And you may have run into systems that were inadequate. The EOS-1 is going to erase those doubts.

Because the new cross-line sensor instantly detects both vertical and horizontal lines, even in extremely low light. And the improved focus prediction system focuses on where a rapidly moving subject actually will be when the film is exposed.

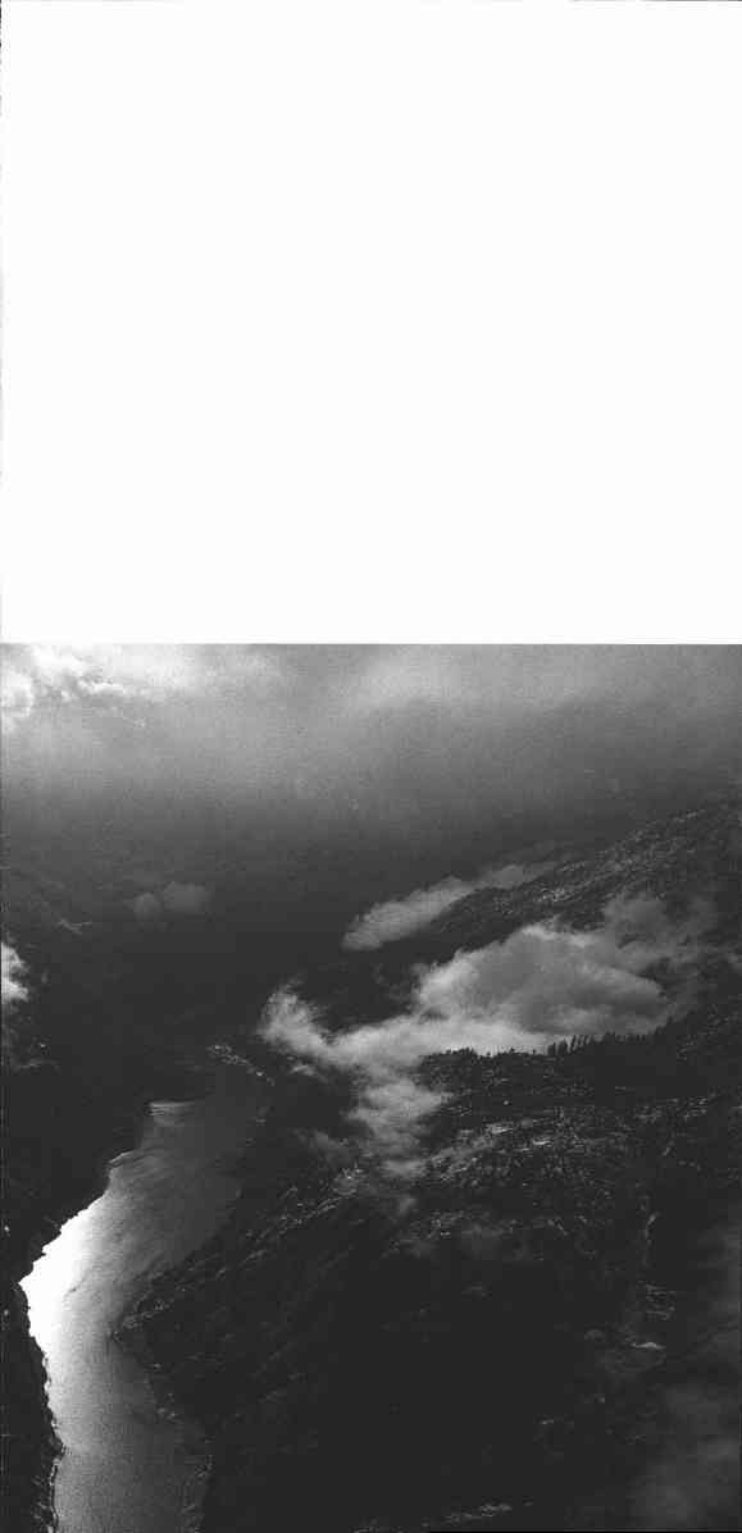






This is the camera for people who know that photographs aren't just taken. And they certainly aren't snapped. They're *made*. And Canon wouldn't have it any other way.





You use the automation the way you want,



The EOS-1 has been designed to provide you, the professional photographer, with total control over every photographic situation you might encounter. This means going beyond automation to a totally integrated system that permits the “fine-tuning” of various key aspects of the photographic process. That which is merely incidental to the act of making photographs — film advance, film rewind, etc. — is fully automated. Yet in order to create a camera good enough to meet any photographic situation, it was necessary to reach beyond even the most sophisticated automatic operation. And to devise a form of “new” manual operation that takes advantage of advanced technology to work faster and with more precision than ever before possible. Essential options for personalized operation let you “design” the camera to fit your demands.

#### **Input dials**

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

The main dial works in combination with various mode selectors to allow the photographer to quickly dial in operational choices. It selects the exposure control, AF operation and metering pattern. It also selects shutter speeds or aperture values during shutter-priority or aperture-priority operation. It sets the auto



**AUTO OPERATION & “NEW” MANUAL CONTROL**

when you want it.



exposure bracketing values and exposure compensation. It selects the film winding speed, number of multiple exposure presets, and manual film speed settings. And it also selects the EOS-1's unique Custom Function Controls.

The quick control dial has a switch that enables operation. 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. In the AE mode, the quick control dial can be used to set exposure compensation values.

Listing the options above gives you a sense of the total control offered by the EOS-1. But only by handling the camera and actually using the two dials can you appreciate just how simple and convenient they are to operate, since they quickly become intuitive — par-

ticularly in the metered manual shooting mode, with each input selection instantly confirmed in the viewfinder's exposure level scale.

#### **Display panel**

Just as the two electronic input dials enable quick, effortless decision-making, the display panel lets you quickly check operating conditions. The display panel has been inclined toward the rear slightly for better readability and is equipped with an integrated electro-luminescence function that makes it easy to see in the dark.



## Viewfinder and information display

The bright, 20mm high-eyepoint viewfinder has a field of view that is virtually 100%, ensuring that you see exactly what you are photographing. The viewfinder employs a fixed pentaprism and has seven types of interchangeable focusing screens. A built-in integrated dioptic adjustment function from -3 to +1 allows compensation for photographers who wear glasses.

Basic information is displayed along the bottom and at the side of the viewfinder. Information along the bottom includes manual exposure indicator, AE lock, shutter speed or aperture value, Depth-of-Field AE indicators, exposure compensation indicator, flash charge completion and AF confirmation. Along the side are a detailed exposure level scale with overexposure and underexposure indicators. Exposure values are displayed with dots in 1/3-step increments. When using AE lock, the difference between the locked value and actual value is indicated. Below this scale is a frame counter that shows the number of frames remaining.

## Depth-of-field preview

Depth-of-field preview provides a visual confirmation of the zone of focus. With only a touch of a button, you can easily preview the scene in any exposure mode, thanks to the EMD (Electro-Magnetic Diaphragm) which achieves precise control.



## Metered manual control

The two electronic input dials make metered manual operation exceptionally easy and precise. In this mode, the shutter speed is set using the main dial while the aperture is set by the quick control 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. Canon's "new" metered manual, together with body-integral auto bracketing and 1/3-stop precision are a dream come true for the pro shooting transparency films.



## Manual focus

Nearly all Canon EF lenses have a switch on the lens barrel that lets you shift from AF to manual operation. The manual focusing "feel" is pleasingly smooth, without the rasping operation common to some AF lenses. Canon's L series lenses with ultrasonic motors also allow manual focusing in the One-Shot AF mode once the lens has focused on the subject. By using the electronic focusing ring system after AF has completed, you make the final decision on focus.

## Viewfinder Information Display

Partial metering area mark  
(8 mm diameter/5.8%)

AF frame

Spot metering area mark  
(5 mm diameter/2.3%)

Laser-matte screen

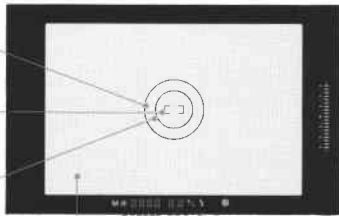
Manual exposure indicator

■ AE lock indicator

■ Shutter speed digital display

Depth-of-Field AE indicator

■ Aperture value digital display



No mark: Lights up; ■ mark: Lights up or blinks, depending on condition.

## AUTO OPERATION & "NEW" MANUAL CONTROL

## Custom Function Control

Individual photographers have unique needs. The EOS-1 is flexible enough to allow reconfiguration for a number of specialized purposes. Eight custom functions are selectable.

1. Automatic film rewind can be canceled. This eliminates rewind noise when shooting in 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 reloaded later.

3. Automatic DX-coded film speed setting can be canceled. This is useful for photographers who frequently adjust film speed. The user-set ISO film speed can be easily confirmed in the display panel.

4. Autofocus can be initiated by pressing the AE lock button. (Regular operation is activated by pressing the shutter button halfway.) By separating focusing and metering operations, focus-lock shooting becomes more flexible.

5. The aperture value is set with the main electronic input dial and the shutter speed with the quick control dial during manual exposure mode operation. (The opposite of regular operation.) You can decide the combination that's easiest for the way you hold the camera.

6. The shutter speeds and aperture values are set in 1-step increments. (Normal operation is in 1/3-step increments.)

7. Additional manual focusing is disabled after completion of one-shot AF mode operation. (When using ultrasonic motor lenses.)

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

## Ergonomic design

The EOS-1 has been created to serve as a hard-working professional tool. As such, particular care has been taken to allow the photographer to achieve high-level photographic techniques with absolutely minimal stress. The shutter button height and release stroke can be easily adjusted at a Canon service facility without disassembling the camera. Shutter release time lag is only 55 ms, regardless of the lens being used. And image loss time is also minimal.

The camera is rugged. The grip is covered with rubber to prevent slipping. The camera holds easily, with the key controls where your fingers fall naturally. Using the electronic input dials and mode selector buttons quickly becomes second nature. The size and placement of the quick control dial makes it particularly easy to input information while holding the camera vertically. Even with the Power Drive Booster E1 attached, principle operations for vertically-held shots are carried out the same way, since there is a shutter button and AE lock button on the booster. The quick control dial also offers quick adjustments even when the booster is mounted.

Correct exposure position mark

Exposure level scale

(□: 1 step; □: 1/3 step)

Overexposure indicator

Exposure level indicator

Underexposure indicator

Remaining frame counter

(F, 9—0)

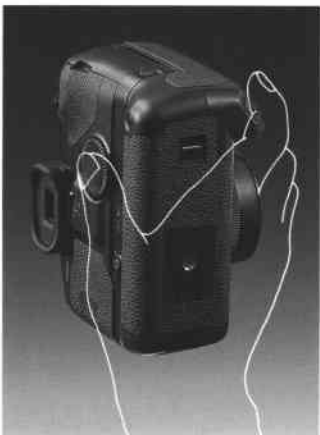
■ AF in-focus mark

• Lights up when focus is obtained.

• Blinks at 8 Hz when AF is not possible.

Flash charge completion

Exposure compensation indicator



# The autofocus system responds instantly.

The new AF system incorporated in the EOS-1 has been improved to meet the high standards of professional photographers. It's faster. It works better under low-light conditions. And it's more precise.

There are three focusing modes:

1. **One-shot AF 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. 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 AF mode.** This sophisticated mode enables focus prediction control for moving subjects. This involves shutter-release priority, and during con-

tinuous shooting, the lens is adjusted for the movement of the subject. Custom Function No. 4 even allows for convenient AF lock in servo mode.

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.

## 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 AF 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 professional L series lenses. It's quick enough to catch each segment of fast-breaking action.





### 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, and works extremely well with difficult to focus wide-angle lenses, improving speed and accuracy.



### 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.

### 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). This means the EOS-1 focuses quickly and precisely in dark hallways, dimly lit rooms, gardens at twilight — situations where human vision is limited. Having accurate AF operation available for these low-light situations creates new possibilities for sophisticated available-light photography.

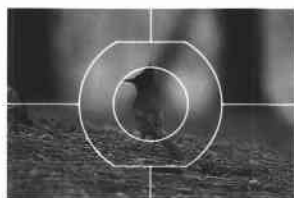


# Four metering systems provide total control

The EOS-1 features four metering modes that are easily selected by using the main electronic input dial.

## **Evaluative metering**

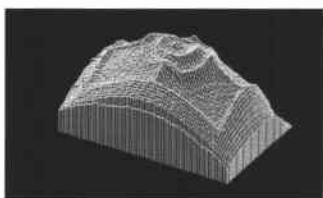
Six-zone evaluative metering provides exceptionally precise metering under difficult photographic conditions, making it easy to handle backlit subjects. In this mode, light is measured separately in six zones. Ambient light, subject size and subject pattern are input and "evaluated" by a microprocessor using a highly complex algorithm that determines the correct exposure.



## **Center-weighted average metering**

By increasing the value of the light in the central area — the place where the main elements are most likely to be — more selective metering can be accomplished under conventional lighting conditions. This pattern will be familiar to Canon F-1 users.

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



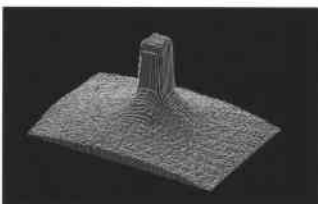
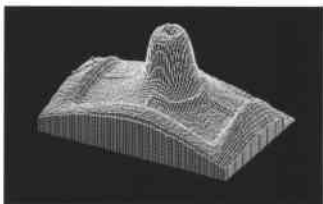
over the vagaries of light.

### **Partial metering**

Partial metering 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 for photographs with a particularly light or particularly dark background. Choose this system if you want to meter a selected area of the frame then stipulate the final exposure using exposure compensation.

### **Fine spot metering**

The most selective of the metering patterns, 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 the key parts of a photographic composition. Metering is exceptionally precise because the spot metering sensor is located on the BASIS sensor itself.



# Versatile exposure control and blazingly fast

## Automatic exposure

A complete selection of AE choices provides the kind of operating flexibility you need for the variety of work you do.

### ■ Shutter-priority AE

Shutter speeds can be set in 1/3-step increments, ranging from 30 seconds to 1/8000 second. Custom Function No. 6 enables settings in 1-step increments.

### ■ Aperture-priority AE

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.

### ■ Depth-of-Field AE

Using this mode makes it easy to control exactly how much of the scene will be in sharp focus from front to back. You simply focus on the element nearest you that is to be sharply in focus, then to the element farthest away that you want in focus. The camera 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 equivalent

shutter speed for lighting conditions. Depth of field can be confirmed by pressing the electronic preview button. This mode is also useful when extremely shallow depth of field is required, since you can set the nearest-point/farthest-point perimeters at the same place.

### ■ Intelligent Program AE

This convenient 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. Intelligent program AE thus automatically calculates the minimum possible shutter speed for the lens, providing 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, used with auto exposure bracketing, you have the best in convenience and security for fast-breaking situations.



*1/8000 sec. shutter speed*

## EXPOSURE SYSTEMS

# shutter speeds meet any challenge.

## 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. Or using Custom Function No. 5 can reverse this, with the main dial handling the aperture and quick control dial inputting shutter speeds. The viewfinder display shows user-set shutter and aperture values, and the dot display at the right of the finder indicates correct exposure setting.

## ■ 1/8000 second top shutter speed

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, providing superior precision. When shooting in the bulb mode, elapsed time is displayed up to a total of 120 seconds.

## ■ 1/250 second flash sync speed

The fast flash-synchro shutter speed of 1/250 second broadens the possibilities of daylight fill-in flash photography.

## ■ Auto exposure bracketing

Canon's unique camera-integral system allows auto exposure bracketing without accessories. AEB is a way to make certain of a shot that offers 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  $+/- 3$  steps in 1/3-step increments. AEB is set according to the film winding mode, and since it can only be canceled manually, continuous auto exposure bracketing is possible.

## ■ Multiple exposures

The multiple exposure function lets you expose the same frame up to nine times. The number of exposures is preset with the main dial while pressing the exposure control selector and metering pattern selector. Operation can be easily canceled or reset during mid-operation. Motor drive-powered continuous multiple exposures offer a great range of creative effects. Film registration remains virtually perfect between exposures.



*1/250 sec. flash sync speed*

Built-in power backed by a power-booster motordrive provides stop-action control.



**POWER DRIVE BOOSTER**



### Power Drive Booster E1

The film transport system presents two configurations. The camera is lightweight and compact when the Power Drive Booster E1 is not attached, and the built-in motor drive advances the film at a rate of 2.5 frames per second. If you need more speed, attaching the Power Drive Booster E1 raises the film advance speed to 5.5 fps, enabling

very rapid-fire continuous shooting. In addition, 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 motordrive batteries power the camera when attached. "AA" alkaline or Ni-Cd batteries can be used.

New flash technology gives you your kind of light.



#### **A-TTL flash program AE**

Canon's A-TTL auto flash system yields natural-looking flash photography. Flash synchro speeds range from 1/250 to 1/60 second. A warning is given before exposure if the subject is out of flash coupling range. And flash output is controlled automatically via measurement of the light reflected off the film plane. With fill-in flash, the flash level is automatically adjusted by the A-TTL flash program AE to maintain a natural balance between the brightness of the subject and the background. Upon flash charge completion, the A-TTL flash program AE automatically sets the shutter speed according to the brightness of the background. The

aperture value for exposure is determined based on both the background brightness as detected by the camera body in the four outer zones of the evaluative metering system and on the main subject's distance, determined by the flash unit's infrared preflash function.

**430EZ**



## **FLASHES**





at up to ten times per second. The flash's internal zoom adjusts to suit the flash output to the focal length of the lens being used. An LCD panel with EL illumination displays key data. And the flash head swings 90° upward or to the right, and 180° to the left for bounce-flash photography. A hot shoe lock pin holds the flash securely.

A high-quality external battery pack has been created for use with the Speedlite 430EZ, ensuring adequate power for extended photography sessions. The Transistor Pack E provides approximately 2,000 flashes (with alkaline-manganese batteries) or 1,500 flashes (with Ni-Cd batteries).



*Transistor Pack E*

The new Speedlite 430EZ provides superior light control for truly natural-looking flash photography — both ordinary and fill-in — by using the EOS-1's A-TTL auto-flash program. An AF auxiliary light enables positive autofocus even in total darkness. There is a user-controlled flash fill ratio to achieve the exact effect you desire. Flash exposure compensation is possible in 1/3-step increments. And flash charging time is less than 1.5 seconds, allowing rapid-fire flash photography.

Second-curtain sync means the flash is fired at the end of a slow shutter speed exposure, preserving the natural flow of moving light. The stroboscopic function fires the flash

## More flashes



*Macro Ring Lite ML-3*



*300EZ*

A complete selection of EF lenses provides the best focal lengths for each situation.

Canon's system of sophisticated autofocus lenses are widely recognized as setting the standards for superior optical performance. The new 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**

**EF20-35mm 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



*EF 50mm f/1.0L*

**EF LENSES**



*EF80-200 mm f/2.8L*

is a super wide-angle zoom lens which remains bright during zooming.

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 distortion in large aperture lenses. The optical system employs a floating element construction to compensate aberration alterations

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 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. 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.



### **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 lets you “lock in” a focus setting. You can focus on other shots, then when necessary return immediately to the preset focus at the touch of a button.



*Compact-Macro EF 50 mm f/2.5*



### **Electronic ring manual control**

Some L series lenses feature electronic focusing rings together with the AF mechanism that take advantage of the superior operational capabilities of ultrasonic motors. With electronic focusing rings, 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.





### **Electronic mount**

The EOS system's fully electronic EF mount lens combines the speed and reliability that are essential for high-quality AF operation. In terms of accuracy and dependability, the electronic mount far out-performs the systems used by other autofocus SLRs. Communications between lens and camera body can be transferred at high speed. Moreover, essential information about the lens in use is sent to the camera's microprocessor as soon as the lens is mounted, allowing all basic preparations to be completed immediately.

With the lens' focal length, maximum aperture, AF/manual mode entered, as well as information on shooting modes, whether or not a flash is mounted, etc., the camera's microprocessor can perform all relevant calculations, make the necessary decisions, and send instructions to the lens, which then instantly activates AF and aperture-setting operations.

Moreover, the fully electronic mount offers the advantage of providing compatibility with the more intelligent systems of the future.

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## **EF LENSES**



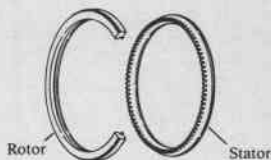
*EF 300mm f/2.8L*

## **USM**

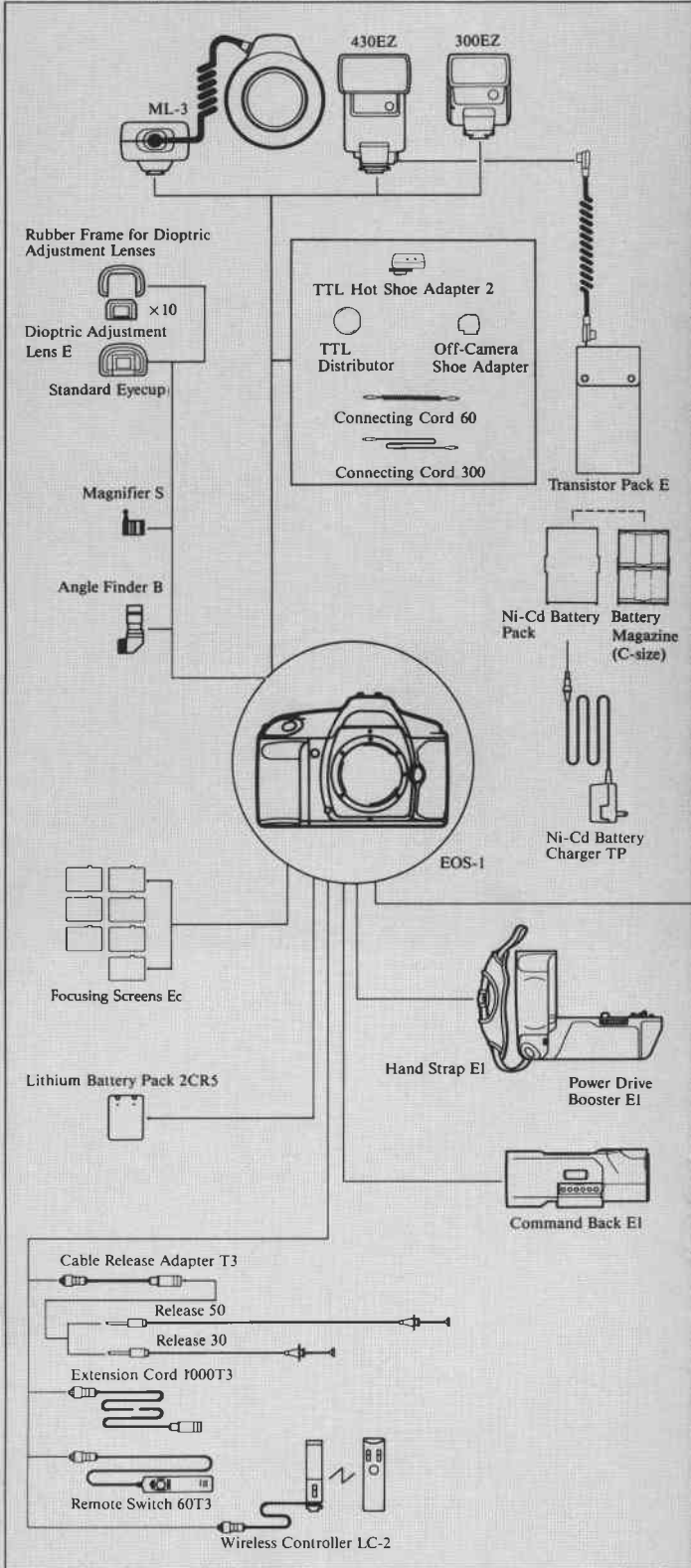
Some L series lenses employ an ultrasonic motor that handles AF operation within the lens. USM incorporates a ring-shaped motor. As it is a direct-drive system with no gearing units, operation is fast and reliable. Added to the fact that there are no mechanical couplings between the lens and camera body, this technologically-advanced lens focusing system allows astonishingly quick, precise operation. Greater compactness and operational simplicity are realized by using low rotational speed and high torque,

thereby eliminating the need for a braking unit. Beyond being quick, focusing operation is also virtually noiseless.

*Ultrasonic Motor (USM)*



# The EOS-1 System







Fisheye EF15/2.8



EF24/2.8



EF28/2.8



EF50/1.8



•EF50/1.0L



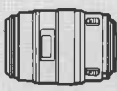
EF50/2.5 Macro



Life-Size Converter



•EF85/1.2L



EF100/2.8



EF135/2.8SF



EF20-35/2.8L



EF28-70/3.5-4.5II



•EF28-80/2.8-4L



EF35-70/3.5-4.5



EF35-70/3.5-4.5A



EF35-105/4.5



EF35-135/3.5-4.5



\*EF35-135/3.5-4.5



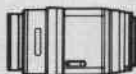
EF50-200/3.5-4.5



EF50-200/3.5-4.5L



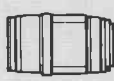
\*EF70-210/3.5-4.5



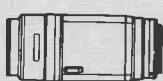
EF70-210/4



EF80-200/2.8L



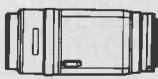
EF100-200/4.5A



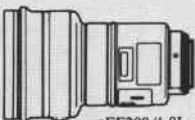
EF100-300/5.6



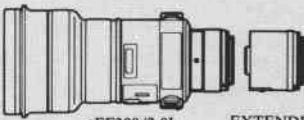
\*EF100-300/4.5-5.6



EF100-300/5.6

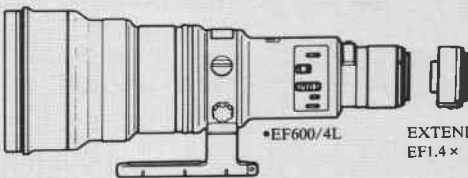


•EF200/1.8L



•EF300/2.8L

EXTENDER EF2x



•EF600/4L

EXTENDER EF1.4x

Filters



Circular Polarizing Filter PL-C



(48mm diameter drop-in type)

Circular Polarizing Filter PL-C



(52mm, 58mm and 72mm diameter screw-in type)

\*New USM lenses

\*USM lenses

## EF LENS LINEUP

Lens	Focus Drive		Angle of View	Construction
	AFD	USM		
Fish-eye EF 15mm f/2.8	●		180°	7-8
EF 24mm f/2.8	●		84°	10-10
EF 28mm f/2.8	●		75°	5-5
EF 50mm f/1.8	●		46°	5-6
EF 50mm f/1.0L (Ultrasonic)		●	46°	9-11
Compact-Macro EF 50mm f/2.5	●		46°	8-9
EF 85mm f/1.2L (Ultrasonic)		●	28°30'	7-8
Macro EF 100mm f/2.8*	●		92°	9-10
Softfocus EF 135mm f/2.8	●		18°	6-7
EF 200mm f/1.8L (Ultrasonic)		●	12°	10-12
EF 300mm f/2.8L (Ultrasonic)		●	8°15'	7-9
EF 600mm f/4L (Ultrasonic)		●	4°10'	8-9
EF 20-35mm f/2.8L	●		94°-65°	12-15
EF 28-70mm f/3.5-4.5II	●		75°-34°	9-10
EF 28-80mm f/2.8-4L (Ultrasonic)		●	75°-30°	11-15
EF 35-70mm f/3.5-4.5	●		63°-34°	8-9
EF 35-70mm f/3.5-4.5A	●		63°-34°	8-9
EF 35-105mm f/3.5-4.5	●		63°-23°20'	11-14
EF 35-135mm f/3.5-4.5	●		63°-18°	12-16
EF 35-135mm f/4-5.6 (Ultrasonic)		●	63°-18°	12-14
EF 50-200mm f/3.5-4.5	●		46°-12°	13-16
EF 50-200mm f/3.5-4.5L	●		46°-12°	14-16
EF 70-210mm f/4	●		34°-11°20'	8-11
EF 70-210mm f/3.5-4.5 (Ultrasonic)*		●	34°-11°20'	10-14
EF 80-200mm f/2.8L	●		30°-12°	13-16
EF 100-200mm f/4.5A	●		24°-12°	7-10
EF 100-300mm f/5.6	●		24°-8°15'	9-15
EF 100-300mm f/5.6L	●		24°-8°15'	10-15
EF 100-300mm f/4.5-5.6 (Ultrasonic)*		●	24°-8°15'	10-13
Extender EF 2x	—	—	—	5-7
Extender EF 1.4x	—	—	—	4-5
Life-Size Converter EF	—	—	—	3-4

\*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  
\*Life-Size Converter EF is for exclusive use with Compact-Macro EF 50mm f/2.5. \*"A" series lenses are auto-

### The EOS-1 System

Canon's EOS began as a camera system built around a series of innovations that were designed to make photography easier and more reliable. It has grown into a complete, professional-quality photographic system that offers everything needed for **any** photographic task. The EOS-1 is the crowning achievement in this system. But it is not alone. The complete selection of professional-quality EF lenses and other accessories are what ensure that this is a system you can rely on. Year after hard-working year.

The EOS system is also

specifically designed to be open to improvements. The electronic lens/camera-body interface is a good example, since this flexible design will adapt easily to new technologies that are still on Canon's drawing board. Your investment in EOS will never become obsolete.

The combination of superior Canon optics and innovative lens design, high-speed professional-quality autofocus, advanced electronics, and now Custom Function Control and total flexibility of the EOS-1 make the EOS system the single finest complete photographic system available today.



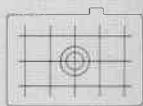
Microprism



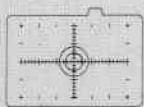
New split



Laser-matte with  
AF frame



Laser-matte with  
section



Laser-matte with scale



Laser-matte with double  
cross-hair reticle



Cross split-image

Minimum Aperture	Closest Focusing Distance		Filter Size (mm)	Length		Weight	
	(ft.)	(m)		(in.)	(mm)	(oz.)	(g)
22	0.7	0.2	Filter Holder	2-7/16	62.2	11.6	330
22	0.8	0.25	58	1-15/16	48.5	9.5	270
22	1	0.3	52	1-11/16	42.5	6.5	185
22	1.5	0.45	52	1-11/16	42.5	6.7	190
16	2	0.6	72	3-3/16	81.5	2.2 lb.	985
32	0.748	0.228	52	2-1/2	63	9.9	280
16	3.1	0.95	72	3-5/16	84	2.3 lb.	1,025
32	1.01	0.31	52	4-1/8	105.5	22.9	650
32	4.3	1.3	52	3-7/8	98.4	13.8	390
22	8.2	2.5	48 (drop-in type)	8-3/16	208	6.6 lb.	3,000
32	9.8	3	48 (drop-in type)	9-9/16	253	6.3 lb.	2,855
32	19.7	6	48 (drop-in type)	17-15/16	456	13.2 lb.	6,000
22	1.6	0.5	72	3-1/2	89	19.1	540
22-29	1.3	0.39	52	3	75.6	10.1	285
22	1.6	0.5	72	4-11/16	119.5	2.1 lb.	945
22-29	1.3	0.39	52	2-1/2	63	8.6	245
22-29	1.3	0.39	52	2-1/2	63	8.1	230
22-29	3.1	0.95	58	3-1/4	81.9	14.1	400
22-29	3.1	0.95	58	3-3/4	94.5	16.8	475
22-32	2.5	0.75	58	3-3/8	86.4	15.0	425
22-29	3.9	1.2	58	5-3/4	146.4	24.4	690
22-29	3.9	1.2	58	5-3/4	145.8	24.5	695
32	3.9	1.2	58	5-7/16	137.6	21.4	605
27-32	3.9	1.2	58	4-3/4	121.5	19.4	550
32	5.9	1.8	72	7-5/16	185.7	2.9 lb.	1,330
32	6.2	1.9	58	5-1/8	130.5	18.4	520
32	4.9	1.5	58	6-9/16	166.8	24.2	685
32	4.9	1.5	58	6-9/16	166.6	24.5	695
32	4.9	1.5	58	4-3/4	121.5	19.1	540
—	—	—	—	2	50.5	8.5	240
—	—	—	—	1-1/16	27.3	7.1	200
—	—	—	—	1-3/8	34.9	5.6	160

exclusive use with EF 200mm f/1.8L, EF 300mm f/2.8L and EF 600mm f/4L lens only. \*Asterisks (\*) indicate that these lenses will be available soon.

## 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. You can capture periodic scenery changes over a fixed length of time, enabling ecological or astronomical photographic studies. 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

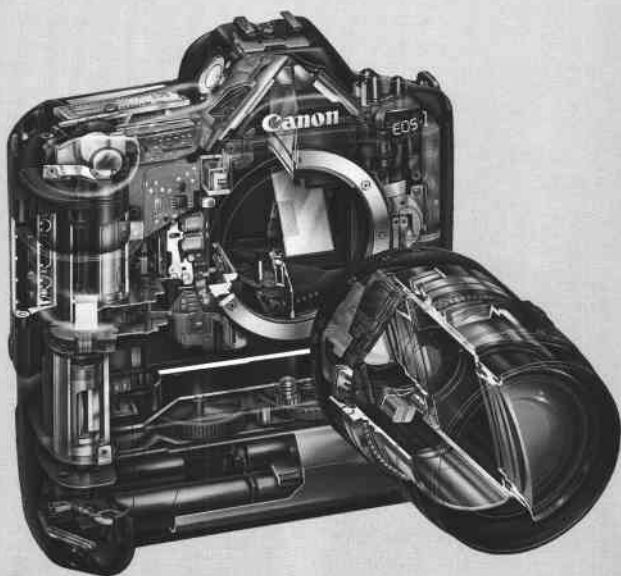
long release timer holds the shutter open for a preset period of time during bulb operation. And the frame counter setting stops the camera after a set number of exposures has been made. Data imprint functions include the date, time of day, a frame counter number, or an arbitrary 6-digit number plus 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.



## The EOS-1 has reliability built in.

Canon designed the EOS-1 knowing that it was going to appeal to people like you. Photographers who demand a lot from their cameras. That's why the EOS-1 was built rock-solid. And ready to go to work.

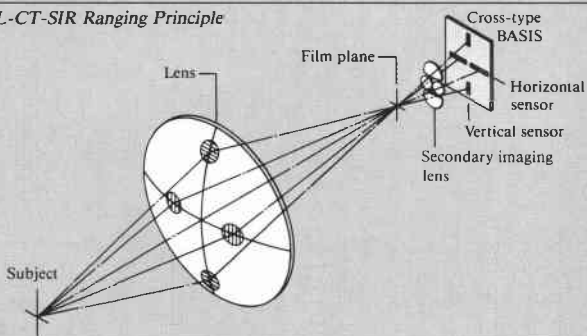


### Unconditional reliability

Rugged construction protects the sophisticated electronics of the EOS-1, making this a camera that is ready for work — no matter where it is, no matter how rough it gets. The body is composed of extra-tough, glass fiber-reinforced polycarbonate. Thick sections of non-slip rubber make holding secure. Like Canon's New F-1, the EOS-1 is also highly dust- and

water-resistant, thanks to a cover sealing mechanism and the elimination of conventional external slide switches. Shutter blades are coated with a water-repellent lubricant, too. And all important electrical contacts have dual terminals to ensure proper operation. Performance is reliable from  $-4^{\circ}\text{F}$  ( $-20^{\circ}\text{C}$ ) up to  $113^{\circ}\text{F}$  ( $45^{\circ}\text{C}$ ) at 85% humidity. In addition, sequence control operations are

*TTL-CT-SIR Ranging Principle*





#### *Double Electrical Contacts*

monitored by the main microprocessor for dependability.

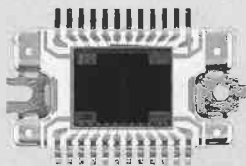
There's no problem with power, either. Pressing the battery check button under the palm door gives an instant readout of battery power on the display panel. The display panel also presents a row of blinking dashes as a warning if the film is not loaded properly. A row of dashes coming out of the cartridge symbol indicates correct film advance and film rewind, too.

#### **TTL-CT-SIR 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 comparing the differences in the data received by the two pairs of images, then by deciding which is the more reliable. Once this has been determined — a matter of microseconds — the lens motor focuses the lens.

#### **Cross ranging sensor BASIS**

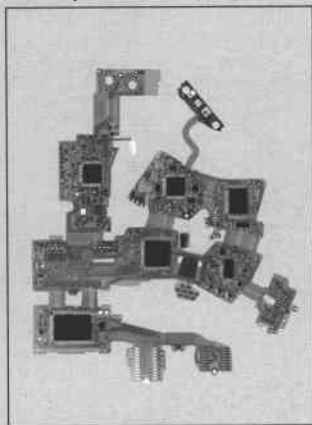
In order to develop an AF system accurate enough and reliable enough to meet the standards professional photographers insist on, Canon had to develop a new cross ranging sensor to replace the conventional sensor used in the past. This new BASIS (Base-Stored Image Sensor) was the result of extensive research, and 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 amplifies 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, an anti-reflection film coats the sensor in order to stabilize signal detection. This innovative cross ranging sensor BASIS results in improved accuracy and better efficiency, making possible reliable low-light level operation down to  $-1$  EV.

#### **Two microprocessors**

The EOS-I 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, electronic operation and AF speed and accuracy are obviously superior.



# The EOS-1

## *EOS-1 Nomenclature*

Self-timer Operation Indicator

Back Cover Latch

Shutter Button

Accessory Shoe

Back Cover  
Lock Button

Grip



Depth-of-Field  
Check Button

Lens Release Button

PC Socket  
(with cap)

### Main Electronic Input Dial

- Selects exposure control, AF operation, metering pattern, film winding, Custom Function Control No. and exposure compensation value with each selector pressed.
- Selects multiple exposure preset numbers, film speed and auto exposure bracketing value with two specified selectors pressed.
- Selects each value according to the exposure mode.
  - In Manual: Shutter speed/Aperture value (with CF-No. 5)
  - In Shutter-priority AE: Shutter speed
  - In Aperture-priority AE: Aperture value
  - In Program AE: Program shift

Exposure  
Control Selector

Display Panel  
Illumination  
Button

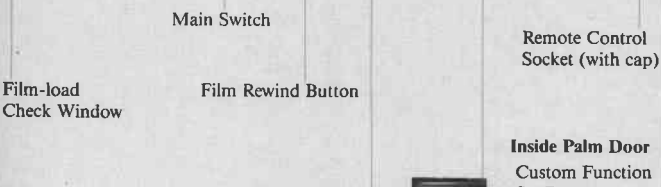


AF Operation  
Selector

Neck Strap Ring

Metering Pattern Selector

LCD Display Panel



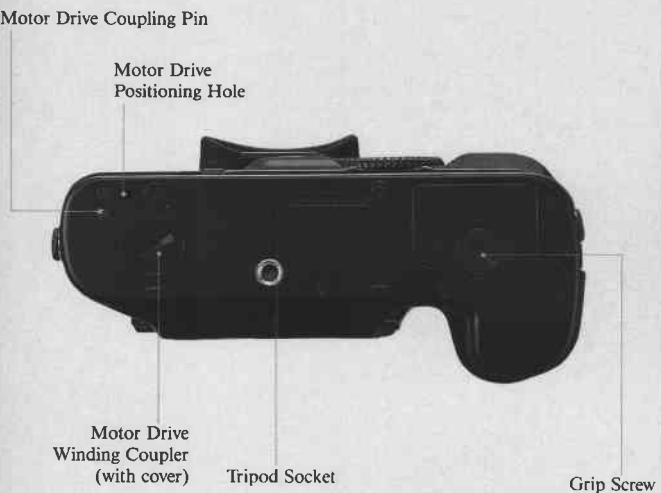
**Quick Control Dial**

- In AE modes: Selects exposure compensation value
- In Manual: Selects aperture value/or shutter speed (with CF-No. 5)



**Inside Palm Door**

- Custom Function Set Button
- Battery Check Button
- Film Winding Speed Selector
- Clear Button



# The Display Panel

Camera status can be quickly adjusted and instantly confirmed with relevant information clearly displayed.

Electro Luminescence emits a soft blue light, making the display panel easy to read in low light.

## LCD Panel Information

Exposure control

Custom Function setting

□ Aperture value

Auto exposure bracketing amount

□ Shutter speed

□ ISO film speed

□ Battery check indicator

Bulb indicator

Custom Function number

Focusing

Metering pattern

Film winding

Film load check indicator

■ Film rewind completion indicator

□ Multiple exposure indicator

□ Auto exposure bracketing indicator

Frame counter function indicator

Exposure compensation scale

Film transport operation (wind, rewind)

■ Film transport failure warning

□ Battery check level

□ Exposure compensation level

□ Auto exposure bracketing amount

Bulb 30-second unit display

□ Frame counter

Bulb exposure time

Multiple exposure preset frame number

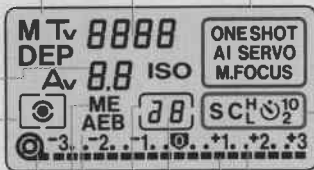
Multiple exposure frame count-down display

Self-timer count-down display

No mark: Lights up

■ mark: Blinks

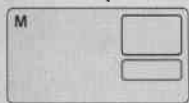
□ mark: Lights up or blinks, depending on condition





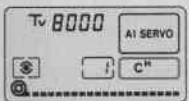
### (1) Exposure

- M... Manual
- Tv... Shutter-priority AE
- buLb... Bulb
- P... Program AE
- Av... Aperture-priority AE
- DEP... Depth-of-Field AE

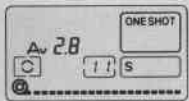


### ■ Shutter/Aperture Display

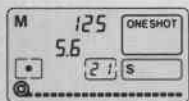
- In Shutter-priority AE  
1/8000—30 sec... Shutter speed



- In Aperture-priority AE  
1.0—91... Aperture value

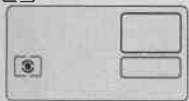


- In Manual



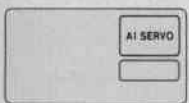
### (2) Metering

- ... Evaluative Metering/  
Center-weighted Average  
Metering (with CF-No. 8)
- ... Partial Metering (5.8%)
- ... Spot Metering (2.3%)



### (3) Focus

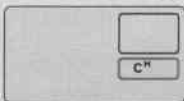
- ONE SHOT... One shot
- AI SERVO... Predictive focus
- M. FOCUS... Manual focus



### (4) Film-winding

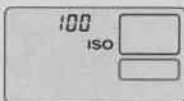
- S... Single frame
- C... Continuous 2.5 fps
- CH... Continuous high speed  
5.5 fps with Power Drive  
Booster E1
- CL... Continuous low speed  
3 fps with Power Drive  
Booster E1

- 10... Self-timer with 10-second  
delay
- 2... Self-timer with two-  
second delay



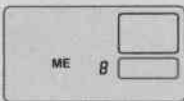
### (5) Film Speed

- 6-6400... ISO film speed



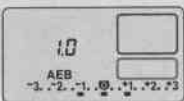
### (6) Multiple Exposure

- 1-9... Multiple exposure preset  
number



### (7) Auto Exposure Bracketing

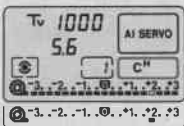
- 3 to +3



### (8) Exposure Compensation

- 3 to +3

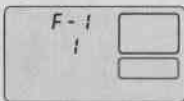
(Set by quick control dial)



(Set by exposure compensation  
button & main dial)

### (9) Custom Function Control

- F-1 — 8... Function number
- 0 — Function not activated
- 1 — Function activated



### (10) Battery Check

Power represented by number  
of bar marks

- — — : Full power
- — : Sufficient
- : (Blinking) Insufficient



# 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 (-3 dpt — +1 dpt) by turning knob

**Eyepoint:** 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 Resistration) 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 Function
5. Manual
6. Flash AE (A-TTL and TTL program flash AE with specified Canon Speedlites)

**Exposure Compensation:** + / - 3 steps in 1/3-step increments.

**Auto Exposure Bracketing:** + / - 3 steps 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°F/-20°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) × 4-3/16" (H) × 2-13/16" (D)

(161 × 106.6 × 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°F/-20°C)	6 rolls	30 rolls

**Power Source:** Eight AA-size alkaline-manganese (LR6) or Ni-Cd (KR15/51) batteries

**Dimensions (EOS-1 + Power Drive Booster)**

**Size:** 6-5/16" (W) × 5-15/16" (H) × 3-1/16" (D)

(160.5 × 150.4 × 78mm)

**Weight:** 3.3 lb. (1490 g) with battery

## ■ Speedlite 430EZ

**Guide Number:** 100-ft/30-m with ISO 100 at 35mm setting

**Flash Coverage Angle:** 24-80mm

**Battery capacity:**

		Number of Flashes*	
		Full output	A-TTL
Internal Battery	Four AA-size alkaline	100	700
	Four AA-size Ni-Cd	45	300
Battery Magazine	Six C-size alkaline	300	2000
Battery Pack	Ni-Cd Pack TP	250	1500

**Dimensions:** 2-15/16" (W) × 5" (H) × 4-3/16" (D)

(75 × 127 × 106mm)

**Weight:** 12.7 oz. (360 g) without batteries

16.2 oz. (460 g) with batteries

\*Figures are approximate.

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

# Canon

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