

# Canon

# PowerShot ELPH 330 HS IXUS 255 HS

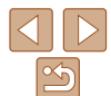
# Camera User Guide

ENGLISH

- Make sure you read this guide, including the "Safety Precautions" section, before using the camera.
- Reading this guide will help you learn to use the camera properly.
- Store this guide safely so that you can use it in the future.

- Click the buttons in the lower right to access other pages.  
: Next page  
: Previous page  
: Page before you clicked a link
- To jump to the beginning of a chapter, click the chapter title at right.

From chapter title pages, you can access topics by clicking their titles.



Cover

Preliminary Notes and Legal Information

Contents: Basic Operations

Basic Guide

Advanced Guide

**1** Camera Basics

**2** Auto Mode/Hybrid Auto Mode

**3** Other Shooting Modes

**4** P Mode

**5** Playback Mode

**6** Wi-Fi Functions

**7** Setting Menu

**8** Accessories

**9** Appendix

Index

## Compatible Memory Cards

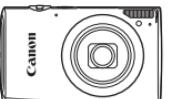
The following memory cards (sold separately) can be used, regardless of capacity.

- SD memory cards\*
- SDHC memory cards\*
- SDXC memory cards\* 

\* Cards conforming to SD standards. However, not all memory cards have been verified to work with the camera.

## Package Contents

Before use, make sure the following items are included in the package. If anything is missing, contact your camera retailer.



Camera

Battery Pack  
NB-4LBattery Charger  
CB-2LV/CB-2LVEInterface Cable  
IFC-400PCUWrist Strap  
WS-DC11DIGITAL CAMERA Solution  
Disk\*  
(CD-ROM)

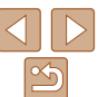
Getting Started



Warranty Card

\* Contains software and PDF manuals (说明书19).

• A memory card is not included (说明书2).

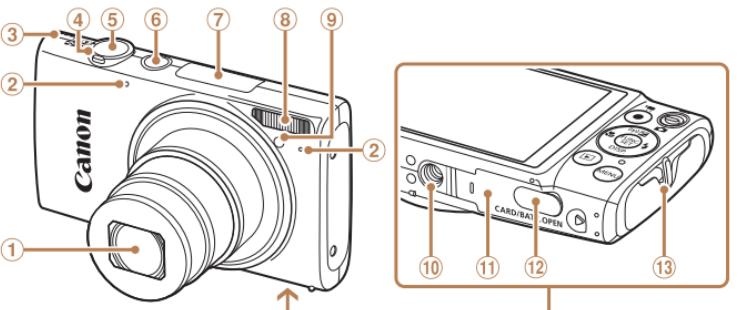


## Preliminary Notes and Legal Information

- Take and review some test shots initially to make sure the images were recorded correctly. Please note that Canon Inc., its subsidiaries and affiliates, and its distributors are not liable for any consequential damages arising from any malfunction of a camera or accessory, including memory cards, that result in the failure of an image to be recorded or to be recorded in a way that is machine readable.
- Images recorded by the camera are intended for personal use. Refrain from unauthorized recording that infringes on copyright law, and note that even for personal use, photography may contravene copyright or other legal rights at some performances or exhibitions, or in some commercial settings.
- The camera warranty is valid only in the area of purchase. In case of camera problems while abroad, return to the area of purchase before contacting a Canon Customer Support Help Desk.
- Although the LCD monitor is produced under extremely high-precision manufacturing conditions and more than 99.99% of the pixels meet design specifications, in rare cases some pixels may be defective or may appear as red or black dots. This does not indicate camera damage or affect recorded images.
- The LCD monitor may be covered with a thin plastic film for protection against scratches during shipment. If covered, remove the film before using the camera.
- When the camera is used over an extended period, it may become warm. This does not indicate damage.

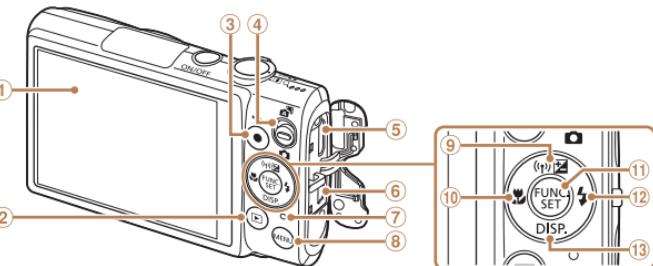


## Part Names and Conventions in This Guide



- ① Lens
- ② Microphone
- ③ Speaker
- ④ Zoom lever  
Shooting: <▶ (telephoto) / <◀ (wide angle)>
- Playback: <Q (magnify) / <▶ (index)>
- ⑤ Shutter button
- ⑥ Power button
- ⑦ Wi-Fi antenna area
- ⑧ Flash
- ⑨ Lamp
- ⑩ Tripod socket
- ⑪ Memory card/battery cover
- ⑫ DC coupler terminal cover
- ⑬ Strap mount

- In this guide, icons are used to represent the corresponding camera buttons and switches on which they appear or which they resemble.
- Shooting modes and on-screen icons and text are indicated in brackets.
- ①: Important information you should know
- ②: Notes and tips for expert camera use
- ③: Pages with related information (in this example, "xx" represents a page number)
- Instructions in this guide apply to the camera under default settings.
- For convenience, all supported memory cards are simply referred to as the "memory card".



- ① Screen (LCD monitor)
- ② <▶> (Playback) button
- ③ Movie button
- ④ Mode switch
- ⑤ HDMI™ terminal
- ⑥ AV OUT (Audio/video output) / DIGITAL terminal
- ⑦ Indicator
- ⑧ <MENU> button
- ⑨ <◀> (Exposure compensation) / <(( ))> (Wi-Fi) / Up button
- ⑩ <◀> (Macro) / Left button
- ⑪ FUNC./SET button
- ⑫ <▶> (Flash) / Right button
- ⑬ <▼> (Display) / Down button

- The following camera buttons and controls are represented by icons.
- <▲> Up button ⑨ on back
- <◀> Left button ⑩ on back
- <▶> Right button ⑫ on back
- <▼> Down button ⑬ on back
- The tabs shown above titles indicate whether the function is used for still images, movies, or both.

- |              |  |
|--------------|--|
| Still Images | : Indicates that the function is used when shooting or viewing still images. |
| Movies       | : Indicates that the function is used when shooting or viewing movies.       |



# Table of Contents

Package Contents .....	2
Compatible Memory Cards .....	2
Preliminary Notes and Legal Information .....	3
Part Names and Conventions in This Guide .....	4
Table of Contents .....	5
Contents: Basic Operations .....	6
Safety Precautions .....	7
<b>Basic Guide .....</b>	<b>10</b>
Initial Preparations .....	11
Trying the Camera Out .....	16
Included Software, PDF Manuals .....	19
System Map .....	23
<b>Advanced Guide .....</b>	<b>25</b>
<b>1 Camera Basics .....</b>	<b>25</b>
On/Off .....	26
Shutter Button .....	27
Shooting Display Options .....	27
FUNC. Menu .....	28
MENU Menu .....	29
Indicator Display .....	30
Clock .....	30

<b>2 Auto Mode/ Hybrid Auto Mode .....</b>	<b>31</b>
Shooting With Camera-Determined Settings .....	32
Common, Convenient Features .....	38
Using Face ID .....	42
Image Customization Features .....	47
Helpful Shooting Features .....	50
Customizing Camera Operation .....	51
<b>3 Other Shooting Modes .....</b>	<b>54</b>
Specific Scenes .....	55
Applying Special Effects .....	57
Special Modes for Other Purposes .....	62
Shooting Super Slow Motion Movies .....	67
<b>4 P Mode .....</b>	<b>68</b>
Shooting in Program AE ([P] Mode) .....	69
Image Brightness (Exposure Compensation) .....	69
Color and Continuous Shooting .....	72
Shooting Range and Focusing .....	74
Flash .....	80
Other Settings .....	81

<b>5 Playback Mode .....</b>	<b>83</b>
Viewing .....	84
Browsing and Filtering Images .....	87
Editing Face ID Information .....	90
Image Viewing Options .....	91
Protecting Images .....	93
Erasing Images .....	96
Rotating Images .....	98
Image Categories .....	99
Editing Still Images .....	100
Editing Movies .....	104
<b>6 Wi-Fi Functions .....</b>	<b>106</b>
What You Can Do With Wi-Fi .....	107
Using Wi-Fi to Send Images From the Camera .....	108
Wi-Fi (Wireless LAN) Precautions .....	108
Security Precautions .....	109
Glossary .....	110
Registering a Camera Nickname (First time only) .....	111
Connecting to Web Services .....	112
Connecting to a Smartphone .....	115
Connecting to Another Camera .....	117
Connecting to a Computer .....	118
Connecting to a Printer .....	124
Sending Images .....	126
Sending Images to a Computer via CANON iIMAGE GATEWAY .....	128
<b>7 Setting Menu .....</b>	<b>132</b>
Adjusting Basic Camera Functions .....	133
<b>8 Accessories .....</b>	<b>140</b>
Optional Accessories .....	141
Using Optional Accessories .....	142
Printing Images .....	146
<b>9 Appendix .....</b>	<b>155</b>
Troubleshooting .....	156
On-Screen Messages .....	159
On-Screen Information .....	162
Functions and Menu Tables .....	164
Handling Precautions .....	170
Specifications .....	171
Index .....	174

Cover

Preliminary Notes and Legal Information

Contents: Basic Operations

Basic Guide

Advanced Guide

1 Camera Basics

2 Auto Mode/Hybrid Auto Mode

3 Other Shooting Modes

4 P Mode

5 Playback Mode

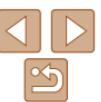
6 Wi-Fi Functions

7 Setting Menu

8 Accessories

9 Appendix

Index



# Contents: Basic Operations

## Shoot

- Use camera-determined settings (Auto Mode, Hybrid Auto Mode) ..... 32, 34

### Shooting people well

Portraits  
( 55)Against Snow  
( 55)Smooth Skin  
( 56)

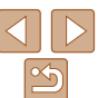
### Matching specific scenes

Night Scenes  
( 55)Fireworks  
( 55)

## Applying special effects

Vivid Colors  
( 57)Poster Effect  
( 57)Fish-Eye Effect  
( 57)Miniature Effect  
( 58)Toy Camera Effect  
( 59)Soft Focus  
( 59)Monochrome  
( 60)

- Focus on faces ..... 32, 55, 76, 77
- Without using the flash (Flash Off) ..... 40
- Include yourself in the shot (Self-Timer) ..... 39, 64
- Add a date stamp ..... 41
- Use Face ID ..... 42, 87



## ▶ View

● View images (Playback Mode).....	84
● Automatic playback (Slideshow) .....	91
● On a TV.....	142
● On a computer .....	20
● Browse through images quickly .....	87
● Erase images .....	96

## ‣ Shoot/View Movies

● Shoot movies .....	32, 67
● View movies (Playback Mode) .....	84
● Fast-moving subjects, slow-motion playback.....	67

## 🖨 Print

● Print pictures .....	146
------------------------	-----

## 💻 Save

● Save images to a computer via a cable .....	20
---	----

## 📱 Use Wi-Fi Functions

● Send images to a smartphone .....	115
● Share images online .....	112
● Send images to a computer .....	118

## Safety Precautions

- Before using the product, please ensure that you read the safety precautions described below. Always ensure that the product is used correctly.
- The safety precautions noted on the following pages are intended to prevent injuries to yourself and other persons, or damage to the equipment.
- Be sure to also check the guides included with any separately sold accessories you use.



### Warning

Denotes the possibility of serious injury or death.

- **Do not trigger the flash in close proximity to people's eyes.**  
Exposure to the intense light produced by the flash could damage eyesight. In particular, remain at least 1 meter (39 inches) away from infants when using the flash.

- **Store this equipment out of the reach of children and infants.**

Strap: Putting the strap around a child's neck could result in asphyxiation.

- **Use only recommended power sources.**
- **Do not attempt to disassemble, alter or apply heat to the product.**
- **Avoid dropping or subjecting the product to severe impacts.**
- **To avoid the risk of injury, do not touch the interior of the product if it has been dropped or otherwise damaged.**
- **Stop using the product immediately if it emits smoke, a strange smell, or otherwise behaves abnormally.**
- **Do not use organic solvents such as alcohol, benzine, or thinner to clean the product.**
- **Do not let the product come into contact with water (e.g. sea water) or other liquids.**
- **Do not allow liquids or foreign objects to enter the camera.**

This could result in electrical shock or fire.

If liquids or foreign objects come into contact with the camera interior, immediately turn the camera off and remove the battery.

If the battery charger becomes wet, unplug it from the outlet and consult your camera retailer or a Canon Customer Support Help Desk.





- Use only the recommended battery.**

Do not place the battery near or in direct flame.

Unplug the power cord periodically, and using a dry cloth, wipe away any dust and dirt that has collected on the plug, the exterior of the power outlet, and the surrounding area.

Do not handle the power cord with wet hands.

Do not use the equipment in a manner that exceeds the rated capacity of the electrical outlet or wiring accessories. Do not use if the power cord or plug are damaged, or not fully plugged into the outlet.

- Do not allow dirt or metal objects (such as pins or keys) to contact the terminals or plug.**

The battery may explode or leak, resulting in electrical shock or fire. This could cause injury and damage the surroundings. In the event that a battery leaks and the battery electrolyte contacts eyes, mouth, skin or clothing, immediately flush with water.

- Turn the camera off in places where camera use is prohibited.**

The electromagnetic waves emitted by the camera may interfere with the operation of electronic instruments and other devices. Exercise adequate caution when using the camera in places where use of electronic devices is restricted, such as inside airplanes and medical facilities.

- Do not play the supplied CD-ROM(s) in any CD player that does not support data CD-ROMs.**

It is possible to suffer hearing loss from listening with headphones to the loud sounds of a CD-ROM played on an audio CD player (music player). Additionally, this could damage the speakers.



**Caution** Denotes the possibility of injury.

- When holding the camera by the strap, be careful not to bang it, subject it to strong impacts or shocks, or let it get caught on other objects.**

Be careful not to bump or push strongly on the lens.

This could lead to injury or damage the camera.

- Be careful not to subject the screen to strong impacts.**

If the screen cracks, injury may result from the broken fragments.

- When using the flash, be careful not to cover it with your fingers or clothing.**

This could result in burns or damage to the flash.

- Avoid using, placing or storing the product in the following places:**

- Places subject to direct sunlight
- Places subject to temperatures above 40 °C (104 °F)
- Humid or dusty areas

These could cause leakage, overheating or an explosion of the battery, resulting in electrical shock, fire, burns or other injuries.

High temperatures may cause deformation of the camera or battery charger casing.

- The slideshow transition effects may cause discomfort when viewed for prolonged periods.**

**Caution**

Denotes the possibility of damage to the equipment.

- Do not aim the camera at bright light sources (such as the sun on a clear day).**

Doing so may damage the image sensor.

- When using the camera on a beach or at a windy location, be careful not to allow dust or sand to enter the camera.**

This may cause the product to malfunction.

- In regular use, small amounts of smoke may be emitted from the flash.**

This is due to the high intensity of the flash burning dust and foreign materials stuck to the front of the unit. Please use a cotton swab to remove dirt, dust or other foreign matter from the flash to prevent heat build-up and damage to the unit.

- Remove and store the battery when you are not using the camera.**

If the battery is left inside the camera, damage caused by leakage may occur.

- Before you discard the battery, cover the terminals with tape or other insulators.**

Contacting other metal materials may lead to fire or explosions.

- Unplug the battery charger from the power outlet after charging is complete, or when you are not using it.**

- Do not place anything, such as cloth, on top of the battery charger while it is charging.**

Leaving the unit plugged in for a long period of time may cause it to overheat and distort, resulting in fire.

- Do not place the battery near pets.**

Pets biting the battery could cause leakage, overheating or explosion, resulting in fire or damage.

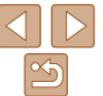
- Do not sit down with the camera in your pocket.**

Doing so may cause malfunctions or damage the screen.

- When putting the camera in your bag, ensure that hard objects do not come into contact with the screen.**

- Do not attach any hard objects to the camera.**

Doing so may cause malfunctions or damage the screen.



Cover

Preliminary Notes and  
Legal Information

Contents: Basic  
Operations

Basic Guide

Advanced Guide

**1** Camera Basics

**2** Auto Mode/Hybrid  
Auto Mode

**3** Other Shooting  
Modes

**4** P Mode

**5** Playback Mode

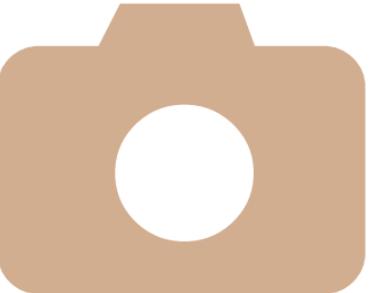
**6** Wi-Fi Functions

**7** Setting Menu

**8** Accessories

**9** Appendix

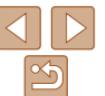
Index



# Basic Guide

Gives basic instructions, from initial preparations to shooting, playback, and saving on a computer

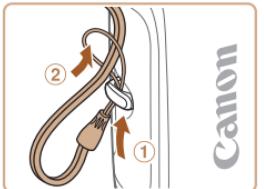
Initial Preparations.....	11
Trying the Camera Out.....	16
Included Software, PDF Manuals .....	19
System Map .....	23



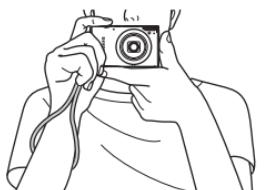
## Initial Preparations

Prepare for shooting as follows.

### Attaching the Strap



### Holding the Camera

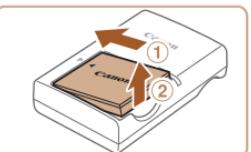
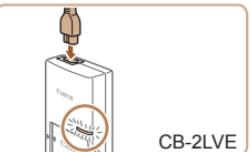
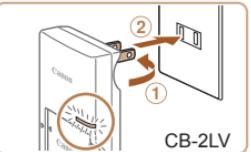
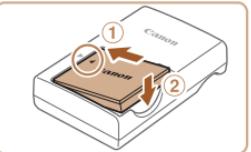


- Thread the end of the strap through the strap hole (①), and then pull the other end of the strap through the loop on the threaded end (②).

- Place the strap around your wrist.
- When shooting, keep your arms close to your body and hold the camera securely to prevent it from moving. Do not rest your fingers on the flash.

## Charging the Battery

Before use, charge the battery with the included charger. Be sure to charge the battery initially, because the camera is not sold with the battery charged.



### 1 Insert the battery.

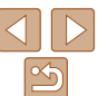
- After aligning the ▲ marks on the battery and charger, insert the battery by pushing it in (①) and down (②).

### 2 Charge the battery.

- CB-2LV:** Flip out the plug (①) and plug the charger into a power outlet (②).
- CB-2LVE:** Plug the power cord into the charger, then plug the other end into a power outlet.
  - The charging lamp turns orange and charging begins.
  - When charging is finished, the lamp turns green.

### 3 Remove the battery.

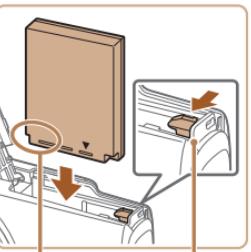
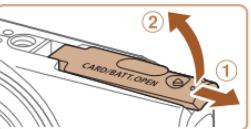
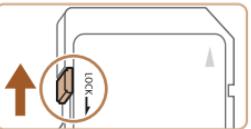
- After unplugging the battery charger, remove the battery by pushing it in (①) and up (②).



- !**
- To protect the battery and keep it in optimal condition, do not charge it continuously for more than 24 hours.
  - For battery chargers that use a power cord, do not attach the charger or cord to other objects. Doing so could result in malfunction or damage to the product.
- Pencil**
- For details on charging time and the number of shots and recording time possible with a fully charged battery, see "Number of Shots/Recording Time, Playback Time" (171).
  - Charged batteries gradually lose their charge, even when they are not used. Charge the battery on (or immediately before) the day of use.
  - The charger can be used in areas with 100 – 240 V AC power (50/60 Hz). For power outlets in a different format, use a commercially available adapter for the plug. Never use an electrical transformer designed for traveling, which may damage the battery.

## Inserting the Battery and Memory Card

Insert the included battery and a memory card (sold separately). Note that before using a new memory card (or a memory card formatted in another device), you should format the memory card with this camera (136).



### 1 Check the card's write-protect tab.

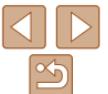
- Recording is not possible on memory cards with a write-protect tab when the tab is in the locked (downward) position. Slide the tab up until it clicks into the unlocked position.

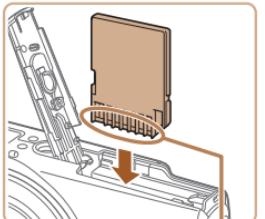
### 2 Open the cover.

- Slide the cover (①) and open it (②).

### 3 Insert the battery.

- While pressing the battery lock in the direction of the arrow, insert the battery as shown and push it in until it clicks into the locked position.
- If you insert the battery facing the wrong way, it cannot be locked into the correct position. Always confirm that the battery is facing the right way and locks when inserted.





Terminals



#### 4 Insert the memory card.

- Insert the memory card facing as shown until it clicks into the locked position.
- Make sure the memory card is facing the right way when you insert it. Inserting memory cards facing the wrong way may damage the camera.

#### 5 Close the cover.

- Lower the cover (①) and hold it down as you slide it, until it clicks into the closed position (②).

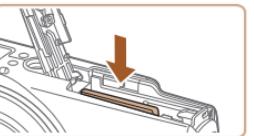
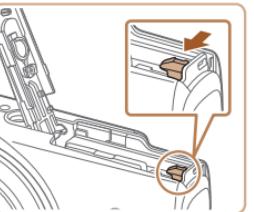


- For guidelines on how many shots or hours of recording can be saved on one memory card, see "Number of 4:3 Shots per Memory Card" (172).

#### ■ Removing the Battery and Memory Card

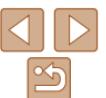
##### Remove the battery.

- Open the cover and press the battery lock in the direction of the arrow.
- The battery will pop up.



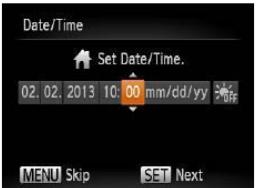
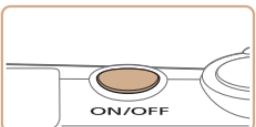
##### Remove the memory card.

- Push the memory card in until it clicks, and then slowly release it.
- The memory card will pop up.



## Setting the Date and Time

Set the current date and time correctly as follows if the [Date/Time] screen is displayed when you turn the camera on. Information you specify this way is recorded in image properties when you shoot, and it is used when you manage images by shooting date or print images showing the date. You can also add a date stamp to shots, if you wish (41).



### 1 Turn the camera on.

- Press the power button.
- ▶ The [Date/Time] screen is displayed.



### 2 Set the date and time.

- Press the <↔><↔> buttons to choose an option.
- Press the <▲><▼> buttons to specify the date and time.
- When finished, press the <**FUNC./SET**> button.



- Unless you set the date, time, and home time zone, the [Date/Time] screen will be displayed each time you turn the camera on. Specify the correct information.



- To set daylight saving time (1 hour ahead), choose [OFF] in step 2 and then choose [ON] by pressing the <▲><▼> buttons.

### 3 Set the home time zone.

- Press the <↔><↔> buttons to choose your home time zone.

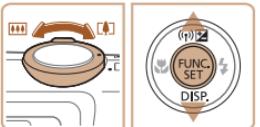
### 4 Finish the setup process.

- Press the <**FUNC./SET**> button when finished. After a confirmation message, the setting screen is no longer displayed.
- To turn off the camera, press the power button.



## Changing the Date and Time

Adjust the date and time as follows.



### 1 Access the camera menu.

- Press the <FUNC./SET> button.

### 2 Choose [Date/Time].

- Move the zoom lever to choose the  tab.
- Press the <▲><▼> buttons to choose [Date/Time], and then press the <FUNC./SET> button.

### 3 Change the date and time.

- Follow step 2 on [14](#) to adjust the settings.
- Press the <FUNC./SET> button to close the menu.



- Date/time settings can be retained for about 3 weeks by the camera's built-in date/time battery (backup battery) after the battery pack is removed.
- The date/time battery will be charged in about 4 hours once you insert a charged battery or connect the camera to an AC adapter kit (sold separately, [141](#)), even if the camera is left off.
- Once the date/time battery is depleted, the [Date/Time] screen will be displayed when you turn the camera on. Follow the steps on [14](#) to set the date and time.

## Display Language

Change the display language as needed.



English	Suomi	Magyar
Dutsch	Norsk	Türkçe
Français	Svenska	繁體中文
Nederlands	Español	한국어
Dansk	简体中文	ไทย
Italiano	Русский	العربية
Українська	Português	Română
B. Malaysia	Էղենական	پارسی
Indonesian	Polski	ଓଡ଼ିଆ
Tiếng Việt	Cătina	日本語



### 1 Enter Playback mode.

- Press the <PLAYBACK> button.

### 2 Access the setting screen.

- Press and hold the <FUNC./SET> button, and then immediately press the <MENU> button.

### 3 Set the display language.

- Press the <▲><▼><◀><▶> buttons to choose a language, and then press the <FUNC./SET> button.
- Once the display language has been set, the setting screen is no longer displayed.



- The current time is displayed if you wait too long in step 2 after pressing the <FUNC./SET> button before you press the <MENU> button. In this case, press the <FUNC./SET> button to dismiss the time display and repeat step 2.
- You can also change the display language by pressing the <FUNC./SET> button and choosing [Language ] on the  tab.

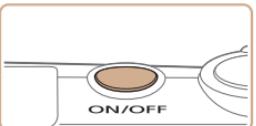


# Trying the Camera Out

Follow these instructions to turn the camera on, shoot still images or movies, and then view them.

## Shooting (Smart Auto)

For fully automatic selection of the optimal settings for specific scenes, simply let the camera determine the subject and shooting conditions.



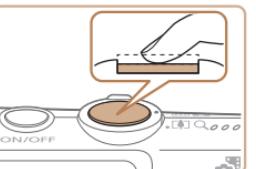
### 1 Turn the camera on.

- Press the power button.
- ▶ The startup screen is displayed.



### 2 Enter [AUTO] mode.

- Set the mode switch to <>.
- Press the <> button, press the <><> buttons to choose [AUTO], and then press the <> button again.
- Press the <><> buttons to choose [AUTO], and then press the <> button.



- Aim the camera at the subject. The camera will make a slight clicking noise as it determines the scene.

- ▶ Icons representing the scene and image stabilization mode are displayed in the upper right of the screen.
- ▶ Frames displayed around any detected subjects indicate that they are in focus.

## 3 Compose the shot.

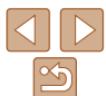
- To zoom in and enlarge the subject, move the zoom lever toward <> (telephoto), and to zoom away from the subject, move it toward <> (wide angle).

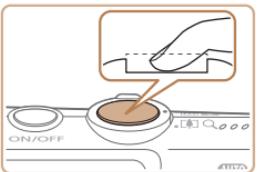
## 4 Shoot.

### Shooting Still Images

#### ① Focus.

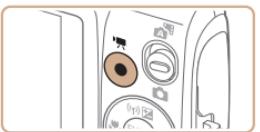
- Press the shutter button lightly, halfway down. The camera beeps twice after focusing, and AF frames are displayed to indicate image areas in focus.





## ② Shoot.

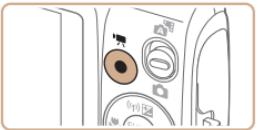
- Press the shutter button all the way down.
- ▶ As the camera shoots, a shutter sound is played, and in low-light conditions, the flash fires automatically.
- Keep the camera still until the shutter sound ends.
- ▶ Your shot is only displayed until the camera is ready to shoot again.



## Shooting Movies

### ① Start shooting.

- Press the movie button. The camera beeps once as recording begins, and [●Rec] is displayed with the elapsed time.
- ▶ Black bars displayed on the top and bottom edges of the screen indicate image areas not recorded.
- ▶ Frames displayed around any detected faces indicate that they are in focus.
- Once recording begins, take your finger off the movie button.



### ② Finish shooting.

- Press the movie button again to stop shooting. The camera beeps twice as recording stops.



- You can make a short movie of the day (digest movie) just by shooting still images. When the mode switch is set to [ ], the camera automatically records a movie clip of the scene immediately before each shot (Hybrid Auto Mode (34)).

## Viewing

After shooting images or movies, you can view them on the screen as follows.



### 1 Enter Playback mode.

- Press the <▶> button.
- ▶ Your last shot is displayed.

### 2 Browse through your images.

- To view the previous image, press the <◀> button. To view the next image, press the <▶> button.





- To access Scroll Display mode, press and hold the <◀><▶> buttons for at least one second. In this mode, press the <◀><▶> buttons to browse through images.

- To return to single-image display, press the <**FUNC SET**> button.

- Movies are identified by a [**SET**▶] icon. To play movies, go to step 3.

### 3 Play movies.

- Press the <**FUNC SET**> button, press the <▲><▼> buttons to choose [▶], and then press the <**FUNC SET**> button again.
- Playback now begins, and after the movie is finished, [**SET**▶] is displayed.
- To adjust the volume, press the <▲><▼> buttons.



- To switch to Shooting mode from Playback mode, press the shutter button halfway.

## ■ Erasing the Images

You can choose and erase unneeded images one by one. Be careful when erasing images, because they cannot be recovered.

### 1 Choose an image to erase.

- Press the <◀><▶> buttons to choose an image.

### 2 Erase the image.

- Press the <**FUNC SET**> button, press the <▲><▼> buttons to choose [trash], and then press the <**FUNC SET**> button again.
- After [Erase?] is displayed, press the <◀><▶> buttons to choose [Erase], and then press the <**FUNC SET**> button.
- The current image is now erased.
- To cancel erasure, press the <◀><▶> buttons to choose [Cancel], and then press the <**FUNC SET**> button.



- You can also erase all images at once (96).



## Included Software, PDF Manuals

The software and PDF manuals on the included DIGITAL CAMERA Solution Disk (CD-ROM) (2) are introduced below, with instructions for installation, and saving images to a computer.

### Software

After installing the software on the CD-ROM, you can do the following things on your computer.

#### CameraWindow

- Import images and change camera settings

#### ImageBrowser EX

- Manage images: view, search, and organize
- Print and edit images

#### Auto Update Function

Using the included software, you can update to the latest version, and download new functions via the Internet (some software excluded). Be sure to install the software on a computer with an Internet connection so you can use this function.



- Internet access is required to use this function, and any ISP account charges and access fees must be paid separately.

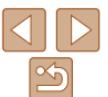
## PDF Manuals

### Camera User Guide

- Refer to this guide for a more in-depth understanding of camera operation.

### Software Guide

- Refer to this guide when using the included software. The guide can be accessed from the help system of included software (some software excluded).



## System Requirements

The included software can be used on the following computers. Adobe Reader is required to view the PDF manuals.

	Windows	Macintosh
Operating System <sup>1</sup>	Windows 8 Windows 7 SP1 Windows Vista SP2 Windows XP SP3	Mac OS X 10.6 Mac OS X 10.7 Mac OS X 10.8 <sup>2</sup>
Computer	Computers running one of the above operating systems (preinstalled), with an included USB port and Internet connection	
Processor	Still images: 1.6 GHz or higher, Movies: Core 2 Duo 2.6 GHz or higher	Still images Mac OS X 10.7 – 10.8: Core 2 Duo or higher, Mac OS X 10.6: Core Duo 1.83 GHz or higher Movies Core 2 Duo 2.6 GHz or higher
RAM	Still images Windows 8 (64 bit), Windows 7 (64 bit): 2 GB or more Windows 8 (32 bit), Windows 7 (32 bit), Windows Vista: 1 GB or more Windows XP: 512 MB or more Movies 2 GB or more	Still images Mac OS X 10.7 – 10.8: 2 GB or more, Mac OS X 10.6: 1 GB or more Movies 2 GB or more
Interfaces	USB and Wi-Fi	
Free Hard Disk Space	440 MB or more <sup>3</sup>	550 MB or more <sup>3</sup>
Display	1024 x 768 resolution or higher	

\*1 Wi-Fi image transfer to a computer requires Windows 8, Windows 7 SP1, Mac OS X 10.6.8, Mac OS X 10.7, or Mac OS X 10.8.2 or later.

\*2 Information on computer models compatible with Mac OS X 10.8 is available on the Apple website.

\*3 Includes Silverlight 5.1 (max. 100 MB). Additionally, in Windows XP, Microsoft .NET Framework 3.0 or later (max. 500 MB) must be installed. Installation may take some time, depending on computer performance.



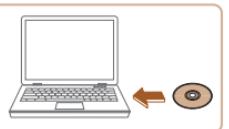
- Check the Canon website for the latest system requirements, including supported OS versions.

## Installing the Software

Windows 7 and Mac OS X 10.6 are used here for the sake of illustration. Using the software auto update function, you can update to the latest version and download new functions via the Internet (some software excluded), so be sure to install the software on a computer with an Internet connection.

### What you will need:

- Computer
- Interface cable (book icon 2)
- Included CD-ROM (DIGITAL CAMERA Solution Disk) (book icon 2)



### 1 Insert the CD-ROM in the computer's CD-ROM drive.

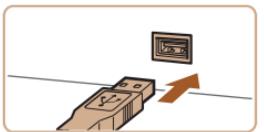
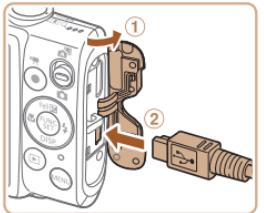
- Insert the included CD-ROM (DIGITAL CAMERA Solution Disk) (book icon 2) in the computer's CD-ROM drive.
- On a Macintosh computer, after inserting the disc, double-click the desktop disc icon to open it, and then double-click the [ ] icon displayed.



### 2 Begin the installation.

- Click [Easy Installation] and follow the on-screen instructions to complete the installation process.





### 3 When a message is displayed prompting you to connect the camera, connect it to a computer.

- With the camera turned off, open the cover (①). With the smaller plug of the included interface cable (②) in the orientation shown, insert the plug fully into the camera terminal (②).
- Insert the larger plug of the interface cable in the computer's USB port. For details about USB connections on the computer, refer to the computer user manual.



### 4 Install the files.

- Turn the camera on, and follow the on-screen instructions to complete the installation process.
- The software will connect to the Internet to update to the latest version and download new functions. Installation may take some time, depending on computer performance and the Internet connection.
- Click [Finish] or [Restart] on the screen after installation and remove the CD-ROM when the desktop is displayed.
- Turn the camera off and disconnect the cable.

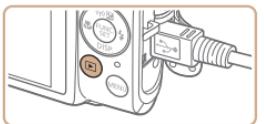


- When not connected to the Internet, there are the following limitations.
  - The screen in step 3 will not be displayed.
  - Some functions may not be installed.
- The first time you connect the camera to the computer, drivers will be installed, so it may take a few minutes until camera images are accessible.
- If you have several cameras that were bundled with ImageBrowser EX on the included CD-ROMs, be sure to use each camera with their included CD-ROM and follow the on-screen installation instructions for each. Doing so will ensure that each camera will receive the correct updates and new functions via the auto update function.



## Saving Images to a Computer

Windows 7 and Mac OS X 10.6 are used here for the sake of illustration.



### 1 Connect the camera to the computer.

- Follow step 3 in "Installing the Software" (21) to connect the camera to a computer.

### 2 Turn the camera on to access CameraWindow.

- Press the **<▶>** button to turn the camera on.
- On a Macintosh computer, CameraWindow is displayed when a connection is established between the camera and computer.
- For Windows, follow the steps introduced below.
- In the screen that displays, click the [ ] link to modify the program.
- Choose [Downloads Images From Canon Camera using Canon CameraWindow] and then click [OK].



CameraWindow

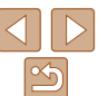


- Double click [ ].

### 3 Save the images to the computer.

- Click [Import Images from Camera], and then click [Import Untransferred Images].
- Images are now saved to the Pictures folder on the computer, in separate folders named by date.
- After images are saved, close CameraWindow, press the **<▶>** button to turn the camera off, and unplug the cable.
- For instructions on viewing images on a computer, refer to the *Software Guide* (19).

- In Windows 7, if the screen in step 2 is not displayed, click the [ ] icon in the taskbar.
- To start CameraWindow in Windows Vista or XP, click [Downloads Images From Canon Camera using Canon CameraWindow] on the screen displayed when you turn the camera on in step 2. If CameraWindow is not displayed, click the [Start] menu and choose [All Programs] ▶ [Canon Utilities] ▶ [CameraWindow] ▶ [CameraWindow].
- On a Macintosh computer, if CameraWindow is not displayed after step 2, click the [CameraWindow] icon in the Dock (the bar at the bottom of the desktop).



- Although you can save images to a computer simply by connecting your camera to the computer without using the software, the following limitations apply.
  - It may take a few minutes after you connect the camera to the computer until camera images are accessible.
  - Images shot in vertical orientation may be saved in horizontal orientation.
  - Image protection settings may be cleared from images saved to a computer.
  - Some problems may occur when saving images or image information, depending on the operating system version, the software in use, or image file sizes.
  - Some functions provided by the software may not be available, such as movie editing.

## Using the PDF Manuals

### Camera User Guide

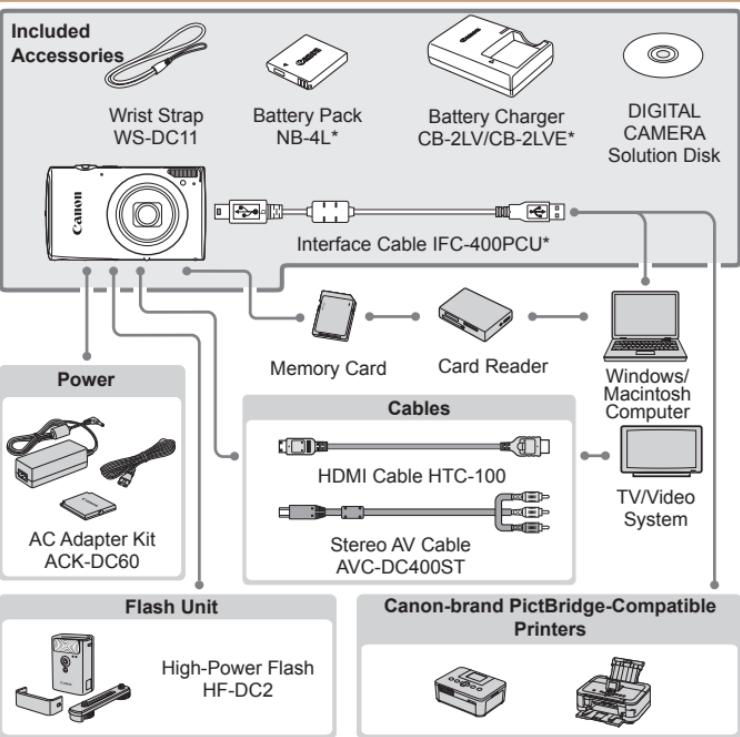
- Access this guide by double-clicking the desktop shortcut icon.

### Software Guide

- The guide can be accessed from the help system of included software (some software excluded).

-  It may not be possible to install the PDF manuals on computers that do not meet the system requirements ( 20). However, you can view the manuals on a computer that supports Adobe Reader by copying the PDF files in the Readme folder on the CD-ROM directly to a convenient location on the computer.

## System Map



\* Also available for purchase separately.

Cover

Preliminary Notes and Legal Information

Contents: Basic Operations

Basic Guide

Advanced Guide

1 Camera Basics

2 Auto Mode/Hybrid Auto Mode

3 Other Shooting Modes

4 P Mode

5 Playback Mode

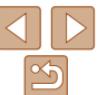
6 Wi-Fi Functions

7 Setting Menu

8 Accessories

9 Appendix

Index



**Use of genuine Canon accessories is recommended.**

This product is designed to achieve excellent performance when used with genuine Canon accessories.

Canon shall not be liable for any damage to this product and/or accidents such as fire, etc., caused by the malfunction of non-genuine Canon accessories (e.g., a leakage and/or explosion of a battery pack). Please note that this warranty does not apply to repairs arising out of the malfunction of non-genuine Canon accessories, although you may request such repairs on a chargeable basis.

Note that availability varies by area, and some accessories may no longer be available.





# Advanced Guide

# 1

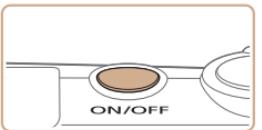
## Camera Basics

Practical guide that introduces other camera basics and describes shooting and playback options

On/Off .....	26	Indicator Display .....	30
Shutter Button .....	27	Clock .....	30
Shooting Display Options .....	27		
FUNC. Menu.....	28		
MENU Menu .....	29		



## On/Off



- To switch to Playback mode from Shooting mode, press the <▶> button.
- To switch to Shooting mode from Playback mode, press the shutter button halfway (27).
- The lens will be retracted after about one minute once the camera is in Playback mode. You can turn the camera off when the lens is retracted by pressing the <▶> button.

### Shooting Mode

- Press the power button to turn the camera on and prepare for shooting.
- To turn the camera off, press the power button again.

### Playback Mode

- Press the <▶> button to turn the camera on and view your shots.
- To turn the camera off, press the <▶> button again.

## Power-Saving Features (Auto Power Down)

As a way to conserve battery power, the camera automatically deactivates the screen (Display Off) and then turns itself off after a specific period of inactivity.

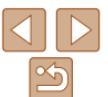
### Power Saving in Shooting Mode

The screen is automatically deactivated after about one minute of inactivity. In about two more minutes, the lens is retracted and the camera turns itself off. To activate the screen and prepare for shooting when the screen is off but the lens is still out, press the shutter button halfway (27).

### Power Saving in Playback Mode

The camera turns itself off automatically after about five minutes of inactivity.

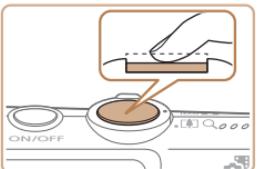
- You can deactivate Auto Power Down and adjust the timing of Display Off, if you prefer (135).
- Power saving is not active while the camera is connected to a computer via the interface cable (22), or when connected to other devices via Wi-Fi (106).



## Shutter Button

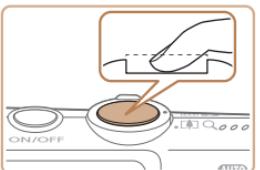
To ensure your shots are in focus, always begin by holding the shutter button halfway down, and once the subject is in focus, press the button all the way down to shoot.

In this manual, shutter button operations are described as pressing the button *halfway* or *all the way down*.



### 1 Press halfway. (Press lightly to focus.)

- Press the shutter button halfway. The camera beeps twice, and AF frames are displayed around image areas in focus.



### 2 Press all the way down. (From the halfway position, press fully to shoot.)

- The camera shoots, as a shutter sound is played.
- Keep the camera still until the shutter sound ends.

- Images may be out of focus if you shoot without initially pressing the shutter button halfway.
- Length of shutter sound playback varies depending on the time required for the shot. It may take longer in some shooting scenes, and images will be blurry if you move the camera (or the subject moves) before the shutter sound ends.

## Shooting Display Options

Press the <▶> button to view other information on the screen, or to hide the information. For details on the information displayed, see “On-Screen Information” (162).



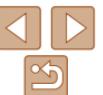
Information is displayed



No information is displayed

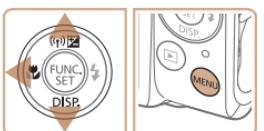
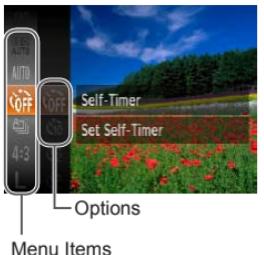


- Screen brightness is automatically increased by the night display function when you are shooting under low light, making it easier to check how shots are composed. However, on-screen image brightness may not match the brightness of your shots. Note that any on-screen image distortion or jerky subject motion will not affect recorded images.
- For playback display options, see “Switching Display Modes” (85).



## FUNC. Menu

Configure commonly used functions through the FUNC. menu as follows. Note that menu items and options vary depending on the shooting mode (165 – 168) or playback mode (170).



### 1 Access the FUNC. menu.

- Press the <FUNC. SET> button.



### 2 Choose a menu item.

- Press the <▲><▼> buttons to choose a menu item, and then press the <FUNC. SET> or <▶> button.
- In some menu items, functions can be specified simply by pressing the <FUNC. SET> or <▶> button, or another screen is displayed for configuring the function.

### 3 Choose an option.

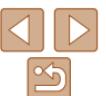
- Press the <▲><▼> buttons to choose an option.
- Options labeled with a [MENU] icon can be configured by pressing the <MENU> button.
- To return to the menu items, press the <◀> button.

### 4 Finish the setup process.

- Press the <FUNC. SET> button.
- The screen before you pressed the <FUNC. SET> button in step 1 is displayed again, showing the option you configured.



- To undo any accidental setting changes, you can restore the camera's default settings (139).



## MENU Menu

Configure a variety of camera functions through other menus as follows. Menu items are grouped by purpose on tabs, such as shooting [CAMERA], playback [PLAYBACK], and so on. Note that available settings vary depending on the selected shooting or playback mode (167 – 170).



### 1 Access the menu.

- Press the <MENU> button.



### 2 Choose a tab.

- Move the zoom lever to choose a tab.
- After you have pressed the <▲><▼> buttons to choose a tab initially, you can switch between tabs by pressing the <◀><▶> buttons.



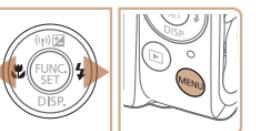
### 3 Choose a setting.

- Press the <▲><▼> buttons to choose a setting.
- To choose settings with options not shown, first press the <FUNC./SET> or <▶> button to switch screens, and then press the <▲><▼> buttons to select the setting.
- To return to the previous screen, press the <MENU> button.



### 4 Choose an option.

- Press the <◀><▶> buttons to choose an option.

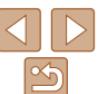


### 5 Finish the setup process.

- Press the <MENU> button to return to the screen displayed before you pressed the <MENU> button in step 1.



- To undo any accidental setting changes, you can restore the camera's default settings (139).





## Indicator Display

The indicator on the back of the camera (4) lights up or blinks depending on the camera status.

Color	Indicator Status	Camera Status
Green	On	Connected to a computer (22), or display off (26, 135)
	Blinking	Starting up, recording/reading/transmitting images, shooting long exposures (65), or connected/transmitting via Wi-Fi

- When the indicator blinks green, never turn the camera off, open the memory card/battery cover, or shake or jolt the camera, which may corrupt images or damage the camera or memory card.

## Clock

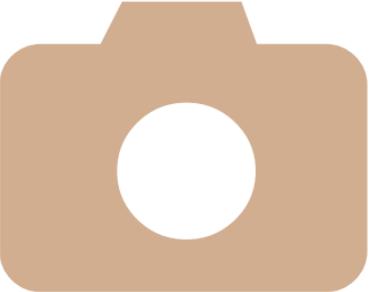
You can check the current time.



- Press and hold the <FUNC.  
SET> button.
- The current time appears.
- If you hold the camera vertically while using the clock function, it will switch to vertical display. Press the <◀▶><▶▶> buttons to change the display color.
- Press the <FUNC.  
SET> button again to cancel the clock display.



- When the camera is off, press and hold the <FUNC.  
SET> button, then press the power button to display the clock.



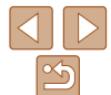
# 2

## Auto Mode/Hybrid Auto Mode

Convenient mode for easy shots with greater control over shooting

Shooting With Camera-Determined Settings .....	32
Common, Convenient Features .....	38
Using Face ID .....	42

Image Customization Features .....	47
Helpful Shooting Features .....	50
Customizing Camera Operation .....	51



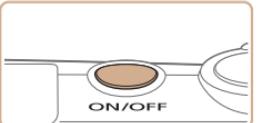
## Shooting With Camera-Determined Settings

For fully automatic selection at optimal settings for specific scenes, simply let the camera determine the subject and shooting conditions.

Still Images

Movies

### Shooting (Smart Auto)



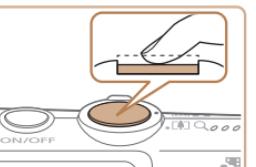
#### 1 Turn the camera on.

- Press the power button.
- The startup screen is displayed.

#### 2 Enter [AUTO] mode.

- Set the mode switch to <>.

- Press the <> button, press the <> button again.
- Press the <> button.



- Aim the camera at the subject. The camera will make a slight clicking noise as it determines the scene.

► Icons representing the scene and image stabilization mode are displayed in the upper right of the screen (36, 37).

► Frames displayed around any detected subjects indicate that they are in focus.

#### 3 Compose the shot.

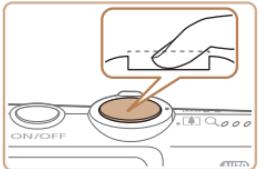
- To zoom in and enlarge the subject, move the zoom lever toward <

#### 4 Shoot. Shooting Still Images

##### ① Focus.

- Press the shutter button halfway. The camera beeps twice after focusing, and AF frames are displayed to indicate image areas in focus.
- Several AF frames are displayed when multiple areas are in focus.



**② Shoot.**

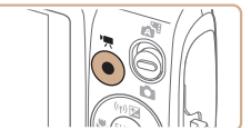
- Press the shutter button all the way down.
- ▶ As the camera shoots, a shutter sound is played, and in low-light conditions, the flash fires automatically.
- Keep the camera still until the shutter sound ends.
- ▶ Your shot is only displayed until the camera is ready to shoot again.

**Shooting Movies****① Start shooting.**

- Press the movie button. The camera beeps once as recording begins, and [●Rec] is displayed with the elapsed time.
- ▶ Black bars displayed on the top and bottom edges of the screen indicate image areas not recorded.
- ▶ Frames displayed around any detected faces indicate that they are in focus.
- Once recording begins, take your finger off the movie button.

**② Resize the subject and recompose the shot as needed.**

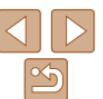
- To resize the subject, repeat the operations in step 3 (32). However, note that the sound of camera operations will be recorded.
- When you recompose shots, the focus, brightness, and colors will be automatically adjusted.

**③ Finish shooting.**

- Press the movie button again to stop shooting. The camera beeps twice as recording stops.
- Recording will stop automatically when the memory card becomes full.



- The flash firing during shots indicates that the camera has automatically attempted to ensure optimal colors in the main subject and background (Multi-area White Balance).



## Shooting in Hybrid Auto Mode

You can make a short movie of the day (digest movie). Just by shooting still images, the camera will automatically record a movie clip of the scene immediately before each shot.



### 1 Enter [ ] mode.

- Set the mode switch to [ ].

### 2 Shoot.

- Follow steps 3 – 4 in "Shooting (Smart Auto)" (16) to shoot a still image.
- To beautifully capture a digest movie, which is created by automatically recording about 2 – 4 seconds of the scene before each shot, aim the camera at the subject about four seconds before shooting a still image.
- Some camera sounds will be muted. Sounds are not played when you press the shutter button halfway, or trigger the self-timer (39).



- Battery life is shorter in this mode than in [AUTO] mode, because digest movies are recorded for each shot.
- A digest movie may not be recorded if you shoot a still image immediately after turning the camera on, choosing [ ] mode, or operating the camera in other ways.
- Camera operating sounds will be recorded in digest movies.



- Although the digest movie recorded on a particular day constitutes a single file, a single clip (chapter) is created with each shot, and the clip can be edited (105).
- Digest movies are saved as separate movie files in the following cases even if they were recorded on the same day in [ ] mode.
  - If the digest movie file size reaches approximately 4 GB or the total recording time reaches approximately 29 minutes and 59 seconds
  - If the digest movie is protected (93)
  - If the daylight saving time (14) or time zone (134) settings have been changed
  - If a new folder is created (137)

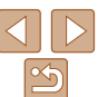
## Digest Movie Playback

You can play digest movies either by viewing still images shot in [ ] mode on the same day as the movies or by specifying the date of movies to play (86).

## Still Images/Movies



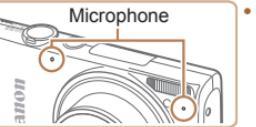
- If the camera is turned on while the <▼> button is held down, the camera will no longer sound. To activate sounds again, press the <MENU> button and choose [Mute] on the [ ] tab, and then press the <◀><▶> buttons to choose [Off].



## Still Images

-  • A flashing [!] icon warns that images are more likely to be blurred by camera shake. In this case, mount the camera on a tripod or take other measures to keep it still.
  - If your shots are dark despite the flash firing, move closer to the subject. For details on the flash range, see "Flash Range" (172).
  - The subject may be too close if the camera only beeps once when you press the shutter button halfway. For details on the focusing range (shooting range), see "Shooting Range" (173).
  - To reduce red-eye and to assist in focusing, the lamp may be activated when shooting in low-light conditions.
  - A blinking [!↓] icon displayed when you attempt to shoot indicates that shooting is not possible until the flash has finished recharging. Shooting can resume as soon as the flash is ready, so either press the shutter button all the way down and wait, or release it and press it again.
  - The shutter sound will not be played when the Sleeping and Babies (Sleeping) icons (36) are displayed.
- 
-  • You can change how long images are displayed after shots (52).

## Movies

-  • The camera may become warm when shooting movies repeatedly over an extended period. This does not indicate damage.
  -  • Keep your fingers away from the microphone while shooting movies. Blocking the microphone may prevent audio from being recorded or may cause the recording to sound muffled.
  - Avoid touching camera controls other than the movie button when shooting movies, because sounds made by the camera will be recorded.
- 
-  • Audio is recorded in stereo.



## Scene Icons

In [ ] and [ **AUTO** ] modes, shooting scenes determined by the camera are indicated by the icon displayed, and corresponding settings are automatically selected for optimal focusing, subject brightness, and color. Depending on the scene, continuous images may be shot ( [37](#) ).

Subject	Background	Normal	Backlit	Dark*	Sunsets	Spotlights
People				—		
In Motion			—	—	—	—
Shadows on Face		—	—	—	—	—
Smiling			—	—	—	—
Sleeping			—	—	—	—
Babies			—	—	—	—
Smiling			—	—	—	—
Sleeping			—	—	—	—
Children (In Motion)			—	—	—	—
Other Subjects						
In Motion			—	—	—	—
At Close Range			—	—		

\* Tripod Used

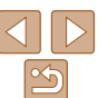
The background color of icons is light blue when the background is a blue sky, dark blue when the background is dark, and gray for all other backgrounds.

The background color of icons is light blue when the background is a blue sky, and gray for all other backgrounds.

- The background color of [ ], [ ], [ ], [ ], and [ ] is dark blue, and the background color of [ ] is orange.
- When shooting movies, only People, Other Subjects, and At Close Range icons will be displayed.
- When shooting in [ ] mode, only People, Shadows on Face, Other Subjects, and At Close Range icons will be displayed.
- When shooting with the self-timer, People (In Motion), Smiling, Sleeping, Babies (Smiling), Babies (Sleeping), Children, Other Subjects (In Motion) icons will not be displayed.
- When the drive mode is set to [ ] ( [74](#) ), and when [Hg Lamp Corr.] is set to [On] and scenes are automatically corrected ( [48](#) ), Smiling, Sleeping, Babies (Smiling), Babies (Sleeping), and Children icons will not be displayed.
- If the flash is set to [ ], the Backlit icons for Smiling and Children will not be displayed.
- Babies, Babies (Smiling), Babies (Sleeping), and Children icons will be displayed when [Face ID] is set to [On], and the face of a registered baby (under two years old) or child (from two to twelve years old) is detected ( [42](#) ). Confirm beforehand that the date and time are correct ( [14](#) ).



- Try shooting in [ ] mode ( [68](#) ) if the scene icon does not match actual shooting conditions, or if it is not possible to shoot with your expected effect, color, or brightness.



## Continuous Shooting Scenes

If you shoot a still image when the following scene icons are displayed, the camera will shoot continuously. If you press the shutter button halfway when one of the icons in the table below is displayed, one of the following icons will be displayed to inform you that the camera will shoot continuous images: [ ], [ ], or [ ].

Smiling (including Babies)	Consecutive images are captured, and the camera analyzes details such as facial expressions to save the image determined to be the best.
Sleeping (including Babies)	Beautiful shots of sleeping faces, created by combining consecutive shots to reduce camera shake and image noise. The AF assist beam will not light up, the flash will not fire, and the shutter sound will not be played.
Children	So you don't miss a photo opportunity of children who move around, the camera will capture three consecutive images for each shot.

- In some scenes, expected images may not be saved, and images may not look as expected.
- Focus, image brightness, and color are determined by the first shot.
  
- When you want to shoot single images only, press the button, choose [ ] in the menu, and then select [ ].

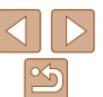
## Image Stabilization Icons

Optimal image stabilization for the shooting conditions is automatically applied (Intelligent IS). Additionally, the following icons are displayed in [ ] and [AUTO] modes.

	Image stabilization for still images		Image stabilization for movies, reducing strong camera shake, as when shooting while walking (Dynamic IS)
	Image stabilization for still images, when panning*		Image stabilization for slow camera shake, such as when shooting movies at telephoto (Powered IS)
	Image stabilization for macro shots (Hybrid IS)		No image stabilization, because the camera is mounted on a tripod or held still by other means

\* Displayed when you pan, following moving subjects with the camera. When you follow subjects moving horizontally, image stabilization only counteracts vertical camera shake, and horizontal stabilization stops. Similarly, when you follow subjects moving vertically, image stabilization only counteracts horizontal camera shake.

- To cancel image stabilization, set [IS Mode] to [Off] (82). In this case, an IS icon is not displayed.
- In [ ] mode, no [ ] icon is displayed.



## On-Screen Frames

In **[AUTO]** mode, a variety of frames are displayed once the camera detects subjects you are aiming the camera at.

- A white frame is displayed around the subject (or person's face) determined by the camera to be the main subject, and gray frames are displayed around other detected faces. Frames follow moving subjects within a certain range to keep them in focus.

However, if the camera detects subject movement, only the white frame will remain on the screen.

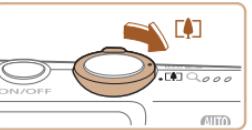
- When you are pressing the shutter button halfway and the camera detects subject movement, a blue frame is displayed, and the focus and image brightness are constantly adjusted (Servo AF).

- !**
- Try shooting in **[P]** mode (68) if no frames are displayed, if frames are not displayed around desired subjects, or if frames are displayed on the background or similar areas.

## Common, Convenient Features

### Zooming In Closer on Subjects (Digital Zoom)

When distant subjects are too far away to enlarge using the optical zoom, use digital zoom for up to about 40x enlargement.



**1 Move the zoom lever toward <[>].**

- Hold the lever until zooming stops.
- ▶ Zooming stops at the largest possible zoom factor (before the image becomes noticeably grainy), which is then indicated on the screen.

**2 Move the zoom lever toward <[> again.**

- The camera zooms in even closer on the subject.

- !**
- Moving the zoom lever will display the zoom bar (which indicates the zoom position). The color of the zoom bar will change depending on the zoom range.
    - White range: optical zoom range where the image will not appear grainy.
    - Yellow range: digital zoom range where the image is not noticeably grainy (ZoomPlus).



- Blue range: digital zoom range where the image will appear grainy. Because the blue range will not be available at some resolution settings (47), the maximum zoom factor can be achieved by following step 1.



- Focal length when optical and digital zoom are combined is as follows (35mm film equivalent).
  - 24 – 960 mm (24 – 240 mm with optical zoom alone)
- To deactivate digital zoom, press the <MENU> button, choose [Digital Zoom] on the [CAMERA] tab, and then choose [Off].

Still Images

Movies

## Using the Self-Timer

With the self-timer, you can include yourself in group photos or other timed shots. The camera will shoot about 10 seconds after you press the shutter button.



### Configure the setting.

- Press the <FUNC./SET> button, choose [OFF] in the menu, and then choose the [ON] option (28).
- Once the setting is complete, [ON] is displayed.



## Shoot.

- For Still Images: Press the shutter button halfway to focus on the subject, and then press it all the way down.
- For Movies: Press the movie button.
- Once you start the self-timer, the lamp will blink and the camera will play a self-timer sound.
- Two seconds before the shot, the blinking and sound will speed up. (The lamp will remain lit in case the flash fires.)
- To cancel shooting after you have triggered the self-timer, press the <MENU> button.
- To restore the original setting, choose [OFF] in step 1.

Still Images

Movies

## Using the Self-Timer to Avoid Camera Shake

This option delays shutter release until about two seconds after you have pressed the shutter button. If the camera is unsteady while you are pressing the shutter button, it will not affect your shot.



### Configure the setting.

- Follow step 1 in "Using the Self-Timer" (39) and choose [ON].
- Once the setting is complete, [ON] is displayed.
- Follow step 2 in "Using the Self-Timer" (39) to shoot.



## Customizing the Self-Timer

You can specify the delay (0 – 30 seconds) and number of shots (1 – 10).

### 1 Choose [⌚].

- Following step 1 in “Using the Self-Timer” (39), choose [⌚] and press the <MENU> button.



### 2 Configure the setting.

- Press the <▲><▼> buttons to choose [Delay] or [Shots].
- Press the <◀><▶> buttons to choose a value, and then press the <FUNC SET> button.
- Once the setting is complete, [⌚] is displayed.
- Follow step 2 in “Using the Self-Timer” (39) to shoot.



- For movies shot using the self-timer, [Delay] represents the delay before recording begins, but the [Shots] setting has no effect.



- When you specify multiple shots, image brightness and white balance are determined by the first shot. More time is required between shots when the flash fires or when you have specified to take many shots. Shooting will stop automatically when the memory card becomes full.
- When a delay longer than two seconds is specified, two seconds before the shot, the lamp blinking and self-timer sound will speed up. (The lamp will remain lit in case the flash fires.)

## Deactivating the Flash

Prepare the camera for shooting without the flash as follows.

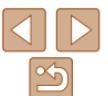


### Configure the setting.

- Press the <▶> button, press the <◀><▶> buttons to choose [⌚], and then press the <FUNC SET> button.
- Once the setting is complete, [⌚] is displayed.
- To restore the original setting, repeat this process but choose [⚡].

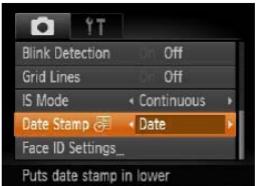


- If a flashing [⚡] icon is displayed when you press the shutter button halfway in low-light conditions, mount the camera on a tripod or take other measures to keep it still.



## Adding a Date Stamp

The camera can add the shooting date to images, in the lower-right corner. However, note that date stamps cannot be edited or removed, so confirm beforehand that the date and time are correct (14).



- Shots taken without adding a date stamp can be printed with one as follows. However, adding a date stamp this way to images that already have one may cause it to be printed twice.

- Use the included software to print  
For details, refer to the *Software Guide* (19).
- Print using printer functions (146)
- Use camera DPOF print settings (150) to print

### 1 Configure the setting.

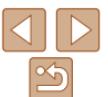
- Press the <MENU> button, choose [Date Stamp ] on the [ ] tab, and then choose the desired option (29).
- ▶ Once the setting is complete, [] is displayed.

### 2 Shoot.

- ▶ As you take shots, the camera adds the shooting date or time to the lower-right corner of images.
- To restore the original setting, choose [Off] in step 1.



- Date stamps cannot be edited or removed.



## Using Face ID

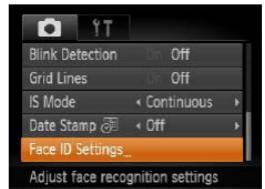
If you register a person ahead of time, the camera will detect that person's face, and prioritize focus, brightness, and color for that person when shooting. In [AUTO] mode, the camera can detect babies and children based on registered birthdays and optimize settings for them when shooting. This function is also useful when searching for a specific registered person among a large number of images (88).

### Personal Information

- Information such as images of a face (face info) registered with Face ID, and personal information (name, birthday) will be saved on the camera. Additionally, when registered people are detected, their names will be recorded in still images. When using the Face ID function, be careful when sharing the camera or images with others, and when posting images online where many others can view them.
- When disposing of a camera or transferring it to another person after using Face ID, be sure to erase all information (registered faces, names, and birthdays) from the camera (46).

### Registering Face ID Information

You can register information (face info, name, birthday) for up to 12 people to use with Face ID.



#### 1 Access the setting screen.

- Press the <MENU> button, choose [Face ID Settings] on the [ ] tab, and then press the <FUNC SET> button (29).



- Press the <▲><▼> buttons to choose [Add to Registry], and then press the <FUNC SET> button.



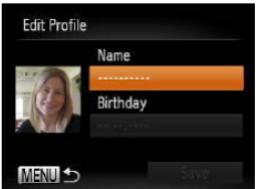
- Press the <▲><▼> buttons to choose [Add a New Face], and then press the <FUNC SET> button.



#### 2 Register face information.

- Aim the camera so that the face of the person you want to register is inside the gray frame at the center of the screen.
- A white frame on the person's face indicates that the face is recognized. Make sure a white frame is displayed on the face, and then shoot.
- If the face is not recognized, you cannot register face information.
- After [Register?] is displayed, press the <◀><▶> buttons to choose [OK], and then press the <FUNC SET> button.
- The [Edit Profile] screen is displayed.





### 3 Register the person's name and birthday.

- Press the <



- Press the <
- Up to 10 characters can be used.
- Choose [
- Choose [
- Press the <**MENU**> button to return to the [Edit Profile] screen.
- To register a birthday, on the [Edit Profile] screen, press the <
- Press the <
- Press the <
- When finished, press the <

### 4 Save the settings.

- Press the <
- After a message is displayed, press the <

### 5 Continue registering face information.

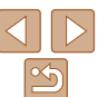
- To register up to 4 more points of face information (expressions or angles), repeat step 2.
- Registered faces are more easily recognized if you add a variety of face information. In addition to a head-on angle, add a slight side angle, a shot when smiling, and shots inside and outside.



- The flash will not fire when following step 2.
- If you do not register a birthday in step 3, Babies or Children icons (36) will not be displayed in [AUTO] mode.



- You can overwrite registered face info, and add face info later if you have not filled all 5 face info slots (45).



## Shooting

If you register a person ahead of time, the camera will prioritize that person as the main subject, and optimize focus, brightness, and color for that person when shooting.



- ▶ When you point the camera toward a subject, the names of up to 3 registered people will be displayed when they are detected.
- Shoot.
- ▶ Displayed names will be recorded in still images. Even if people are detected, but their names are not displayed, the names (up to 5 people) will be recorded in the image.

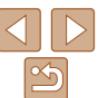


- People other than those registered may be mistakenly detected as the registered person if they share similar facial features.



- Registered people may not be correctly detected if the captured image or scene differs drastically from the registered face information.
- If a registered face is not detected, or not easily detected, overwrite registered information with new face info. Registering face info right before shooting will allow for easier detection of registered faces.
- If a person is mistakenly detected as another person and you continue shooting, you can edit or erase the name recorded in the image during playback (80).
- Because faces of babies and children change quickly as they grow, you should update their face info regularly (45).
- When information display is set to off (27), names will not display, but will be recorded in the image.

- If you don't want names to be recorded in still images, choose [Face ID Settings] on the [ ] tab, choose [Face ID], and then choose [Off].
- You can check names recorded in images in the playback screen (simple information display) (84).
- In [ ] mode, names are not displayed on the shooting screen, but they will be recorded in still images.



## Checking and Editing Registered Information



### 1 Access the [Check/Edit Info] screen.

- Following step 1 in "Registering Face ID Information" (42), choose [Check/Edit Info] and press the <FUNC SET> button.

### 2 Choose a person to check or edit.

- Press the <▲><▼><◀><▶> buttons to choose the person to check or edit, and then press the <FUNC SET> button.

### 3 Check or edit the information as needed.

- To check a name or birthday, access the [Edit Profile] screen by pressing the <▲><▼> buttons and then pressing the <FUNC SET> button. On the screen displayed, you can edit names or birthdays as described in step 3 of "Registering Face ID Information" (43).
- To check face information, press the <▲><▼> buttons to choose [Face Info List], and then press the <FUNC SET> button. To erase face information, press the <FUNC SET> button on the screen displayed, press the <▲><▼><◀><▶> buttons to choose the face information to erase, and then

press the <FUNC SET> button. After [Erase?] is displayed, press the <◀><▶> buttons to choose [OK], and then press the <FUNC SET> button.

- Even if you change names in [Edit Profile], the names recorded in previously shot images will remain the same.

- You can use the included software to edit registered names. Some characters entered with the included software may not display on the camera, but will be correctly recorded in images.

## Overwriting and Adding Face Information

You can overwrite existing face information with new face info. You should update face information regularly, especially with babies and children, as their faces change quickly as they grow.

You can also add face information when all 5 face info slots have not been filled.



### 1 Access the [Add Face Info] screen.

- Following step 1 in "Registering Face ID Information" (42), choose [Add Face Info] and press the <FUNC SET> button.





## 2 Choose the name of the person to overwrite.

- Press the **<▲><▼><◀><▶>** buttons to choose the name of a person to overwrite, and then press the **<FUNC./SET>** button.
- A message is displayed if you have already registered five faces. In this case, press the **<◀><▶>** buttons to choose [OK], and then press the **<FUNC./SET>** button.
- If less than five faces are registered, go to step 4 to add face information.

## 3 Choose the face info to overwrite.

- Press the **<▲><▼><◀><▶>** buttons to choose the face info to overwrite, and then press the **<FUNC./SET>** button.



## 4 Register face information.

- Follow step 2 in "Registering Face ID Information" (42) to shoot, and then register the new face information.
- Registered faces are more easily recognized if you add a variety of face information. In addition to a head-on angle, add a slight side angle, a shot when smiling, and shots inside and outside.



- You cannot add face information if all 5 information slots are filled. Follow the steps above to overwrite face information.
- You can follow the above steps to register new face info when there is at least one slot open; however, you cannot overwrite any face information. Instead of overwriting face info, first erase unwanted existing info (46), and then register new face information (42) as needed.

## Erasing Registered Information

You can erase information (face info, name, birthday) registered to Face ID. However, names recorded in previously shot images will not be erased.



## 1 Access the [Erase Info] screen.

- Follow step 1 in "Registering Face ID Information" (42) and choose [Erase Info].

## 2 Choose the name of the person whose info you want to erase.

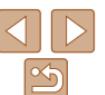
- Press the **<▲><▼><◀><▶>** buttons to choose the name of a person to erase, and then press the **<FUNC./SET>** button.
- After [Erase?] is displayed, press the **<◀><▶>** buttons to choose [OK], and then press the **<FUNC./SET>** button.



- If you erase a registered person's info, you will not be able to display their name (27), overwrite their info (90), or search images for them (88).



- You can also erase names in image information (90).



# Image Customization Features

## Changing the Aspect Ratio

Change the image aspect ratio (ratio of width to height) as follows.



### Configure the setting.

- Press the <FUNC. SET> button, choose [4:3] in the menu, and choose the desired option (28).
- ▶ Once the setting is complete, the screen aspect ratio will be updated.
- To restore the original setting, repeat this process but choose [4:3].

**16:9** Used for display on widescreen HDTVs or similar display devices.

**3:2** Same aspect ratio as 35mm film, used for printing images at 5 x 7-inch or postcard sizes.

**4:3** Native aspect ratio of the camera screen, also used for display on standard-definition televisions or similar display devices, or for printing images at 3.5 x 5-inch or A-series sizes.

**1:1** Square aspect ratio.



- Not available in [A] mode.

## Changing Image Resolution (Size)

Choose from 4 levels of image resolution, as follows. For guidelines on how many shots at each resolution setting can fit on a memory card, see "Number of 4:3 Shots per Memory Card" (172).



### Configure the setting.

- Press the <FUNC. SET> button, choose [L] in the menu, and choose the desired option (28).
- ▶ The option you configured is now displayed.
- To restore the original setting, repeat this process but choose [L].

### Guidelines for Choosing Resolution Based on Paper Size (for 4:3 Images)

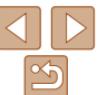
**A2** (16.5 x 23.4 in.)



A3 – A5 (11.7 x 16.5 – 5.8 x 8.3 in.) **M1**

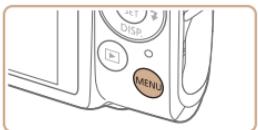
5 x 7 in. **M2**  
Postcard  
3.5 x 5 in.

- [S]: For e-mailing images.



## Red-Eye Correction

Red-eye that occurs in the flash photography can be automatically corrected as follows.



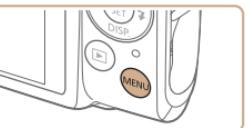
- Red-eye correction may be applied to image areas other than eyes (if the camera misinterprets red eye makeup as red pupils, for example).



- You can also correct existing images (29).
- You can also access the screen in step 2 by pressing the <> button and then the <MENU> button.

## Correcting Greenish Image Areas from Mercury Lamps

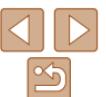
In [AUTO] mode, subjects or background in shots of evening scenes illuminated by mercury lamps may appear to have a greenish tinge. This greenish tinge can be corrected automatically when shooting, using Multi-area White Balance.



- After you are finished shooting under mercury lamps, you should set [Hg Lamp Corr.] back to [Off]. Otherwise, green hues not caused by mercury lamps may be corrected by mistake.



- Try taking some test shots first to make sure you obtain the desired results.



## Changing Movie Image Quality

3 image quality settings are available. For guidelines on the maximum movie length at each level of image quality that will fit on a memory card, see "Recording Time per Memory Card" (Book 172).



### Configure the setting.

- Press the <FUNC./SET> button, choose [ ] in the menu, and choose the desired option (Book 28).  
▶ The option you configured is now displayed.
- To restore the original setting, repeat this process but choose [ ].

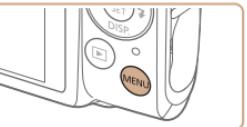
Image Quality	Resolution	Frame Rate	Details
[1920]	1920 x 1080	24 fps	For shooting in Full HD
[1280]	1280 x 720	30 fps	For shooting in HD
[640]	640 x 480	30 fps	For shooting in standard definition



- In [1920] and [1280] modes, black bars displayed on the top and bottom edges of the screen indicate image areas not recorded.

## Using the Wind Filter

Distorted audio caused by recording when the wind is strong can be reduced. However, the recording may sound unnatural when this option is used when there is no wind.



### Configure the setting.

- Press the <MENU> button, choose [Wind Filter] on the [ ] tab, and then choose [On] (Book 29).  
▶ To restore the original setting, repeat this process but choose [Off].



# Helpful Shooting Features

Still Images

Movies

## Displaying Grid Lines

Grid lines can be displayed on the screen for vertical and horizontal reference while shooting.

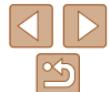


### Configure the setting.

- Press the <MENU> button, choose [Grid Lines] on the [CAMERA] tab, and then choose [On] (29).
- ▶ Once the setting is complete, grid lines are displayed on the screen.
- To restore the original setting, repeat this process but choose [Off].

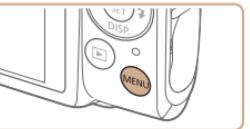


- Grid lines are not recorded in your shots.



## Magnifying the Area in Focus

You can check the focus by pressing the shutter button halfway, which will enlarge the portion of the image in focus in the AF frame.



### 1 Configure the setting.

- Press the <MENU> button, choose [AF-Point Zoom] on the [CAMERA] tab, and then choose [On] (29).

### 2 Check the focus.

- Press the shutter button halfway. The face detected as the main subject is now magnified.
- To restore the original setting, choose [Off] in step 1.



- The area in focus will not be magnified when you press the shutter button halfway if a face was not detected, if the person is too close to the camera and their face is too large for the screen, or if the camera detects subject movement.



- The display will not magnify when using the digital zoom (38), Tracking AF (77), or when using a TV as a display (142).
- Not available in [TV] mode.

## Checking for Closed Eyes

[] is displayed when the camera detects that people may have closed their eyes.



### 1 Configure the setting.

- Press the <MENU> button, choose [Blink Detection] on the [CAMERA] tab, and then choose [On] (29).

### 2 Shoot.

- [] flashes when the camera detects a person whose eyes are closed.
- To restore the original setting, choose [Off] in step 1.



- When you have specified multiple shots in [C] mode, this function is only available for the final shot.
- A frame is displayed around people whose eyes are closed when you have selected [2 sec.], [4 sec.], [8 sec.], or [Hold] in [Display Time] (52).
- This feature is not available during continuous shooting in [A] mode (37).

## Customizing Camera Operation

Customize shooting functions on the [CAMERA] tab of the menu as follows. For instructions on menu functions, see "MENU Menu" (29).

## Deactivating the AF Assist Beam

You can deactivate the lamp that normally lights up to help you focus when you press the shutter button halfway in low-light conditions.



### Configure the setting.

- Press the <MENU> button, choose [AF-assist Beam] on the [CAMERA] tab, and then choose [Off] (29).
- To restore the original setting, repeat this process but choose [On].



## Deactivating the Red-Eye Reduction Lamp

You can deactivate the red-eye reduction lamp that lights up to reduce red-eye when the flash is used in low-light shots.

### 1 Access the [Flash Settings] screen.

- Press the <MENU> button, choose [Flash Settings] on the [CAMERA] tab, and then press the <FUNC/SET> button (29).



### 2 Configure the setting.

- Choose [Red-Eye Lamp], and then choose [Off] (29).
- To restore the original setting, repeat this process but choose [On].

## Changing the Image Display Style After Shots

You can change how long images are displayed and what information is displayed immediately after shooting.

### Changing the Image Display Period After Shots

#### 1 Access the [Review image after shooting] screen.

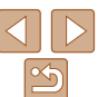
- Press the <MENU> button, choose [Review image after shooting] on the [CAMERA] tab, and then press the <FUNC/SET> button (29).



#### 2 Configure the setting.

- Press the <▲><▼> buttons to choose [Display Time]. Press the <◀><▶> buttons to choose the desired option.
- To restore the original setting, repeat this process but choose [Quick].

Quick	Displays images only until you can shoot again.
2 sec., 4 sec., 8 sec.	Displays images for the specified time. Even while the shot is displayed, you can take another shot by pressing the shutter button halfway again.
Hold	Displays images until you press the shutter button halfway.
Off	No image display after shots.



## ■ Changing the Screen Displayed After Shots



**1 Set [Display Time] to [2 sec.], [4 sec.], [8 sec.], or [Hold] (52).**

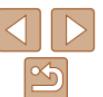
**2 Configure the setting.**

- Press the <▲><▼> buttons to choose [Display Info]. Press the <◀><▶> buttons to choose the desired option.
- To restore the original setting, repeat this process but choose [Off].

Off	Displays only the image.
Detailed	Displays shooting details (163).



- When [Display Time] (52) is set to [Off] or [Quick], [Display Info] is set to [Off] and cannot be changed.
- By pressing the <▼> button while an image is displayed after shooting, you can switch the display information. Note that the settings of [Display Info] on the [REC] tab cannot be changed. By pressing the <FUNC/SET> button, you can do the following operations.
  - Protection (93)
  - Favorites (99)
  - Erase (96)

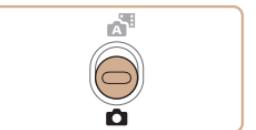




# 3

## Other Shooting Modes

Shoot more effectively in various scenes, and take shots enhanced with unique image effects or captured using special functions



Specific Scenes .....	55	Shooting Super Slow Motion Movies.....	67
Applying Special Effects .....	57		
Special Modes for Other Purposes .....	62		



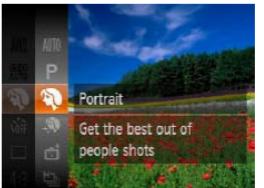
## Specific Scenes

Choose a mode matching the shooting scene, and the camera will automatically configure the settings for optimal shots.



### 1 Enter <CAMERA> mode.

- Set the mode switch to <CAMERA>.



### 2 Choose a shooting mode.

- Press the <FUNC./SET> button, choose [AUTO] in the menu, and then choose a shooting mode (28).

### 3 Shoot.



Still Images

Movies

### Shoot portraits (Portrait)

- Take shots of people with a softening effect.



Still Images

### Shoot evening scenes without using a tripod (Handheld NightScene)

- Beautiful shots of evening scenes or portraits with evening scenery in the background, without the need to hold the camera very still (as with a tripod).
- A single image is created by combining consecutive shots, reducing camera shake and image noise.



Still Images

Movies

### Shoot with snowy backgrounds (Snow)

- Bright, natural-colored shots of people against snowy backgrounds.

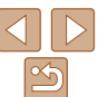


Still Images

Movies

### Shoot fireworks (Fireworks)

- Vivid shots of fireworks.





- In [P] mode, shots may look grainy because the ISO speed (82) is increased to suit the shooting conditions.
  - Because the camera will shoot continuously in [P] mode, hold it steady while shooting.
  - In [P] mode, excessive camera shake or certain shooting conditions may prevent you from obtaining the desired results.
  - In [S] mode, mount the camera on a tripod or take other measures to keep it still and prevent camera shake. Additionally, you should set [IS Mode] to [Off] when using a tripod or other means to hold the camera still (82).
- When you use a tripod for evening scenes, shooting in [AUTO] mode instead of [P] mode will give better results (32).



## Making Skin Look Smoother (Smooth Skin)

You can apply a smoothening effect when shooting images of people. The effect level and color ([Lighter Skin Tone], [Darker Skin Tone]) can be chosen as follows.

### 1 Choose [ ].

- Follow steps 1 – 2 in "Specific Scenes" (55) and choose [ ].



### 2 Access the setting screen.

- Press the <▼> button.

### 3 Configure the setting.

- Press the <▲><▼> buttons to choose an option. Choose the effect level by pressing the <◀><▶> buttons, and then press the FUNC SET button.
- A preview is shown of how your shot will look with the effect applied.

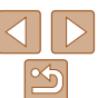
### 4 Shoot.



- Areas other than people's skin may be modified.
- Try taking some test shots first to make sure you obtain the desired results.



- The effect will be stronger for the face of the person detected as the main subject.



# Applying Special Effects

Add a variety of effects to images when shooting.

## 1 Choose a shooting mode.

- Follow steps 1 – 2 in “Specific Scenes” (55) to choose a shooting mode.

## 2 Shoot.

Still Images

Movies

### Shoot in vivid colors (Super Vivid)

- Shots in rich, vivid colors.



Still Images

Movies

### Posterized shots (Poster Effect)

- Shots that resemble an old poster or illustration.



- In [ ] and [ ] modes, try taking some test shots first, to make sure you obtain the desired results.

# Shooting with a Fish-Eye Lens Effect (Fish-eye Effect)

Shoot with the distorting effect of a fish-eye lens.

## 1 Choose [ ].

- Follow steps 1 – 2 in “Specific Scenes” (55) and choose [ ].

## 2 Choose an effect level.

- Press the <▼> button, press the <◀><▶> buttons to choose an effect level, and then press the <SET> button.  
▶ A preview is shown of how your shot will look with the effect applied.



## 3 Shoot.



- Try taking some test shots first, to make sure you obtain the desired results.



## Shots Resembling Miniature Models (Miniature Effect)

Creates the effect of a miniature model, by blurring image areas above and below your selected area.

You can also make movies that look like scenes in miniature models by choosing the playback speed before the movie is recorded. People and objects in the scene will move quickly during playback. Note that sound is not recorded.

### 1 Choose [ ].

- Follow steps 1 – 2 in “Specific Scenes” (55) and choose [ ].
- A white frame is displayed, indicating the image area that will not be blurred.



### 2 Choose the area to keep in focus.

- Press the <▼> button.
- Move the zoom lever to resize the frame, and press the <▲><▼> buttons to move it.



### 3 For movies, choose the movie playback speed.

- Press the <MENU> button, and then press the <◀><▶> buttons to choose the speed.

### 4 Return to the shooting screen and shoot.

- Press the <MENU> button to return to the shooting screen, and then shoot.

## Playback Speed and Estimated Playback Time (for One-Minute Clips)

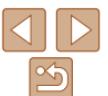
Speed	Playback Time
5x	Approx. 12 sec.
10x	Approx. 6 sec.
20x	Approx. 3 sec.



- The zoom is not available when shooting movies. Be sure to set the zoom before shooting.
- Try taking some test shots first, to make sure you obtain the desired results.



- To switch the orientation of the frame to vertical, press the <◀><▶> buttons in step 2. To move the frame, press the <◀><▶> buttons again. To return the frame to horizontal orientation, press the <▲><▼> buttons.
- Holding the camera vertically will change the orientation of the frame.
- Movie image quality is [640] at an aspect ratio of [4:3] and [1280] at an aspect ratio of [16:9] (47). These quality settings cannot be changed.



## Shooting with a Toy Camera Effect (Toy Camera Effect)

This effect makes images resemble shots from a toy camera by vignetting (darker, blurred image corners) and changing the overall color.



### 1 Choose [ ].

- Follow steps 1 – 2 in “Specific Scenes” (55) and choose [ ].

### 2 Choose a color tone.

- Press the <▲> button, press the <◀><▶> buttons to choose a color tone, and then press the <FUNC./SET> button.  
▶ A preview is shown of how your shot will look with the effect applied.

### 3 Shoot.

Standard	Shots resemble toy camera images.
Warm	Images have a warmer tone than with [Standard].
Cool	Images have a cooler tone than with [Standard].

- ! • Try taking some test shots first, to make sure you obtain the desired results.

## Shooting With a Soft Focus Effect

This function allows you to shoot images as if a soft focus filter is attached to the camera. You can adjust the effect level as desired.



### 1 Choose [ ].

- Follow steps 1 – 2 in “Specific Scenes” (55) and choose [ ].

### 2 Choose an effect level.

- Press the <▼> button, press the <◀><▶> buttons to choose an effect level, and then press the <FUNC./SET> button.  
▶ A preview is shown of how your shot will look with the effect applied.

### 3 Shoot.

- ! • Try taking some test shots first, to make sure you obtain the desired results.



## Shooting in Monochrome

Shoot images in black and white, sepia, or blue and white.



### 1 Choose [ ].

- Follow steps 1 – 2 in “Specific Scenes” (55) and choose [ ].

### 2 Choose a color tone.

- Press the  $\langle\triangleright\rangle$  button, press the  $\langle\blacktriangleleft\rangle\langle\triangleright\rangle$  buttons to choose a color tone, and then press the  $\langle\text{FUNC./SET}\rangle$  button.
- A preview is shown of how your shot will look with the effect applied.

### 3 Shoot.

B/W	Black and white shots.
Sepia	Sepia tone shots.
Blue	Blue and white shots.

## Shooting with Color Accent

Choose a single image color to keep and change other colors to black and white.

### 1 Choose [ /A].

- Follow steps 1 – 2 in “Specific Scenes” (55) and choose [ /A].

### 2 Access the setting screen.

- Press the  $\langle\triangleright\rangle$  button.
- The original image and the Color Accent image are displayed one after another.
- By default, green is the color that will be kept.

### 3 Specify the color.

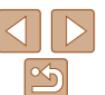
- Position the center frame over the color to keep, and then press the  $\langle\blacktriangleleft\rangle$  button.
- The specified color is recorded.



Recorded Color

### 4 Specify the range of colors to keep.

- Press the  $\langle\blacktriangleup\rangle\langle\triangledown\rangle$  buttons to adjust the range.
- To keep only your specified color, choose a large negative value. To keep colors similar to your specified color as well, choose a large positive value.
- Press the  $\langle\text{FUNC./SET}\rangle$  button to return to the shooting screen.



## 5 Shoot.

- Using the flash in this mode may cause unexpected results.
- In some shooting scenes, images may look grainy and colors may not look as expected.

Still Images

Movies

### Shooting with Color Swap

You can replace one image color with another before shooting. Note that only one color can be replaced.



#### 1 Choose [S].

- Follow steps 1 – 2 in "Specific Scenes" (55) and choose [S].

#### 2 Access the setting screen.

- Press the <▼> button.
- The original image and the Color Swap image are displayed one after another.
- By default, green will be replaced with gray.

#### 3 Specify the color to replace.

- Position the center frame over the color to replace, and then press the <►> button.
- The specified color is recorded.



#### 4 Specify the new color.

- Position the center frame over the new color, and then press the <►> button.
- The specified color is recorded.

#### 5 Specify the range of colors to replace.

- Press the <▲><▼> buttons to adjust the range.
- To replace only your specified color, choose a large negative value. To replace colors similar to your specified color as well, choose a large positive value.
- Press the <FUNC SET> button to return to the shooting screen.

#### 6 Shoot.

- Using the flash in this mode may cause unexpected results.
- In some shooting scenes, images may look grainy and colors may not look as expected.



## Special Modes for Other Purposes

Still Images

### Auto Shooting After Face Detection (Smart Shutter)

#### Auto Shooting After Smile Detection

The camera shoots automatically after detecting a smile, even without you pressing the shutter button.



##### 1 Choose [Smile].

- Follow steps 1 – 2 in “Specific Scenes” (55) and choose [Smile], and then press the <▲><▼> button.
- Press the <◀><▶> buttons to choose [Smile], and then press the <FUNC><SET> button.  
► The camera now enters shooting standby mode, and [Smile Detection on] is displayed.



##### 2 Aim the camera at a person.

- Each time the camera detects a smile, it will shoot after the lamp lights up.
- To pause smile detection, press the <◀> button. Press the <◀> button again to resume detection.



- Switch to another mode when you finish shooting, or the camera will continue shooting each time a smile is detected.



- You can also shoot as usual by pressing the shutter button.
- The camera can detect smiles more easily when subjects face the camera and open their mouth wide enough so that teeth are visible.
- To change the number of shots, press the <▲><▼> buttons after choosing [Smile] in step 1. [Blink Detection] (51) is only available for the final shot.



## Using the Wink Self-Timer

Aim the camera at a person and press the shutter button all the way down. The camera will shoot about two seconds after a wink is detected.



### 1 Choose [Wi].

- Follow steps 1 – 2 in “Specific Scenes” (55) and choose [Wi], and then press the <▲><▼> button.
- Press the <◀><▶> buttons to choose [Wi], and then press the <FUNC./SET> button.

### 2 Compose the shot and press the shutter button halfway.

- Make sure a green frame is displayed around the face of the person who will wink.

### 3 Press the shutter button all the way down.

- The camera now enters shooting standby mode, and [Wink to take picture] is displayed.
- The lamp blinks and the self-timer sound is played.



### 4 Face the camera and wink.

- The camera will shoot about two seconds after detecting a wink by the person whose face is inside the frame.
- To cancel shooting after you have triggered the self-timer, press the <MENU> button.



- If the wink is not detected, wink again slowly and deliberately.
- Winking may not be detected if eyes are obscured by hair, a hat, or glasses.
- Closing and opening both eyes at once will also be detected as a wink.
- If winking is not detected, the camera will shoot about 15 seconds later.
- To change the number of shots, press the <▲><▼> buttons after choosing [Wi] in step 1. [Blink Detection] (51) is only available for the final shot.
- If no one is in the shooting area when the shutter button is pressed all the way down, the camera will shoot after a person enters the shooting area and winks.



## Using the Face Self-Timer

The camera will shoot about two seconds after detecting that the face of another person (such as the photographer) has entered the shooting area (76). This is useful when including yourself in group photos or similar shots.



### 1 Choose [ ].

- Follow steps 1 – 2 in “Specific Scenes” (55) and choose [ ], and then press the <▼> button.
- Press the <◀><▶> buttons to choose [ ], and then press the <<sub>PINC</sub> SET> button.

### 2 Compose the shot and press the shutter button halfway.

- Make sure a green frame is displayed around the face you focus on and white frames around other faces.

### 3 Press the shutter button all the way down.

- The camera now enters shooting standby mode, and [Look straight at camera to start count down] is displayed.
- The lamp blinks and the self-timer sound is played.

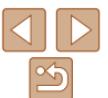


### 4 Join the subjects in the shooting area and look at the camera.

- After the camera detects a new face, the lamp blinking and self-timer sound will speed up. (When the flash fires, the lamp will remain lit.) About two seconds later, the camera will shoot.
- To cancel shooting after you have triggered the self-timer, press the <MENU> button.

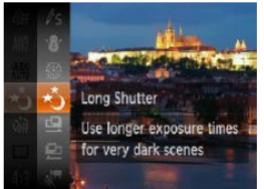


- Even if your face is not detected after you join the others in the shooting area, the camera will shoot about 15 seconds later.
- To change the number of shots, press the <▲><▼> buttons after choosing [ ] in step 1. [Blink Detection] (51) is only available for the final shot.



## Shooting Long Exposures (Long Shutter)

Specify a shutter speed of 1 – 15 seconds to shoot long exposures. In this case, mount the camera on a tripod or take other measures to prevent camera shake.



### 1 Choose [★].

- Follow steps 1 – 2 in "Specific Scenes" (55) and choose [★].

### 2 Choose the shutter speed.

- Press the <▲> button, press the <◀><▶> buttons to choose the shutter speed, and then press the <FUNC> button.

### 3 Check the exposure.

- Press the shutter button halfway to view the exposure for your selected shutter speed.

### 4 Shoot.

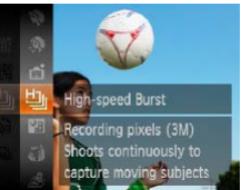
- On-screen image brightness in step 3, when you pressed the shutter button halfway, may not match the brightness of your shots.
- With shutter speeds of 1.3 seconds or slower, there will be a delay before you can shoot again, as the camera processes images to reduce noise.
- Set [IS Mode] to [Off] when using a tripod or other means to hold the camera still (82).



- If the flash fires, your shot may be overexposed. In this case, set the flash to [Off] and shoot again (40).

## High-Speed Continuous Shooting (High-speed Burst)

You can shoot a series of shots in rapid succession by holding the shutter button all the way down. For details on the continuous shooting speed, see "Continuous Shooting Speed" (173).



### 1 Choose [H].

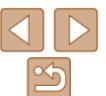
- Follow steps 1 – 2 in "Specific Scenes" (55) and choose [H].

### 2 Shoot.

- Hold the shutter button all the way down to shoot continuously.



- The resolution is [M] (1984 x 1488) and cannot be changed.
- Focus, image brightness, and color are determined by the first shot.
- Shooting may stop momentarily or continuous shooting may slow down depending on shooting conditions, camera settings, and the zoom position.
- As more shots are taken, shooting may slow down.



## Images Displayed During Playback

Each set of images shot continuously is managed as a single group, and only the first image in that group will be displayed. To indicate that the image is part of a group, [SET ] is displayed in the upper left of the screen.

- If you erase a grouped image (96), all images in the group are also erased. Be careful when erasing images.
  
- Grouped images can be played back individually (89) and ungrouped (89).
- Protecting (93) a grouped image will protect all images in the group.
- Grouped images can be viewed individually when played back using Image Search (88) or Smart Shuffle (92). In this case, images are temporarily ungrouped.
- Grouped images cannot be tagged as favorites (99), edited (98 – 103), printed (146), set for printing individually (151), added to a Photobook (153), and Face ID information cannot be edited (90). To do these things, either view grouped images individually (89) or cancel grouping (89) first.

## Shooting Stitch Assist Images

Shoot a large subject by taking multiple shots at various positions, and then use the software (19) to combine them into a panorama.

### 1 Choose [ ] or [ ].

- Follow steps 1 – 2 in “Specific Scenes” (55) and choose [ ] or [ ].

### 2 Take the first shot.

- The first shot will determine the exposure and white balance.



### 3 Take additional shots.

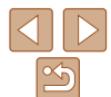
- Compose the second shot so that it partially overlaps the image area of the first shot.
- Minor misalignment of overlapping portions will be corrected automatically when the images are combined.
- You can take up to 26 shots, the same way you took the second shot.

### 4 Finish shooting.

- Press the <> button.

### 5 Use the software to combine the images.

- For instructions on merging images, refer to the *Software Guide* (19).

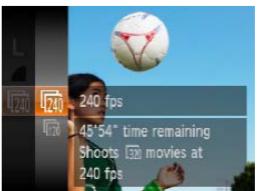


# Shooting Super Slow Motion Movies

You can shoot fast-moving subjects for playback later in slow motion. Note that sound is not recorded.

## 1 Choose [ ].

- Follow steps 1 – 2 in “Specific Scenes” (55) and choose [ ].
- Black bars displayed on the left and right edges of the screen indicate image areas not recorded.



## 2 Choose a frame rate.

- Press the < FINE SET > button, choose [ ] in the menu, and choose the desired frame rate (28).
- The option you configured is now displayed.



## 3 Shoot.

- Press the movie button.
- A bar showing the elapsed time is displayed. Maximum clip length is approx. 30 sec.
- To stop movie recording, press the movie button again.

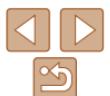
Frame Rate	Image Quality	Playback Time (For a 30-sec. Clip)
240 fps	320 (320 x 240)	Approx. 4 min.
120 fps	640 (640 x 480)	Approx. 2 min.

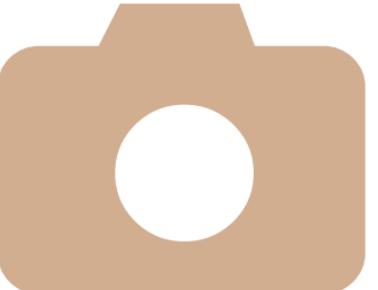


- Zooming is not available during recording, even if you move the zoom lever.
- Focus, exposure, and color are determined when you press the movie button.



- When you play the movie (84), it will be played back in slow motion.
- You can change the playback speed of movies by using the included software. For details, refer to the Software Guide (19).

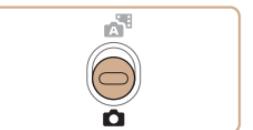




# 4

## P Mode

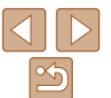
More discerning shots, in your preferred shooting style



- Instructions in this chapter apply to the camera in [P] mode, with the mode switch set to <>.
- [P]: Program AE; AE: Auto Exposure
- Before using a function introduced in this chapter in modes other than [P], make sure the function is available in that mode (164 – 168).

Shooting in Program AE ([P] Mode) .....	<b>69</b>
Image Brightness (Exposure Compensation).....	<b>69</b>
Color and Continuous Shooting .....	<b>72</b>

Shooting Range and Focusing.....	<b>74</b>
Flash.....	<b>80</b>
Other Settings .....	<b>81</b>



## Shooting in Program AE ([P] Mode)

You can customize many function settings to suit your preferred shooting style.



### 1 Enter [P] mode.

- Follow steps 1 – 2 in “Specific Scenes” (55) and choose [P].

### 2 Customize the settings as desired (69 – 82), and then shoot.



- If adequate exposure cannot be obtained when you press the shutter button halfway, shutter speeds and aperture values are displayed in orange. In this case, try adjusting the ISO speed (71) or activating the flash (if subjects are dark, 80), which may enable adequate exposure.
- Movies can be recorded in [P] mode as well, by pressing the movie button. However, some <FUNC.> and <MENU> settings may be automatically adjusted for movie recording.
- For details on the shooting range in [P] mode, see “Shooting Range” (173).

## Image Brightness (Exposure Compensation)

### Adjusting Image Brightness (Exposure Compensation)

The standard exposure set by the camera can be adjusted in 1/3-stop increments, in a range of -2 to +2.



Exposure Compensation Bar



- You can also shoot still images with exposure compensation bar displayed.
- While recording a movie, [AEL] is displayed, and the exposure is locked.

- Press the <▲> button. As you watch the screen, press the <◀><▶> buttons to adjust brightness, and then press the <FUNC.> button.

- The correction level you specified is now displayed.
- When shooting movies, shoot with the exposure compensation bar displayed.
- When shooting still images, press the <FUNC.> button to display the set exposure compensation amount, and then shoot.



## Locking Image Brightness/Exposure (AE Lock)

Before shooting, you can lock the exposure, or you can specify focus and exposure separately.



### 1 Deactivate the flash (40).

### 2 Lock the exposure.

- Aim the camera at the subject to shoot with the exposure locked. With the shutter button pressed halfway, press the <▲> button.
- ▶ [AEL] is displayed, and the exposure is locked.
- To unlock AE, release the shutter button and press the <▲> button again. In this case, [AEL] is no longer displayed.

### 3 Compose the shot and shoot.



- AE: Auto Exposure

## Changing the Metering Method

Adjust the metering method (how brightness is measured) to suit shooting conditions as follows.



- Press the <FUNC./SET> button, choose [(C)] in the menu, and choose the desired option (28).

- ▶ The option you configured is now displayed.

<input checked="" type="checkbox"/> Evaluative	For typical shooting conditions, including backlit shots. Automatically adjusts exposure to match the shooting conditions.
<input type="checkbox"/> Center Weighted Avg.	Determines the average brightness of light across the entire image area, calculated by treating brightness in the central area as more important.
<input type="checkbox"/> Spot	Metering restricted to within the [ ] (Spot AE Point frame), displayed in the center of the screen.



## Changing the ISO Speed



- Press the <**FUNC/SET**> button, choose [ISO] in the menu, and choose the desired option (28).
- The option you configured is now displayed.

<b>ISO</b>	<b>AUTO</b>	Automatically adjusts the ISO speed to suit the shooting mode and conditions.
<b>ISO</b>	<b>ISO 80</b>	For shooting outdoors in fair weather.
<b>ISO</b>	<b>ISO 100</b>	For shooting in cloudy conditions, or at twilight.
<b>ISO</b>	<b>ISO 200</b>	For shooting night scenes, or in dark rooms.

- To view the automatically set ISO speed when the camera is set to [ISO], press the shutter button halfway.
- Although choosing a lower ISO speed may reduce image graininess, there may be a greater risk of subject blurriness in some shooting conditions.
  - Choosing a higher ISO speed will increase shutter speed, which may reduce subject blurriness and increase the flash range. However, shots may look grainy.

## Correcting Image Brightness (i-Contrast)

Before shooting, excessively bright or dark image areas (such as faces or backgrounds) can be detected and automatically adjusted to the optimal brightness. Insufficient overall image contrast can also be automatically corrected before shooting to make subjects stand out better.



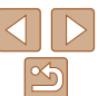
- Press the <**MENU**> button, choose [i-Contrast] on the [CAMERA] tab, and then choose [Auto] (29).
- Once the setting is complete, [i] is displayed.



- Under some shooting conditions, correction may be inaccurate or may cause images to appear grainy.



- You can also correct existing images (103).



# Color and Continuous Shooting

Still Images

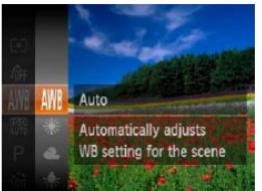
Movies

Still Images

Movies

## Adjusting White Balance

By adjusting white balance (WB), you can make image colors look more natural for the scene you are shooting.

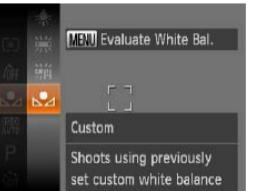


- Press the <**FUNC./SET**> button, choose [AWB] in the menu, and choose the desired option (28).
- ▶ The option you configured is now displayed.

	Auto	Automatically sets the optimal white balance for the shooting conditions.
	Day Light	For shooting outdoors in fair weather.
	Cloudy	For shooting in cloudy conditions, in the shade, or at twilight.
	Tungsten	For shooting under ordinary incandescent (tungsten) lighting and similarly colored fluorescent lighting.
	Fluorescent	For shooting under warm-white (or similarly colored) or cool-white fluorescent lighting.
	Fluorescent H	For shooting under daylight fluorescent and similarly colored fluorescent lighting.
	Custom	For manually setting a custom white balance (27).

## Custom White Balance

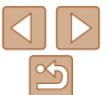
For image colors that look natural under the light in your shot, adjust white balance to suit the light source where you are shooting. Set the white balance under the same light source that will illuminate your shot.

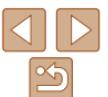


- Follow the steps in “Adjusting White Balance” (27) to choose [ ].
- Aim the camera at a plain white subject, so that the entire screen is white. Press the <MENU> button.
- ▶ The tint of the screen changes once the white balance data has been recorded.



- Colors may look unnatural if you change camera settings after recording white balance data.





## Changing Image Color Tones (My Colors)

Change image color tones as desired, such as converting images to sepia or black and white.



- Press the <FUNC./SET> button, choose [OFF] in the menu, and choose the desired option (28).
- The option you configured is now displayed.

<b>Off</b>	My Colors Off	—
<b>Bv</b>	Vivid	Emphasizes contrast and color saturation, making images sharper.
<b>BN</b>	Neutral	Tones down contrast and color saturation for subdued images.
<b>Se</b>	Sepia	Creates sepia tone images.
<b>BW</b>	B/W	Creates black and white images.
<b>BP</b>	Positive Film	Combines the effects of Vivid Blue, Vivid Green, and Vivid Red to produce intense yet natural-looking colors resembling images on positive film.
<b>BL</b>	Lighter Skin Tone	Lightens skin tones.
<b>BD</b>	Darker Skin Tone	Darkens skin tones.
<b>BB</b>	Vivid Blue	Emphasizes blues in images. Makes the sky, ocean, and other blue subjects more vivid.
<b>BG</b>	Vivid Green	Emphasizes greens in images. Makes mountains, foliage, and other green subjects more vivid.
<b>BR</b>	Vivid Red	Emphasizes reds in images. Makes red subjects more vivid.

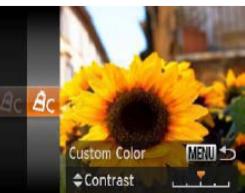
Adjust contrast, sharpness, color saturation, and other qualities as desired (73).



- White balance (72) cannot be set in [Se] or [BW] modes.
- With [BL] and [BD] modes, colors other than people's skin tone may be modified. These settings may not produce the expected results with some skin tones.

## Custom Color

Choose the desired level of image contrast, sharpness, color saturation, red, green, blue, and skin tones in a range of 1 – 5.



### 1 Access the setting screen.

- Follow the steps in "Changing Image Color Tones (My Colors)" (73) to choose [AC], and then press the <MENU> button.

### 2 Configure the setting.

- Press the <▲><▼> buttons to choose an option, and then specify the value by pressing the <◀><▶> buttons.
- For stronger/more intense effects (or darker skin tones), adjust the value to the right, and for weaker/lighter effects (or lighter skin tones), adjust the value to the left.
- Press the <MENU> button to complete the setting.

## Continuous Shooting

Hold the shutter button all the way down to shoot continuously. For details on the continuous shooting speed, see "Continuous Shooting Speed" (173).



### 1 Configure the setting.

- Press the <FUNC SET> button, choose [ ] in the menu, and then choose [ ] (28).
- ▶ Once the setting is complete, [ ] is displayed.

### 2 Shoot.

- ▶ Hold the shutter button all the way down to shoot continuously.



- Cannot be used with the self-timer (39) or [Blink Detection] (51).
- During continuous shooting, focus and exposure are locked at the position/level determined when you pressed the shutter button halfway.
- Shooting may stop momentarily or continuous shooting may slow down depending on shooting conditions, camera settings, and the zoom position.
- As more shots are taken, shooting may slow down.
- Shooting may slow down if the flash fires.



- If you use Face ID (42) in [ ], the name recorded in the image will be fixed to the location where it is displayed in the first shot. Even if the subject moves, the name will stay fixed in the same position for any subsequent shots.

## Shooting Range and Focusing

### Shooting Close-ups (Macro)

To restrict the focus to subjects at close range, set the camera to [ ]. For details on the focusing range, see "Shooting Range" (173).



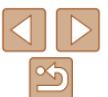
- Press the < > button, press the < >< > buttons to choose [ ], and then press the <FUNC SET> button.
- ▶ Once the setting is complete, [ ] is displayed.



- If the flash fires, vignetting may occur.
- In the yellow bar display area below the zoom bar, [ ] will turn gray and the camera will not focus.



- To prevent camera shake, try mounting the camera on a tripod and shooting with the camera set to [ ] (39).



## Shooting Distant Subjects (Infinity)

To restrict the focus to distant subjects, set the camera to [▲]. For details on the focusing range, see "Shooting Range" (☞173).



- Press the <◀> button, press the <◀><▶> buttons to choose [▲], and then press the <FUNC./SET> button.
- ▶ Once the setting is complete, [▲] is displayed.

## Digital Tele-Converter

The focal length of the lens can be increased by approximately 1.5x or 2.0x. This can reduce camera shake because the shutter speed is faster than it would be if you zoomed (including using digital zoom) in to the same zoom factor.



- Press the <MENU> button, choose [Digital Zoom] on the [CAMERA] tab, and then choose the desired option (☞29).
- ▶ The view is enlarged and the zoom factor is displayed on the screen.



- The digital tele-converter cannot be used with digital zoom (☞38) and AF-point zoom (☞50).



- The respective focal lengths when using [1.5x] and [2.0x] are 36.0 – 360.0 mm and 48.0 – 480.0 mm (35mm film equivalent).
- The shutter speed may be equivalent when you move the zoom lever all the way toward <▲> for maximum telephoto, and when you zoom in to enlarge the subject to the same size following step 2 in "Zooming In Closer on Subjects (Digital Zoom)" (☞38).



## Changing the AF Frame Mode

Change the AF (auto focus) frame mode to suit the shooting conditions as follows.



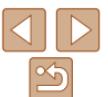
- Press the <MENU> button, choose [AF Frame] on the tab, and then choose the desired option (29).



- If faces are not detected, or when only gray frames are displayed (without a white frame), up to nine green frames are displayed in the areas in focus when you press the shutter button halfway.
- If faces are not detected when Servo AF (78) is set to [On], the AF frame is displayed in the center of the screen when you press the shutter button halfway.
- Examples of faces that cannot be detected:
  - Subjects that are distant or extremely close
  - Subjects that are dark or light
  - Faces in profile, at an angle, or partly hidden
- The camera may misinterpret non-human subjects as faces.
- No AF frames are displayed if the camera cannot focus when you press the shutter button halfway.

### Face AiAF

- Detects people's faces, and then sets the focus, exposure (evaluative metering only), and white balance ([AWB] only).
- After you aim the camera at the subject, a white frame is displayed around the person's face determined by the camera to be the main subject, and up to two gray frames are displayed around other detected faces.
- When the camera detects movement, frames will follow moving subjects, within a certain range.
- After you press the shutter button halfway, up to nine green frames are displayed around faces in focus.



## Choosing Subjects to Focus On (Tracking AF)

Shoot after choosing a subject to focus on as follows.

### 1 Choose [Tracking AF].

- Follow the steps in “Changing the AF Frame Mode” (76) to choose [Tracking AF].
- [] is displayed in the center of the screen.



### 2 Choose a subject to focus on.

- Aim the camera so that [] is on the desired subject, and then press the <▶> button.



- When the subject is detected, the camera beeps and [] is displayed. Even if the subject moves, the camera will continue to track the subject within a certain range.
- If no subject is detected, [] is displayed.
- To cancel tracking, press the <▶> button again.

## 3 Shoot.

- Press the shutter button halfway. [] changes to a blue [], which follows the subject as the camera continues to adjust the focus and exposure (Servo AF) (78).
- Press the shutter button all the way down to shoot.
- Even after your shot, [] is still displayed and the camera continues to track the subject.



- [Servo AF] (78) is set to [On] and cannot be changed.
- Tracking may not be possible when subjects are too small or move too rapidly, or when subject color or brightness matches that of the background too closely.
- [AF-Point Zoom] on the [ ] tab is not available.
- [] and [] are not available.



- The camera can detect subjects even if you press the shutter button halfway without pressing the <▶> button. After your shot, [] is displayed in the center of the screen.
- If [Face ID] is set to [On], names will not display when registered people are detected, but the names will be recorded in the still images (42). However, a name will display if the subject chosen to focus on is the same as a person detected with Face ID.



## Center

One AF frame is displayed in the center. Effective for reliable focusing.

- ! A yellow AF frame is displayed with [!] if the camera cannot focus when you press the shutter button halfway.

- ! To reduce the AF frame size, press the <MENU> button and set [AF Frame Size] on the [ ] tab to [Small] (29).
- The AF frame size is set to [Normal] when you use the digital zoom (38) or digital tele-converter (75).
- To compose shots so that subjects are positioned at the edge or in a corner, first aim the camera to capture the subject in an AF frame, and then hold the shutter button halfway down. As you continue to hold the shutter button halfway, recompose the shot as desired, and then press the shutter button all the way down (Focus Lock).
- The AF frame position is enlarged when you press the shutter button halfway and [AF-Point Zoom] (50) is set to [On].

## Shooting with Servo AF

This mode helps avoid missing shots of subjects in motion, because the camera continues to focus on the subject and adjust the exposure as long as you press the shutter button halfway.



### 1 Configure the setting.

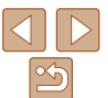
- Press the <MENU> button, choose [Servo AF] on the [ ] tab, and then choose [On] (29).

### 2 Focus.

- The focus and exposure are maintained where the blue AF frame is displayed while you are pressing the shutter button halfway.



- Focusing may not be possible in some shooting conditions.
- In low-light conditions, Servo AF may not be activated (AF frames may not turn blue) when you press the shutter button halfway. In this case, the focus and exposure are set according to the specified AF frame mode.
- If adequate exposure cannot be obtained, shutter speeds and aperture values are displayed in orange. Release the shutter button, and then press it halfway again.
- AF lock shooting is not available.
- [AF-Point Zoom] on the [ ] tab is not available.
- Not available when using the self-timer (39).



## Changing the Focus Setting

You can change default camera operation of constantly focusing on subjects it is aimed at, even when the shutter button is not pressed. Instead, you can limit camera focusing to the moment you press the shutter button halfway.



- Press the <MENU> button, choose [Continuous AF] on the tab, and then choose [Off] (29).

On	Helps avoid missing sudden photo opportunities, because the camera constantly focuses on subjects until you press the shutter button halfway.
Off	Conerves battery power, because the camera does not focus constantly.

## Shooting with the AF Lock

The focus can be locked. After you lock the focus, the focal position will not change even when you release your finger from the shutter button.



### 1 Lock the focus.

- With the shutter button pressed halfway, press the <↔> button.
- The focus is now locked, and [AFL] is displayed.
- To unlock the focus, release the shutter button and press the <↔> button again. In this case, [AFL] is no longer displayed.

### 2 Compose the shot and shoot.



# Flash

## Activating Flash

You can have the flash fire for each shot. For details on the flash range, see "Flash Range" (172).



### Configure the setting.

- ▶ Press the **<►>** button, press the **<◀><►>** buttons to choose **[flash]**, and then press the **<FUNC./SET>** button.
- ▶ Once the setting is complete, **[flash]** is displayed.

## Shooting with Slow Syncro

With this option, the flash fires to increase the brightness of the main subject (such as people) while the camera shoots at a slow shutter speed to increase the brightness of the background that is out of the flash range. For details on the flash range, see "Flash Range" (172).



### 1 Configure the setting.

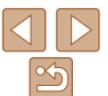
- ▶ Press the **<►>** button, press the **<◀><►>** buttons to choose **[Slow Syncro]**, and then press the **<FUNC./SET>** button.
- ▶ Once the setting is complete, **[Slow Syncro]** is displayed.

### 2 Shoot.

- ▶ Even after the flash fires, ensure that the main subject does not move until the shutter sound is finished playing.



- Mount the camera on a tripod or take other measures to keep it still and prevent camera shake. Additionally, you should set [IS Mode] to [Off] when using a tripod or other means to hold the camera still (82).



## Shooting with the FE Lock

Just as with the AE lock (70), you can lock the exposure for the flash shots.



### 1 Set the flash to [ ] (80).

### 2 Lock the flash exposure.

- Aim the camera at the subject to shoot with the exposure locked. With the shutter button pressed halfway, press the <▲> button.
- ▶ The flash fires, and when [FEL] is displayed, the flash output level is retained.
- To unlock FE, release the shutter button and press the <▲> button again. In this case, [FEL] is no longer displayed.

### 3 Compose the shot and shoot.



- FE: Flash Exposure

## Other Settings

### Changing the Compression Ratio (Image Quality)

Choose from two compression ratios, as follows: [S] (Super Fine), [ ] (Fine). For guidelines on how many shots at each compression ratio can fit on a memory card, see "Number of 4:3 Shots per Memory Card" (172).



### Configure the setting.

- Press the <FUNC./SET> button, choose [ ] in the menu, and choose the desired option (28).



## Changing the IS Mode Settings



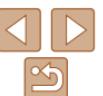
- Press the <MENU> button, choose [IS Mode] on the [CAMERA] tab, and then choose the desired option (29).

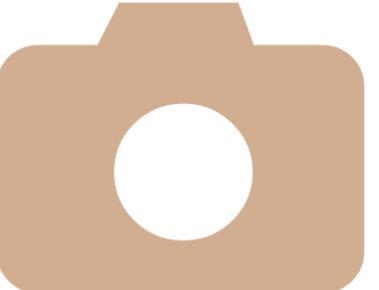
Continuous	Optimal image stabilization for the shooting conditions is automatically applied (Intelligent IS) (37).
Shoot Only*	Image stabilization is active only at the moment of shooting.
Off	Deactivates image stabilization.

\* The setting is changed to [Continuous] for movie recording.



- If image stabilization cannot prevent camera shake, mount the camera on a tripod or take other measures to hold it still. In this case, set [IS Mode] to [Off].





# 5

## Playback Mode

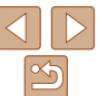
Have fun reviewing your shots, and browse or edit them in many ways

- To prepare the camera for these operations, press the <▶> button to enter Playback mode.



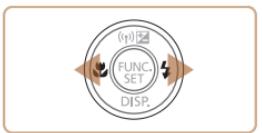
- It may not be possible to play back or edit images that were renamed or already edited on a computer, or images from other cameras.

Viewing.....	84	Erasing Images.....	96
Browsing and Filtering Images .....	87	Rotating Images .....	98
Editing Face ID Information .....	90	Image Categories .....	99
Image Viewing Options.....	91	Editing Still Images .....	100
Protecting Images .....	93	Editing Movies.....	104



# Viewing

After shooting images or movies, you can view them on the screen as follows.



## 1 Enter Playback mode.

- Press the <▶> button.
- Your last shot is displayed.



## 2 Browse through your images.

- To view the previous image, press the <◀> button. To view the next image, press the <▶> button.



- To access Scroll Display mode, press and hold the <◀><▶> buttons for at least one second. In this mode, press the <◀><▶> buttons to browse through images.
- To return to single-image display, press the <FUNC./SET> button.
- To browse images grouped by shooting date, press the <▲><▼> buttons in Scroll Display mode.



Volume Indicator



- Movies are identified by a [SET ▶] icon. To play movies, go to step 3.

## 3 Play movies.

- To start playback, press the <FUNC./SET> button, press the <▲><▼> buttons to choose [▶], and then press the <FUNC./SET> button again.

## 4 Adjust the volume.

- Press the <▲><▼> buttons to adjust the volume.
- Even after the volume indicator disappears, you can adjust the volume by pressing the <▲><▼> buttons.

## 5 Pause playback.

- To pause or resume playback, press the <FUNC./SET> button.
- After the movie is finished, [SET ▶] is displayed.







- [---] is shown instead of numerical values for items not available on your smartphone or items not recorded correctly.



- UTC: Coordinated Universal Time, essentially the same as Greenwich Mean Time

### Movies

## Viewing Short Movies Created When Shooting Still Images (Digest Movies)

View digest movies recorded automatically in [REC] mode (28) on a day of still image shooting as follows.



### 1 Browse through your images.

- [Play digest movie with FUNC.] is displayed in still images shot in [REC] mode.



### 2 Play the digest movie.

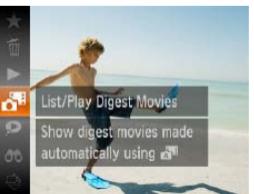
- Press the <FUNC> button, and then choose [▶] in the menu (28).  
▶ The digest movie recorded automatically on the day of still image shooting is played back from the beginning.



- In a moment, [Play digest movie with FUNC.] will no longer be displayed.

## Viewing by Date

Digest movies can be viewed by date.

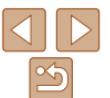


### 1 Choose a movie.

- Press the <FUNC> button, choose [▶] in the menu, and choose the date (28).

### 2 Play the movie.

- Press the <FUNC> button to start playback.



## Checking People Detected in Face ID

If you switch the camera to simple information display mode (85), the names of up to five detected people registered in Face ID (42) will be displayed.



### Switch to simple information display mode and check.

- Press the <▼> button repeatedly until simple information display is activated, and then press the <◀><▶> buttons to choose an image.
- Names will be displayed on detected people.

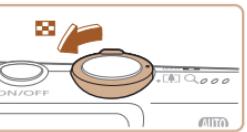


- If you do not want names to display on images shot using Face ID, press the <MENU> button, choose [Face ID Info] on the [ ] tab, and then set [Name Display] to [Off].

## Browsing and Filtering Images

### Navigating Through Images in an Index

By displaying multiple images in an index, you can quickly find the images you are looking for.

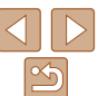


### 1 Display images in an index.

- Move the zoom lever toward <Q> to display images in an index. Moving the lever again will increase the number of images shown.
- To display fewer images, move the zoom lever toward <Q>. Fewer images are shown each time you move the lever.

### 2 Choose an image.

- Press the <▲><▼><◀><▶> buttons to choose an image.
- An orange frame is displayed around the selected image.
- Press the <FUNC SET> button to view the selected image in single-image display.



## Finding Images Matching Specified Conditions

Find desired images quickly on a memory card full of images by filtering image display according to your specified conditions. You can also protect (93) or delete (96) these images all at once.

	Name	Displays images of a registered person (42).
	People	Displays images with detected faces.
	Shot Date	Displays the images shot on a specific date.
	Favorites	Displays images tagged as favorites (99).
	Still image/Movie	Displays still images, movies, or movies shot in [ ] mode (34).



- When the camera has found no corresponding images for some conditions, those conditions will not be available.



- Options for viewing the images found (in step 2) include "Navigating Through Images in an Index" (87), "Viewing Slideshows" (91), and "Magnifying Images" (91). You can protect, erase, or print all images found or add them to a photobook by choosing [Select All Images in Search] in "Protecting Images" (93), "Erasing All Images" (96), "Adding Images to the Print List (DPOF)" (150), or "Adding Images to a Photobook" (153).
- If you edit images and save them as new images (101 – 103), a message is displayed, and the images that were found are no longer shown.

### 1 Choose a search condition.

- Press the <FUNC SET> button, choose [ ] in the menu, and choose a condition (28).
- When you have selected [ ] or [ ], choose the condition by pressing the <▲><▼><◀><▶> buttons on the screen displayed, and then press the <FUNC SET> button.

### 2 View the filtered images.

- Images matching your conditions are displayed in yellow frames. To view only these images, press the <◀><▶> buttons.
- To cancel filtered display, choose [ ] in step 1.

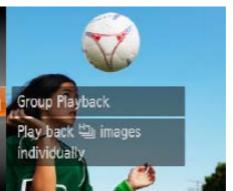


## Viewing Individual Images in a Group

Grouped images shot in [H] mode (65) are generally displayed together, but they can also be viewed individually.



- During group playback (step 3), you can use the menu functions accessed by pressing the <FUNC SET> button. You can also browse through images quickly "Navigating Through Images in an Index" (87) and magnify them "Magnifying Images" (91). You can protect, erase, or print all images in a group at once or add them to a photobook by choosing [All Images in Group] in "Protecting Images" (93), "Erasing All Images" (96), "Adding Images to the Print List (DPOF)" (150), or "Adding Images to a Photobook" (153).



### 1 Choose an image group.

- Press the <◀▶><▶▶> buttons to choose an image labeled [SET].



### 2 Choose [ ].

- Press the <FUNC SET> button, and then choose [ ] in the menu (28).

### 3 View individual images in the group.

- Pressing the <◀▶><▶▶> buttons will display only images in the group.
- To cancel group playback, press the <FUNC SET> button, choose [ ] in the menu, and press the <FUNC SET> button again (28).



## Editing Face ID Information

If you notice that a name is incorrect during playback, you can change it or erase it.

However, you cannot add names for people who are not detected by Face ID (names are not displayed), and for people whose names have been erased.

### Changing Names



#### 1 Access the setting screen.

- Press the <MENU> button and choose [Face ID Info] on the [ ] tab (29).
- Press the <▲><▼> buttons to choose [Edit ID Info], and then press the <

#### 2 Choose an image.

- Following the procedure in “Checking People Detected in Face ID” (87), choose an image and press the <
- An orange frame is displayed around the selected face. When multiple names are displayed in an image, press the <◀><▶> buttons to choose the name to change, and press the <



#### 3 Choose the item to edit.

- Press the <▲><▼><◀><▶> buttons to choose [Overwrite], and then press the <

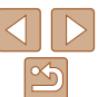
#### 4 Choose the name of the person to overwrite.

- Follow step 2 in “Overwriting and Adding Face Information” (46) to choose the name of the person you want to overwrite.

### Erasing Names

- Following step 3 in “Changing Names” (90), choose [Erase] and press the <

- After [Erase?] is displayed, press the <◀><▶> buttons to choose [OK], and then press the <



# Image Viewing Options

Still Images

## Magnifying Images



Approximate Position  
of Displayed Area

### 1 Magnify an image.

- Moving the zoom lever toward <Q> will zoom in and magnify the image. You can magnify images up to about 10x by continuing to hold the zoom lever.
- To zoom out, move the zoom lever toward <Q>. You can return to single-image display by continuing to hold it.

### 2 Move the display position and switch images as needed.

- To move the display position, press the <▲><▼><◀><▶> buttons.
- While [SET ] is displayed, you can switch to [SET ] by pressing the <> button. To switch to other images while zoomed, press the <◀><▶> buttons. Press the <> button again to restore the original setting.



- You can return to single-image display from magnified display by pressing the <MENU> button.

Still Images

Movies

## Viewing Slideshows

Automatically play back images from a memory card as follows. Each image is displayed for about three seconds.



### Choose a slideshow transition and start playback.

- Press the <> button, choose [⋮] in the menu, and choose the desired option (28).
- The slideshow will start a few seconds after [Loading image] is displayed.
- Press the <MENU> button to stop the slideshow.



- The camera's power-saving functions (26) are deactivated during slideshows.



- To pause or resume slideshows, press the <> button.
- You can switch to other images during playback by pressing the <◀><▶> buttons. For fast-forward or fast-rewind, hold the <◀><▶> buttons down.
- In image search mode (88), only images matching search conditions are played.



## ■ Changing Slideshow Settings

You can set up slideshows to repeat, and you can change the transitions between images and the display duration of each image.



### 1 Access the setting screen.

- Press the <MENU> button, and then choose [Slideshow] on the [ ] tab (91).

### 2 Configure the settings.

- Choose a menu item to configure, and then choose the desired option (29).
- To start the slideshow with your settings, choose [Start] and press the <> button.
- To return to the menu screen, press the <MENU> button.



- [Play Time] cannot be modified when [Bubble] is chosen in [Effect].

## ■ Auto Playback of Similar Images (Smart Shuffle)

Based on the current image, the camera offers four images similar to it that you may wish to view. After you choose to view one of those images, the camera offers four more images. This is an enjoyable way to play back images in an unexpected order. Try this feature after you have taken many shots, in many kinds of scenes.

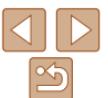


### 1 Choose Smart Shuffle.

- Press the <> button, and then choose [ ] in the menu (28).
- Four candidate images are displayed.

### 2 Choose an image.

- Press the <><><>><>>> buttons to choose the image you want to view next.
- Your chosen image is displayed in the center, surrounded by the next four candidate images.
- For full-screen display of the center image, press the <> button. To restore the original display, press the <> button again.
- Press the <MENU> button to restore single-image display.



## Protecting Images

Protect important images to prevent accidental erasure by the camera (96).



- Press the <FUNC SET> button, and then choose [ON] in the menu (28). [Protected] is displayed.
- To cancel protection, repeat this process and choose [ON] again, and then press the <FUNC SET> button.



- Protected images on a memory card will be erased if you format the card (136, 137).



- Protected images cannot be erased using the camera's erasure function. To erase them this way, first cancel protection.



## Using the Menu



### 1 Access the setting screen.

- Press the <MENU> button and choose [Protect] on the [ ] tab (29).



### 2 Choose a selection method.

- Choose a menu item and a setting as desired (29).
- To return to the menu screen, press the <MENU> button.

## Choosing Images Individually

### 1 Choose [Select].

- Following step 2 in "Using the Menu" (94), choose [Select] and press the <



### 2 Choose an image.

- Press the < is displayed.
- To cancel selection, press the < is no longer displayed.
- Repeat this process to specify other images.



### 3 Protect the image.

- Press the <MENU> button. A confirmation message is displayed.
- Press the <

- Images will not be protected if you switch to Shooting mode or turn the camera off before finishing the setup process in step 3.

## Selecting a Range

### 1 Choose [Select Range].

- Following step 2 in "Using the Menu" (94), choose [Select Range] and press the <



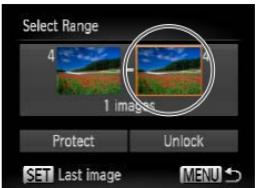
### 2 Choose a starting image.

- Press the <



- Press the <





### 3 Choose an ending image.

- Press the  $<\triangleright>$  button to choose [Last image], and then press the  $<\text{FUNC/SET}>$  button.

- Press the  $<\blacktriangleleft><\triangleright>$  buttons to choose an image, and then press the  $<\text{FUNC/SET}>$  button.
- Images before the first image cannot be selected as the last image.

### 4 Protect the images.

- Press the  $<\blacktriangledown>$  button to choose [Protect], and then press the  $<\text{FUNC/SET}>$  button.

## Specifying All Images at Once

### 1 Choose [Select All Images].

- Following step 2 in "Using the Menu" (94), choose [Select All Images] and press the  $<\text{FUNC/SET}>$  button.

### 2 Protect the images.

- Press the  $<\blacktriangleup><\blacktriangledown>$  buttons to choose [Protect], and then press the  $<\text{FUNC/SET}>$  button.



- To cancel protection for groups of images, choose [Unlock] in step 4 of "Selecting a Range" or in step 2 of "Specifying All Images at Once".



## Erasing Images

You can choose and erase unneeded images one by one. Be careful when erasing images, because they cannot be recovered. However, protected images (293) cannot be erased.



- 1 Choose an image to erase.**
  - Press the <FUNC./SET> buttons to choose an image.
  
- 2 Erase the image.**
  - Press the <FUNC./SET> button, and then choose [Erase] in the menu (28).
  - After [Erase?] is displayed, press the <FUNC./SET> buttons to choose [Erase], and then press the <FUNC./SET> button.  
▶ The current image is now erased.
  - To cancel erasure, press the <FUNC./SET> buttons to choose [Cancel], and then press the <FUNC./SET> button.

## Erasing All Images

You can erase all images at once. Be careful when erasing images, because they cannot be recovered. However, protected images (293) cannot be erased.

### Choosing a Selection Method



### Access the setting screen.

- Press the <MENU> button, and then choose [Erase] on the [ ] tab (29).

### Choose a selection method.

- Choose a menu item and a setting as desired (29).
- Press the <▲><▼> buttons to choose a selection method, and then press the <FUNC./SET> button.
- To return to the menu screen, press the <MENU> button.



## Choosing Images Individually

### 1 Choose [Select].

- Following step 2 in “Choosing a Selection Method” (see above), choose [Select] and press the <> button.



### 2 Choose an image.

- Once you choose an image following step 2 in “Choosing Images Individually” (94), [✓] is displayed.
- To cancel selection, press the <> button again. [✓] is no longer displayed.
- Repeat this process to specify other images.



### 3 Erase the image.

- Press the <MENU> button. A confirmation message is displayed.
- Press the <◀><▶> buttons to choose [OK], and then press the <> button.

## Selecting a Range

### 1 Choose [Select Range].

- Following step 2 in “Choosing a Selection Method” (96), choose [Select Range] and press the <> button.



### 2 Choose images.

- Follow steps 2 – 3 in “Selecting a Range” (94) to specify images.

### 3 Erase the images.

- Press the <▼> button to choose [Erase], and then press the <> button.

## Specifying All Images at Once

### 1 Choose [Select All Images].

- Following step 2 in “Choosing a Selection Method” (96), choose [Select All Images] and press the <> button.



### 2 Erase the images.

- Press the <◀><▶> buttons to choose [OK], and then press the <> button.



## Rotating Images

Change the orientation of images and save them as follows.



### 1 Choose [Q].

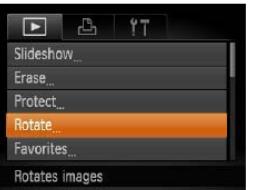
- Press the <FUNC/SET> button, and then choose [Q] in the menu (28).



### 2 Rotate the image.

- Press the <◀> or <▶> button, depending on the desired direction. Each time you press the button, the image is rotated 90°. Press the <FUNC/SET> button to complete the setting.

## Using the Menu



### 1 Choose [Rotate].

- Press the <MENU> button and choose [Rotate] on the [ ] tab (29).



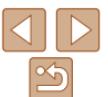
### 2 Rotate the image.

- Press the <◀><▶> buttons to choose an image.
- The image is rotated 90° each time you press the <FUNC/SET> button.
- To return to the menu screen, press the <MENU> button.



- Movies with an image quality of [1920] or [1280] cannot be rotated.
- Rotation is not possible when [Auto Rotate] is set to [Off] (99).





## Deactivating Auto Rotation

Follow these steps to deactivate automatic rotation by the camera, which rotates images shot in vertical orientation so they are displayed vertically on the camera.



- Press the <MENU> button, choose [Auto Rotate] on the [ ] tab, and then choose [Off] (29).



- Images cannot be rotated (98) when you set [Auto Rotate] to [Off]. Additionally, images already rotated will be displayed in the original orientation.
- In Smart Shuffle (92) mode, even if [Auto Rotate] is set to [Off], images shot vertically will be displayed vertically, and rotated images will be displayed in the rotated orientation.

## Image Categories

You can organize images by tagging them as favorites. By choosing a category in filtered playback, you can restrict the following operations to all of those images.

- Viewing (84), Viewing Slideshows (91), Protecting Images (93), Erasing Images (96), Adding Images to the Print List (DPOF) (150), Adding Images to a Photobook (153)

Still Images      Movies

## Tagging Images as Favorites



- Press the <FUNC/SET> button, and then choose [★] in the menu (28).  
► [Tagged as Favorite] is displayed.
- To untag the image, repeat this process and choose [★] again, and then press the <FUNC/SET> button.

## Using the Menu



### 1 Choose [Favorites].

- Press the <MENU> button and choose [Favorites] on the [ ] tab (29).



- !**
- Images will not be tagged as favorites if you switch to Shooting mode or turn the camera off before finishing the setup process in step 3.
  - Favorite images will have a three-star rating (★★★☆☆) when transferred to computers running Windows 8, Windows 7 or Windows Vista. (Does not apply to movies.)

## 2 Choose an image.

- Press the <◀><▶> buttons to choose an image, and then press the <
- To untag the image, press the <
- Repeat this process to choose additional images.

## 3 Finish the setup process.

- Press the <MENU> button. A confirmation message is displayed.
- Press the <◀><▶> buttons to choose [OK], and then press the <

# Editing Still Images



- Image editing (100 – 103) is only available when the memory card has sufficient free space.

Still Images

## Resizing Images

Save a copy of images at a lower resolution.



### 1 Choose [Resize].

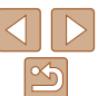
- Press the <MENU> button and choose [Resize] on the [▶] tab (29).

### 2 Choose an image.

- Press the <◀><▶> buttons to choose an image, and then press the <

### 3 Choose an image size.

- Press the <◀><▶> buttons to choose the size, and then press the <
- [Save new image?] is displayed.





#### 4 Save the new image.

- Press the <◀><▶> buttons to choose [OK], and then press the <FUNC./SET> button.
- The image is now saved as a new file.



#### 5 Review the new image.

- Press the <MENU> button. [Display new image?] is displayed.
- Press the <◀><▶> buttons to choose [Yes], and then press the <FUNC./SET> button.
- The saved image is now displayed.

**!** • Editing is not possible for images saved as [**S**] in step 3.

• Images cannot be resized to a higher resolution.

## Cropping

You can specify a portion of an image to save as a separate image file.



Cropping Area



Preview of Image After Cropping

Resolution After Cropping



#### 1 Choose [Cropping].

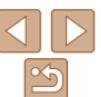
- Press the <MENU> button, and then choose [Cropping] on the [ ] tab (29).

#### 2 Choose an image.

- Press the <◀><▶> buttons to choose an image, and then press the <FUNC./SET> button.

#### 3 Adjust the cropping area.

- A frame is displayed around the portion of the image to be cropped.
- The original image is shown in the upper left, and a preview of the image as cropped is shown in the lower right.
- To resize the frame, move the zoom lever.
- To move the frame, press the <▲><▼><◀><▶> buttons.
- To change the frame orientation, press the <FUNC./SET> button.
- Press the <MENU> button.



## 4 Save as a new image and review.

- Follow steps 4 – 5 in “Resizing Images” (101).



- Editing is not possible for images shot at a resolution of [S] (47) or resized to [S] (100).



- Images supported for cropping will have the same aspect ratio after cropping.
- Cropped images will have a smaller resolution than uncropped images.
- If you crop still images shot using Face ID (42), only the names of the people left in the cropped image will remain.

## Changing Image Color Tones (My Colors)

You can adjust image colors and then save the edited image as a separate file. For details on each option, see “Changing Image Color Tones (My Colors)” (73).



### 1 Choose [My Colors].

- Press the <MENU> button, and then choose [My Colors] on the [ ] tab (29).

### 2 Choose an image.

- Press the < > buttons to choose an image, and then press the <FUNC./SET> button.

### 3 Choose an option.

- Press the < > buttons to choose an option, and then press the <FUNC./SET> button.

### 4 Save as a new image and review.

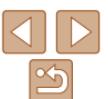
- Follow steps 4 – 5 in “Resizing Images” (101).



- Image quality of pictures you repeatedly edit this way will be a little lower each time, and you may not be able to obtain the desired color.



- The color of images edited using this function may vary slightly from the color of images shot using My Colors (73).



## Correcting Image Brightness (i-Contrast)

Excessively dark image areas (such as faces or backgrounds) can be detected and automatically adjusted to the optimal brightness. Insufficient overall image contrast is also automatically corrected, to make subjects stand out better. Choose from four correction levels, and then save the image as a separate file.



### 1 Choose [i-Contrast].

- Press the <MENU> button, and then choose [i-Contrast] on the [ ] tab (29).

### 2 Choose an image.

- Press the < >< > buttons to choose an image, and then press the <FUNC/SET> button.

### 3 Choose an option.

- Press the < >< > buttons to choose an option, and then press the <FUNC/SET> button.

### 4 Save as a new image and review.

- Follow steps 4 – 5 in “Resizing Images” (101).



- For some images, correction may be inaccurate or may cause images to appear grainy.
- Images may look grainy after repeated editing using this function.



- If [Auto] does not produce the expected results, try correcting images using [Low], [Medium], or [High].

## Correcting Red-Eye

Automatically corrects images affected by red-eye. You can save the corrected image as a separate file.



### 1 Choose [Red-Eye Correction].

- Press the <MENU> button, and then choose [Red-Eye Correction] on the [ ] tab (29).

### 2 Choose an image.

- Press the < >< > buttons to choose an image.

### 3 Correct the image.

- Press the <FUNC/SET> button.
- Red-eye detected by the camera is now corrected, and frames are displayed around corrected image areas.
- Enlarge or reduce images as needed. Follow the steps in “Magnifying Images” (91).

### 4 Save as a new image and review.

- Press the <▲><▼><◀><▶> buttons to choose [New File], and then press the <FUNC/SET> button.
- The image is now saved as a new file.
- Follow step 5 in “Resizing Images” (101).





- Some images may not be corrected accurately.
- To overwrite the original image with the corrected image, choose [Overwrite] in step 4. In this case, the original image will be erased.
- Protected images cannot be overwritten.

## Editing Movies

You can cut movies to remove unneeded portions at the beginning or end.



Movie Editing Panel



Movie Editing Bar

### 1 Choose [✂].

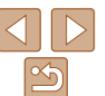
- Following steps 1 – 5 in “Viewing” (84), choose [✂] and press the <FUNC SET> button.
- ▶ The movie editing panel and editing bar are now displayed.

### 2 Specify portions to cut.

- Press the <▲><▼> buttons to choose [✂] or [✓].
- To view the portions you can cut (identified by [✂] on the screen), press the <◀><▶> buttons to move [█]. Cut the beginning of the movie (from [✂]) by choosing [✂], and cut the end of the movie by choosing [✓].
- Even if you move [█] to a position other than a [✂] mark, choosing [✂] will only cut the portion from the nearest [✂] to the left, and choosing [✓] will cut the portion from the nearest [✂] to the right.

### 3 Review the edited movie.

- Press the <▲><▼> buttons to choose [▶], and then press the <FUNC SET> button. The edited movie is now played.
- To edit the movie again, repeat step 2.





- To cancel editing, press the **<▲><▼>** buttons to choose [ ]. Press the **<FUNC./SET>** button, press the **<◀><▶>** buttons to choose [OK], and then press the **<FUNC./SET>** button again.

#### 4 Save the edited movie.

- Press the **<▲><▼>** buttons to choose [ ], and then press the **<FUNC./SET>** button.
  - Press the **<▲><▼><◀><▶>** buttons to choose [New File], and then press the **<FUNC./SET>** button.
- The movie is now saved as a new file.



- To overwrite the original movie with the cut one, choose [Overwrite] in step 4. In this case, the original movie will be erased.
- [Overwrite] is only available when memory cards lack sufficient free space.
- Movies may not be saved if the battery runs out while saving is in progress.
- When editing movies, you should use a fully charged battery or an AC adapter kit (141, sold separately).

## Editing Digest Movies

Individual chapters (34) recorded in [ ] mode can be erased, as needed. Be careful when erasing chapters, because they cannot be recovered.

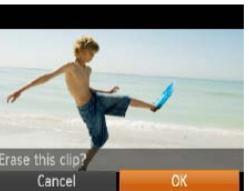


#### 1 Select the chapter to erase.

- Follow steps 1 – 2 in “Viewing Short Movies Created When Shooting Still Images (Digest Movies)” (86) to play a movie created in [ ] mode, and then press the **<FUNC./SET>** button to access the movie control panel.
- Press the **<◀><▶>** buttons to choose [◀] or [▶], and then press the **<FUNC./SET>** button.

#### 2 Choose [ ].

- Press the **<◀><▶>** buttons to choose [ ], and then press the **<FUNC./SET>** button.
- The selected chapter is played back repeatedly.



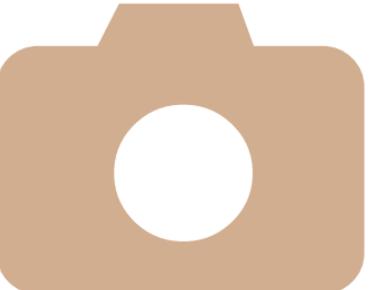
#### 3 Confirm erasure.

- Press the **<◀><▶>** buttons to choose [OK], and then press the **<FUNC./SET>** button.
- The chapter is erased, and the clip is overwritten.



- [ ] is not displayed if you select a chapter when the camera is connected to a printer.





# 6

## Wi-Fi Functions

Use Wi-Fi functions to send images from the camera to a variety of compatible devices, and use the camera with Web services

What You Can Do With Wi-Fi .....	107	Connecting to Another Camera.....	117
Using Wi-Fi to Send Images From the Camera....	108	Connecting to a Computer....	118
Wi-Fi (Wireless LAN) Precautions .....	108	Connecting to a Printer .....	124
Security Precautions .....	109	Sending Images.....	126
Glossary.....	110	Sending Images to a Computer via CANON iIMAGE GATEWAY .....	128
Registering a Camera Nickname (First time only)...	111	Geotagging Images on the Camera.....	129
Connecting to Web Services .....	112	Editing or Erasing Wi-Fi Settings .....	129
Connecting to a Smartphone.....	115		



## What You Can Do With Wi-Fi

This camera is an approved Wi-Fi® product. You can wirelessly connect to and send images to the following devices.

Note that, in this chapter, wireless LAN functions other than Wi-Fi may be referred to as Wi-Fi.

\* Wi-Fi is a brand name that indicates interoperability certification of Wi-Fi devices.



### Connecting to Web Services

CANON iIMAGE GATEWAY is an online photo service available to those who have purchased this product. If you register for free as a member, you can use CANON iIMAGE GATEWAY to access various Web services, such as social networking services set on a computer. Images on the camera can also be sent automatically to a computer via CANON iIMAGE GATEWAY.



### Connecting to a Smartphone

Send images to smartphones and tablet computers that have Wi-Fi functions. You can also geotag your shots from a connected smartphone or tablet. Installation of a dedicated application on the smartphone or tablet is required. See the Canon website for details.

For convenience in this manual, smartphones and tablets are collectively referred to as *smartphones*.



### Connecting to Another Camera

Use the Wi-Fi function to send images between Canon-brand, compact digital cameras.



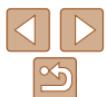
### Connecting to a Computer

Use the included software to wirelessly send images from the camera to a computer. Refer to the *Software Guide* for details.



### Connecting to a Printer

Send images wirelessly to a PictBridge-compatible printer (supporting DPS over IP) to print them.



## Using Wi-Fi to Send Images From the Camera

	Operation	Device				
Preparations	Registering a camera nickname (111)	O	O	O	O	O
	Installing the included software (19)*1	O	-	-	O	-
	Adjusting settings for using Web services from CANON iIMAGE GATEWAY (112)	O	-	-	-	-
Connection	Installing the dedicated application on the smartphone (115)	-	O	-	-	-
Send/Print/ Import	Establishing a connection with the camera	(112)	(115)	(117)	(118)	(124)
	Sending images (126)	O*2	O	O	-	-
	Transferring images to a computer (123)	-	-	-	O	-
	Printing images (124)*3	-	-	-	-	O

\*1 Instructions in this guide apply when the software has been installed correctly from the included CD-ROM (19).

\*2 Images are sent automatically when transferred via a server (128).

\*3 For detailed printing instructions, see "Printing Images" (146).

## Wi-Fi (Wireless LAN) Precautions

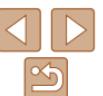
- The model number is PC1897 (including WLAN module model WM219).

### Countries and Regions Permitting WLAN Use

- Use of WLAN is restricted in some countries and regions, and illegal use may be punishable under national or local regulations. To avoid violating WLAN regulations, visit the Canon website to check where use is allowed.

Note that Canon cannot be held liable for any problems arising from WLAN use in other countries and regions.

- Doing any of the following may incur legal penalties:
  - Altering or modifying the product
  - Removing the certification labels from the product
- According to foreign exchange and foreign trade law regulations, export permission (or service transaction permission) from the Japanese government is necessary to export strategic resources or services (including this product) outside Japan.
- Because this product includes American encryption software, it falls under U.S. Export Administration Regulations, and cannot be exported to or brought into a country under U.S. trade embargo.
- Be sure to make notes of the wireless LAN settings you use.  
The wireless LAN settings saved to this product may be erased due to incorrect operation of the product, the effects of radio waves or static electricity, accident or malfunction. Be sure to make notes of wireless LAN settings as a precaution. Please note that Canon accepts no responsibility for degradation of content, direct or indirect damages or loss of revenue arising from use of the product.
- When transferring this product to another person, disposing of it, or sending it for repair, be sure to note the wireless LAN settings and reset the product to its default settings (erase settings) if necessary.



- Canon will not make compensation for loss or theft of the product. Canon accepts no responsibility for damages incurred due to unauthorized access to registered data (image transfer destinations, etc.) if the product is lost or stolen.
- Be sure to use the product as directed in this guide. Be sure to use the wireless LAN function of this product within the guidelines noted in this guide. Canon accepts no responsibility for damages or loss if the function and product are used in ways other than as described in this guide.
- Do not use the wireless LAN function of this product near medical equipment or other electronic equipment. Use of the wireless LAN function near medical equipment or other electronic equipment may affect operation of those devices.

## Radio Wave Interference Precautions

- This product may receive interference from other devices that emit radio waves. To avoid interference, be sure to use this product as far away as possible from such devices, or avoid using the devices at the same time as this product.

## Security Precautions

Because Wi-Fi uses radio waves to transmit signals, security precautions more stringent than when using a LAN cable are required.

Keep the following points in mind when using Wi-Fi.

- Only use networks you are authorized to use.

This product searches for Wi-Fi networks in the vicinity and displays the results on the screen. Networks you are not authorized to use (unknown networks) may also be displayed. However, attempting to connect to or using such networks could be regarded as unauthorized access. Be sure to use only networks you are authorized to use, and do not attempt to connect to other unknown networks.

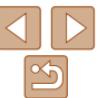
If security settings have not been properly set, the following problems may occur.

- Transmission monitoring  
Third parties with malicious intent may monitor Wi-Fi transmissions and attempt to acquire the data you are sending.
- Unauthorized network access  
Third parties with malicious intent may gain unauthorized access to the network you are using to steal, modify, or destroy information.

Additionally, you could fall victim to other types of unauthorized access such as impersonation (where someone assumes an identity to gain access to unauthorized information) or springboard attacks (where someone gains unauthorized access to your network as a springboard to cover their tracks when infiltrating other systems).

To prevent these types of problems from occurring, be sure to thoroughly secure your Wi-Fi network.

Only use this camera's Wi-Fi function with a proper understanding of Wi-Fi security, and balance risk and convenience when adjusting security settings.



## Glossary

Wi-Fi related terms are explained here. Also refer to the explanations of terms given in the respective sections of this guide.

- Access point

A device that relays radio wave signals to create a Wi-Fi network. This term also refers to a network that you can use to connect to the Internet via Wi-Fi.

- Firewall

This is a system that protects networks from computer viruses, external unauthorized access, and security threats. This is set on the Wi-Fi router or computer.

- SSID/ESSID

Preconfigured numbers and letters used to identify a specific access point. Also called the “access point name” or “network name”.

- Encryption key

This is a key used to encrypt data for transmission to and from an access point.

- IP address

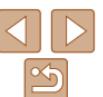
This is an address used to identify a device within a network.

- MAC address

This is a unique address pre-assigned to a network device. It is also referred to as a “physical address”.



The camera can print to PictBridge-compatible printers via Wi-Fi. PictBridge technical standards make it easy to connect digital cameras, printers, and other devices directly. Additionally, a new standard called DPS over IP enables PictBridge connections in network environments, and the camera is also compatible with this standard.



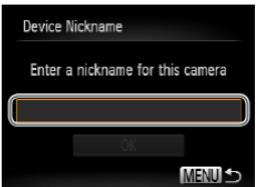
# Registering a Camera Nickname (First time only)

To start with, register a camera nickname.

This nickname will be displayed on the screen of target devices when connecting to other devices via Wi-Fi.

## 1 Access the Wi-Fi menu.

- Press the <▶> button to turn the camera on.
- Press the <▲> button.



## 2 Access the keyboard.

- Press the <FUNC./SET> button.



## 3 Enter a nickname.

- Press the <▲><▼><◀><▶> buttons to choose a character, and then press the <FUNC./SET> button to enter it.
- Up to 16 characters can be used.
- Choose [◀] or [▶] and press the <FUNC./SET> button to move the cursor.
- Choose [▲] and press the <FUNC./SET> button. The previous character will be deleted.

## 4 Save the settings.

- Press the <MENU> button, press the <▲><▼> buttons to choose [OK], and then press the <FUNC./SET> button.



- When connecting wirelessly to any device other than a computer, a memory card must be inserted in the camera. Additionally, the memory card must contain images in order for you to access Web services or connect to a smartphone or printer wirelessly.
- To change the camera's nickname, choose [Wi-Fi Settings] on the [Wi-Fi] tab, and then choose [Change Device Nickname].
- If the Wi-Fi menu is not displayed but only the information changes when you press the <▲> button, first press the <▼> button to switch from detailed information display (85).



## Connecting to Web Services

Set up the camera to use a variety of Web services as follows.

### Adjusting Settings for Using Web Services From CANON iIMAGE GATEWAY

Adjust account settings for the Web services you want to use.

- A computer is required for Web service settings, starting with CANON iIMAGE GATEWAY.
- Because CameraWindow is used to adjust settings, be sure to install it from the included CD-ROM beforehand (20). See "System Requirements" (20) for server transfer system requirements.
- For information on countries and regions where CANON iIMAGE GATEWAY is available, visit the Canon website (<http://canon.com/cig>).

#### **1 Register as a CANON iIMAGE GATEWAY member.**

- From a computer or other device connected to the Internet, access <http://canon.com/cig> and visit the CANON iIMAGE GATEWAY site for your region.
- Follow the instructions displayed to complete member registration (free of charge).
- You must have an account with Web services other than CANON iIMAGE GATEWAY if you desire to use them. For further details, check the websites for each Web service you want to register.



#### **2 Connect the camera to a computer with the interface cable (21).**

- On a computer running Windows, there is no need to connect the interface cable if you complete settings in advance (120). In this case, you can connect via Wi-Fi.

#### **3 Display CameraWindow (22).**

#### **4 Access the CANON iIMAGE GATEWAY login screen.**

- Click [Camera Settings], and then click [Set Up Web Services].

#### **5 Login to CANON iIMAGE GATEWAY.**

- Enter your CANON iIMAGE GATEWAY login name and password, and then click [Login].





## **6 Set a Web service you want to use.**

- Follow the on-screen instructions to complete settings for Web services you want to use.
- Once the Web service settings are complete, click [Finish] at the bottom of the window to close it.

## **7 Apply Web service settings to the camera.**

- Choose the name of the Web service you want to set on the camera, and click [ ] in the middle of the lists.
- ▶ The name of the Web service that will be saved to the camera will be displayed in the [Camera] list.
- Click [▲] or [▼] to change the order of the Web services that will be displayed in the camera's Wi-Fi menu.
- After you finish adjusting settings in the [Camera] list to your liking, close the window.
- ▶ The settings of Web services and for transferring images via the server are applied to the camera.



- An Internet connection is required to access CANON iIMAGE GATEWAY (an Internet browser must be installed on the computer, you must have an account with an Internet service provider, and an Internet connection must be established).
- When connecting to CANON iIMAGE GATEWAY, check the CANON iIMAGE GATEWAY website for browser (Microsoft Internet Explorer, etc.) settings, conditions, and version information.
- Separate ISP connection and access point fees may be applicable.



- After logging in to CANON iIMAGE GATEWAY the second time in step 5, the screen in step 7 will be displayed. To change settings for Web services you use, click [Edit Web Services].
- To add or change Web services, repeat the above procedures starting from step 2.



## Establishing Web Service Connections

Connect to Web services registered to the camera.



### 1 Access the Wi-Fi menu.

- Press the **<▲>** button.

### 2 Choose a Web service.

- Press the **<▲><▼><◀><▶>** buttons to choose the icon of the Web service that you want to connect to, and then press the **<FUNC./SET>** button.
- If the Web service has multiple recipients, select the desired recipient on the [Select Recipient] screen, and press the **<FUNC./SET>** button.



### 3 Connect to an access point.

- With a WPS-compatible access point, connect to the access point by following steps 4 – 6 in “Adding a Computer” (121).
  - With an access point that is not WPS-compatible, connect to the access point by following steps 2 – 3 in “Connecting to Access Points in the List” (122).
- When you have connected to the Web service, the image transfer screen will be displayed. Proceed to “Sending Images” (126). However, when [Send via Server] is selected, images will be sent as soon as a connection is established (128).

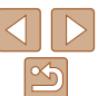


- When you are in the vicinity of an access point that you have previously connected to, the camera will automatically connect to it in step 2. To change access points, select [Switch Network] from the screen that will be displayed when the connection is being established, and follow steps 4 – 5 in “Adding a Computer” (121).



- After you have accessed the Wi-Fi menu once, you can access it again by pressing the **<▲>** button. The recent target device is listed first, so you can easily connect again by pressing the **<▲><▼>** buttons to choose it. To add a new device, display the device selection screen by pressing the **<◀><▶>** buttons, and then configure the setting.

If you prefer not to display recent target devices, press the **<MENU>** button, and on the [Wi-Fi Settings] tab, choose [Target History] > [Off].



## Connecting to a Smartphone

When establishing a Wi-Fi connection with a smartphone, you can either use the camera as an access point (Camera Access Point mode) or use another access point.

Follow these instructions when using the camera as an access point. When using another access point, see "Connecting to Access Points in the List" (122).

## Installing CameraWindow on a Smartphone

Before connecting your camera to a smartphone, first install the free dedicated application, CameraWindow, on your smartphone.



### 1 Connect the smartphone to a network.

### 2 Install CameraWindow.

- For an iPhone, iPad, or iPod touch, download and install CameraWindow from the Mac App Store.
- For an Android device, download and install CameraWindow from Google Play.

### 3 Register the smartphone name.

- On the smartphone, start CameraWindow and enter a name for the smartphone that will be displayed on the camera.



- For details on this application (supported smartphones and included functions), refer to the Canon website.

## Establishing the Smartphone Connection

### 1 Access the Wi-Fi menu.

- Press the  $\langle\blacktriangle\rangle$  button.

### 2 Choose a smartphone.

- Press the  $\langle\blacktriangle\rangle\langle\blacktriangledown\rangle\langle\blackleftarrow\rangle\langle\blackrightarrow\rangle$  buttons to choose [ ], and then press the  $\langle\text{FUNC/SET}\rangle$  button.



### 3 Choose [Add a Device].

- Press the  $\langle\blacktriangle\rangle\langle\blacktriangledown\rangle$  buttons to choose [Add a Device], and then press the  $\langle\text{FUNC/SET}\rangle$  button.

The camera's SSID and encryption key are displayed on the screen.





## 4 Use the smartphone to connect to the network displayed on the camera screen.

- Choose the displayed SSID (network name) from the smartphone's Wi-Fi setting menu.
- Enter the encryption key displayed on the camera screen into the password field on the smartphone.



## 5 Start CameraWindow on the smartphone.

- Once the smartphone is recognized on the camera, the device connection screen will be displayed on the camera.



## 6 Choose a smartphone to connect to.

- Press the <▲><▼> buttons to choose the smartphone for the connection, and then press the <FUNC SET> button (115).



## 7 Adjust the privacy settings.

- Press the <◀><▶> buttons to choose [Yes], and then press the <FUNC SET> button.
- You can now use the smartphone to receive images sent from the camera, or to geotag images on the camera (129).
- When the smartphone has been added successfully, the image transfer screen will be displayed. Proceed to "Sending Images" (126).



- When you are in the vicinity of an access point that you have previously connected to, the camera will automatically connect to it in step 3. To change access points, select [Switch Network] from the screen that will be displayed when the connection is being established, and follow steps 4 – 5 in "Adding a Computer" (121).
- All camera images can be viewed from the connected smartphone when you choose [Yes] in step 7. To keep camera images private, so that they cannot be viewed from the smartphone, choose [No] in step 7.



- You can connect to smartphones that you have already connected to by choosing them on the [Select a Device] screen in step 3.
- After you have accessed the Wi-Fi menu once, you can access it again by pressing the <▲> button. The recent target device is listed first, so you can easily connect again by pressing the <▲><▼> buttons to choose it. To add a new device, display the device selection screen by pressing the <◀><▶> buttons, and then configure the setting.  
If you prefer not to display recent target devices, press the <MENU> button, and on the [Wi-Fi tab], choose [Wi-Fi Settings] > [Target History] > [Off].
- The image quality level for movies that can be sent may differ depending on the smartphone. Refer to the instruction manual provided with your smartphone for details.
- To add multiple smartphones, repeat the above procedures starting from step 1.
- To change privacy settings for smartphones added to the list, choose the smartphone whose settings you want to change from [Edit a Device] in step 3, and then choose [View Settings].

## Connecting to Another Camera

Connect two cameras via Wi-Fi and send images between them as follows.



- Only Canon-brand cameras equipped with a Wi-Fi function can be connected to wirelessly. Even Canon-brand cameras that support Eye-Fi cards cannot be connected to if they do not have a Wi-Fi function. You cannot connect to PowerShot SD430 DIGITAL ELPH WIRELESS/DIGITAL IXUS WIRELESS cameras with this camera.



### 1 Access the Wi-Fi menu.

- Press the <▲> button.

### 2 Choose a camera.

- Press the <▲><▼><◀><▶> buttons to choose [CAMERA], and then press the <FUNC/SET><▶> button.

### 3 Choose [Add a Device].

- Press the <▲><▼> buttons to choose [Add a Device], and then press the <FUNC/SET><▶> button.
- Follow steps 1 – 3 on the target camera.
- ▶ Camera connection information will be added when [Start connection on target camera] is displayed on both camera screens.
- ▶ When the target camera has been added successfully, the image transfer screen will be displayed. Proceed to “Sending Images” (126).





- After you have accessed the Wi-Fi menu once, you can access it again by pressing the <▲> button. The recent target device is listed first, so you can easily connect again by pressing the <▲><▼> buttons to choose it. To add a new device, display the device selection screen by pressing the <◀><▶> buttons, and then configure the setting.

If you prefer not to display recent target devices, press the <MENU> button, and on the [Wi-Fi] tab, choose [Wi-Fi Settings] > [Target History] > [Off].

- To add multiple cameras, repeat the above procedures starting from step 1.
- Once a camera is added, the camera nickname will be displayed on the screen in step 3. To connect to a camera again, simply choose the camera nickname from the list.

## Connecting to a Computer

Configure computer settings for the connection, add the computer as a connection destination, and transfer images to the computer wirelessly using the included software CameraWindow as follows.



- When connected to a computer, the camera is used to establish the connection and then the computer (included software CameraWindow) is used to transfer images.

## Preparing to Register a Computer

Prepare to register a computer.

### Checking Your Computer Environment

For computer environments that allow Wi-Fi connection with a camera, refer to "System Requirements" (20).

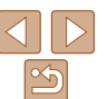
Additionally, the included software CameraWindow must be installed (20).



- Windows 7 Starter and Home Basic editions are not supported.
- Windows 7 N (European version) and KN (South Korean version) require a separate download and installation of Windows Media Feature Pack.

For further details, see the following website.

<http://go.microsoft.com/fwlink/?LinkId=159730>



## Check sheet

**Network name (SSID/ESSID)**

The SSID or ESSID for the access point you use.

**Network certificate/data encryption (encryption method/encryption mode)**

The method for encrypting data during transmission via Wi-Fi.

ONone  
OWEP (open system authentication)  
OWPA-PSK (TKIP)  
OWPA-PSK (AES)  
OWPA2-PSK (TKIP)  
OWPA2-PSK (AES)

**Encryption key (network key)**

The data encryption key used for transmission via Wi-Fi.

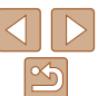
**Key index (sent key)**

The key specified when using WEP for Network certificate/data encryption.

O 1



- A router is a device that creates a network (LAN) structure for connecting multiple computers. A router that contains an internal Wi-Fi function is called a "Wi-Fi router".
- This guide refers to all Wi-Fi routers and base stations as "access points".
- If you use MAC address filtering on your Wi-Fi network, be sure to add the camera's MAC address to your access point. You can check your camera's MAC address by choosing the [Wi-Fi] tab, [Wi-Fi Settings], and then [Check MAC Address].



## ■ Computer Settings for Connecting via Wi-Fi (Windows only)

On a computer running Windows, you must configure the following settings before you can connect the camera to the computer wirelessly.



- The following Windows settings are configured when you run the utility in step 2.
  - Turn on media streaming.  
This will enable the camera to find the computer to access via Wi-Fi.
  - Turn on network discovery.  
This will enable the computer to find the camera.
  - Turn on ICMP (Internet Control Message Protocol).  
This allows you to check the network connection status.
  - Enable Universal Plug & Play (UPnP).  
This will enable network devices to detect each other automatically.
  - Some security software may prevent you from completing the settings as described here. Check the settings of your security software.

### 1 Confirm the computer is connected to Wi-Fi.

- For instructions on checking your network connection, refer to the computer user manual.

### 2 Configure the setting.

- Click in the following order: [Start] menu ▶ [All Programs] ▶ [Canon Utilities] ▶ [CameraWindow] ▶ [Wi-Fi connection setup].
- In the application that opens, follow the on-screen instructions and configure the setting.

## Adding a Computer

Add a computer to your list of devices to connect to via Wi-Fi.

Follow these instructions when using a Wi-Fi Protected Setup (WPS) compatible access point to establish a push-button connection.

If your access point is not WPS-compatible, establish a connection as described in "Connecting to Access Points in the List" (122).



- WPS makes it easy to complete settings when connecting devices over Wi-Fi. You can use either Push Button Configuration Method or PIN Method for settings on a WPS supported device.
- Refer to the user guide provided with your access point to check if it supports WPS.
- Be sure to also read the user guide included with your access point.

### 1 Access the Wi-Fi menu.

- Press the  $\langle\blacktriangle\blacktriangleright$  button.

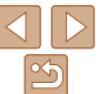
### 2 Choose a computer.

- Press the  $\langle\blacktriangle\blacktriangleright\blacktriangleleft\blacktriangleright$  buttons to choose [ ], and then press the  $\langle\text{FUNC/SET}\rangle$  button.



### 3 Choose [Add a Device].

- Press the  $\langle\blacktriangle\blacktriangleright$  buttons to choose [Add a Device], and then press the  $\langle\text{FUNC/SET}\rangle$  button.
- ▶ A list of detected access points will be displayed in the [Select Network] screen.





#### 4 Choose [WPS Connection].

- Press the **<▲><▼>** buttons to choose [WPS Connection], and then press the **<FUNC./SET>** button.



#### 5 Choose [PBC Method].

- Press the **<▲><▼>** buttons to choose [PBC Method], and then press the **<FUNC./SET>** button.



#### 6 Establish the connection.

- On the access point, hold down the WPS connection button for a few seconds.
- On the camera, press the **<FUNC./SET>** button.
- The camera will connect to the access point.
- A list of computers connected to the access point will appear in the [Select a Device] screen.



#### 7 Choose a computer to connect to.

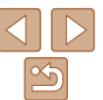
- Press the **<▲><▼>** buttons to choose the computer name, and then press the **<FUNC./SET>** button.
- When using a Macintosh computer, see "Using CameraWindow to Transfer Images to a Computer" (123).



#### 8 Install a driver (first Windows connection only).

- When the screen at left is displayed, click the Start menu on the computer, click [Control Panel], and then click [Add a device].

- Double click the connected camera icon.
- Driver installation will begin.
- After driver installation is complete, and the camera and computer connection is enabled, the AutoPlay screen will be displayed. Nothing will be displayed on the camera screen.
- Proceed to "Using CameraWindow to Transfer Images to a Computer" (123).





- When you are in the vicinity of an access point that you have previously connected to, the camera will automatically connect to it in step 3. To change access points, select [Switch Network] from the screen that will be displayed when the connection is being established, and follow steps 4 – 5 in “Adding a Computer” (121).



- You can connect to computers that you have already connected to by choosing them on the [Select a Device] screen in step 3.
  - If you chose [PIN Method] in step 5, a PIN code will be displayed on the screen. Be sure to set this code in the access point. Choose a device in the [Select a Device] screen. For further details, refer to the user guide included with your access point.
  - To add multiple computers, repeat the above procedures starting from step 1.
  - To disconnect from the camera, turn off the camera.
  - After you have accessed the Wi-Fi menu once, you can access it again by pressing the  $\langle\blacktriangle\rangle$  button. The recent target device is listed first, so you can easily connect again by pressing the  $\langle\blacktriangle\rangle\langle\blacktriangledown\rangle$  buttons to choose it. To add a new device, display the device selection screen by pressing the  $\langle\blacktriangleleft\rangle\langle\blacktriangleright\rangle$  buttons, and then configure the setting.
- If you prefer not to display recent target devices, press the  $\langle\text{MENU}\rangle$  button, and on the tab, choose [Wi-Fi Settings] > [Target History] > [Off].

## Connecting to Access Points in the List

### 1 View the listed access points.

- View the listed networks (access points) as described in steps 1 – 3 of “Adding a Computer” (120).



### 2 Choose an access point.

- Press the  $\langle\blacktriangle\rangle\langle\blacktriangledown\rangle$  buttons to choose a network (access point), and then press the  $\langle\text{FUNC/SET}\rangle$  button.



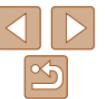
### 3 Enter the access point's encryption key.

- Press the  $\langle\text{FUNC/SET}\rangle$  button to access the keyboard, and then enter the encryption key (111).
- Press the  $\langle\blacktriangle\rangle\langle\blacktriangledown\rangle$  buttons to choose [Next], and then press the  $\langle\text{FUNC/SET}\rangle$  button.



### 4 Choose [Auto].

- Press the  $\langle\blacktriangle\rangle\langle\blacktriangledown\rangle$  buttons to choose [Auto], and then press the  $\langle\text{FUNC/SET}\rangle$  button.
- A list of other devices connected to the access point will appear in the [Select a Device] screen.



## 5 Choose a computer to connect to.

- Choose the computer to connect to, following steps 7 – 8 in “Adding a Computer” (121). The computer is now added to the list.



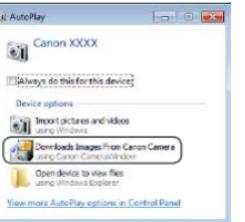
- For information on the access point’s encryption key, refer to the body of the access point or its user manual.
- Up to 16 access points will be displayed. If no access points are detected, choose [Manual Settings] in step 2 to manually set an access point. Follow on-screen instructions and enter an SSID, security settings, and an encryption key.
- When you use an access point that you have already connected to for connecting to another device, [\*] is displayed for the encryption key in step 3. To use the same encryption key, press the <▲><▼> buttons to choose [Next], and then press the <
- To add multiple computers, repeat the above procedures starting from step 1.

## Using CameraWindow to Transfer Images to a Computer

Use the computer (included software CameraWindow) to transfer images from the camera to the computer.



- For details on how to use CameraWindow, see the Software Guide (19).



### 1 Display CameraWindow.

- In Windows, click [Downloads Images From Canon Camera using Canon CameraWindow].
- CameraWindow will be displayed.
- On a Macintosh computer, CameraWindow is automatically displayed when a Wi-Fi connection is established between the camera and computer.

### 2 Import images.

- Click [Import Images from Camera], and then click [Import Untransferred Images].
- Images are now saved to the Pictures folder on the computer, in separate folders named by date.
- Click [OK] in the screen that is displayed after image import is complete.





- If CameraWindow is not displayed when using a Macintosh computer, click the [CameraWindow] icon in the Dock.
- Movies will take longer to import since the file size is larger than still images.
- To disconnect from the camera, turn off the camera.
- You can also specify to save all images or only selected images to the computer, and you can change the destination folder. Refer to the *Software Guide* (19) for details.

## Connecting to a Printer

Connect the camera to a printer via Wi-Fi to print as follows.

When establishing a Wi-Fi connection with a printer, you can either use the camera as an access point (Camera Access Point mode) or use another access point.

Follow these instructions when using the camera as an access point. When using another access point, see “Connecting to Access Points in the List” (122) in “Adding a Computer”.

### 1 Access the Wi-Fi menu.

- Press the <▲> button.



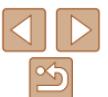
### 2 Choose a printer.

- Press the <▲><▼><◀><▶> buttons to choose [ ], and then press the <



### 3 Choose [Add a Device].

- Press the <▲><▼> buttons to choose [Add a Device], and then press the <





## 4 Use the printer to connect to the network displayed on the camera screen.

- Choose the displayed SSID (network name) from the printer's Wi-Fi setting menu.
- Enter the encryption key displayed on the camera screen into the password field on the printer.

## 5 Choose the printer.

- Once the printer is ready for the connection, press the button when the printer name is displayed on the camera.
- When the printer has been added successfully, the printing screen will be displayed.

## 6 Choose an image to print.

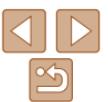
- Press the buttons to choose an image.
- Press the button, choose , and press the button again to access the printing screen.
- Press the buttons to choose [Print], and then press the button.
- Printing now begins.
- For detailed printing instructions, see "Printing Images" (146).



- When you are in the vicinity of an access point that you have previously connected to, the camera will automatically connect to it in step 3. To change access points, select [Switch Network] from the screen that will be displayed when the connection is being established, and follow steps 4 – 5 in "Adding a Computer" (121).



- You can connect to printers that you have already connected to by choosing them on the [Select a Device] screen in step 3.
- After you have accessed the Wi-Fi menu once, you can access it again by pressing the button. The recent target device is listed first, so you can easily connect again by pressing the buttons to choose it. To add a new device, display the device selection screen by pressing the buttons, and then configure the setting.  
If you prefer not to display recent target devices, press the button, and on the [Wi-Fi Settings] tab, choose [Target History] > [Off].



# Sending Images

Send images wirelessly to destinations registered on the camera as follows.

- Images can be uploaded to social networking services or sent to email addresses, via CANON iIMAGE GATEWAY. For details, refer to the CANON iIMAGE GATEWAY website.
- Up to 50 images can be sent together at once. You can send movies together as long as the total playback time is within two minutes. However, if the destination is a Web service, the number of movies and images that can be sent may be less depending on the Web service. See the desired Web service for details.
- Depending on the condition of the network you are using, it may take a long time to send movies. Be sure to keep an eye on the camera battery level.
- When connected to a computer, images are transferred using the computer (included software CameraWindow) instead of the camera (123).



## 1 Choose [Select and send].

- Press the **<▲><▼><◀><▶>** buttons to choose [Select and send], and then press the **<FUNC./SET>** button.



## 2 Choose images.

- Press the **<▲><▼><◀><▶>** buttons to choose an image to send, and then press the **<FUNC./SET>** button. [✓] is displayed.
- To cancel selection, press the **<FUNC./SET>** button again. [✓] is no longer displayed.
- Repeat this process to choose additional images.
- After you finish choosing images, press the **<MENU>** button.



## 3 Send the images.

- Press the **<▲><▼><◀><▶>** buttons to choose [Send], and then press the **<FUNC./SET>** button. Press the **<▲><▼>** buttons to choose the resolution (size) of images to send, and then press the **<MENU>** button.
- Press the **<▲><▼><◀><▶>** buttons to choose [Send], and then press the **<FUNC./SET>** button.
- When uploading to YouTube, read the terms of service, choose [I Agree], and press the **<FUNC./SET>** button.
- Image transfer will begin. The screen darkens during image transfer.
- After images are uploaded to a Web service, [OK] is displayed. Press the **<FUNC./SET>** button to return to the playback screen.



## Adding Comments

Using the camera, you can add comments (alphanumeric characters and symbols) to images that you send to email addresses, social networking services, etc. The number of characters and symbols that can be entered may differ depending on the Web service.

- ▶ After sending images to a camera or smartphone, [Transfer completed] will be displayed, and the display will return to the image transfer screen.

---

- Keep your fingers or other objects off the Wi-Fi transmitter-receiver (4). Covering this may decrease the speed of your image transfers.
- On the screen, wireless signal strength is indicated by the following icons. [ ] high, [ ] medium, [ ] low, [ ] weak
- To disconnect from the camera, press the <MENU> button. After the confirmation message, press the <><>>> buttons to choose [OK], and then press the <FUNC./SET> button. You can also use the smartphone to end the connection.
- Only images larger than the resolution you selected in step 3 will be resized.
- Movies cannot be resized.
- To send only one of the displayed images, choose [Resize] on the screen in step 1, change the size, and choose [Send this image].



### 1 Choose [ ].

- Press the <▲><▼><◀><▶> buttons to choose [ ], and then press the <FUNC./SET> button.

### 2 Add a comment.

- Follow step 3 in "Registering a Camera Nickname (First time only)" (111) to add a comment.

### 3 Send the images.

- Follow the steps in "Sending Images" (126) to send the image.



- When a comment is not entered, the comment set in CANON IMAGE GATEWAY is automatically sent.



# Sending Images to a Computer via CANON iIMAGE GATEWAY

Images on the memory card that have not been transferred already can be sent to a computer via CANON iIMAGE GATEWAY.

If the computer that you intend to send images to is turned off, the images will be stored temporarily on the CANON iIMAGE GATEWAY server. However, the images will be deleted after a while. Start up the computer so that they can be saved.

## 1 Choose the type of images to send (only when sending movies with images).

- Press the <MENU> button, and then choose [Wi-Fi Settings] on the [Wi-Fi] tab (29).
- Press the <▲><▼> buttons to choose [Send via Server], press the <◀><▶> buttons to choose [Stills/Movies], and then press the <MENU> button.
- When sending only still images, go to step 2.

## 2 Send the images.

- Follow the steps in “Establishing Web Service Connections” (114) to choose [ ].
- Once the connection is established, the images are sent. (The screen will close in about one minute.)



- After the images are sent, [OK] is displayed. Press the <DISP/SET> button to return to the playback screen.

- When the images have been sent successfully to the CANON iIMAGE GATEWAY server, [ ] is displayed on the screen.

## 3 Turn on the computer.

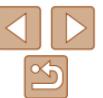
- Images are automatically saved to the computer when you turn it on.



- When sending images, you should use a fully charged battery or an AC adapter kit (sold separately). (141)



- Even if images were imported to the computer through a different method, any images not sent to the computer via CANON iIMAGE GATEWAY will be sent to the computer.



## Geotagging Images on the Camera

GPS data recorded on a smartphone using the dedicated CameraWindow application (115) can be added to images on the camera. Images are tagged with information including the latitude, longitude, and elevation.

- ! Before shooting, make sure the date and time and your home time zone are set correctly. (See “Setting the Date and Time” (14).) Additionally, in [Time Zone] (134), specify any shooting destinations that are in other time zones.
- The smartphone you will use for geotagging must be authorized to view the images on the camera (116).
- Others may be able to locate or identify you by using location data in your geotagged still images or movies. Be careful when sharing these images with others, as when posting images online where many others can view them.

## Editing or Erasing Wi-Fi Settings

Edit or erase Wi-Fi settings as follows.

### Editing Connection Information

Edit connection information saved to the camera. You can change device nicknames (display names) that are displayed on the camera, and erase connection information.

The following explains the procedure when the target device is a computer.

#### 1 Access the Wi-Fi menu.

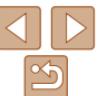
- Pressing the <▲> button will show recent target devices. To access the Wi-Fi menu, press the <◀><▶> buttons.

#### 2 Choose a device to edit.

- Press the <▲><▼><◀><▶> buttons to choose the icon of the device to edit, and then press the <> button.

#### 3 Choose [Edit a Device].

- Press the <▲><▼> buttons to choose [Edit a Device], and then press the <> button.





#### 4 Choose a device to edit.

- Press the <▲><▼> buttons to choose the device to edit, and then press the <> button.

#### 5 Choose an option to edit.

- Press the <▲><▼> buttons to choose an option to edit, and then press the <> button.
- The settings you can change depend on what device or service the camera will access.

Configurable Settings	Connection				
					Web Services
[Change Device Nickname] (130)	O	O	O	O	-
[View Settings] (116)	-	O	-	-	-
[Erase Connection Info] (130)	O	O	O	O	-

O : Configurable – : Not configurable

#### Changing a Device Nickname

You can change the device nickname (display name) that is displayed on the camera.



- Following step 5 in "Editing Connection Information" (130), choose [Change Device Nickname] and press the <> button.
- Select the input field and press the <> button. Use the keyboard displayed to enter a new nickname (111).

#### Erasing Connection Information

Erase connection information (information about devices that you have connected to) as follows.

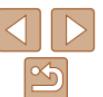


- Following step 5 in "Editing Connection Information" (130), choose [Erase Connection Info] and press the <> button.



- After [Erase?] is displayed, press the <◀><▶> buttons to choose [OK], and then press the <> button.
- The connection information will be erased.





## Returning the Wi-Fi Settings to Default

Return the Wi-Fi settings to default if you transfer ownership of the camera to another person, or dispose of it.



### 1 Choose [Wi-Fi Settings].

- Press the <MENU> button, and then choose [Wi-Fi Settings] on the [Wi-Fi] tab (29).



### 2 Choose [Reset Settings].

- Press the <▲><▼> buttons to choose [Reset Settings], and then press the <<sub>FUNC</sub>> button.



### 3 Restore the default settings.

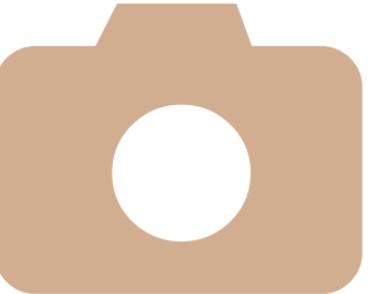
- Press the <◀><▶> buttons to choose [OK], and then press the <<sub>FUNC</sub>> button.
- The Wi-Fi settings are now reset.



- When returning the Wi-Fi settings to defaults, all Web services set using a computer will also be erased from the camera. Be sure that you want to reset all Wi-Fi settings before using this option.

To clear the settings completed in "Sending Images to a Computer via CANON iMAGE GATEWAY" (128), connect your camera to the computer and use CameraWindow to erase the connection information.

- To reset other settings (aside from Wi-Fi) to defaults, choose [Reset All] in the [Wi-Fi] tab.



# 7

## Setting Menu

Customize or adjust basic camera functions for greater convenience

Adjusting Basic Camera  
Functions.....133



## Adjusting Basic Camera Functions

Functions can be configured on the [FUNC] tab. Customize commonly used functions as desired, for greater convenience (29).

### Silencing Camera Operations

Silence camera sounds and movies as follows.



- Choose [Mute], and then choose [On].



- Operation can also be silenced by holding down the <▼> button as you turn the camera on.
- Sound is not played during movies if you mute camera sounds (84). To restore sound during movies, press the <▲> button. Adjust volume with the <▲><▼> buttons, as needed.

### Adjusting the Volume

Adjust the volume of individual camera sounds as follows.



- Choose [Volume], and then press the <FUNC SET> button.
- Choose an item, and then press the <◀><▶> buttons to adjust the volume.

## Hiding Hints and Tips

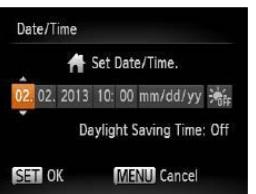
Hints and tips are normally shown when you choose FUNC. menu (28) or Menu (29) items. If you prefer, you can deactivate this information.



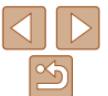
- Choose [Hints & Tips], and then choose [Off].

## Date and Time

Adjust the date and time as follows.



- Choose [Date/Time], and then press the <FUNC SET> button.
- Press the <◀><▶> buttons to choose an item, and then press the <▲><▼> buttons to adjust the setting.



## World Clock

To ensure that your shots will have the correct local date and time when you travel abroad, simply register the destination in advance and switch to that time zone. This convenient feature eliminates the need to change the Date/Time setting manually.

Before using the world clock, be sure to set the date and time and your home time zone, as described in "Setting the Date and Time" (14).



### 1 Specify your destination.

- Choose [Time Zone], and then press the <**FUNC/SET**> button.
- Press the <**▲**><**▼**> buttons to choose [**World**], and then press the <**FUNC/SET**> button.
- Press the <**◀**><**▶**> buttons to choose the destination.
- To set daylight saving time (1 hour ahead), press the <**▲**><**▼**> buttons to choose [**☀**].
- Press the <**FUNC/SET**> button.

### 2 Switch to the destination time zone.

- Press the <**▲**><**▼**> buttons to choose [**World**], and then press the <**MENU**> button.
- ▶ [**World**] is now shown on the shooting screen (162).



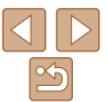
- Adjusting the date or time while in [**World**] mode (14) will automatically update your [**Home**] time and date.

## Lens Retraction Timing

The lens is normally retracted for safety about one minute after you press the <**REC**> button in Shooting mode (26). To have the lens retracted immediately after you press the <**REC**> button, set the retraction timing to [0 sec.].

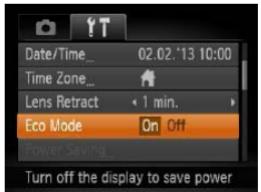


- Choose [Lens Retract], and then choose [0 sec.].



## Using Eco Mode

This function allows you to conserve battery power in Shooting mode. When the camera is not in use, the screen quickly darkens to reduce battery consumption.



### 1 Configure the setting.

- Choose [Eco Mode], and then choose [On].
- ▶ [ECO] is now shown on the shooting screen (162).
- ▶ The screen darkens when the camera is not used for approximately two seconds; approximately ten seconds after darkening, the screen turns off. The camera turns off after approximately three minutes of inactivity.

### 2 Shoot.

- To activate the screen and prepare for shooting when the screen is off but the lens is still out, press the shutter button halfway.

## Power-Saving Adjustment

Adjust the timing of automatic camera and screen deactivation (Auto Power Down and Display Off, respectively) as needed (26).



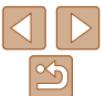
- Choose [Power Saving], and then press the <(SET)> button.
- After choosing an item, press the <><> buttons to adjust it as needed.



- To conserve battery power, you should normally choose [On] for [Auto Power Down] and [1 min.] or less for [Display Off].



- The [Display Off] setting is applied even if you set [Auto Power Down] to [Off].
- These power-saving functions are not available when you have set Eco mode (135) to [On].



## Screen Brightness

Adjust screen brightness as follows.



- Choose [LCD Brightness], and then press the <▶><▶> buttons to adjust the brightness.



- For maximum brightness, press and hold the <▶> button for at least one second when the shooting screen is displayed or when in single-image display. (This will override the [LCD Brightness] setting on the [?] tab.) To restore the original brightness, press and hold the <▶> button again for at least one second or restart the camera.

## Hiding the Start-up Screen

If you prefer, you can deactivate display of the start-up screen normally shown when you turn the camera on.



- Choose [Start-up Image], and then choose [Off].

## Formatting Memory Cards

Before using a new memory card or a card formatted in another device, you should format the card with this camera.

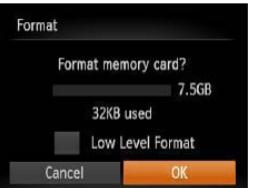
Formatting erases all data on a memory card. Before formatting, copy images on the memory card to a computer, or take other steps to back them up.

### 1 Access the [Format] screen.

- Choose [Format], and then press the <FUNC./SET> button.

### 2 Choose [OK].

- Press the <▲><▼> buttons to choose [Cancel], press the <◀><▶> buttons to choose [OK], and then press the <FUNC./SET> button.

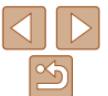


### 3 Format the memory card.

- To begin the formatting process, press the <▲><▼> buttons to choose [OK], and then press the <FUNC./SET> button.
- When formatting is finished, [Memory card formatting complete] is displayed. Press the <FUNC./SET> button.



- Formatting or erasing data on a memory card only changes file management information on the card and does not erase the data completely. When transferring or disposing of memory cards, take steps to protect personal information if necessary, as by physically destroying cards.





- The total card capacity indicated on the formatting screen may be less than the advertised capacity.

## Low-Level Formatting

Perform low-level formatting in these cases: [Memory card error] is displayed, the camera is not working correctly, card image reading/writing is slower, continuous shooting is slower, or movie recording suddenly stops. Low-level formatting erases all data on a memory card. Before low-level formatting, copy images on the memory card to a computer, or take other steps to back them up.



- On the screen in step 2 of “Formatting Memory Cards” (136), press the **<▲><▼>** buttons to choose [Low Level Format], and then press the **<◀><▶>** buttons to select this option. A [✓] icon is displayed.
- Follow steps 2 – 3 in “Formatting Memory Cards” (136) to continue with the formatting process.



- Low-level formatting takes longer than “Formatting Memory Cards” (136), because data is erased from all storage regions of the memory card.
- You can cancel low-level formatting in progress by choosing [Stop]. In this case, all data will be erased, but the memory card can be used normally.

## File Numbering

Your shots are automatically numbered in sequential order (0001 – 9999) and saved in folders that store up to 2,000 images each. You can change how the camera assigns file numbers.



- Choose [File Numbering], and then choose an option.

Continuous	Images are numbered consecutively (until the 9999th shot is taken/saved) even if you switch memory cards.
Auto Reset	Image numbering is reset to 0001 if you switch memory cards, or when a new folder is created.



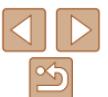
- Regardless of the option selected in this setting, shots may be numbered consecutively after the last number of existing images on newly inserted memory cards. To start saving shots from 0001, use an empty (or formatted (136)) memory card.
- Refer to the *Software Guide* (19) for information on the card folder structure and image formats.

## Date-Based Image Storage

Instead of saving images in folders created each month, you can have the camera create folders each day you shoot to store shots taken that day.



- Choose [Create Folder], and then choose [Daily].
- Images will now be saved in folders created on the shooting date.



## Metric/Non-Metric Display

Change the unit of measurement shown in GPS information for elevation (85) and elsewhere from m/cm to ft/in as needed.



- Choose [Units], and then choose [ft/in].

## Checking Certification Logos

Some logos for certification requirements met by the camera can be viewed on the screen. Other certification logos are printed in this guide, on the camera packaging, or on the camera body.



- Choose [Certification Logo Display], and then press the <> button.

## Display Language

Change the display language as needed.

English	Suomi	Magyar
Dansk	Norsk	Türkçe
Français	Svenska	繁體中文
Nederlands	Español	한국어
Dansk	简体中文	ไทย
Italiano	Русский	العربية
Українська	Português	Română
B. Malaysia	Ελληνικά	فارسی
Indonesian	Polski	泰國語
Tiếng Việt	Čeština	日本語

- Choose [Language ], and then press the <> button.
- Press the <><><><> buttons to choose a language, and then press the <> button.

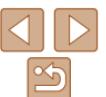


- You can also access the [Language] screen in Playback mode by pressing and holding the <> button and immediately pressing the <> button.

## Adjusting Other Settings

The following settings can also be adjusted on the [] tab.

- [Video System] (144)
- [Ctrl via HDMI] (143)
- [Wi-Fi Settings] (106)



## Restoring Defaults

If you accidentally change a setting, you can restore default camera settings.

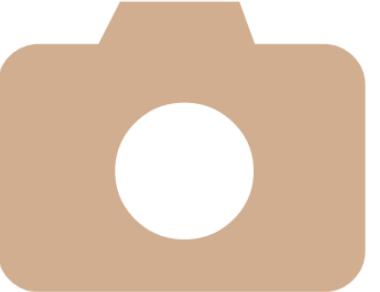


- Choose [Reset All], and then press the <FUNC/SET> button.
- Press the <◀><▶> buttons to choose [OK], and then press the <FUNC/SET> button.
- ▶ Default settings are now restored.



- The following functions are not restored to default settings.
- Information registered using Face ID (42)
- Shooting mode (55)
- Colors chosen in Color Accent (60) or Color Swap (61)
- Movie mode (67)
- Custom white balance data you have recorded (72)
- Wi-Fi settings (106)
- [¶] tab settings [Date/Time] (133), [Time Zone] (134), [Video System] (144), and [Language] (138)





# 8

## Accessories

Enjoy the camera in more ways with optional Canon accessories and other compatible accessories sold separately

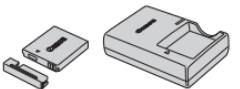
Optional Accessories.....	141
Using Optional Accessories..	142
Printing Images .....	146



## Optional Accessories

The following camera accessories are sold separately. Note that availability varies by area, and some accessories may no longer be available.

### Power Supplies



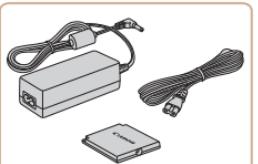
#### Battery Pack NB-4L

- Rechargeable lithium-ion battery

#### Battery Charger CB-2LV/CB-2LVE

- Charger for Battery Pack NB-4L

The battery includes a convenient cover which you can attach to know the charging status at a glance. Attach the cover so that ▲ is visible on a charged battery, and attach it so that ▲ is not visible on an uncharged battery.



#### AC Adapter Kit ACK-DC60

- For powering the camera using household power. Recommended when using the camera over extended periods, or when connecting the camera to a printer or computer. Cannot be used to charge the camera battery.

AC Adapter Kit ACK-DC10 can also be used.



- The battery charger and AC adapter kit can be used in areas with 100 – 240 V AC power (50/60 Hz).
- For power outlets in a different format, use a commercially available adapter for the plug. Never use an electrical transformer designed for traveling, which may damage the battery.

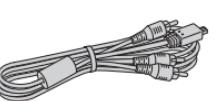
### Flash Unit



#### High-Power Flash HF-DC2

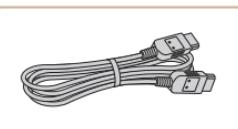
- External flash for illuminating subjects that are out of range of the built-in flash.

### Other Accessories



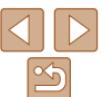
#### Stereo AV Cable AVC-DC400ST

- Connect the camera to a TV to enjoy playback on the larger TV screen.

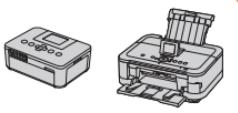


#### HDMI Cable HTC-100

- For connecting the camera to an HDMI input of a high-definition TV.



## Printers



### Canon-brand PictBridge-Compatible Printers

- Printing images without a computer is possible by connecting the camera to a Canon-brand PictBridge-compatible printer.  
For details, visit your nearest Canon dealer.

Still Images

Movies

## Using Optional Accessories

Still Images

Movies

### Playback on a TV

By connecting the camera to a TV, you can view your shots on the larger screen of the TV.

For details on connection or how to switch inputs, refer to the TV manual.



- Some information may not be displayed on the TV (163).

Still Images

Movies

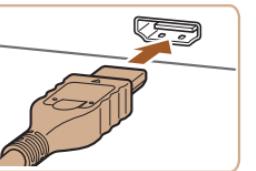
### Playback on a High-Definition TV

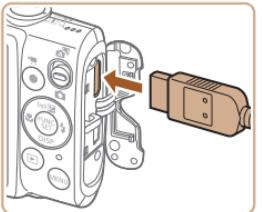
Connecting the camera to an HDTV with the HDMI Cable HTC-100 (sold separately) enables you to view your shots on the larger screen of the TV. Movies shot at a resolution of [1920] or [1280] can be viewed in high definition.

- 1 Make sure the camera and TV are off.

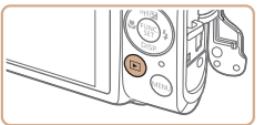
- 2 Connect the camera to the TV.

- On the TV, insert the cable plug fully into the HDMI input as shown.





- On the camera, open the terminal cover and insert the cable plug fully into the camera terminal.



### 3 Turn the TV on and switch to video input.

- Switch the TV input to the video input you connected the cable to in step 2.

### 4 Turn the camera on.

- Press the <**REC/MENU**> button to turn the camera on.  
▶ Images from the camera are now displayed on the TV. (Nothing is displayed on the camera screen.)
- When finished, turn off the camera and TV before disconnecting the cable.



- Camera operating sounds are not played while the camera is connected to an HDTV.

## Controlling the Camera with a TV Remote

Connecting the camera to an HDMI CEC-compatible TV enables playback (including slideshow playback) using the TV remote control. In this case, you will need to adjust some TV settings. For details, refer to the TV manual.



### 1 Configure the setting.

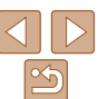
- Press the <**MENU**> button, choose [Ctrl via HDMI] on the [TV] tab, and then choose [Enable] (29).

### 2 Connect the camera to the TV.

- Follow steps 1 – 2 in "Playback on a High-Definition TV" (142) to connect the camera to the TV.

### 3 Display images.

- Turn on the TV. On the camera, press the <**REC/MENU**> button.  
▶ Images from the camera are now displayed on the TV. (Nothing is displayed on the camera screen.)



## 4 Control the camera with the TV remote.

- Press the <▶><▶> buttons on the remote to browse images.
- To display the camera control panel, press the OK>Select button. Select control panel items by pressing the <▶><▶> buttons to choose an item, and then pressing the OK>Select button again.

### Camera Control Panel Options Shown on the TV

◀ Return	Closes the menu.
◀ Group Playback	Displays sets of images shot in [◀] mode (65). (Only displayed when a grouped image is selected.)
▶ Play Movie	Starts movie playback. (Only displayed when a movie is selected.)
◀ Slideshow	Starts slideshow playback. To switch images during playback, press the <▶><▶> buttons on the remote control.
◀ Index Playback	Displays multiple images in an index.
DISP. Change Display	Switches display modes (27).

-  • Pressing the <MENU> button on the camera will switch control to the camera itself, which will prevent remote control until you return to single-image display.
- Moving the zoom lever on the camera will switch control to the camera itself, which will prevent remote control until you return to single-image display.
- The camera may not always respond correctly even if the remote is for an HDMI CEC-compatible TV.

Still Images

Movies

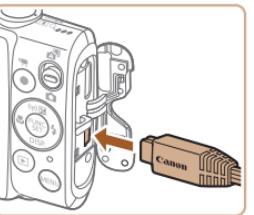
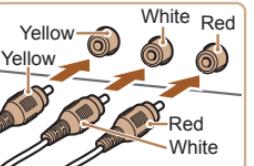
## Playback on a Standard-Definition TV

Connecting the camera to a TV with the Stereo AV Cable AVC-DC400ST (sold separately) enables you to view your shots on the larger screen of the TV as you control the camera.

### 1 Make sure the camera and TV are off.

### 2 Connect the camera to the TV.

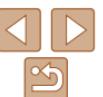
- On the TV, insert the cable plugs fully into the video inputs as shown.



- On the camera, open the terminal cover and insert the cable plug fully into the camera terminal.

### 3 Display images.

- Follow steps 3 – 4 in “Playback on a High-Definition TV” (143) to display images.



- !** • Correct display is not possible unless the camera video output format (NTSC or PAL) matches the TV format. To change the video output format, press the <MENU> button and choose [Video System] on the [TV] tab.

- Pencil** • When the camera and TV are connected, you can also shoot while previewing shots on the larger screen of the TV. To shoot, follow the same steps as when using the camera screen.  
• However, AF-Point Zoom (50) and Stitch Assist (66) are not available.

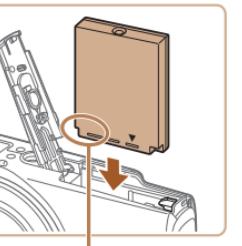
## Powering the Camera with Household Power

Powering the camera with AC Adapter Kit ACK-DC60 (sold separately) eliminates the need to monitor the remaining battery level.

### 1 Make sure the camera is off.

### 2 Insert the coupler.

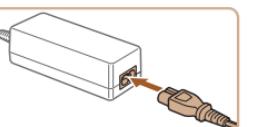
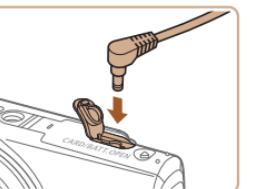
- Follow step 2 in “Inserting the Battery and Memory Card” (12) to open the cover.
- Insert the coupler facing the direction shown, just as you would a battery (following step 3 in “Inserting the Battery and Memory Card” (12)).
- Follow step 5 in “Inserting the Battery and Memory Card” (13) to close the cover.



Terminals

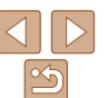
### 3 Connect the adapter to the coupler.

- Open the cover and insert the adapter plug fully into the coupler.



### 4 Connect the power cord.

- Insert one end of the power cord into the compact power adapter, and then plug the other end into a power outlet.
- Turn the camera on and use it as desired.



## Printing Images

When finished, turn the camera off and unplug the power cord from the outlet.

! Do not disconnect the adapter or unplug the power cord while the camera is still on. This may erase your shots or damage the camera.

Do not attach the adapter or adapter cord to other objects. Doing so could result in malfunction or damage to the product.

- AC Adapter Kit ACK-DC10 (sold separately) can also be used.



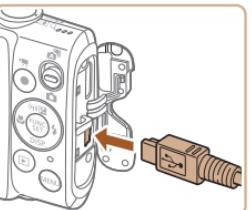
Your shots can easily be printed by connecting the camera to a printer. On the camera, you can specify images to set up batch printing, prepare orders for photo development services, and prepare orders or print images for photobooks.

A Canon SELPHY CP series compact photo printer is used here for the sake of illustration. Screens displayed and available functions vary by printer. Also refer to the printer manual for additional information.

### Easy Print

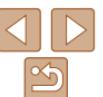
Easily print your shots by connecting the camera to a PictBridge-compatible printer (sold separately) with the included interface cable (2).

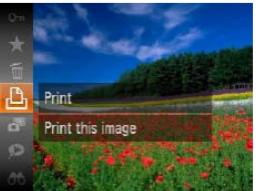
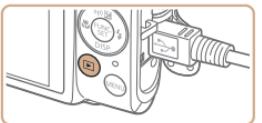
- 1 Make sure the camera and printer are off.



- 2 Connect the camera to the printer.

- Open the cover. Holding the smaller cable plug in the orientation shown, insert the plug fully into the camera terminal.
- Connect the larger cable plug to the printer. For other connection details, refer to the printer manual.





### 3 Turn the printer on.

### 4 Turn the camera on.

- Press the **<▶>** button to turn the camera on.

### 5 Choose an image.

- Press the **<◀><▶>** buttons to choose an image.

### 6 Access the printing screen.

- Press the **<FUNC./SET>** button, choose [Print], and press the **<FUNC./SET>** button again.

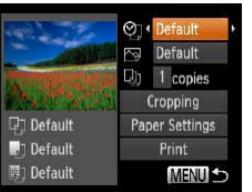
### 7 Print the image.

- Press the **<▲><▼>** buttons to choose [Print], and then press the **<FUNC./SET>** button.
- ▶ Printing now begins.
- To print other images, repeat the above procedures starting from step 5 after printing is finished.
- When you are finished printing, turn the camera and printer off and disconnect the cable.



- For Canon-brand PictBridge-compatible printers (sold separately), see "Printers" (142).

## Configuring Print Settings



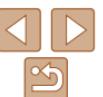
### 1 Access the printing screen.

- Follow steps 1 – 6 in "Easy Print" (146 – 147) to access the screen at left.

### 2 Configure the settings.

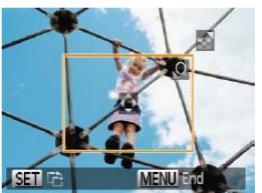
- Press the **<▲><▼>** buttons to choose an item, and then press the **<◀><▶>** buttons to choose an option.

	Default	Matches current printer settings.
	Date	Prints images with the date added.
	File No.	Prints images with the file number added.
	Both	Prints images with both the date and file number added.
	Off	–
	Default	Matches current printer settings.
	Off	–
	On	Uses information from the time of shooting to print under optimal settings.
	Red-Eye 1	Corrects red-eye.
	No. of Copies	Choose the number of copies to print.
	Cropping	– Specify a desired image area to print (148).
	Paper Settings	– Specify the paper size, layout, and other details (148).



## Cropping Images Before Printing (Cropping)

By cropping images before printing, you can print a desired image area instead of the entire image.



### 1 Choose [Cropping].

- After following step 1 in “Configuring Print Settings” (147) to access the printing screen, choose [Cropping] and press the <**FUNC/SET**> button.
- A cropping frame is now displayed, indicating the image area to print.

### 2 Adjust the cropping frame as needed.

- To resize the frame, move the zoom lever.
- To move the frame, press the <**▲**><**▼**><**◀**><**▶**> buttons.
- To rotate the frame, press the <**FUNC/SET**> button.
- Press the <**MENU**> button, press the <**▲**><**▼**> buttons to choose [OK], and then press the <**FUNC/SET**> button.

### 3 Print the image.

- Follow step 7 in “Easy Print” (147) to print.

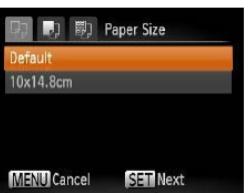


- Cropping may not be possible at small image sizes, or at some aspect ratios.
- Dates may not be printed correctly if you crop images shot with [Date Stamp] selected.

## Choosing Paper Size and Layout Before Printing

### 1 Choose [Paper Settings].

- After following step 1 in “Configuring Print Settings” (147) to access the printing screen, choose [Paper Settings] and press the <**FUNC/SET**> button.



### 2 Choose a paper size.

- Press the <**▲**><**▼**> buttons to choose an option, and then press the <**FUNC/SET**> button.

### 3 Choose a type of paper.

- Press the <**▲**><**▼**> buttons to choose an option, and then press the <**FUNC/SET**> button.





## 4 Choose a layout.

- Press the <▲><▼> buttons to choose an option.
- When choosing [N-up], press the <◀><▶> buttons to specify the number of images per sheet.
- Press the <FUNC SET> button.

## 5 Print the image.

### Available Layout Options

Default	Matches current printer settings.
Bordered	Prints with blank space around the image.
Borderless	Borderless, edge-to-edge printing.
N-up	Choose how many images to print per sheet.
ID Photo	Prints images for identification purposes. Only available for images with a resolution of L and an aspect ratio of 4:3.
Fixed Size	Choose the print size. Choose from 3.5 x 5 in., postcard, or wide-format prints.

## Printing ID Photos



## 1 Choose [ID Photo].

- Following steps 1 – 4 in “Choosing Paper Size and Layout Before Printing” (148 – 149), choose [ID Photo] and press the <FUNC SET> button.

## 2 Choose the long and short side length.

- Press the <▲><▼> buttons to choose an item. Choose the length by pressing the <◀><▶> buttons, and then press the <FUNC SET> button.

## 3 Choose the printing area.

- Follow step 2 in “Cropping Images Before Printing (Cropping)” (148) to choose the printing area.

## 4 Print the image.



## Printing Movie Scenes



### 1 Access the printing screen.

- Follow steps 1 – 6 in “Easy Print” (146 – 147) to choose a movie. The screen at left is displayed.

### 2 Choose a printing method.

- Press the <▲><▼> buttons to choose [ ], and then press the <◀><▶> buttons to choose the printing method.

### 3 Print the image.

## Movie Printing Options

Single	Prints the current scene as a still image.
Sequence	Prints a series of scenes, a certain interval apart, on a single sheet of paper. You can also print the folder number, file number, and elapsed time for the frame by setting [Caption] to [On].



- To cancel printing in progress, press the button.
- [ID Photo] and [Sequence] cannot be chosen on Canon-brand PictBridge-compatible printers from CP720/CP730 and earlier models.

## Adding Images to the Print List (DPOF)

Batch printing (152) and ordering prints from a photo development service can be set up on the camera. Choose up to 998 images on a memory card and configure relevant settings, such as the number of copies, as follows. The printing information you prepare this way will conform to DPOF (Digital Print Order Format) standards.

### Still Images

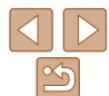
### Configuring Print Settings

Specify the printing format, whether to add the date or file number, and other settings as follows. These settings apply to all images in the print list.



- Press the <MENU> button, and then choose [Print Settings] on the [ ] tab. Choose and configure settings as desired (29).

Print Type	Standard	One image is printed per sheet.
	Index	Smaller versions of multiple images are printed per sheet.
	Both	Both standard and index formats are printed.
Date	On	Images are printed with the shooting date.
	Off	–
File No.	On	Images are printed with the file number.
	Off	–
Clear DPOF data	On	All image print list settings are cleared after printing.
	Off	–



- Not all of your DPOF settings may be applied in printing by the printer or photo development service, in some cases.
- [!] may be displayed on the camera to warn you that the memory card has print settings that were configured on another camera. Changing the print settings using this camera may overwrite all previous settings.
- Setting [Date] to [On] may cause some printers to print the date twice.

- Specifying [Index] will prevent you from choosing [On] for both [Date] and [File No.] at the same time.
- The date is printed in a format matching setting details in [Date/Time] on the [ ] tab, accessible by pressing the <MENU> button (14).
- Index printing is not available on some Canon-brand PictBridge-compatible printers (sold separately).

## Setting Up Printing for Individual Images



### 1 Choose [Select Images & Qty.]

- Press the <MENU> button, choose [Select Images & Qty.] on the [ ] tab, and then press the <<sub>FUNC</sub> SET> button.

### 2 Choose an image.

- Press the <◀><▶> buttons to choose an image, and then press the <<sub>FUNC</sub> SET> button.
- You can now specify the number of copies.
- If you specify index printing for the image, it is labeled with a [✓] icon. To cancel index printing for the image, press the <<sub>FUNC</sub> SET> button again. [✓] is no longer displayed.

### 3 Specify the number of prints.

- Press the <▲><▼> buttons to specify the number of prints (up to 99).
- To set up printing for other images and specify the number of prints, repeat steps 2 – 3.
- Printing quantity cannot be specified for index prints. You can only choose which images to print, by following step 2.
- When finished, press the <MENU> button to return to the menu screen.



## Setting Up Printing for a Range of Images



- Following step 1 in “Setting Up Printing for Individual Images” (151), choose [Select Range] and press the <**FUNC SET**> button.
- Follow steps 2 – 3 in “Selecting a Range” (94) to specify images.
- Press the <**▲><▼>** buttons to choose [Order], and then press the <**FUNC SET**> button.

## Setting Up Printing for All Images



- Following step 1 in “Setting Up Printing for Individual Images” (151), choose [Select All Images] and press the <**FUNC SET**> button.
- Press the <**◀><▶>** buttons to choose [OK], and then press the <**FUNC SET**> button.

## Clearing All Images from the Print List

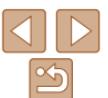


- Following step 1 in “Setting Up Printing for Individual Images” (151), choose [Clear All Selections] and press the <**FUNC SET**> button.
- Press the <**◀><▶>** buttons to choose [OK], and then press the <**FUNC SET**> button.

## Printing Images Added to the Print List (DPOF)



- When images have been added to the print list (150 – 152), the screen at left is displayed after you connect the camera to a PictBridge-compatible printer. Press the <**▲><▼>** buttons to choose [Print now], and then simply press the <**FUNC SET**> button to print the images in the print list.
- Any DPOF print job that you temporarily stop will be resumed from the next image.



## Adding Images to a Photobook

Photobooks can be set up on the camera by choosing up to 998 images on a memory card and importing them into the included software on your computer, where they are stored in their own folder. This is convenient when ordering printed photobooks online or printing photobooks with your own printer.

### Choosing a Selection Method



- Press the <MENU> button, choose [Photobook Set-up] on the [ ] tab, and then choose how you will select images.

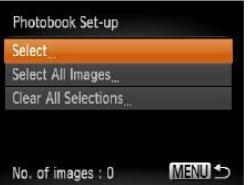


- [!] may be displayed on the camera to warn you that the memory card has print settings that were configured on another camera. Changing the print settings using this camera may overwrite all previous settings.



- After importing images to your computer, also refer to the *Software Guide* (19) and the printer manual for further information.

## Adding Images Individually

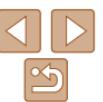


### 1 Choose [Select].

- Following the procedure in "Choosing a Selection Method" (153), choose [Select] and press the <FUNC/SET> button.

### 2 Choose an image.

- Press the < >< >> buttons to choose an image, and then press the <FUNC/SET> button. ► [✓] is displayed.
- To remove the image from the photobook, press the <FUNC/SET> button again. [✓] is no longer displayed.
- Repeat this process to specify other images.
- When finished, press the <MENU> button to return to the menu screen.



## ■ Adding All Images to a Photobook



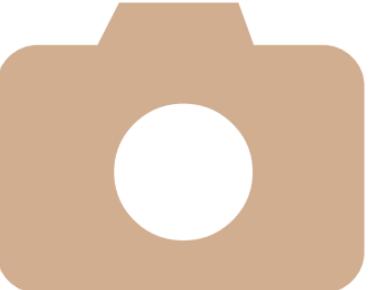
- Following the procedure in “Choosing a Selection Method” (153), choose [Select All Images] and press the <> button.
- Press the <><> buttons to choose [OK], and then press the <> button.

## ■ Removing All Images from a Photobook



- Following the procedure in “Choosing a Selection Method” (153), choose [Clear All Selections] and press the <> button.
- Press the <><> buttons to choose [OK], and then press the <> button.



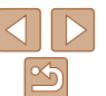


# 9

## Appendix

Helpful information when using the camera

Troubleshooting .....	156	Functions and Menu Tables ..	164
On-Screen Messages .....	159	Handling Precautions .....	170
On-Screen Information .....	162	Specifications .....	171



# Troubleshooting

If you think there is a problem with the camera, first check the following. If the items below do not solve your problem, contact a Canon Customer Support Help Desk.

## Power

### Nothing happens when the power button is pressed.

- Confirm that the battery is charged (11).
- Confirm that the battery is inserted facing the correct way (12).
- Confirm that the memory card/battery cover is fully closed (13).
- Dirty battery terminals reduce battery performance. Try cleaning the terminals with a cotton swab and reinserting the battery a few times.

### The battery is depleted quickly.

- Battery performance decreases at low temperatures. Try warming the battery a little by putting it in your pocket, for example, ensuring that the terminals do not touch any metal objects.
- If these measures do not help and the battery is still depleted soon after charging, it has reached the end of its life. Purchase a new battery.

### The lens is not retracted.

- Do not open the memory card/battery cover while the camera is on. Close the cover, turn the camera on, and then turn it off again (13).

### The battery is swollen.

- Battery swelling is normal and does not pose any safety concerns. However, if battery swelling prevents the battery from fitting in the camera, contact a Canon Customer Support Help Desk.

## Display on a TV

Camera images look distorted or not displayed on a TV (145).

## Shooting

### Cannot shoot.

- In Playback mode (15), press the shutter button halfway (27).

### Strange display on the screen under low light (27).

### Strange display on the screen when shooting.

Note that the following display problems are not recorded in still images but are recorded in movies.

- The screen may flicker and horizontal banding may appear under fluorescent or LED lighting.

### No date stamp is added to images.

- Configure the [Date Stamp] setting (133). Note that date stamps are not added to images automatically, merely because you have configured the [Date/Time] setting (41).
- Date stamps are not added in shooting modes (168) in which this setting cannot be configured (41).

### [] flashes on the screen when the shutter button is pressed, and shooting is not possible (35).

### [] is displayed when the shutter button is pressed halfway (40).

- Set [IS Mode] to [Continuous] (82).
- Set the flash mode to [] (80).
- Increase the ISO speed (71).
- Mount the camera on a tripod or take other measures to keep it still. In this case, you should set [IS Mode] to [Off] (82).

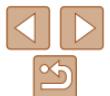
### Shots are out of focus.

- Press the shutter button halfway to focus on subjects before pressing it all the way down to shoot (27).
- Make sure subjects are within focusing range (173).
- Set [AF-assist Beam] to [On] (51).
- Confirm that unneeded functions such as macro are deactivated.
- Try shooting with focus lock or AF lock (78, 79).

### No AF frames are displayed and the camera does not focus when the shutter button is pressed halfway.

- To have AF frames displayed and the camera focus correctly, try composing the shot with higher-contrast subject areas centered before you press the shutter button halfway. Otherwise, try pressing the shutter button halfway repeatedly.





## Subjects in shots look too dark.

- Set the flash mode to [↓] (80).
- Adjust brightness by using exposure compensation (69).
- Adjust contrast by using i-Contrast (71, 103).
- Use AE lock or spot metering (70).

## Subjects look too bright, highlights are washed-out.

- Set the flash mode to [+] (40).
- Adjust brightness by using exposure compensation (69).
- Use AE lock or spot metering (70).
- Reduce the lighting on subjects.

## Shots look too dark despite the flash firing (35).

- Shoot within flash range (172).
- Increase the ISO speed (71).

## Subjects in flash shots look too bright, highlights are washed-out.

- Shoot within flash range (172).
- Set the flash mode to [+] (40).

## White dots or similar image artifacts appear in flash shots.

- This is caused by light from the flash reflecting off dust or airborne particles.

## Shots look grainy.

- Lower the ISO speed (71).
- High ISO speeds in some shooting modes may cause grainy images (56).

## Subjects are affected by red-eye (48).

- Set [Red-Eye Lamp] to [On] (52) to activate the red-eye reduction lamp (4) in flash shots. Note that while the red-eye reduction lamp is on (for about one second), it is not possible to shoot, because the lamp is counteracting red-eye. For best results, have subjects look at the red-eye reduction lamp. Also try increasing the lighting in indoor scenes and shooting at closer range.
- Edit images using red-eye correction (103).

## Recording to the memory card takes too long, or continuous shooting is slower.

- Use the camera to perform low-level formatting of the memory card (137).

## Shooting settings or FUNC. menu settings are not available.

- Available setting items vary by shooting mode. Refer to "Functions Available in Each Shooting Mode", "FUNC. Menu", and "Shooting Menu" (164 – 167).

## The Babies or Children icon does not display.

- The Babies and Children icons will not display if the birthday is not set in face information (42). If the icons still do not display even when you set the birthday, re-register face information (42), or make sure that the date/time are set correctly (133).

## Shooting Movies

### The elapsed time shown is incorrect, or recording is interrupted.

- Use the camera to format the memory card, or switch to a card that supports high-speed recording. Note that even if the elapsed time display is incorrect, the length of movies on the memory card corresponds to the actual recording time (136, 172).

### [!] is displayed and shooting stops automatically.

The camera's internal memory buffer filled up as the camera could not record to the memory card quickly enough. Try one of the following measures.

- Use the camera to perform low-level formatting of the memory card (137).
- Lower the image quality (49).
- Switch to a memory card that supports high-speed recording (172).

### Zooming is not possible.

- Zooming is not possible when shooting movies in [■] (58) and [■] (67) modes.

### Subjects look distorted.

- Subjects that pass in front of the camera quickly may look distorted. This is not a malfunction.

## Playback

### Playback is not possible.

- Image or movie playback may not be possible if a computer is used to rename files or alter the folder structure. Refer to the *Software Guide* (19) for details on folder structure and file names.

### Playback stops, or audio skips.

- Switch to a memory card that you have performed low-level formatting on with the camera (137).
- There may be brief interruptions when playing movies copied to memory cards that have slow read speeds.
- When movies are played on a computer, frames may be dropped and audio may skip if computer performance is inadequate.

### Sound is not played during movies.

- Adjust the volume (84) if you have activated [Mute] (133) or the sound in the movie is faint.
- No sound is played for movies shot in [ ] (58) or [ ] (67) mode because audio is not recorded in these modes.

## Memory Card

### The memory card is not recognized.

- Restart the camera, with the memory card in it (12).

## Computer

### Cannot transfer images to a computer.

When attempting to transfer images to the computer via a cable, try reducing the transfer speed as follows.

- Press the < > button to enter Playback mode. Hold the <MENU> button down as you press the <> and <<sup>Fn</sup>> buttons at the same time. On the next screen, press the <>> buttons to choose [B], and then press the <<sup>OK</sup>> button.

## Wi-Fi

### Cannot access the Wi-Fi menu by pressing the <> button.

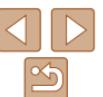
- The Wi-Fi menu is not available in Shooting mode. Switch to Playback mode and try again.
- In Playback mode, the Wi-Fi menu cannot be accessed during detailed information display, magnified display, or index display. Switch to single-image display and a viewing mode other than detailed information display. Similarly, the Wi-Fi menu cannot be accessed during filtered image display according to specified conditions. Cancel the playback state of the image in image search mode.
- The Wi-Fi menu cannot be accessed while the camera is connected to a printer, computer, or TV via a cable. Disconnect the cable.

### Cannot add a device/destination.

- A total of 20 items of connection information can be added to the camera. Erase unneeded connection information from the camera first, and then add new devices/destinations (129).
- To add Web services to send images to, install CameraWindow and complete the settings in CameraWindow (112).
- To add a smartphone as a device, first install the dedicated application CameraWindow on your smartphone.
- To add a computer as a device, first install the included software CameraWindow on the computer. Also check your computer and Wi-Fi environment and settings (118, 120).
- Do not use the camera near sources of Wi-Fi signal interference, such as microwave ovens, Bluetooth devices, or other equipment operating on the 2.4 GHz band.
- Bring the camera closer to the other device you are trying to connect to (such as the access point), and make sure there are no objects between the devices.

### Cannot send images.

- The destination device has insufficient storage space. Increase the storage space on the destination device and resend the images.
- The write-protect tab of the memory card in the destination camera is set to the locked position. Slide the write-protect tab to the unlocked position.



**Cannot resize images for sending.**

- Images cannot be resized to be bigger than the resolution setting of their original size.
- Movies cannot be resized.

**Images take a long time to send./The Wi-Fi connection is disrupted.**

- Multiple images may take a long time to send. Try resizing the image to [M2] or [S] to reduce sending time (126).
- Movies may take a long time to send.
- Do not use the camera near sources of Wi-Fi signal interference, such as microwave ovens, Bluetooth devices, or other equipment operating on the 2.4 GHz band. Note that images may take a long time to send even when [T1] is displayed.
- Bring the camera closer to the other device you are trying to connect to (such as the access point), and make sure there are no objects between the devices.
- When sending images to a computer from a memory card with a large amount of images (approximately 1,000), the connection may be disrupted. Import any necessary images to a computer, and then reduce the number of images on the memory card by erasing unnecessary images.

**Want to erase Wi-Fi connection information before disposing of the camera or giving it to someone else.**

- Reset the Wi-Fi settings (131).

**On-Screen Messages**

If an error message is displayed, respond as follows.

**No memory card**

- The memory card may be inserted facing the wrong way. Reinsert the memory card facing the correct way (13).

**Memory card locked**

- The write-protect tab of the memory card is set to the locked position. Switch the write-protect tab to the unlocked position (12).

**Cannot record!**

- Shooting was attempted without a memory card in the camera. To shoot, insert a memory card facing the correct way (13).

**Memory card error (137)**

- If the same error message is displayed even after you have formatted a supported memory card (2) and have inserted it facing the correct way, contact a Canon Customer Support Help Desk (13).

**Insufficient space on card**

- There is not enough free space on the memory card to shoot (31, 54, 68) or edit images (100 – 103). Either erase unneeded images (96) or insert a memory card with enough free space (12).

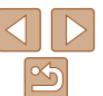
**Charge the battery (11)****No Image.**

- The memory card does not contain any images that can be displayed.

**Protected! (93)****Unidentified Image/Incompatible JPEG/Image too large./Cannot play back MOV/Cannot play back MP4**

- Unsupported or corrupt images cannot be displayed.
- It may not be possible to display images that were edited or renamed on a computer, or images shot with another camera.





## Cannot magnify!/Cannot play back this content in Smart Shuffle/ Cannot rotate/Cannot modify image/Cannot modify/Cannot assign to category/Unselectable image./No identification information

- The following functions may be unavailable for images that were renamed or already edited on a computer, or images shot with another camera. Note that starred (\*) functions are not available for movies.  
Magnify\* (91), Smart Shuffle\* (92), Rotate (98), Edit\* (100 – 103), Print List\* (150), Photobook Set-up\* (153), and Edit ID Info\* (90).
- Grouped images cannot be processed (66).

## Invalid selection range

- When specifying a range for image selection (94, 97), you attempted to choose an initial image that was after the final image, or vice-versa.

## Exceeded selection limit

- More than 998 images were selected for Print List (150) or Photobook Set-up (153). Choose 998 images or less.
- Print List (150) or Photobook Set-up (153) settings could not be saved correctly. Reduce the number of selected images and try again.
- You attempted to choose more than 500 images in Protect (93), Erase (96), Favorites (99), Print List (150), or Photobook Set-up (153).

## Communication error

- An excessive amount of images (approx. 1,000) on the memory card prevented printing or image transfer to a computer. To transfer the images, use a commercially available USB card reader. To print, insert the memory card directly into the printer card slot.

## Naming error!

- The folder could not be created or images could not be recorded, because the highest supported folder number (999) for storing images on the card has been reached and the highest supported image number (9999) for images in folders has been reached. In the [ ] menu, change [File Numbering] to [Auto Reset] (137), or format the memory card (136).

## Lens Error

- This error may occur if the lens is held while it is moving, or when the camera is used in dusty or sandy locations.
- Frequent display of this error message may indicate camera damage. In this case, contact a Canon Customer Support Help Desk.

## A camera error was detected (error number)

- If this error message is displayed immediately after a shot, the image may not have been saved. Switch to Playback mode to check for the image.
- Frequent display of this error message may indicate camera damage. In this case, write down the error number (Exx) and contact a Canon Customer Support Help Desk.

## File Error

- Correct printing (146) may not be possible for photos from other cameras or images that have been altered using computer software, even if the camera is connected to the printer.

## Print error

- Check the paper size setting (148). If this error message is displayed when the setting is correct, restart the printer and complete the setting on the camera again.

## Ink absorber full

- Contact a Canon Customer Support Help Desk to request assistance with ink absorber replacement.

## Wi-Fi

### Connection failed

- No access points were recognized. Check the access point settings (120).
- A device could not be found. Turn the camera off and on again, and retry the connection.
- Check the device you want to connect to and make sure it is ready for connection.

### Cannot determine access point

- The WPS buttons on numerous access points were pressed simultaneously. Try reconnecting again.

### No access points found

- Check to make sure that the access point is turned on.
- When connecting to an access point manually, make sure that you entered the correct SSID.

### Incorrect Wi-Fi encryption key/Incorrect Wi-Fi security settings

- Check the access point security settings (119).

### IP address conflict

- Reset the IP address so that it does not conflict with another.

### Disconnected/Receiving failed/Sending failed

- You may be in an environment where Wi-Fi signals are obstructed.
- Avoid using the camera's Wi-Fi function around microwave ovens, Bluetooth devices, and other devices that operate on the 2.4 GHz band.
- Bring the camera closer to the other device you are trying to connect to (such as the access point), and make sure there are no objects between the devices.
- Check the connected device to make sure it is not experiencing errors.

### Sending failed

#### Memory card error

- If the same error message is displayed even when you have inserted a formatted memory card facing the correct way, contact a Canon Customer Support Help Desk.

### Receiving failed

#### Insufficient space on card

- There is not enough free space on the memory card to receive images. Erase images to create space on the memory card, or insert a memory card with sufficient space.

### Receiving failed

#### Memory card locked

- The write-protect tab of the memory card in the camera to receive the images is set to the locked position. Slide the write-protect tab to the unlocked position.

### Receiving failed

#### Naming error!

- When the highest folder number (999), and the highest image number (9999) have been reached on the receiving camera, images cannot be received.

### Insufficient space on server

- Delete unnecessary images uploaded to CANON iIMAGE GATEWAY to create space.
- Save the images sent via a server (128) on your computer.

### SSL certificate not valid

#### Connect to a computer, use the supplied software to reset

- Check to make sure the date/time settings on the camera are correct. After confirming that the settings are correct, follow the on-screen instructions and reset the settings.

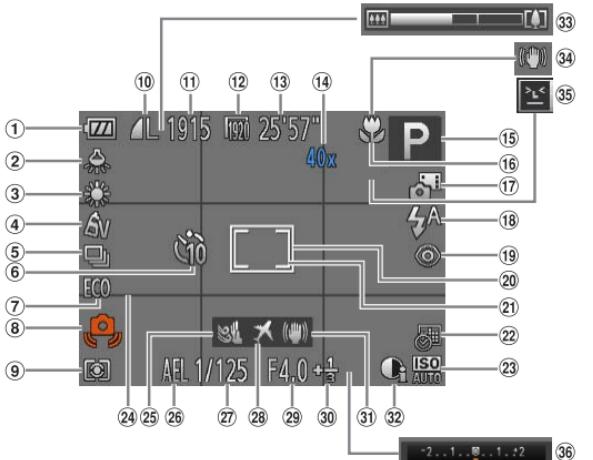
### Check network settings

- Check to make sure your computer can connect to the Internet with the current network settings.



## On-Screen Information

### Shooting (Information Display)



- ① Battery level (book icon 162)
- ② Mercury lamp correction (book icon 48)
- ③ White balance (book icon 72)
- ④ My Colors (book icon 73)
- ⑤ Drive mode (book icon 74)
- ⑥ Self-timer (book icon 39)
- ⑦ Eco mode (book icon 135)

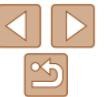
- ⑧ Camera shake warning (book icon 35)
- ⑨ Metering method (book icon 70)
- ⑩ Compression (image quality) (book icon 81) / Resolution (book icon 47)
- ⑪ Recordable shots (book icon 172)
- ⑫ Movie resolution (book icon 49)
- ⑬ Remaining time (book icon 172)
- ⑭ Digital zoom magnification (book icon 38), Digital tele-converter (book icon 75)
- ⑮ Shooting mode (book icon 164), Scene icon (book icon 36)

- ⑯ Focusing range (book icon 74), AF lock (book icon 79)
- ⑰ Hybrid Auto (book icon 34)
- ⑱ Flash mode (book icon 40, 80)
- ⑲ Red-eye correction (book icon 48)
- ⑳ AF frame (book icon 76)
- ㉑ Spot AE point frame (book icon 70)
- ㉒ Date stamp (book icon 41)
- ㉓ ISO speed (book icon 71)
- ㉔ Grid lines (book icon 50)
- ㉕ Wind filter (book icon 49)
- ㉖ AE lock (book icon 70), FE lock (book icon 81)
- ㉗ Shutter speed (book icon 40, 80)
- ㉘ Time zone (book icon 134)
- ㉙ Aperture value (book icon 51)
- ㉚ Exposure compensation level (book icon 69)
- ㉛ Exposure compensation bar (book icon 69)
- ㉜ Zoom bar (book icon 32)
- ㉝ IS mode icon (book icon 37)
- ㉞ Blink detection (book icon 51)
- ㉟ ECO (book icon 135)
- ㉟ AEL 1/125 (book icon 76)
- ㉟ F4.0 +1/3 (book icon 76)
- ㉟ 40x (book icon 38)
- ㉟ 19:15 (book icon 172)
- ㉟ 19:21 (book icon 172)
- ㉟ 25'57" (book icon 172)
- ㉟ 10 (book icon 172)
- ㉟ 11 (book icon 172)
- ㉟ 12 (book icon 172)
- ㉟ 13 (book icon 172)
- ㉟ 14 (book icon 172)
- ㉟ 15 (book icon 172)
- ㉟ 16 (book icon 172)
- ㉟ 17 (book icon 172)
- ㉟ 18 (book icon 172)
- ㉟ 19 (book icon 172)
- ㉟ 20 (book icon 172)
- ㉟ 21 (book icon 172)
- ㉟ 22 (book icon 172)
- ㉟ 23 (book icon 172)
- ㉟ 24 (book icon 172)
- ㉟ 25 (book icon 172)
- ㉟ 26 (book icon 172)
- ㉟ 27 (book icon 172)
- ㉟ 28 (book icon 172)
- ㉟ 29 (book icon 172)
- ㉟ 30 (book icon 172)
- ㉟ 31 (book icon 172)
- ㉟ 32 (book icon 172)
- ㉟ 33 (book icon 172)
- ㉟ 34 (book icon 172)
- ㉟ 35 (book icon 172)

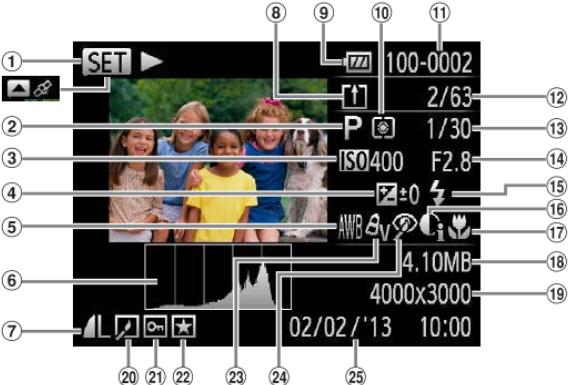
### Battery Level

An on-screen icon or message indicates the battery charge level.

Display	Details
	Sufficient charge
	Slightly depleted, but sufficient
	Nearly depleted—charge the battery soon
[Charge the battery]	Depleted—charge the battery immediately



## Playback (Detailed Information Display)



- ① Movies (32, 84), High-speed burst (65), GPS information display (85)
- ② Shooting mode (164)
- ③ ISO speed (71), Playback speed (58)
- ④ Exposure compensation level (69)
- ⑤ White balance (72)
- ⑥ Histogram (85)
- ⑦ Compression (image quality) (81) / Resolution (47, 49), MOV (movies)
- ⑧ Images have been saved on a computer (128)
- ⑨ Battery level (162)
- ⑩ Metering method (70)
- ⑪ Folder number - File number (137)
- ⑫ Current image no. / Total no. of images
- ⑬ Shutter speed (still images), Image quality / Frame rate (movies) (49)
- ⑭ Aperture value
- ⑮ Flash (80)
- ⑯ i-Contrast (71, 103)
- ⑰ Focusing range (74)
- ⑱ File size
- ⑲ Still images: Resolution (172) Movies: Playback time (172)
- ㉑ Group playback (89), Image editing (100 – 103)
- ㉒ Favorites (99)
- ㉓ My Colors (73, 102), Mercury lamp correction (48)
- ㉔ Red-eye correction (48, 103)
- ㉕ Shooting date/time (14)
- ㉖ Protection (93)

- ㉖ Protection (93)



- Some information may not be displayed when viewing images on a TV (142).

## Summary of Movie Control Panel in “Viewing” (84)

- ◀ Exit
- ▶ Play
- ▶ Slow Motion (Press the <◀>▶ buttons to adjust the playback speed. No sound is played.)
- ◀ Skip Backward\* or Previous Clip (34) (To continue skipping backward, keep holding down the <▶> button.)
- ◀◀ Previous Frame (For fast-rewind, keep holding down the <▶> button.)
- ▶▶ Next Frame (For fast-forward, keep holding down the <▶> button.)
- ▶ Skip Forward\* or Next Clip (34) (To continue skipping forward, keep holding down the <▶> button.)
- ◀◀ Edit (104)
- ◀ Erase Clip (displayed when a digest movie is selected (105))
- ◀ Shown when the camera is connected to a PictBridge-compatible printer (146).

\* Displays the frame approx. 4 sec. before or after the current frame.

- During movie playback, you can skip back or forward (or to the previous or next chapter) by pressing the <◀>▶ buttons.



## **Functions and Menu Tables**

## **Functions Available in Each Shooting Mode**

\*1 Not available, but switches to [4:1] in some cases.

\*? EE lock not available in [④] flash mode

Available or set automatically. – Not available.



## FUNC. Menu

Function	Shooting Mode		[ ]																								
	AUTO	P																									
Metering Method (70)	[ ]	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O
	[ ]	-	-	O	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
My Colors (73)	[ ]	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O
	[ ]	-	-	O	-	-	O	O	O	-	-	-	-	-	-	-	-	-	-	-	-	O	O	-			
White Balance (72)	[ ]	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O
	[ ]	-	-	O	-	-	O	O	O	O	-	-	-	-	-	-	-	-	-	-	-	O	O	-			
ISO Speed (71)	[ ]	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O
	[ ]	-	-	O	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Self-Timer (39)	[ ]	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O
	[ ]	O	O	O	O	O	-	-	-	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O
Self-Timer Settings (40)	[ ]	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O
	[ ]	-	O	O	O	O	-	-	-	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O
*1 White balance is not available.																											
*2 Set in a range of 1 – 5: contrast, sharpness, color saturation, red, green, blue, and skin tone.																											
*3 Not available in [ ] or [ ].																											
*4 Cannot be set to 0 seconds in modes without selection of the number of shots.																											
*5 One shot (cannot be modified) in modes without selection of the number of shots.																											

O Available or set automatically. – Not available.

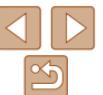
\*1 White balance is not available.

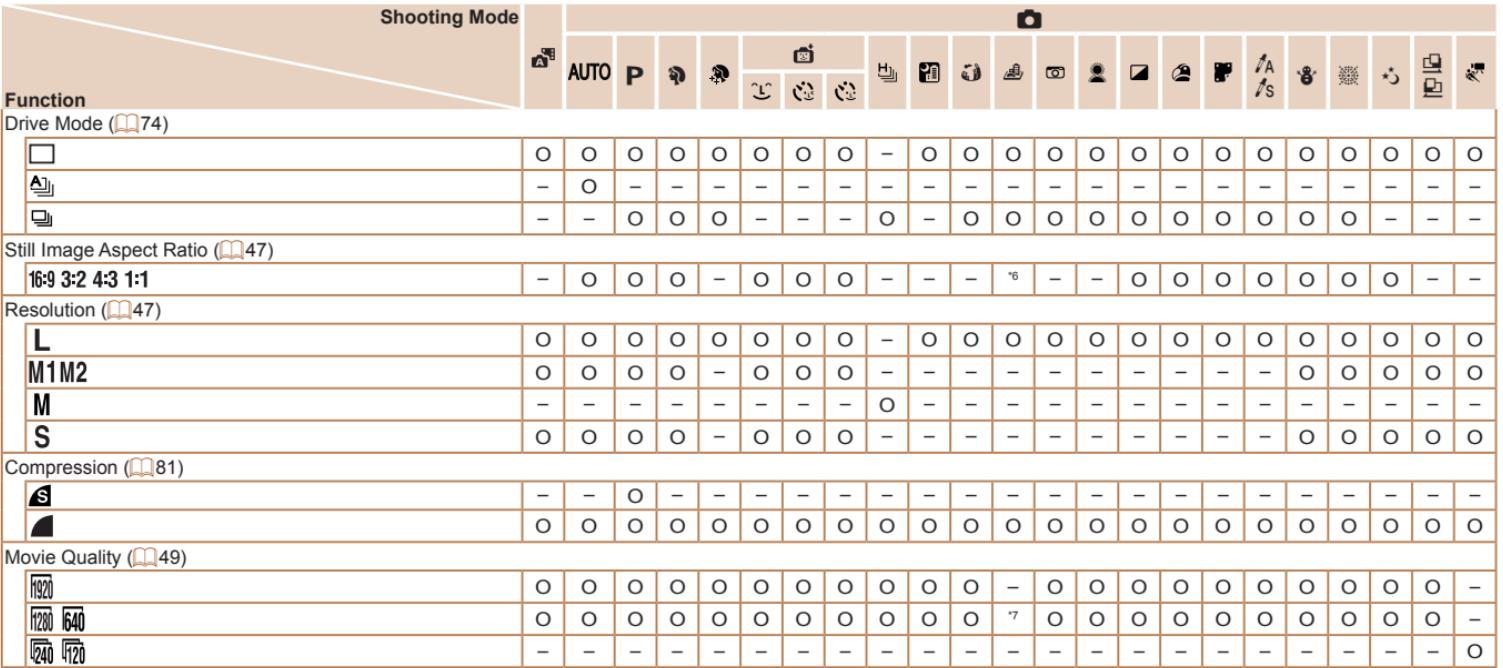
\*2 Set in a range of 1 – 5: contrast, sharpness, color saturation, red, green, blue, and skin tone.

\*3 Not available in [ ] or [ ].

\*4 Cannot be set to 0 seconds in modes without selection of the number of shots.

\*5 One shot (cannot be modified) in modes without selection of the number of shots.





\*6 Only [4:3] and [16:9] are available.

\*7 Synchronizes with the aspect ratio setting and is automatically set (58).

Available or set automatically. – Not available.

Cover

## Preliminary Notes and Legal Information

## Contents: Basic Operations

Basic Guide

Advanced Guide

## 1 Camera Basics

## **2** Auto Mode/Hybrid Auto Mode

## **3** Other Shooting Modes

## 4 P Mode

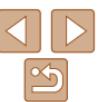
## **5** Playback Mode

## 6 Wi-Fi Functions

## 7 Setting Menu

## **8** Accessories

## 9 Appendix



## Shooting Menu

Function	Shooting Mode																				
		AUTO	P	SCN	MOVIE	FLASH	WB	ISO	EV	WHITE BAL	AE	AF	AF-S	AF-C	AF-A	AF-M	AF-L	AF-H	AF-P	AF-Z	AF-W
AF Frame (☞76)		O	O	O	O	O	O	O	O	O	-	-	O	O	O	O	O	O	-	O	-
Face AiAF*1		-	-	O	O	-	-	-	O	-	-	-	O	O	O	O	O	O	-	O	-
Tracking AF		-	-	O	O	-	-	-	O	-	-	-	O	O	O	O	O	O	-	O	-
Center		-	-	O	O	-	-	-	O	-	O	-	O	O	O	O	O	O	O	O	O
AF Frame Size (☞78)*2		-	-	O	O	-	-	-	O	-	O	-	O	O	O	O	O	O	O	O	O
Normal		-	-	O	O	-	-	-	O	-	-	-	O	O	O	O	O	O	-	O	-
Small		-	-	O	O	-	-	-	O	-	-	-	O	O	O	O	O	O	-	O	-
Digital Zoom (☞38)		O	O	O	O	-	O	O	O	-	-	-	-	-	-	-	-	O	O	O	-
Standard		O	O	O	O	O	O	O	O	O	-	-	-	-	-	-	-	O	O	O	-
Off		O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O
1.5x/2.0x		-	-	O	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AF-Point Zoom (☞50)		-	O	O	O	O	O	O	O	O	-	-	-	-	-	-	-	O	O	O	-
On		O	O	O	O	O	O	O	O	O	-	-	-	-	-	-	-	O	O	O	-
Off		O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O
Servo AF (☞78)		-	-	O	O	-	-	-	-	-	-	-	-	-	-	-	O	O	O	O	-
On		O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	-
Off*3		O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O
Continuous AF (☞79)		O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O
On		O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O
Off		-	-	O	O	O	-	-	-	O	O	O	O	O	O	O	O	O	O	O	-
AF-assist Beam (☞51)		O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O
On		O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O
Off		O	O	O	O	O	-	O	O	O	O	O	O	O	O	O	O	O	O	O	O
Flash Settings (☞48, 52)	On	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O
Red-Eye Corr.	On	O	O	O	O	-	O	O	O	-	O	-	-	-	-	-	-	O	-	O	-
Red-Eye Corr.	Off	O	O	O	O	O	O	O	O	-	O	O	O	O	O	O	O	O	-	O	O
Red-Eye Lamp	On/Off	O	O	O	O	O	O	O	-	O	O	O	O	O	O	O	O	O	-	O	O

\*1 Operation when no faces are detected varies by shooting mode.

O Available or set automatically. – Not available.

\*2 Available when the AF frame is set to [Center].

\*3 [On] when subject movement is detected in [AUTO] mode.



Function	Shooting Mode																										
	[]	AUTO	P	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]	[]
i-Contrast ( 71)	O	O	O	-	-	-	-	O	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Auto	O	O	O	-	-	-	-	O	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Off	-	-	O	O	O	O	O	O	-	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O
Hg Lamp Corr. ( 48)	-	O	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Wind Filter ( 49)	On/Off	-	O	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Review image after shooting ( 52)	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O
Display Time	Off/Quick/2 sec./4 sec./8 sec./Hold	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O
Display Info	Off	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O
Detailed	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O
Blink Detection ( 51)	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O
On	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O
Off	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O
Grid Lines ( 50)	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O
On	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O
Off	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O
IS Mode ( 82)	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O
Off	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O
Continuous	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O
Shoot Only	-	-	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O
Date Stamp  ( 41)	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O
Off	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O
Date / Date & Time	O	O	O	O	-	O	O	O	-	-	-	-	-	-	-	-	-	-	-	-	O	O	O	O	O	O	O
Face ID Settings ( 42)	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O

- When using [Face ID] ( 42) to shoot, names will not be displayed in [], [], [], [], or [], but they will be recorded in still images.
  - Setting available, but when using [Face ID] ( 42) to shoot, names will not be displayed in [], and they will not be recorded in movies.
- O Available or set automatically. – Not available.



## Set up Menu

Item	Ref. Page	Item	Ref. Page
Mute	 133	Format	 136, 137
Volume	 133	File Numbering	 137
Hints & Tips	 133	Create Folder	 137
Date/Time	 14	Units	 138
Time Zone	 134	Video System	 145
Lens Retract	 134	Ctrl via HDMI	 143
Eco Mode	 135	Wi-Fi Settings	 106
Power Saving	 26, 135	Certification Logo Display	 138
LCD Brightness	 136	Language 	 15
Start-up Image	 136	Reset All	 139

## Playback Menu

Item	Ref. Page	Item	Ref. Page
Slideshow	 91	Resize	 100
Erase	 96	My Colors	 102
Protect	 93	Face ID Info	 87
Rotate	 98	Scroll Display	 85
Favorites	 99	Group Images	 89
Photobook Set-up	 153	Auto Rotate	 99
i-Contrast	 103	Resume	 85
Red-Eye Correction	 103	Transition	 85
Cropping	 101		



## Print Menu

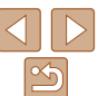
Item	Ref. Page	Item	Ref. Page
Print	-	Select All Images	152
Select Images & Qty.	151	Clear All Selections	152
Select Range	152	Print Settings	150

## Playback Mode FUNC. Menu

Item	Ref. Page	Item	Ref. Page
Rotate	98	Group Playback	89
Protect	93	Play Linked Digest Movie	86
Favorites	99	List/Play Digest Movies	86
Erase	96	Smart Shuffle	92
Print	146	Image Search	88
Play Movie	84	Slideshow	91

## Handling Precautions

- The camera is a high-precision electronic device. Avoid dropping it or subjecting it to strong impact.
- Never bring the camera near magnets, motors, or other devices that generate strong electromagnetic fields, which may cause malfunction or erase image data.
- If water droplets or dirt adheres to the camera or screen, wipe with a dry soft cloth, such as an eyeglass cloth. Do not rub hard or apply force.
- Never use cleaners containing organic solvents to clean the camera or screen.
- Use a blower brush to remove dust from the lens. If cleaning is difficult, contact a Canon Customer Support Help Desk.
- To prevent condensation from forming on the camera after sudden temperature changes (when the camera is transferred from cold to warm environments), put the camera in an airtight, resealable plastic bag and let it gradually adjust to the temperature before removing it from the bag.
- If condensation does form on the camera, stop using it immediately. Continuing to use the camera in this state may damage it. Remove the battery and memory card, and wait until the moisture has evaporated before resuming use.
- Before long-term battery storage, use up the battery's remaining charge, remove it from the camera, and store it in a plastic bag or similar container. Storing a partially charged battery over extended periods (about a year) may shorten its life or affect performance.



# Specifications

<b>Camera Effective Pixels (Max.)</b>	Approx. 12.1 million pixels
<b>Lens Focal Length</b>	10x zoom: 4.3 (W) – 43.0 (T) mm (35mm film equivalent: 24 (W) – 240 (T) mm)
<b>LCD Monitor</b>	3.0 type color TFT LCD Effective Pixels: Approx. 461,000 dots
<b>File Format</b>	Design rule for Camera File system, DPOF (version 1.1) compliant
<b>Data Type</b>	Still Images: Exif 2.3 (JPEG) Movies: MOV (Image data: H.264; Audio data: Linear PCM (stereo))
<b>Interface</b>	Hi-speed USB HDMI output Analog audio output (stereo) Analog video output (NTSC/PAL)
<b>Wi-Fi Standards</b>	IEEE802.11b/g/n* * 2.4 GHz band only
<b>Wi-Fi Transmission Methods</b>	OFDM modulation (IEEE 802.11g/n) DSSS modulation (IEEE 802.11b)
<b>Wi-Fi Communication Modes</b>	Infrastructure mode*, Ad hoc mode * Supports Wi-Fi Protected Setup
<b>Supported Wi-Fi Channels</b>	Power Shot ELPH 330 HS: 1 – 11 IXUS 255 HS: 1 – 13
<b>Wi-Fi Security</b>	WEP, WPA-PSK (AES/TKIP), WPA2-PSK (AES/TKIP)
<b>Power Source</b>	Battery Pack NB-4L AC Adapter Kit ACK-DC60
<b>Dimensions (Based on CIPA Guidelines)</b>	97.2 x 56.4 x 22.5 mm (3.83 x 2.22 x 0.89 in.)
<b>Weight (Based on CIPA Guidelines)</b>	Approx. 144 g (approx. 5.08 oz.; including the battery and memory card) Approx. 125 g (approx. 4.41 oz.; camera body only)

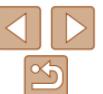
## Number of Shots/Recording Time, Playback Time

<b>Number of Shots</b>	Approx. 220
<b>in Eco mode</b>	Approx. 300
<b>Movie Recording Time<sup>*1</sup></b>	Approx. 45 minutes
<b>Continuous Shooting<sup>*2</sup></b>	Approx. 1 hour, 20 minutes
<b>Playback Time</b>	Approx. 4 hours

\*1 Time under default camera settings, when normal operations are performed, such as shooting, pausing, turning the camera on and off, and zooming.

\*2 Time available when shooting the maximum movie length (until recording stops automatically) repeatedly.

- The number of shots that can be taken is based on measurement guidelines of the Camera & Imaging Products Association (CIPA).
- Under some shooting conditions, the number of shots and recording time may be less than mentioned above.
- Number of shots/time with a fully charged battery.



## Number of 4:3 Shots per Memory Card

Recording Pixels	Compression Ratio	Number of Shots per Memory Card (Approx. shots)	
		8 GB	32 GB
<b>L</b> (Large) 12M/4000x3000		1379	5568
		2192	8850
<b>M1</b> (Medium 1) 6M/2816x2112		2431	9814
		3721	15020
<b>M2</b> (Medium 2) 2M/1600x1200		7442	30040
		12927	52176
<b>S</b> (Small) 0.3M/640x480		27291	110150
		40937	165225

- The values in the table are measured according to Canon standards and may change depending on the subject, memory card and camera settings.
- The values in the table are based on 4:3 aspect ratio. If the aspect ratio is changed (47), more images can be shot because the data size per image will be smaller than with 4:3 images. However, since [M2] 16:9 images have a setting of 1920 x 1080 pixels, their data size will be larger than 4:3 images.

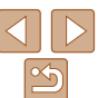
## Recording Time per Memory Card

Image Quality	Recording Time per Memory Card	
	8 GB	32 GB
	29 min. 37 sec.	1 hr. 59 min. 41 sec.
	42 min. 09 sec.	2 hr. 50 min. 17 sec.
	1 hr. 28 min. 53 sec.	5 hr. 59 min. 05 sec.

- The values in the table are measured according to Canon standards and may change depending on the subject, memory card and camera settings.
- Recording will automatically stop when the clip file size reaches 4 GB, or when the recording time reaches approximately 10 minutes when shooting in [1920] or [1280], and approximately 1 hour when shooting in [640].
- Recording may stop even if the maximum clip length has not been reached on some memory cards. SD Speed Class 6 or higher memory cards are recommended.

## Flash Range

Maximum wide angle (	50 cm – 4.0 m (1.6 – 13 ft.)
Maximum telephoto (	1.0 - 2.0 m (3.3 – 6.6 ft.)



## ■ Shooting Range

Shooting Mode	Focusing Range	Maximum Wide Angle (■)	Maximum Telephoto (□)
AUTO	–	1 cm (0.4 in.) – infinity	1 m (3.3 ft.) – infinity
Other modes	▲	5 cm (2.0 in.) – infinity	1 m (3.3 ft.) – infinity
	✿	1 cm – 50 cm (0.4 in. – 1.6 ft.)	–
	▲	3 m (9.8 ft.) – infinity	3 m (9.8 ft.) – infinity

\* Not available in some shooting modes.

## ■ Continuous Shooting Speed

Shooting Mode	Speed
P	Approx. 2.4 shots/sec.
H	Approx. 6.2 shots/sec.

## ■ Shutter Speed

[AUTO] mode, automatically set range | 1 – 1/2000 sec.

## ■ Aperture

f/number | f/3.0 / f/9.0 (W), f/6.9 / f/20 (T)

## ■ Battery Pack NB-4L

Type: Rechargeable lithium-ion battery

Nominal Voltage: 3.7 V DC

Nominal Capacity: 760 mAh

Charging Cycles: Approx. 300 times

Operating Temperatures: 0 – 40 °C (32 – 104 °F)

Dimensions: 35.4 x 40.3 x 5.9 mm (1.39 x 1.59 x 0.23 in.)

Weight: Approx. 17 g (approx. 0.60 oz.)

## ■ Battery Charger CB-2LV/CB-2LVE

Rated Input: 100 – 240 V AC (50/60 Hz), 0.1 A (100 V) – 0.06 A (240 V)

Rated Output: 4.2 V DC, 0.65 A

Charging Time: Approx. 1 hr. 30 min. (when using NB-4L)

Charge Indicator: Charging: orange / Fully charged: green

Operating Temperatures: 0 – 40 °C (32 – 104 °F)

- All data is based on tests by Canon.
- Camera specifications or appearance are subject to change without notice.



# Index

<b>A</b>	
AC adapter kit.....	141, 145
Accessories.....	141
Access point	
Manual settings.....	123
Number of display items.....	123
Adding target devices	
Camera.....	117
Computer.....	120
Printer.....	124
Smartphone.....	115
Web services.....	112
AE lock.....	70
AF frames.....	76
AF lock.....	79
Aspect ratio.....	47
AUTO mode (shooting mode).....	16, 32
<b>B</b>	
Batteries → Date/time (date/time battery)	
Battery	
Charging.....	11
Eco mode.....	135
Level.....	162
Power saving.....	26
Battery charger.....	2, 141
Black and white images.....	73
Blink detection.....	51, 52

<b>C</b>	
Camera	
Adding target devices.....	117
Nickname.....	111
Reset all.....	139
Camera Access Point mode.....	115, 124
Camera shake.....	82
CameraWindow	
Display.....	123
CANON iMAGE GATEWAY	
Settings.....	112
Center (AF frame mode).....	78
Clock.....	30
Color Accent (shooting mode).....	60
Color Swap (shooting mode).....	61
Color (white balance).....	72
Compression ratio (image quality).....	81
Computer	
Adding target devices.....	120
Environment.....	20
Preparation.....	118
Connection	
Web services.....	114
Connection information	
Changing nickname.....	130
Editing.....	129
Erasing.....	130
Continuous shooting.....	74
High-speed burst (shooting mode).....	65
Cropping.....	101
Custom white balance.....	72

<b>D</b>	
Date/time	
Adding date stamps.....	41
Changing.....	15
Date/time battery.....	15
Settings.....	14
World clock.....	134
DC coupler.....	145
Defaults → Reset all	
DIGITAL CAMERA Solution Disk.....	2
Digital tele-converter.....	75
Digital zoom.....	38
Display language.....	15
DPOF.....	150
Drive mode.....	74
<b>E</b>	
Eco mode.....	135
Editing	
Cropping.....	101
i-Contrast.....	103
My Colors.....	102
Red-eye correction.....	103
Resizing images.....	100
Erasing.....	96
Error messages.....	159
Exposure	
AE lock.....	70
Compensation.....	69
FE lock.....	81
<b>F</b>	
Face AiAF (AF frame mode).....	76
Face ID.....	42
<b>G</b>	
GPS.....	85
Grid lines.....	50
<b>H</b>	
Handheld nightscene (shooting mode).....	55
HDMI cable.....	142
High-speed burst (shooting mode).....	65
Household power.....	145
Hybrid Auto Mode (shooting mode).....	34

Cover

Preliminary Notes and Legal Information

Contents: Basic Operations

Basic Guide

Advanced Guide

**1 Camera Basics**

**2 Auto Mode/Hybrid Auto Mode**

**3 Other Shooting Modes**

**4 P Mode**

**5 Playback Mode**

**6 Wi-Fi Functions**

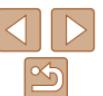
**7 Setting Menu**

**8 Accessories**

**9 Appendix**

Index





I	
i-Contrast	71, 103
Image quality → Compression ratio (image quality)	
Images	
Erasing	96
Playback → Viewing	
Protecting	93
Indicator	30
Infinity (focus mode)	75
Interface cable	2, 21
ISO speed	71
L	
Lamp	51, 52
Long shutter (shooting mode)	65
M	
MAC address	119
Macro (focus mode)	74
Magnified display	91
Memory cards	2, 111
Recording time	172
Menu	
Basic operations	29
Table	164
Mercury lamp correction	48
Metering method	70
Miniature effect (shooting mode)	58
Monochrome (shooting mode)	60
Movies	
Editing	104

Image quality (resolution/frame rate)	49
Recording time	172
Multi-area White Balance	48
My Colors	73, 102
N	
Nickname	
Camera	111
Connection	130
P	
Package contents	2
Photobook set-up	153
PictBridge	142, 146
Playback → Viewing	
Portrait (shooting mode)	55
Poster effect (shooting mode)	57
Power → AC adapter kit → Battery	
Power saving	26
Printing	146
Program AE	69
Protecting	93
P (shooting mode)	69
R	
Red-eye correction	48, 103
Reset all	139
Resetting Wi-Fi settings	131
Resizing images	100
Resolution (image size)	47
Rotating	98
S	
Saving images to a computer	123
Screen	
Display language	15
Icons	162, 163
Menu → FUNC. menu, Menu	
SD/SDHC/SDXC memory cards → Memory cards	
Searching	88
Self-timer	39
2-second self-timer	39
Customizing the self-timer	40
Face self-timer (shooting mode)	64
Wink self-timer (shooting mode)	63
Sending images	126
Maximum number of images that can be sent together	126
Sepia tone images	73
Servo AF	78
Shooting	
Shooting date/time → Date/time	
Shooting information	162
Slideshow	91
Smartphone	115
Adding target devices	115
Changing privacy settings	117
Privacy settings	116
Smart Shuffle	92
Smart Shutter (shooting mode)	62
Smile (shooting mode)	62
Snow (shooting mode)	55
Soft focus (shooting mode)	59
Software	
DIGITAL CAMERA Solution Disk	2

Installation	20
Saving images to a computer	20
Sounds	133
Stereo AV cable	144
Stitch Assist (shooting mode)	66
Strap	2, 11
Super slow motion movie (movie mode)	67
Super vivid (shooting mode)	57
T	
Terminal	143, 144, 145, 146
Toy camera effect (shooting mode)	59
Tracking AF	77
Traveling with the camera	134
Troubleshooting	156
TV display	142
V	
Viewing	17
Image search	88
Index display	87
Magnified display	91
Single-image display	17
Slideshow	91
Smart Shuffle	92
TV display	142
W	
Web services	
Adding target devices	112
Connection	114
Display order	113
White balance (color)	72

Wi-Fi ..... 107, 119  
Access point ..... 119  
Settings ..... 118

Windows  
CameraWindow display ..... 123  
Settings ..... 120  
Wink self-timer (shooting mode) ..... 63  
World clock ..... 134

WPS  
PBC Method ..... 121  
PIN Method ..... 122  
Wrist strap → Strap

## Z

Zoom ..... 16, 32, 38

Cover

Preliminary Notes and Legal Information

Contents: Basic Operations

Basic Guide

Advanced Guide

**1 Camera Basics**

**2 Auto Mode/Hybrid Auto Mode**

**3 Other Shooting Modes**

**4 P Mode**

**5 Playback Mode**

**6 Wi-Fi Functions**

**7 Setting Menu**

**8 Accessories**

**9 Appendix**

Index



**CAUTION**

RISK OF EXPLOSION IF BATTERY IS REPLACED BY AN INCORRECT TYPE.  
DISPOSE OF USED BATTERIES ACCORDING TO LOCAL REGULATION.

**FCC/IC Notice**

Model: PC1897 (including WLAN Module Model WM219, FCC ID: AZD219)  
The available scientific evidence does not show that any health problems are associated with using low power wireless devices. There is no proof, however, that these low power wireless devices are absolutely safe. Low power Wireless devices emit low levels of radio frequency energy (RF) in the microwave range while being used. Whereas high levels of RF can produce health effects (by heating tissue), exposure to low-level RF that does not produce heating effects causes no known adverse health effects. Many studies of low-level RF exposures have not found any biological effects. Some studies have suggested that some biological effects might occur, but such findings have not been confirmed by additional research. This model has been tested and found to comply with FCC/IC radiation exposure limits set forth for an uncontrolled equipment and meets the FCC radio frequency (RF) Exposure Guidelines in Supplement C to OET65 and RSS-102 of the IC radio frequency (RF) Exposure rules.

This device complies with Part 15 of FCC Rules and Industry Canada licence-exempt RSS standard(s). Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of this device.

This transmitter must not be co-located or operated in conjunction with any other antenna or transmitter.

Complies with  
IDA Standards  
DB00671

This product is installed with the WLAN Module which is certified to standards set by IDA Singapore

**USA and Canada only:**

The Lithium ion/polymer battery that powers the product is recyclable. Please call 1-800-8-BATTERY for information on how to recycle this battery.

**For CA, USA only**

Included lithium battery contains Perchlorate Material - special handling may apply. See [www.dtsc.ca.gov/hazardouswaste/perchlorate/](http://www.dtsc.ca.gov/hazardouswaste/perchlorate/) for details.

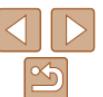
**Trademark Acknowledgments**

- The SDXC logo is a trademark of SD-3C, LLC.
- This device incorporates exFAT technology licensed from Microsoft.
- HDMI, the HDMI logo and High-Definition Multimedia Interface are trademarks or registered trademarks of HDMI Licensing LLC.
- Wi-Fi®, Wi-Fi Alliance®, WPA™, WPA2™ and Wi-Fi Protected Setup™ are trademarks or registered trademarks of the Wi-Fi Alliance.

**About MPEG-4 Licensing**

This product is licensed under AT&T patents for the MPEG-4 standard and may be used for encoding MPEG-4 compliant video and/or decoding MPEG-4 compliant video that was encoded only (1) for a personal and non-commercial purpose or (2) by a video provider licensed under the AT&T patents to provide MPEG-4 compliant video.

No license is granted or implied for any other use for MPEG-4 standard.



**FCC Notice**

(Digital Camera, Model PC1897 systems)

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions;

- (1) this device may not cause harmful interference, and
- (2) this device must accept any interference received, including interference that may cause undesired operation.

Note: This equipment has been tested and found to comply with the limits for Class B digital devices, pursuant to Part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

The cable with the ferrite core provided with the digital camera must be used with this equipment in order to comply with Class B limits in Subpart B of Part 15 of the FCC rules.

Do not make any changes or modifications to the equipment unless otherwise specified in the manual. If such changes or modifications should be made, you could be required to stop operation of the equipment.

Canon U.S.A., Inc.

One Canon Park, Melville, New York 11747, U.S.A.

Tel No. 1-800-OK-CANON (1-800-652-2666)

**Canadian Radio Interference Regulations**

CAN ICES-3 (B)/NMB-3 (B)

**Battery Charger CB-2LV**

# **IMPORTANT SAFETY INSTRUCTIONS- SAVE THESE INSTRUCTIONS. DANGER-TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, CAREFULLY FOLLOW THESE INSTRUCTIONS.**

For connection to a supply not in the U.S.A., use an attachment plug adapter of the proper configuration for the power outlet, if needed.

**Disclaimer**

- Reprinting, transmitting, or storing in a retrieval system any part of this guide without the permission of Canon is prohibited.
- Canon reserves the right to change the contents of this guide at any time without prior notice.
- Illustrations and screenshots in this guide may differ slightly from the actual equipment.
- The above items notwithstanding, Canon accepts no liability for damages due to mistaken operation of the products.

