back to my "Orphancameras" manuals /flash and light meter site

Only one "donation" needed per manual, not per multiple section of a manual !
The large manuals are split only for easy download size.

III Useful Functions

This section explains various functions you can use to make fine adjustments to match your shooting objectives or the situation at hand.

* Functions explained in this section cannot be used with image zone shooting modes.

1. AE Lock

Use AE lock in situations when there is extremely strong contrast between the subject and background or when a bright light source or highly reflective object is located in the picture.

When you press the AE lock button, ✷ lights in the viewfinder to indicate that AE lock is set. Once ✷ appears the exposure remains locked even if you release the AE lock button.

* Remove your finger from the shutter button when setting AE lock.
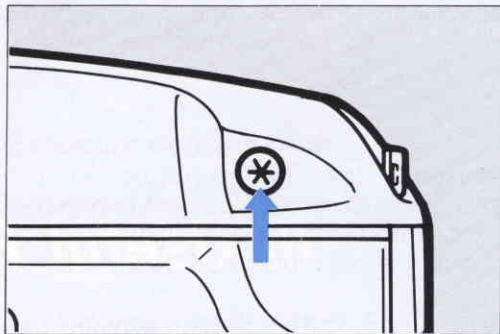
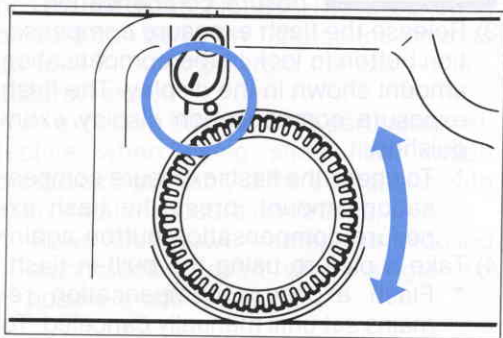When taking pictures in an AE shooting mode, you can use the quick control dial to vary the exposure according to the subject conditions. Exposure can be compensated up to +/− 2 stops in 1/2-stop increments.

1) Set the quick control dial switch to **I**.
2) Focus the subject and confirm the exposure.

3) Turn the quick control dial to set the desired exposure compensation amount.
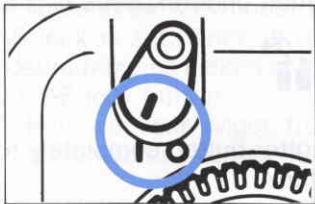   * The compensation amount is displayed in the LCD panel and viewfinder. '' + '' compensation overexposes the subject and '' − '' compensation underexposes it.

4) Press the shutter button completely to take the picture.
   * To cancel exposure compensation, repeat step 3 to return the compensation amount to 0 (then set the quick control dial to **O**).

3. Built-in Flash Exposure Compensation

This functions lets you vary the automatic flash exposure level of the built-in flash. The flash exposure can be compensated up to +/− 2 stops in 1/2-stop increments. This function does not affect external flash units even if the flash exposure compensation display is lit.
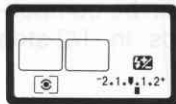

1) Set the quick control dial switch to **I**.
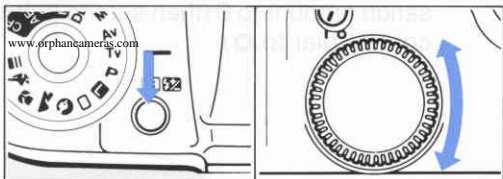
2) Press the flash exposure compensation button while turning the quick control dial to set the compensation amount.

* **⚡⚘** lights in the LCD panel.
* The flash exposure compensation amount is displayed in the LCD panel.

" + " indicates overexposure compensation and " − " indicates underexposure compensation.

3) Release the flash exposure compensation button to lock in the compensation amount shown in the display. The flash exposure compensation display extinguishes.
   * To check the flash exposure compensation amount, press the flash exposure compensation button again.
4) Take a picture using the built-in flash.
   * Flash exposure compensation remains set until manually canceled. To cancel, carry out the operation in step 2 to reset the flash exposure compensation amount to 0.

* Flash compensation can be used together with AE exposure compensation.

4. AEB (Auto Exposure Bracketing)

Use auto exposure bracketing in AE and manual exposure modes to take a sequence of pictures at different exposures. When this function is set, one press of the shutter button automatically takes three pictures in sequence while shifting the exposure for each picture. The bracketing amount can be set in 1/2-stop increments up to +/- 2 stops from the correct exposure value.

Auto exposure bracketing is particularly effective when using slide film, which produces noticeably different results with even small exposure variations.

* Three successive frames are exposed automatically even when single exposure mode is set.

(- 1.0)

(+ / - 0)

(+ 1.0)

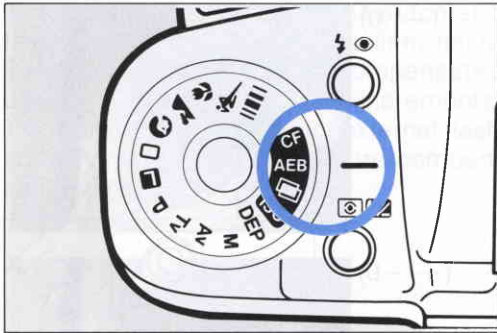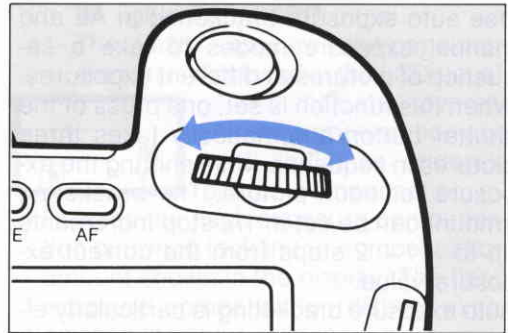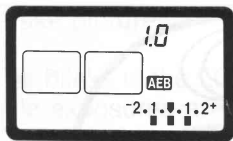1) Set the command dial to AEB.
   * "AEB" lights in the LCD panel.

2) Turn the main dial to set the desired bracketing amount.
   * The bracketing amount is shown in the LCD panel as both a dot display and a numerical value. If "1.0" is set, for instance, three pictures are taken in the following sequence: underexposure (– 1.0 stop), correct exposure (+ / – 0 stop) and overexposure (+ 1.0 stop).

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* The compensation level is also displayed in the viewfinder.
3) Set the command dial to the desired shooting mode and take pictures.
   * To cancel auto exposure bracketing, repeat steps 1 and 2 to reset the bracketing amount to 0.

* Auto exposure bracketing cannot be used in bulb mode or when using flash.
* Auto exposure bracketing is automatically canceled when film is removed.
* If you wish to shift the bracketed exposure values toward over- or underexposure, you can add exposure compensation using the quick control dial. In this case the LCD panel will not display the correct values, but exposures will be made correctly.

Auto exposure bracketing is carried out in each mode as follows:
(1) Program AE
Both the shutter speed and aperture value are shifted.
(2) Aperture-priority AE, Depth-of-Field AE, Manual Exposure
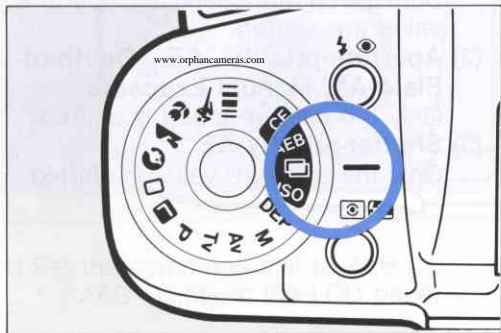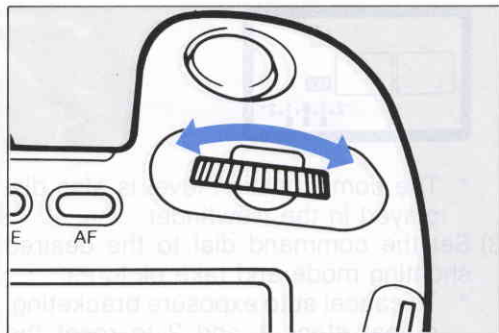Only the shutter speed is shifted.
(3) Shutter-priority AE
Only the aperture value is shifted.

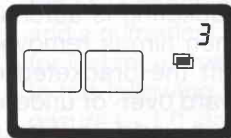## 5. ▣ (Multiple Exposure)

Up to nine exposures can be made on one frame by presetting the number of multiple exposures with the main dial.

1) Set the command dial to ▣.
   * ▣ lights in the LCD panel.

2) Turn the main dial to set the desired number of exposures in the frame counter display area.

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3) Take pictures.

* 🔲 blinks in the LCD panel while multiple exposures are being taken.
* To cancel multiple exposure mode in mid-operation, repeat steps 1 and 2 to set the frame counter to a blank display.
* When the preset number of multiple exposures is completed, the film automatically advances to the next frame and multiple exposure mode is canceled.

Helpful Hints
When taking multiple exposures on a single frame, you should decrease the exposure value for each exposure using exposure compensation. ($\rightarrow$ page 51)

Number of multiple exposures	Compensation amount
2 exposures	-1.0
3 exposures	-1.5
4 exposures	-2.0

The above values should be used only as a guide. The actual compensation amount required depends on the shooting conditions and should be determined by prior testing.

6. Bulb (Long Exposure) Operation
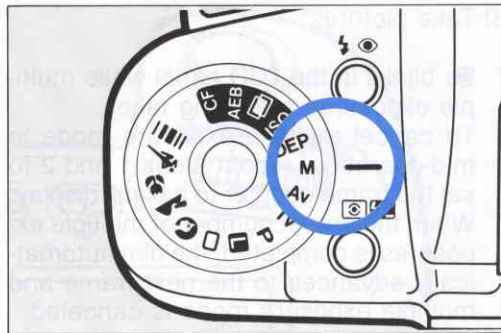
Use this mode when long exposures are required, such as for pictures of night scenes and fireworks displays. The shutter stays open for as long as you press the shutter button.
Mount the camera on a tripod to prevent camera movement during exposure.

1) Set the command dial to M.

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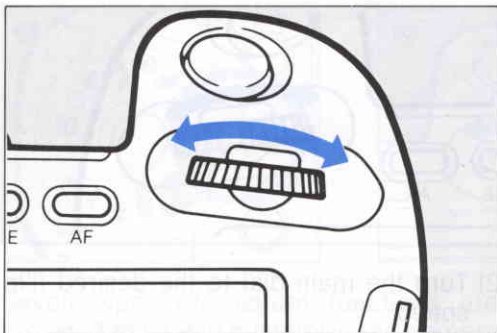
2) Turn the main dial to change the shutter speed until "buLb" appears in the LCD panel. "buLb" is the next position after 30".
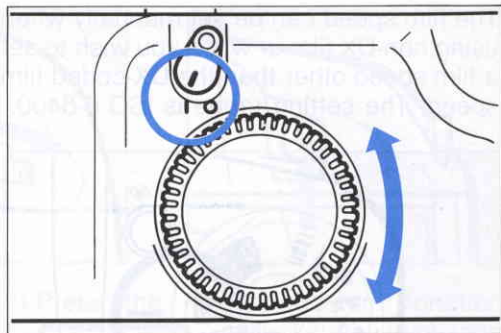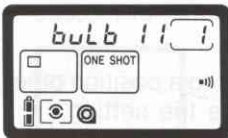
3) Set the quick control dial switch to I.
4) Turn the quick control dial to the desired aperture.
5) Press the shutter button for the desired length of time.
   * The viewfinder display extinguishes during the exposure.
   * Remote controller RC-1 can be used to start and stop the bulb exposure. For details, read the instructions supplied with the RC-1.

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7. Manual Film Speed Setting

The film speed can be set manually when using non-DX film or when you wish to set a film speed other than the DX-coded film speed. The setting range is ISO 6-6400.

2) Turn the main dial to the desired film speed.
  * The film speed is displayed in the LCD panel.
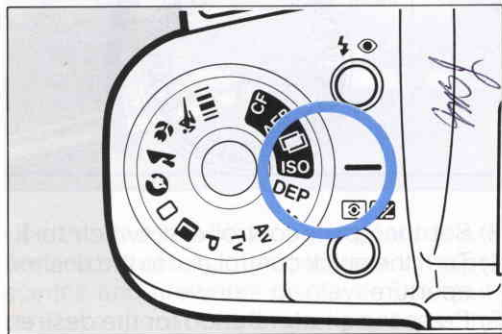
1) Set the command dial to ISO.
  * "ISO" is displayed in the LCD panel.

  * When using *non-DX* film cartridges, the **ISO** mark blinks in the LCD panel. To change the ISO setting, follow the procedures explained for non DX-coded film use.
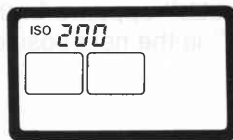
3) Set the command dial to a position other than ISO to complete the setting.

* If DX-coded film is loaded after manually setting the film speed, the DX-coded film speed is set.

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8. Custom Function Control
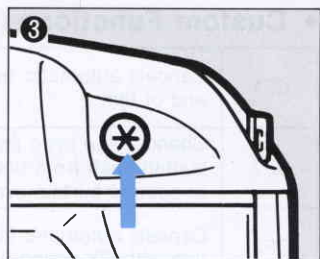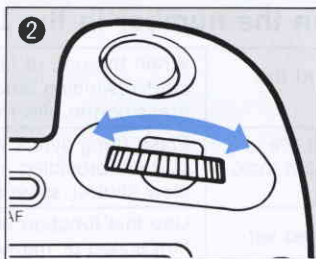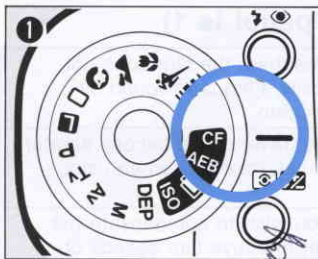
Seven types of custom functions are provided to let you customize the camera according to your personal shooting style. Set the custom functions as follows.
1) Set the command dial to CF.
   * "CF" lights in the LCD panel.
2) Turn the main dial to select the desired custom function number.

3) Press the AE lock/custom function select button to change the setting in the LCD panel to "1".

* The number in the LCD panel switches between 0 and 1 each time the AE lock/custom function select button is pressed.
   1 : Sets the custom function to the custom setting.
   0 : Resets the custom function to the standard setting.
4) Turn the command dial to a position other than CF.

• Custom Functions (when the number in the LCD panel is 1)

CF1	Cancels automatic rewind at the end of film.	When the end of film is reached, the film does not start rewinding automatically. Film is rewound by pressing the film rewind button.
CF2	Changes the sync timing of the built-in flash from first curtain sync to second curtain sync.	Flash firing syncs with the travel of the second shutter curtain, providing a more natural effect when using slow shutter speeds.
CF3	Cancels automatic film speed setting with DX-coded film.	Use this function when you wish to compensate the film speed or manually set effective film speeds obtained from independent testing.
CF4	Prohibits firing of the AF auxiliary light during autofocusing.	This function is useful to keep the AF auxiliary light from appearing in other people's pictures in situations where many people are taking pictures of the same scene.
CF5	Changes the AE lock/custom function select button to a depth-of-field preview function.	Setting this function lets you use the AE lock/custom function select button to check the depth of field after the subject is focused and exposure is set.
CF6	Turns off the beeper tone.	When this function is set, the beeper tone will not sound during self-timer operation.
CF7	Locks the mirror up when the self-timer or remote control is activated.	When the shutter button is pressed completely in self-timer/remote control mode, the mirror moves up immediately and the picture is taken 10 seconds later.

IV Reference

1. Exposure Warnings

Shooting mode	Blinking display warning		Meaning	Corrective action
P (Program AE)		Shutter speed 30" and maximum aperture of the lens in use.	Subject is too dark.	Use flash.
		Shutter speed 4000 and minimum aperture of the lens in use.	Subject is too bright.	Use an ND filter.
Tv (Shutter-priority AE)		Maximum aperture of the lens in use.	Subject will be underexposed.	Turn the main dial to a slower shutter speed.
		Minimum aperture of the lens in use.	Subject will be overexposed.	Turn the main dial to a faster shutter speed.
Av (Aperture-priority AE)		Shutter speed 30".	Subject will be underexposed.	Turn the main dial to a larger aperture.
		Shutter speed 4000.	Subject will be overexposed.	Turn the main dial to a smaller aperture.
DEP (Depth-of-field AE)		Set aperture value.	Desired depth of field cannot be obtained.	1) Move farther from the subject and set the near and far points again. 2) When using a zoom lens, set to the wide-angle position.
		Shutter speed 30" and maximum aperture of the lens in use.	Subject is too dark.	Use flash. (Same result as using Program AE.)
		Shutter speed 4000 and minimum aperture of the lens in use.	Subject is too bright.	Use an ND filter.

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Exposure Warnings When Using Flash

Shooting mode	Blinking display warning		Meaning	Corrective action
P (Program AE)		When using daylight fill-in flash, shutter speed 125 and minimum aperture of the lens in use.	Overall image will be overexposed.	Do not use flash.
Tv (Shutter-priority AE)		Minimum aperture of the lens in use.	Overall image will be overexposed.	Do not use flash.
		Maximum aperture of the lens in use.	Background will be underexposed.	Subject will be properly exposed.
Av (Aperture-priority AE)		Shutter speed 125.	Overall image will be overexposed.	Turn the main dial to a smaller aperture.
		Shutter speed 30".	Background will be underexposed.	Turn the main dial to a larger aperture.

2. Program Line Characteristics

This camera is equipped with advanced "Intelligent Program AE" which chooses the best shutter speed/aperture combinations taking the lens' focal length and minimum and maximum apertures into account.

The camera-shake warning indicator (⌂) is displayed in the viewfinder when the automatically-set shutter speed becomes 0 to 0.5 stops slower than "1/focal length of the lens in use". This shutter speed (1/focal length of the lens in use) is generally said to be the limit for hand-held shooting. The following graphs show the program lines for common lenses.

Program Characteristics

Pink: When using the EF 50 mm f/1.8
Black: When using the EF 28-80 mm f/3.5-5.6

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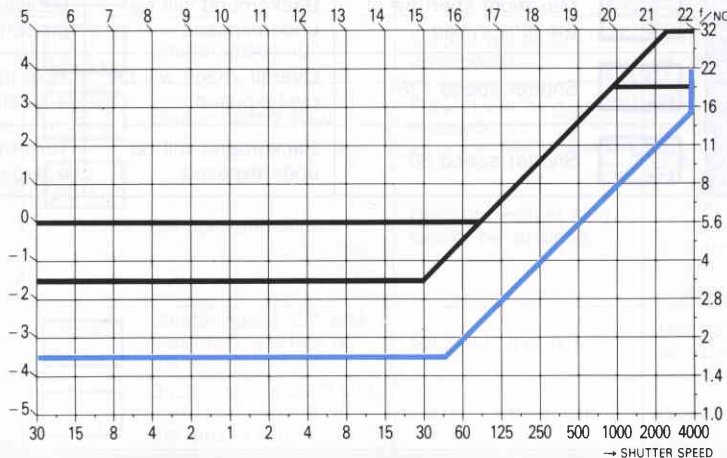
Program Shift Characteristics

* ● indicates the shutter speed/aperture
  combinations with program shift.

(EF 50 mm f/1.8 - example with shift at EV 12)

→ SHUTTER SPEED
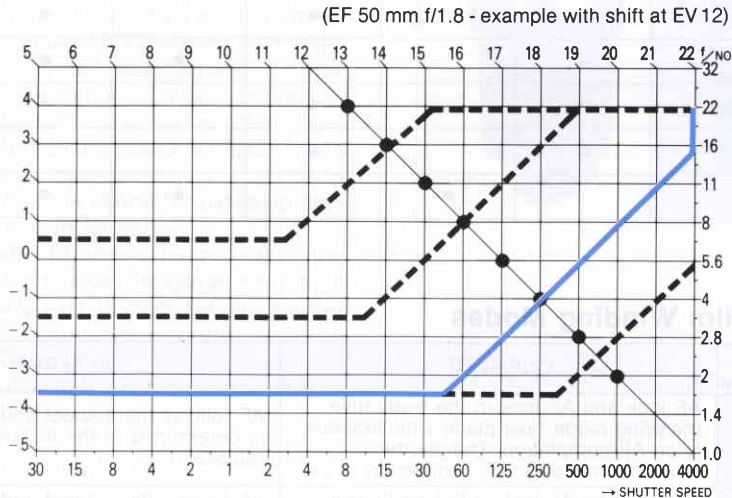
3. Function Combination Charts

(1) Programmed Image Control Mode Function Combinations

Shooting mode	AF mode		Film winding mode		Metering mode	
	ONE SHOT	AI SERVO	Single	Continuous	Evaluative	Partial
▢ (Full Auto)	(automatic switching)		●		●	
◐ (Portrait)	●			●	●	
⛰ (Landscape)	●		●		●	
🌷 (Close-up)	●		●			●
🏃 (Sports)		●		●	●	

(2) AF and Film Winding Modes

Film winding mode ╲ AF mode	ONE-SHOT	AI SERVO
▢ (Single)	AF lock and AE lock in the evaluative metering mode take place simultaneously on AF completion. The shutter releases only after AF completion.	AF follows the subject and the exposure is determined at the instant of shutter release.
▤ (Continuous)	AF lock and AE lock in the evaluative metering mode take place simultaneously on AF completion, then continuous exposure is activated. (Approx. 3 fps maximum.)	AF follows the subject and the exposure is determined at the instant of shutter release. AF is adjusted during exposure to follow the subject. (Approx. 2.5 fps maximum.)

■ Dedicated Canon Speedlites

Dedicated Speedlites you can use with the EOS ELAN include the powerful 430EZ zoom flash with a maximum guide number of 141 ft/43 m, and the 300EZ with a maximum guide number of 93 ft/28 m. With the 430EZ in particular, high-level flash functions such as automatic or manual flash output level compensation, stroboscopic flash, second-curtain sync, bounce flash, and slow synchronization are possible in addition to providing large output.

The ML-3 ring flash is useful for close-up photography with macro lenses.

When using any of these flashes with the camera in Full Auto mode, the camera automatically sets a 1/60-1/125 sec X-sync shutter speed as well as the flash control aperture value.

* For details refer to the instruction book supplied with the flash unit.

■ Remote Controller RC-1

The Remote Controller RC-1 lets you take pictures while standing away from the camera, and is especially useful for self-timer and bulb shooting as well as close-up photography and copying. It attaches to the camera strap for convenient carrying.

* To prevent camera shake caused by mirror movement during close-up or long-exposure photography, set custom function No.7 to move the mirror up at the beginning of the self-timer/remote control shutter release delay countdown. (→ page 62)

■ Grip Extension GR-70

This dedicated grip extension with padded hand-strap provides a larger camera grip for improved holding comfort and security.

■ Lens Hoods and Filters

Use lens hoods and filters to keep unwanted light from entering the lens and provide special effects. Select the right hood size to match your lens and select filters according to your photographic objectives.

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■ Dioptric Adjustment Lenses

Attaching a Dioptric Adjustment Lens E to the viewfinder eyepiece makes viewing and focusing easier without glasses for near- and far-sighted users. The built-in viewfinder eyepiece has a power of − 1 diopter, and ten eyesight correction lenses are available for adjustment from + 3 to − 4 diopters. Choose the one which is closest to your eyeglass prescription. We recommend that you actually try the lens before purchasing to make sure you get the one which is best for your eyesight.

* The numerical value printed on a dioptric adjustment lens indicates the diopter value obtained when the dioptric adjustment lens is attached to the camera. This number does not indicate the diopter value of the dioptric adjustment lens itself.
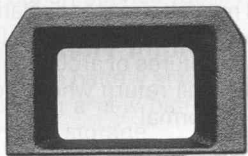
■ Cases

Keep the camera in its case to protect it while carrying.

Canon offers two special semi-hard cases designed for use with this camera.

- Semi-hard Case L (EH-6L): For camera body and EF 35-80mm f/4-5.6 or EF 35-105mm f/4.5-5.6 zoom lens.
- Semi-hard Case LL (EH-6LL): For camera body and EF 28-80mm f/3.5-5.6 USM, EF35-135mm f/4.0-5.6 USM zoom lens.

EH-6LL   EH-6L

CAMERA CARE

■ Cleaning

Keep your camera in top condition by following these suggestions for periodic cleaning. See the precautions on page 8 for other important information.

1. Cleaning the lens surface—
   Blow off dust with a blower brush and gently wipe the lens surface with a piece of lens cleaning paper moistened with lens cleaner. Clean in a spiral motion from the center outwards.

2. Cleaning the mirror and focusing screen—
   Use a blower brush reserved for this purpose only. If more cleaning is necessary NEVER attempt to do it yourself. Take the camera to an authorized Canon service facility.

3. Cleaning the film chamber—
   Use a blower brush to remove accumulated film dust particles that might scratch the film. Be careful not to touch the shutter curtain.

4. Cleaning the film pressure plate and film guide rails—
   Lightly wipe the surface with a piece of lens cleaning paper moistened with lens cleaning fluid. Be careful not to touch the shutter curtain.

* Use of aerosol spray dust removers is not recommended.

■ Liquid Crystal Display/Battery Notes
1) LCD Information

The LCD panel uses liquid crystal to show exposure information. After about five years, the display may become difficult to read. If this occurs, have it replaced at an authorized Canon service facility. Replacement is at the owner's expense.

Liquid crystal may also respond relatively slowly in temperatures below 32°F/0°C. It may also darken in temperatures of around 140°F/60°C. The LCD panel will return when the temperature returns to normal.

2) Blinking Empty Battery Indicator

There are two situations in which the blinking empty battery indicator will appear in the LCD panel: (1) when the battery is nearly exhausted or (2) when the camera's self-test process detects an internal malfunction. If the blinking empty battery indicator appears, perform the following operations:

1. Remove the battery, wipe the battery terminals and reload it. Check the battery again. If the blinking still appears, replace the battery with a new one.
2. Release the shutter once.

If the battery indicator stops blinking, the problem is corrected and you can continue using the camera normally. If the blinking does not stop, the camera needs to be examined by an authorized Canon service facility.

3) Lithium Battery Information

Always check the battery at the following times:
1. When loading a new battery
2. After lengthy storage
3. If the shutter will not release
4. In cold weather
5. Before an important shooting assignment

Battery Use Information

* Wipe the battery terminals with a clean, dry cloth to ensure proper contact.
* The battery may explode or cause burns if disassembled, recharged, shorted, exposed to high temperatures, or disposed of in fire. Be sure to observe all precautions indicated on the battery package. Always keep it out of the reach of children.
* Battery performance deteriorates slightly in temperatures below 32°F/0°C. Keep the camera and especially a spare battery close to your body or in an inside pocket to keep it warm until use.
* Remove the battery if you do not expect to use the camera for more than three weeks.

4) Camera Operation with a Low Battery

Even if the battery indicator blinks or does not appear in the LCD panel during battery check, exposure will be okay as long as the shutter releases. Film advance and rewind will be impaired by insufficient battery power. If wind or rewind stops due to the battery, the film cartridge symbol will blink. Film transport resumes after a new battery is loaded and the film rewind button pressed.

Specifications

TYPE AND MAJOR COMPONENTS

Type: 35mm focal plane shutter SLR (single-lens reflex) camera with autofocus, auto exposure, built-in flash 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 90% vertical and horizontal coverage of actual picture area and 0.75× magnification with 50mm lens at infinity.

Dioptric Adjustment: Built-in eyepiece is adjusted to −1 diopter (eyepoint: 20 mm).

Focusing Screen: Fixed, overall matte screen with AF frame and partial metering mark.

Shutter: Vertical-travel, focal plane shutter with all speeds electronically controlled.

Shutter Speed: 1/4000 - 30 sec. and bulb. X-sync is 1/125 sec. Set in 1/2-stop increments.

AUTOFOCUS

AF Control System: TTL-SIR (Secondary Image Registration) phase detection type using Cross-type BASIS (Base-Stored Image Sensor). Two autofocus modes available: One-shot AF and AI Servo AF. Manual focusing also possible.

AF Working Range: EV 0 - 18 at ISO 100.

AF Auxiliary Light: Automatically projected when necessary.

EXPOSURE CONTROL

Light Metering: TTL full-aperture metering using a 6-zone SPC (silicon photocell). Three metering modes available: evaluative metering, partial metering (covers approx. 6.5% of the central picture area) and center-weighted average metering.

Metering Range: EV − 1 to 20 (with 50mm f/1.4 lens) at ISO 100 (normal temperature).

Shooting Modes:
1. Program AE
2. Shutter-priority AE
3. Aperture-priority AE
4. Depth-of-field AE
5. Full Auto
6. Bar-code program mode
7. Programmed Image Control (Portrait, Landscape, Close-up, Sports)
8. Flash AE (A-TTL or TTL program flash AE with built-in flash or dedicated speedlite)
9. Manual exposure

Camera Shake Warning: Operates in Full Auto, Program AE, Aperture-priority AE, Depth-of-field AE, Programmed Image Control, and bar-code program modes. Camera-shake indicator blinks in viewfinder when automatically-set shutter speed becomes 0 to 0.5 stops slower than "1/focal length of the lens in use."

Multiple Exposures: Up to nine exposures can be preset. Automatically clears upon completion.

Exposure Compensation: +/− 2 stops in 1/2-stop increments.

Auto Exposure Bracketing: +/− 2 stops in 1/2-stop increments. Three continuous exposures are taken in sequence: one under, one at the standard metered value, and one over.

FILM TRANSPORT

Film Speed Setting: Automatically set according to DX code (ISO 25-5000) or set by user (ISO 6-6400).

Film Loading: Automatic. Film automatically advances to first frame when back cover is closed.

Film Wind: Automatic using dedicated miniature motor. Two modes are available: single exposure and continuous exposure (3 fps maximum).

Film Rewind: Automatic rewind at end of roll.

OTHER

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

Remote Control: Possible using optional remote control unit.

Custom Function Control: Seven built-in custom functions selectable by user.

POWER SOURCE

Battery: One six-volt lithium battery (2CR5).

Battery Check: Battery automatically checked when command dial moved to position other than "L". Battery condition indicator displayed on LCD panel.

SIZE

Dimensions: 154.2 (W) × 105.0 (H) × 69.1 (D) mm/ 6-1/16″ × 4-1/8″ × 2-3/4″

Weight: 575 g/20.3 oz without battery (body only)

BUILT-IN FLASH

Type: Retractable type TTL automatic zoom flash housed in pentaprism. Series control system.

Guide Number (ISO 100, m/ft): 12/40 (28mm) to 17/60 (80mm)

Flash Coverage Angle: Automatically zooms to cover the field of view of 28mm, 50mm and 80mm focal lengths.

Recycling Time: Approx. 2 sec.

Flash Contacts: X-sync contact. Directly coupled contacts provided on accessory shoe. Red-eye reduction, 2nd. curtain sync, flash output compensation.

EF 28-80mm f/3.5-5.6 USM ZOOM LENS

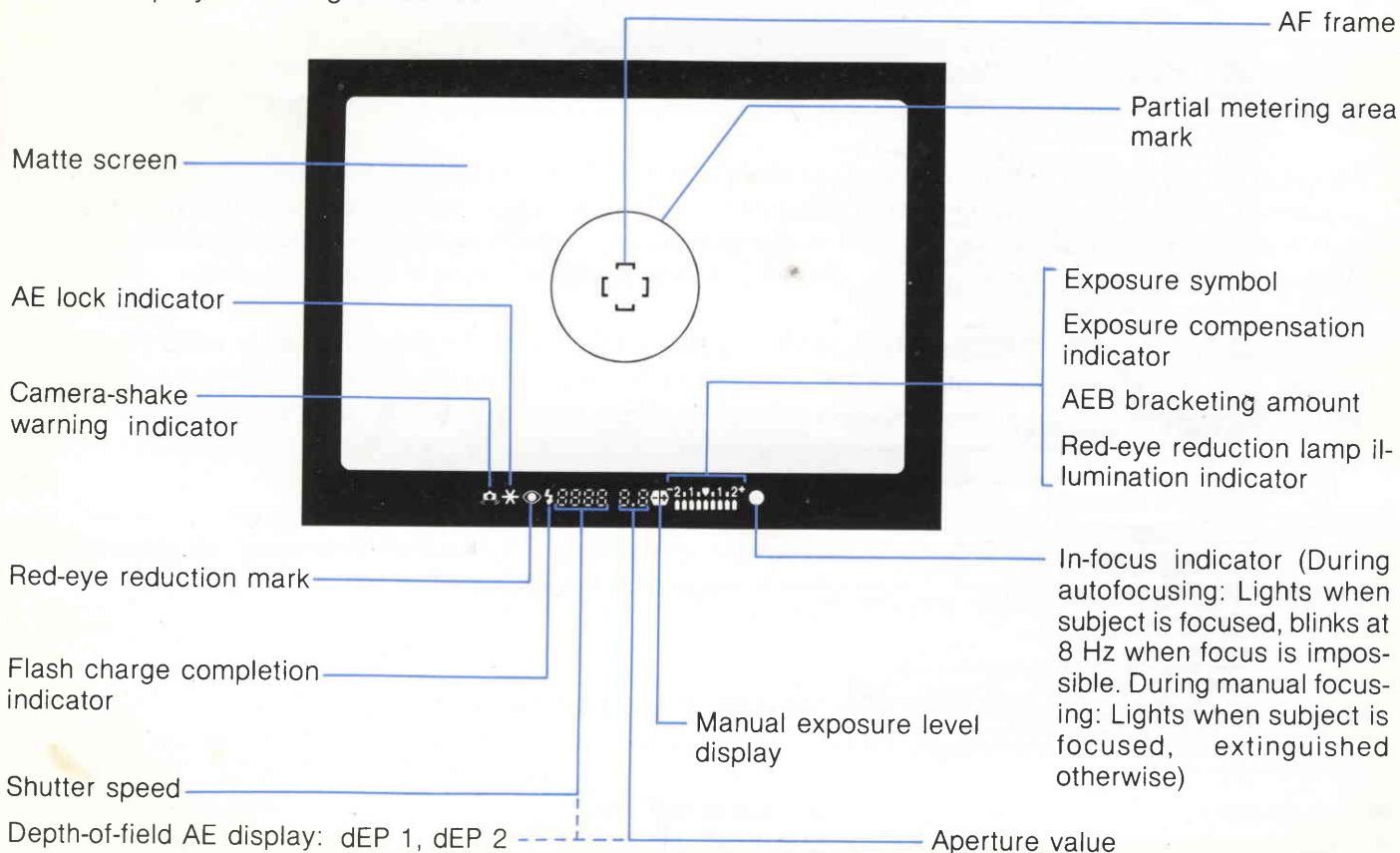| Field of View	Diagonal	75° - 30°
	Vertical	46° - 17°
	Horizontal	65° - 25°
Optical Construction		10 elements in 9 groups
Minimum Aperture		22 - 38
Shooting Distance		0.8 m (macro: 0.5 m) to infinity
Maximum Magnification and Field of View		28mm: 0.04 (macro: 0.069) 612 × 940 mm (macro: 357 × 550 mm)
		80mm: 0.106 (macro: 0.182) 225 × 337 mm (macro: 131 × 196 mm)
Filter Size		58 mm
Hood		EW-68A
Length × Max. Diameter		77.5 × 72 mm
Weight		330 gr
Case (hard case)		LH-B12

When attaching a lens cap or filter to the EF 28-80mm f/3.5-5.6 USM, turn the zoom ring to either the WIDE (28mm) or TELE (80mm) position before attaching the cap or filter.
A polarizing filter can only be used at the WIDE and TELE positions.

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

Viewfinder Information

The illustration shows all indicators lit for explanation purposes only. Only necessary information is displayed during actual use.

AF frame

Partial metering area mark

Matte screen

Exposure symbol

Exposure compensation indicator

AE lock indicator

AEB bracketing amount

Camera-shake warning indicator

Red-eye reduction lamp illumination indicator

In-focus indicator (During autofocusing: Lights when subject is focused, blinks at 8 Hz when focus is impossible. During manual focusing: Lights when subject is focused, extinguished otherwise)

Red-eye reduction mark

Flash charge completion indicator

Manual exposure level display

Shutter speed

Depth-of-field AE display: dEP 1, dEP 2

Aperture value

Nomenclature

Viewfinder Eyepiece

Eye cup

Quick Control Dial Switch

AE Lock/Custom Function Select Button

Film Check Window

Strap Fixture

Bar-code Receptor

Quick Control Dial

Film Rewind Button

Battery Cover Latch

Tripod Socket

Grip Extension Positioning Hole

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