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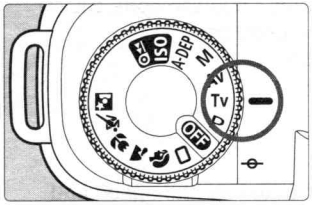
Tv Shutter-Priority AE

In this mode, you set the shutter speed and the camera sets the aperture automatically to suit the brightness of the scene.
A fast shutter speed can freeze the motion of a fast-moving subject. Or, a slow shutter speed can blur the subject to give the impression of motion.
* "**Tv**" stands for Time value which is the shutter speed.

Taken with a fast shutter speed.

Taken with a slow shutter speed.



1 **Turn the Command Dial to <Tv>.**

2 **Select the desired shutter speed.**
- Look at the LCD panel and turn the <⌓> dial to set the desired shutter speed.

3 **Press the shutter button halfway to focus the subject.**
- The aperture is set automatically.

4 Check the viewfinder display and take the picture.

- If the aperture display is not blinking, a correct exposure will be obtained.

- If the maximum aperture (the smallest f-number) blinks, it indicates underexposure. In such a case, turn the <dial> dial to set a slower shutter speed until the aperture display stops blinking.
- If the minimum aperture (the largest f-number) blinks, it indicates overexposure. In such a case, turn the <dial> dial to set a faster shutter speed until the aperture display stops blinking.

Shutter Speed Display

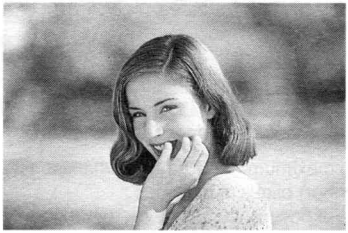
The shutter speed can be set and displayed in full and half stops. Shutter speeds from "2" to "2000" indicate the denominator of the fractional shutter speed. For example, "125" is 1/125 second. For slower shutter speeds, the numeral is appended with the seconds mark ("''"). For example, "0'5" is 0.7 second and "15''" is 15 seconds.

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

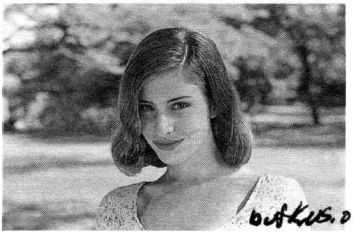
To photograph a scene on a TV screen, mount the camera on a tripod and use a shutter speed of 1/15 sec. for NTSC, 1/10 sec. for PAL.

Av Aperture-Priority AE

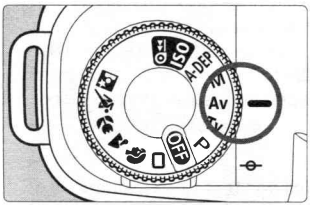
In this mode, you set the aperture and the camera sets the shutter speed automatically to suit the brightness of the subject.
A large aperture (small f-number) will blur the background and make the subject stand out. The larger the aperture, the more blurred the background will look.
Or, a small aperture (large f-number) will increase the depth of field to make both the foreground and background look sharp. The smaller the aperture, the sharper the background will look.
* "**Av**" stands for aperture value.



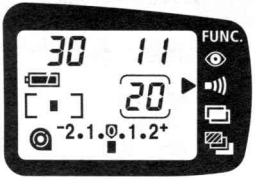
Taken with a large aperture.



Taken with a small aperture.



1 Turn the Command Dial to <Av>.



2 Select the desired aperture.

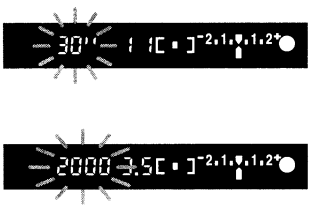
- Look at the LCD panel and turn the <dial> dial to set the desired aperture.

3 Press the shutter button halfway to focus the subject.

- The shutter speed is set automatically.

4 Check the viewfinder display and take the picture.

- If the shutter speed display does not blink, a correct exposure will be obtained.



- If the slowest shutter speed blinks, it indicates underexposure. In such a case, turn the <> dial to set a larger aperture (smaller f-number) until the shutter speed display stops blinking.
- If the maximum shutter speed blinks, it indicates overexposure. In such a case, turn the <> dial to set a smaller aperture (larger f-number) until the shutter speed display stops blinking.

Aperture Display

The aperture can be set and displayed in full and half stops as shown below. The larger the number, the smaller the aperture opening will be. The displayable range of apertures depends on the lens mounted on the camera.

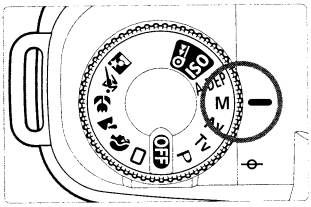
1.0 1.2 1.4 1.8 2.0 2.5 2.8 3.5 4.0 4.5 5.6
6.7 8.0 9.5 11 13 16 19 22 27 32

If no lens is mounted on the camera, "00" will be displayed for the aperture setting.

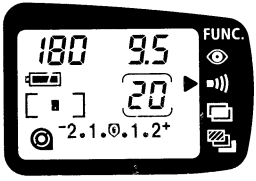
M Manual Exposure

In this mode, you set both the shutter speed and the aperture for total exposure control. The exposure level of the shutter speed and aperture you set is indicated on the exposure level scale. You can there by check how suitable the exposure will be.

* "**M**" stands for Manual.

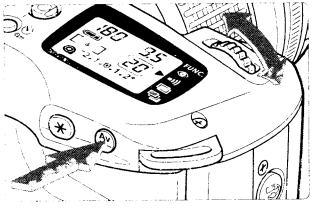


1 Turn the Command Dial to <M>.



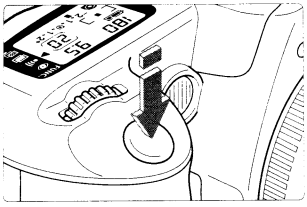
2 Select the desired shutter speed with the <⌓> dial.

- Turn the <⌓> dial until the desired shutter speed is displayed.



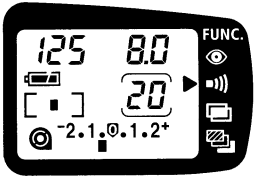
3 Select the desired aperture by holding down the <Av> button and turning the <⌓> dial.

- Turn the <⌓> dial until the desired aperture is displayed.



4 Press the shutter button halfway to focus the subject.

- The exposure level is displayed in the viewfinder.
- The exposure level indicator <▮> indicates how close the exposure level is to the correct exposure.



5 Set the exposure setting.

- Look at the exposure level indicator and set the shutter speed and aperture as desired.

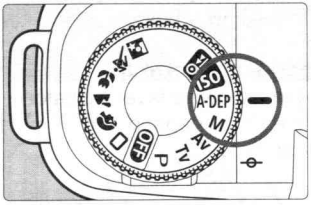
Correct exposure	-2.1.0.1.2+	: This is the standard level for a correct exposure.
Underexposure	-2.1.0.1.2+	: To achieve the correct exposure, set a slower shutter speed or a larger aperture.
Overexposure	-2.1.0.1.2+	: To achieve the correct exposure, set a faster shutter speed or a smaller aperture.

- If the exposure level indicator <▮> blinks at <2+> or <-2>, it indicates that the exposure is respectively overexposed or underexposed by 2 stops or more.

6 Take the picture.

A-DEP Automatic Depth-of-Field AE

This mode is for obtaining a wide depth of field automatically between a near subject and far subject. It is effective for group photos and landscapes. The camera uses the 3 AF frames to detect the nearest and farthest subjects to be in focus.
* "**A-DEP**" stands for Auto-depth of field.



1 Turn the Command Dial to <A-DEP>.

2 Aim the AF frames over the subjects and press the shutter button halfway to focus.

- The focusing points which achieve focus will light on the display. Sharp focus will be attained for the nearest and farthest subjects covered by the AF frames.

3 Check the viewfinder information and take the picture.

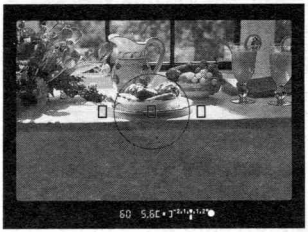
- In the sample photo, the focus will be sharp from the left boy in the distance to the right boy in the foreground.

The <A-DEP> mode cannot be used if the lens' focus mode switch is set to <**MF**> (or <**M**> on older lenses).

- If the aperture blinks, it indicates that the exposure level is correct but the desired depth of field cannot be achieved. Either use a wide-angle lens or move further away from the subjects.
- In this shooting mode, you cannot freely change the shutter speed and aperture. If the camera sets a slow shutter speed, hold the camera steady or use a tripod.
- If flash is used, the result will be the same as using flash in the <**P**> mode.

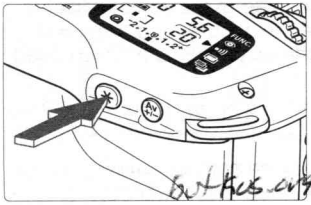
✳ AE Lock

With the same AF frame, you can obtain and lock the auto exposure setting on one part of the picture and then recompose to focus a different part of the picture. AE lock enables you to maintain the same exposure setting even after recomposing the shot. This is effective for backlit subjects.



1 Focus the subject where you want to lock the exposure.

- Press the shutter button halfway to focus. (⏱4)
- ▸ The exposure setting is displayed in the viewfinder.



2 Press the <✳> button. (⏱4)

- Aim the partial metering circle over the part where you want to lock the correct exposure.
- ▸ The <✳> indicator lights in the viewfinder and the exposure setting locks (AE lock).
- Each time you press the <✳> button, the auto exposure locks over the area covered by the selected AF frame.

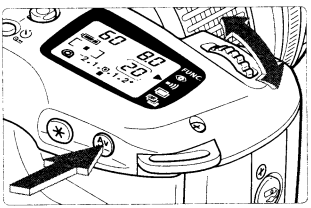
3 Compose the shot and take the picture.

- If you want to maintain the AE lock while taking more pictures, hold down the <✳> button and press the shutter button to take another picture.

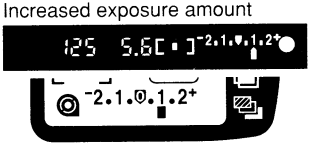
During AE lock, partial metering (→page 41) is used automatically.

Exposure Compensation

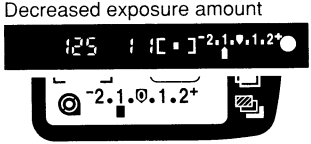
Changing the exposure level set by the camera is called exposure compensation. Exposure compensation can be used to make the picture darker or brighter intentionally. Exposure compensation can be set up to ±2 stops in half-stop increments.



Increased exposure amount



Decreased exposure amount



1 Turn the Command Dial to a Creative Zone mode except <M>.

2 Press the shutter button halfway and check the exposure display.

3 Press and hold down the <Av/±> button and turn the <dial> dial until the desired exposure compensation amount is set. (⏱4)

- The <+> side of the scale indicates increased exposure, and the <−> side of the scale indicates decreased exposure.

Decreased exposure amount ◄·····■·····► Increased exposure amount
-2.1.0.1.2+

- The exposure compensation amount set is retained even after the Command Dial is set to <OFF>.
- To cancel the exposure compensation, set the exposure level indicator back to <0>.

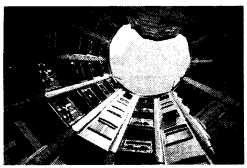
4 Take the picture.

- The exposure compensation amount is canceled automatically when you turn the Command Dial to a Basic Zone mode.
- Assuming that a shutter speed of 1/125 sec. and an aperture of f/5.6 will give a correct exposure, setting the exposure compensation amount to plus or minus 1 stop will change the shutter speed or aperture as follows:

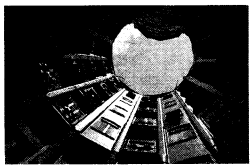
	−1 stop	←	0	→	+1 stop
Shutter Speed	250	←	125	→	60
Aperture	8.0	←	5.6	→	4.0

Auto Exposure Bracketing (AEB)

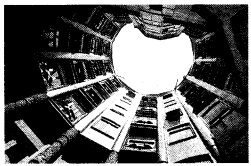
With AEB, the camera automatically changes the exposure within the set range (up to ±2 stops in 1/2-stop increments) for three successive frames. The three bracketed shots are exposed in the following sequence (→page 71): Correct exposure, decreased exposure, and increased exposure.



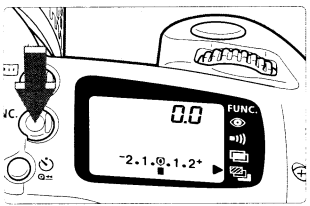
Correct exposure (0)



Decreased exposure (–0.5 stop)

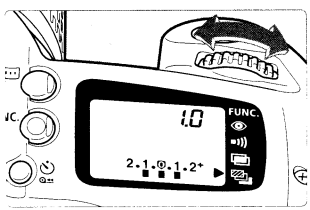


Increased exposure (+0.5 stop)



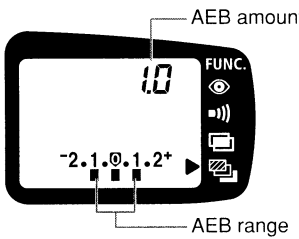
1 Move the <▶> arrow to the <🖼> icon.

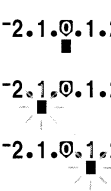
- Look at the LCD panel and press the <FUNC.> button. (⏱6)



2 Set the desired AEB amount.

- Turn the <⚙> dial.
- The AEB amount and AEB range <▮> are displayed on the LCD panel.
- The sample illustration below shows an AEB amount of 1 stop with respect to the correct exposure level.





3 Take the picture.

- The respective AEB amount is displayed on the LCD panel and in the viewfinder for each bracketed shot.
- After the three AEB shots are taken, the AEB will not be canceled automatically. To cancel AEB, set the AEB amount back to "0.0".

AEB cannot be used with flash or bulb exposures.

- During AEB shooting, the <▶> icon will blink next to the <> icon.
- In the continuous shooting mode, holding down the shutter button will take all three bracketed shots continuously. However, the viewfinder will not display the respective AEB information.
- If the self-timer or remote control is used, the three AEB shots will be taken in continuous succession automatically.
- AEB can be used in combination with exposure compensation. If the AEB + exposure compensation range you set exceeds the displayable range, it will be displayed as shown below.

In the <P>, <Tv>, <Av>, and <A-DEP> modes:

-2.1.0.1.2+ : ±1 stop AEB.

-2.1.0.1.2+ : ±1 stop AEB with –1-stop exposure compensation.

-2.1.0.1.2+ : ±1 stop AEB with –1.5-stop exposure compensation.

-2.1.0.1.2+ : ±1 stop AEB with –2-stop exposure compensation.

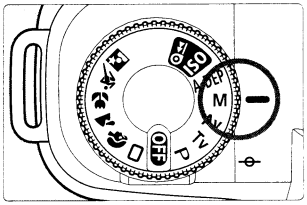
In the <M> mode:

-2.1.0.1.2+ : ±1 stop AEB with –2-stop exposure compensation.

-2.1.0.1.2+ : ±1 stop AEB with over –2-stop exposure compensation.

Bulb Exposures

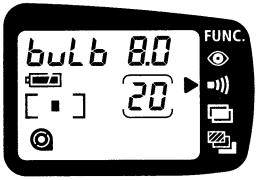
A bulb exposure starts when you press the shutter button completely and ends when you release the shutter button. Bulb exposures are useful when long exposures are required for night scenes, fireworks, astronomical photography, etc.

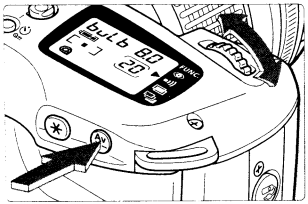


1 Turn the Command Dial to <M>.

2 Set the shutter speed to "bulb".

- Turn the <⌓> dial until "bulb" is displayed on the LCD panel.
- "bulb" follows "30''".





3 Press and hold down the <Av> button and turn the <⌓> dial to set the desired aperture.

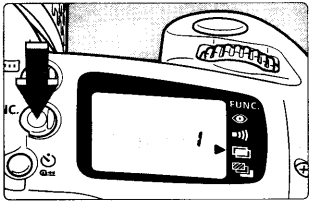
4 Start the bulb exposure.

- Press and hold down the shutter button.
- During the bulb exposure, "bulb" blinks on the LCD panel.
- The bulb exposure continues as long as you hold down the shutter button.

- Remote Switch RS-60E3 (optional) is recommended for bulb exposures.
- With a new set of batteries, the maximum bulb exposure time (at 20°C) will be about 6 hours.

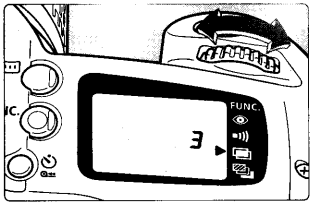
Multiple Exposures

By not advancing the film after taking a picture, a single frame can be shot multiple times. Up to nine multiple exposures can be taken on one frame.



1 Move the <▶> arrow to the <▣> icon.

- Look at the LCD panel and press the <FUNC.> button. (⏱6)
- ▸ The frame counter will show "1".



Three multiple exposures have been set above.

2 Set the desired number of multiple exposures.

- Turn the <⚙> dial.

3 Select the shooting mode and take the multiple exposures.

- ▸ After you take all the multiple exposures, the film advances to the next frame automatically and the multiple-exposure setting is canceled.

If you shoot multiple exposures on the first few or last few frames of roll, the multiple exposures might not be precisely aligned due to the film advance mechanism's characteristics.

- During multiple-exposure shooting, the <▶> arrow next to the <▣> icon on the LCD panel will blink.
- To cancel multiple exposures before shooting, set the number of multiple exposures to 1.
- To cancel multiple exposures after shooting, follow steps **1** and **2** to set the number of multiple exposures to blank.

Since shooting multiple exposures will expose the same frame multiple times, negative exposure compensation (→page 52) must first be set to avoid overexposure.

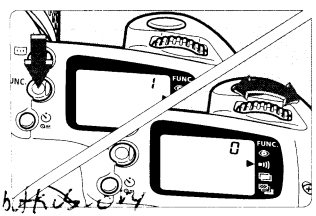
General Guide for Exposure Compensation

Multiple Exposures	2 exposures	3 exposures	4 exposures
Exposure Compensation Amount	–1.0 stop	–1.5 stop	–2.0 stop

These are only suggested exposure compensation amounts. The optimum amount depends on the scene. Experiment to find the optimum compensation amount.

Silencing the Beeper

The beeper can be silenced in all of the shooting modes.



1 Move the <▶> arrow to the <))> icon.

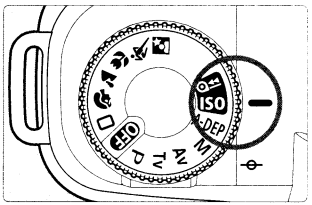
- Look at the LCD panel and press the <FUNC.> button. (☉6)

2 Set the setting to "♪".

- Turn the <⌨> dial.
- To enable the beeper to sound, set to "♪".
- Press the shutter button halfway to return to normal camera operation.

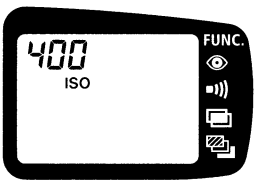
ISO Setting the ISO Film Speed

If the film is not DX-coded or if you want to set a different film speed, you can set the film speed manually after loading the film into the camera. The settable film speed range is ISO 6 to 6400.



1 Turn the Command Dial to <ISO>.

- The <**ISO**> icon and the current ISO film speed will be displayed on the LCD panel.



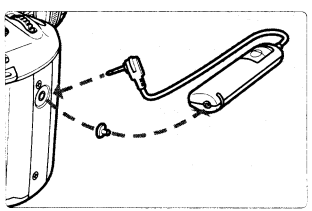
2 Turn the <⌓> dial until the desired ISO film speed appears on the LCD panel.

3 Turn the Command Dial to the desired mode.

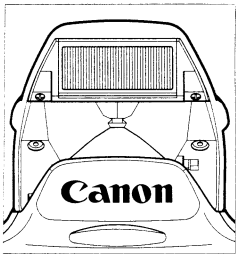
The manually-set film speed will be canceled if the film is taken out and DX-coded film is loaded.

Using the Remote Switch

The Remote Switch RS-60E3 (optional) can be used in all the shooting modes.



Connect the Remote Switch RS-60E3's (optional) plug to the camera's remote control terminal. Press the release button to take the picture.



When the built-in flash is popped up, flash photography is easy.

- When using a Basic Zone mode, pop up the flash if the <⚡> icon blinks. If the built-in flash is already popped up, it will fire automatically when necessary in low-light or backlit conditions.
- When using a Creative Zone mode, you can fire the flash at anytime by popping up the built-in flash. You can also set the flash aperture and sync speed (1/90 sec. or slower) and the flash will be controlled automatically to suit the flash aperture you have set.

Flash Photography

Using an External EOS-Dedicated Speedlite

Flash photography with an external, EOS-dedicated, EX-series Speedlite is as easy as using the camera's built-in flash. E-TTL autoflash linked to the AF frame is also possible. An external Speedlite is recommended for large group shots requiring a large flash output and for portraits using interesting lighting effects. High-speed sync (FP flash) which can synchronize with all shutter speeds can be used, as well as FE lock (flash exposure lock). For details, read the Speedlite's instructions which apply to Type A cameras.

Using the Built-in Flash

In a Basic Zone Mode

If the <⚡> icon blinks, pop up the built-in flash. The built-in flash will fire automatically in low-light or backlit conditions.

In a Creative Zone Mode

In a Creative Zone mode, you can use the built-in flash at anytime regardless of the existing light level. Just pull up the built-in flash head before taking the picture.

P : Use this mode for automatic flash photography. The flash sync speed and flash aperture will be set automatically as with the <□> (Full Auto) mode.

Tv : Use this mode if you want to set a flash sync speed slower than 1/90 sec. The camera will set the flash aperture automatically to obtain a correct flash exposure.

Av : Use this mode if you want to set the flash aperture. In this mode, you can obtain a balanced exposure between the subject and a dark background (night scene, etc.) with a slow sync speed set automatically by the camera. The flash illuminates the subject while the background is exposed with a long shutter speed.
- Be sure to use a tripod when a slow sync speed is set.

M : This mode enables you to set both the flash sync speed and flash aperture. The subject is properly exposed with the flash and the background is exposed with the flash sync speed and aperture you have set.

A-DEP : The result will be the same as using the <**P**> mode.

Effective Range of the Built-in Flash (With EF 28-80mm f/3.5-5.6 lens)

ISO		28mm		80mm	
		Negative Film	Slide Film	Negative Film	Slide Film
100	m	1 - 4.8	1 - 3.4	1 - 3.0	1 - 2.1
	ft	3.3 - 15.7	3.3 - 11.1	3.3 - 9.8	3.3 - 6.9
200	m	1 - 6.8	1 - 4.8	1 - 4.3	1 - 3.0
	ft	3.3 - 22.3	3.3 - 15.7	3.3 - 14.1	3.3 - 9.8
400	m	1 - 9.7	1.2 - 6.8	1 - 6.0	1 - 4.3
	ft	3.3 - 31.8	3.9 - 22.3	3.3 - 19.7	3.3 - 14.1

Flash Sync Speeds and Flash Apertures

Mode	Sync Speed	Flash Aperture
P	The sync speed is set automatically to 1/90 sec.	The flash aperture is set automatically according to the TTL program.
Tv	Any sync speed 1/90 sec. or slower can be set manually.*	The flash aperture is set automatically to match the sync speed you set.
Av	The sync speed is set automatically within a range of 30" to 1/90 sec. to match the flash aperture you set.	You set the flash aperture manually.
M	Any sync speed 1/90 sec. or slower can be set manually.*	

* If the sync speed is set faster than 1/90 sec., it will be reset automatically to 1/90 sec.

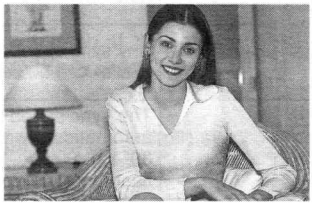
- When using the built-in flash, stay at least 1 meter away from the subject. Otherwise, part of the photo will look dark.
- When using the built-in flash, detach any hood attached to the lens. A lens hood will partially obstruct the flash coverage.
- If any of the following lenses is attached to the camera, the flash coverage of the built-in flash might be obstructed. Use an external, EOS-dedicated Speedlite with these lenses.
  Fast lenses such as the EF 17-35mm f/2.8L USM and EF 28-70mm f/2.8L USM.
  Super telephoto lenses such as the EF 300mm f/2.8L IS USM and EF 600mm f/4L IS USM.
- The built-in flash's flash coverage is effective for lenses with a focal length of 28mm or longer. At focal lengths shorter than 28mm, the periphery of the photograph will look dark.
- Before attaching an EOS-dedicated Speedlite to the camera, push down the built-in flash if it is popped up.

- To retract the built-in flash, push it down.
- When it is difficult to focus, the AF-assist beam will be fired automatically. (→page 26)
- The built-in flash and an external, EOS-dedicated Speedlite attached to the camera cannot be used at the same time.

Flash Photography with a Speedlite EX-Series

With a Canon Speedlite EX-Series, flash photography is easy as using the built-in flash. You can also use the advanced features below.
• This section applies when Speedlite 220EX is attached to the camera.

- **E-TTL Autoflash**
  With E-TTL autoflash (preflash evaluative metering), an optimum flash exposure is obtained for the subject in focus. In the aperture-priority AE mode, a slow sync speed is set automatically in low-light conditions to obtain a natural-looking, balanced exposure between the subject and background.

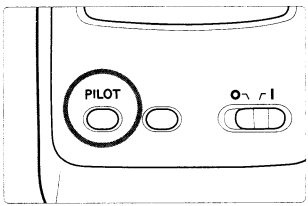


- **High-Speed Sync (FP Flash)**
  High-speed sync (FP or focal-plane flash) enables flash synchronization with all of the camera's shutter speeds from 30 sec. to 1/2000 sec.
- **FE (Flash Exposure) Lock**
  FE lock obtains and locks the correct flash exposure for any part of the subject. This is the flash equivalent of AE lock.

- E-TTL is an abbreviation for Evaluative-Through-The-Lens.
- With autofocus, the flash exposure is always based on the aperture, and E-TTL autoflash metering is weighted at the active AF frame assumed to be covering the main subject.
- When it is difficult to autofocus, the Speedlite's AF-assist beam is emitted automatically.
- When an external, EOS-dedicated Speedlite except the EX-series is used with the camera, flash photography is as easy as A-TTL/TTL autoflash with the built-in flash.

Full Auto Flash

Full Auto E-TTL autoflash used in the <**P**> Program AE mode is explained below. For more details on using Speedlite 220EX, see the Speedlite 220EX instruction booklet.



1 Turn the Command Dial to <P>.

2 Check that the 220EX's pilot lamp is lit.

3 Focus the subject.

4 Take the picture.

- Make sure the flash-ready indicator <ϟ> is lit, and check the shutter speed and aperture displays before taking the picture.

E-TTL Autoflash in Other Shooting Modes

Even in the <**Tv**>, <**Av**>, and <**M**> modes, E-TTL autoflash is as easy as normal picture-taking without flash.

(1) When you press the shutter button halfway, the camera sets the shutter speed and aperture.

Mode	Shutter Speed Setting	Flash Aperture Setting
Tv (Shutter-priority AE)	Manual (30 sec. - 1/90 sec.)	Auto
Av (Aperture-priority AE)	Auto (30 sec. - 1/90 sec.)	Manual
M (Manual exposure)	Manual (30 sec. - 1/90 sec.)	Manual

(2) When you press the shutter button completely, preflash evaluative metering based on the aperture set in (1) is used for the E-TTL autoflash exposure.

(3) The background exposure is set by the shutter speed and aperture combination.

- In the Basic Zone modes, flash photography is as easy as with the built-in flash.
- Using the <A-DEP> mode with flash gives the same result as the <P> mode.

⚡H High-Speed Sync (FP Flash)

When you press Speedlite 220EX's high-speed sync button <⚡H> and turn on the lamp, high-speed sync (FP flash) enables the Speedlite to synchronize at all shutter speeds, even those faster than 1/90 sec. When high-speed sync is enabled, <⚡H> is displayed in the viewfinder.
High-speed sync is useful in the cases listed below.

- High-speed sync works in Creative Zone modes.

---

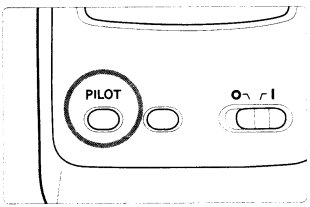
(1) When you want to use fill flash for a portrait and maintain background blur with a large aperture.
(2) When you want to create a catchlight in the subject's eyes.
(3) When you want to use fill flash to eliminate shadows.


With conventional flash.


With FP flash.

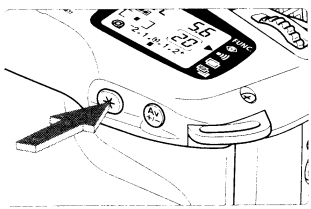
✳ FE Lock

FE (flash exposure) lock obtains and locks the correct flash exposure reading for any part of the scene.
• FE lock works in Creative Zone modes.



1 Check that the 220EX's pilot lamp is lit.
• The flash mode can be either normal or high-speed sync. FE lock works with either mode.

2 Focus the subject.
• Focus at the point where you want to lock the flash exposure.



3 Aim the center AF frame where you want to lock the flash exposure, then press the <✳> button. (⏱16)
‣ The <✳> icon lights in the viewfinder.
‣ The Speedlite fires a preflash and stores and locks the flash exposure reading in memory.
‣ Below the viewfinder, the display shown in ① appears for 0.5 sec. followed by the display shown in ②.
• Each time you press the <✳> button, a preflash fires and the flash exposure reading is locked.

①

②

For this picture, the flash exposure was locked on the face and then the picture was recomposed. The subject was exposed correctly without being affected by the background reflection.

4 Take the picture.

- Compose the shot and take the picture.

If the subject is too far away to obtain a correct flash exposure, the <⚡> icon will blink. Get closer to the subject and follow steps 2 and 3 again.

Basic Photography Terms

Exposure

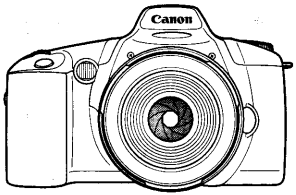
Exposure occurs when the film is exposed to light. Correct exposure is obtained when the film is exposed to a proper amount of light in accordance with the film's sensitivity to light. The correct exposure is adjusted with the camera's shutter speed and aperture.

Shutter speed

The shutter speed is the length of time the camera's shutter opens to expose the film to the light coming through the lens. The shutter speed is displayed on the camera's LCD panel and in the viewfinder. It ranges from 30 sec. to 1/2000 sec. and bulb.

Aperture

The aperture setting (f-number) indicates the size of the aperture opening in the lens. It is used to adjust the amount of light striking the film. The aperture setting is displayed on the camera's LCD panel and in the viewfinder. It can range anywhere from 1.0 to 32, depending on the lens attached to the camera.



ISO film speed

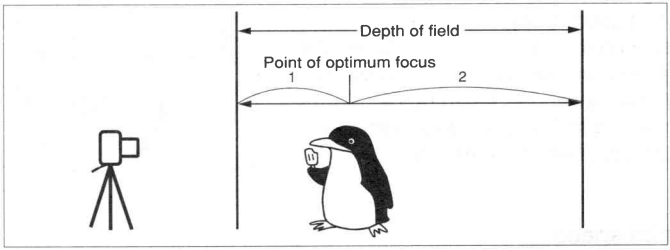
The ISO film speed indicates the film's sensitivity to light. The higher the film speed, the more sensitive the film is. Therefore, ISO 400 and higher-speed films are suited for low-light conditions. The ISO film speed is set in accordance with standards set by the International Standardization Organization (ISO).
A film speed from 6 to 6400 can be set with the camera. The film speed is displayed on the LCD panel and in the viewfinder.

Depth of field

This is the range where acceptable focus can be achieved in front of and behind the point of optimum focus. The smaller the aperture (the larger the f-number), the deeper the depth of field. And the larger the aperture (the smaller the f-number), the shallower the depth of field.

The depth of field is affected as described below:

(1) A smaller aperture (a larger f-number) increases the depth of field.
(2) A longer distance between the camera and subject increases the depth of field.
(3) When subject distance remains the same, a lens with a shorter focal length increases the depth of field.
(4) The depth of field behind the point of optimum focus is longer than the depth of field in front of the point of optimum focus.



Aperture set to f/2.

Aperture set to f/22.

Exposure Warning List

Mode	Blinking Warning	Indication	Countermeasures
P		The subject is too dark.	Use flash.
		The subject is too bright.	Attach a neutral density filter to the lens.
Tv		The picture will be underexposed.	Turn the <dial> dial to set a slower shutter speed.
		The picture will be overexposed.	Turn the <dial> dial to set a faster shutter speed.
Av		The picture will be underexposed.	Turn the <dial> dial to set a larger aperture (smaller f-number).
		The picture will be overexposed.	Turn the <dial> dial to set a smaller aperture (larger f-number).
A-DEP		The desired depth of field cannot be obtained.	1) Move away from the subject and try again. 2) If a zoom lens is used, use the shortest focal length.
		The subject is too dark.	Use flash. The result will be the same as using the <P> mode.
		The subject is too bright.	Attach a neutral density (ND) filter to the lens.

The sample warnings above apply when the lens used has a maximum aperture of f/3.5 and minimum aperture of f/22. The maximum and minimum aperture warning displays will differ depending on the lens attached to the camera.

Feature Availability Table

Command Dial Mode	AF					Film Advance		Metering Mode				
	One-Shot	AI Focus	AF Frame Selection		AF-Assist	Single	Continuous	Evaluative	Partial	Center-weighted avg.	Standard	Sports
			Auto	Manual								
P		●			●		●	●	(●)		●	
Tv		●			●		●	●	(●)			
Av		●			●		●	●	(●)			
A-DEP	●		●		●	●		●	(●)			
▭		●	●		●	●		●			●	
🏃	●		●		●		●	●				
🏔	●		●			●		●				
🌷	●		●		●	●		●				
🏌		●	●				●	●				●
👶	●		●		●	●		●			●	
M		●			●		●		(●)	●		

●: Set automatically. (●): Set automatically during AE lock. : User-selectable/settable.

AF Mode

One-Shot AF

The exposure setting (shutter speed and aperture) is set when focus is achieved. The picture cannot be taken unless the subject is focused.

AI Focus AF

The AF mode is set automatically to suit the subject's movement when the shutter button is pressed.
If the subject is still, the focus is locked when focus is achieved (One-Shot AF). If the subject is moving, focusing is continuous and predictive AF is used so that the subject is in focus at the moment of exposure.

rogram AE				Built-in Flash		Exposure Compensation	AE Lock	FE Lock	Functions				Self-timer
ortrait	Close-up	Land-scape	P Shift	Auto Firing	Manual Firing				Red-eye Reduction	Beeper	Multiple Exposures	AEB	
				●									
●				●									
		●											
	●			●									
				●									

AF Mode and Film Advance Mode

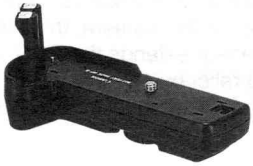
Film Advance Mode	One-Shot AF	AI Servo AF
Single	The picture cannot be taken until focus is achieved. When focus is achieved, it also locks at the same time. The evaluative metering's exposure reading is also locked. (The exposure setting is retained before the picture is taken.)	Autofocusing continues to match the subject's movement. The exposure setting is determined at the moment of exposure.
Continuous	The same conditions as above apply during continuous shooting (at about 1 frame per second).	The same conditions above apply during continuous shooting. Autofocusing continues during continuous shooting (at about 1 frame per second).

Troubleshooting Guide

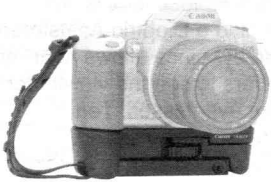
If there is a problem, try to resolve it by referring to this Troubleshooting Guide. If the problem still persists, take the camera to your nearest Canon Service Center.

Nothing is displayed on the LCD panel.	The batteries are exhausted. ▸ Replace the batteries with new ones. (→page 16) The batteries have been installed incorrectly. ▸ Install the batteries correctly. (→page 16)
The picture looks blurred.	The lens focus mode is set to <**MF**> (or <**M**>). ▸ Set the lens focus mode to <**AF**>. (→page 18) There was camera shake when the picture was taken. ▸ Hold the camera steady or use a faster shutter speed. (→page 19)
The shutter does not work.	The frame count is not displayed on the LCD panel. ▸ Take out the film and load it correctly. (→page 20) The <▭> icon blinks on the LCD panel. ▸ Replace the batteries with new ones. (→page 16) The <◎> icon blinks while the rewound film is still in the camera. ▸ Replace with a new roll of film. (→page 20) The in-focus indicator <●> in the viewfinder blinks and focus cannot be achieved. ▸ Select another AF frame. (→page 38) If focus still cannot be achieved, focus manually. (→page 40)
The <▭> icon blinks on the LCD panel.	The battery level is very low. ▸ Replace the batteries with new ones. (→page 16) A misoperation has occurred. ▸ Press the shutter button halfway. (→page 19) ▸ Remove and reload the batteries. (→page 16) If the <▭> icon stops blinking, picture-taking is possible. If it is still blinking, consult your nearest Canon Service Center.

Major Accessories



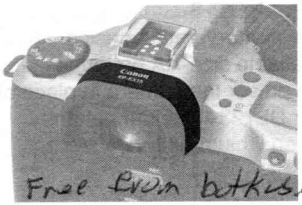
- **Battery Pack BP-8**
  An external battery pack housing widely-available size-AA batteries which can power the camera in place of CR123 (or DL123A) lithium batteries. Handy when lithium batteries are not available.



- **Grip GR-80TP**
  Grip GR-80TP enlarges the camera grip to enhance holding ease. It can also unfold as a mini-tripod for self-timer or low-angle shots.

- **Speedlites EX-series**
  EOS-dedicated, E-TTL autoflash Speedlites that attach to the camera's hot shoe.

- **Remote Switch RS-60E3**
  Dedicated cable release for a tripod-mounted camera. Ideal for close-up shots and bulb exposures. Connects to the camera's remote control jack.



- **Eyepiece Extender EP-EX15**
  When attached to the camera, this eyepiece extender extends the EOS camera's eye relief by 15 mm. The viewfinder magnification also becomes 0.5×.

- **Dioptric Adjustment Lens E**
  The camera's eyepiece lens is -1 diopter. Attaching a Dioptric Adjustment Lens E on the eyepiece allows near- or far-sighted users to see the viewfinder clearly without eyeglasses. Ten eyesight correction lenses are available. When choosing an eyesight correction lens, attach it to the eyepiece and look through the viewfinder to see if it suits your vision.
  - The number on the dioptric correction lenses indicates the diopter when it is attached to the camera's eyepiece. It is not the diopter of the eyesight correction lens itself.

- **Camera Case EH8N-L and EH8N-LL**
  Dedicated case which can accommodate the camera attached with a lens.

When using an external flash unit, an EOS-dedicated Speedlite is recommended. Using a flash unit (equipped with electrical contacts on the hot shoe foot), high-voltage flash unit, or flash accessories dedicated to a different brand may result in camera misoperation or malfunction.

Major Specifications

• Type

Type .....35mm AF/AE SLR camera with focal-plane shutter, built-in winder and flash
Recording media .....35mm film
Image size .....24 x 36mm
Compatible lenses .....Canon EF lenses
Lens mount .....Canon EF mount (electronic data exchange)

• Viewfinder

Type .....Eye-level pentamirror
Coverage .....90% vertically and horizontally
Magnification .....0.7x (–1 diopter with 50mm lens at infinity)
Eyepoint 18.5mm
Standard diopter .....–1 diopter
Focusing screen .....Fixed (New Laser Matte screen)
Mirror .....Quick-return half mirror
Viewfinder information .....AF (AF frame, in-focus mark); Exposure (shutter speed, aperture, manual exposure, metering range, exposure level, exposure warning); Flash (flash ready, hi-speed sync, FE lock, red-eye reduction)

• Autofocus

Type .....TTL-SIR with multiple BASIS
Focusing points .....3 focusing points
AF working range .....EV 2 - 18 (ISO 100)
Focusing modes .....One-Shot AF/AI Focus AF/Manual focusing
AF frame selection .....Automatic/manual
Selected AF frame display...AF frame marks in viewfinder and also indicated on LCD panel.
AF-assist beam .....Lamp
Working distance: Approx. 4m (13.1ft) at center, Approx. 2.5m (8.2ft) at periphery

• Exposure Control

Exposure metering modes...TTL full aperture metering with 6-zone SPC.
1. Evaluative metering (linkable to any AF frame)
2. Partial metering (Automatically set with AE lock, approx. 9.5% of viewfinder at the center.)
3. Center-weighted averaging metering (automatically set in manual exposure mode)

Metering range .....EV 2 - 20 (normal temperature, 50mm f/1.4, ISO 100)
Exposure control .....Program AE (shiftable), shutter-priority AE, aperture-priority AE, automatic depth-of-field AE, full auto, five programmed image control modes (portrait, landscape, close-up, sports, night scene portrait), E-TTL/A-TTL/TTL program autoflash, manual exposure
Film speeds .....ISO 6 - 6400 (Set automatically for DX-coded film within ISO 25 - 5000 in 1/3-stop increments.)
Exposure compensation...Manual exposure compensation: +/– 2 stops in 1/2-stop increments (can be used with AEB).
Auto Exposure Bracketing (AEB): +/– 2 stops in 1/2-stop increments.
AE lock .....Auto AE lock: Operates in One-shot AF mode with evaluative metering when focus is achieved.
Manual AE lock: By AE lock button in partial metering mode.
Multiple exposures .....Max. 9 exposures

• Shutter

Type .....Electronically controlled focal-plane shutter
Shutter speeds .....1/2000 - 30sec. in 1/2-stop increments, X sync at 1/90sec.
Shutter release .....Soft touch electromagnetic release
Self-timer .....Shoot after 10sec. delay

• Flash

Built-in flash.....AF frame-linked, 3-zone autoflash
Guide No. 12 (ISO 100, meters), 39 (ISO 100, feet)
Recycling time: Approx. 2sec.
Flash coverage: 28mm lens angle covered
Red-eye reduction: Lamp
External EOS-dedicated flash...E-TTL/A-TTL/TTL autoflash

• Film Transport

Film loading .....Automatic prewind
Film advance modes .....Single-frame/continuous shooting
Continuous shooting speeds...Approx. 1fps.
Frame counter .....Counts down
Film rewind .....Automatic. Mid-roll rewind
Rewind noise.....Approx. 56dB

• Date Imprinting

Automatic dating.....Automatic calendar to 2019
Power source .....One CR2025 lithium battery

• Other Specification

Power source .....Two CR123A (or DL123A) lithium batteries
Battery life ..... 24-ex. film (Approx. rolls)

Conditions	Normal temperature (20 degree C)	Low temperature (–10 degree C)
No flash use	85	60
50% flash use	35	25
100% flash use	17	12

Battery check.....Automatic
Dimensions (W x H x D)..145.0 x 92.0 x 61.9mm / 5.71 x 3.62 x 2.43in
Weight .....EOS66/3000N : 350g/12.35oz
(body only, excluding battery) EOS66QD/3000NQD : 365g/12.87oz

• All the specifications above are based on Canon's testing and measuring standards.
• Specifications and physical appearance are subject to change without notice.

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