Canon

SPEEDLITE EL-1 (Ver.2)

Advanced User Guide

EN

CT2-D394-A

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Contents

Introduction. 4
Supplemental Information. 5
Compatible Accessories. 6
Instruction Manual. 7
About This Guide. 8
Safety Instructions. 10
Part Names. 12
Getting Started and Basic Operations. 28
Charging the Battery. 29
Inserting the Battery. 33
Attaching and Detaching the Speedlite. 35
Turning on the Power. 37
Fully Automatic Flash Photography. 42
E-TTL II / E-TTL Autoflash, by Shooting Mode. 44
Checking Battery Information. 49
Advanced Flash Photography. 51
Flash Exposure Compensation. 52
Flash Exposure Bracketing. 54
FE Lock. 56
High-Speed Sync. 58
Second-Curtain Sync. 60
Bounce. 62
Flash Coverage Setting. 69
Manual Flash. 73
Stroboscopic Flash. 80
Flash External Metering. 84
Continuous Shooting Priority Mode. 89
Modeling Lamp. 90
Modeling Flash. 91
Color Filter. 92

Clearing Speedlite Settings. 94
Setting Flash Functions from the Camera. 96
Flash Control from the Camera Menu. 97
Radio Transmission Wireless Flash Photography. 104
Radio Transmission Wireless Flash Photography. 105
Wireless Settings. 112
Autoflash with One Receiver. 126
Autoflash with Two Receiver Groups. 134
Autoflash with Three Receiver Groups. 137
Wireless Multiple-Flash Photography with Flash Ratio. 142
Shooting in Group-Specific Flash Modes. 146
Firing Test Flash/Modeling Flash from Receivers. 151
Remote Release from Receivers. 153
Linked Shooting. 155
Optical Transmission Wireless Flash Shooting. 161
Optical Transmission Wireless Flash Shooting. 162
Optical Transmission Wireless Settings. 166
Autoflash with One Receiver. 175
Autoflash with Two Receiver Groups. 183
Autoflash with Three Receiver Groups. 186
Wireless Multiple-Flash Photography with Flash Ratio. 190
Manual Flash / Stroboscopic Flash Set in the Receiver Unit. 193
Customizing the Speedlite. 196
Setting Custom and Personal Functions. 197
Customization with Custom Functions. 204
Customization with Personal Functions. 209
Reference. 216
Flash Firing Restriction Due to Temperature Increase. 217
Troubleshooting Guide. 221
Specifications. 227
Accessories. 235
Regulations. 236

Introduction

The Canon Speedlite EL-1 (Ver.2) is an external flash unit for EOS cameras compatible with E-TTL II/E-TTL autoflash. The Speedlite can be used as an on-camera flash that attaches to the hot shoe of the camera (normal shooting), and as a sender/receiver unit during radio transmission/optical transmission wireless flash shooting. In addition to these functions, the Speedlite also has dust and water resistance equivalent to EOS-1D series cameras.

Read before use

To avoid shooting problems and accidents, first read the Safety Instructions. Also read this Advanced User Guide carefully to ensure correct use.

Read in conjunction with the camera instruction manual

Before use, read this guide and the Advanced User Guide of your camera to familiarize yourself with operations and ensure correct use.
*** Explanations in this guide are based on use with an EOS Digital camera.**

Using the Speedlite in combination with an EOS film camera

When the Speedlite is used in combination with an EOS film camera with E-TTL II / E-TTL autoflash, pictures can be taken with the autoflash. When used in combination with a TTL autoflash EOS film camera, pictures cannot be taken with the autoflash.

Precaution on continuous flash firing

Flash units fire repeatedly in continuous shooting with flash or when you shoot with features such as stroboscopic or modeling flash. Some people may experience seizures or similar symptoms from visual overstimulation caused by continuous flash firing (including light reflected off brightly colored walls or other surfaces). If you or others experience these symptoms, stop firing the flash units immediately.

- Supplemental Information
- Compatible Accessories
- Instruction Manual
- About This Guide
- Safety Instructions
- Part Names

Supplemental Information

Check the following website for supplemental information about the Speedlite.

- **https://cam.start.canon/H001/**

Compatible Accessories

Check the following website for the latest compatible cameras and accessories.

- **https://cam.start.canon/H002/**

Instruction Manual

The included Instruction Manual provides basic instructions on flash photography.

- **Advanced User Guide**

  Complete instructions are provided in this Advanced User Guide.
  For the latest Advanced User Guide, refer to the following website.
  https://cam.start.canon/A012/

About This Guide

Icons in This Guide

Basic Assumptions

Icons in This Guide

< ◎ >	Indicates the select dial.
⏱12 / ⏱16	Indicates the duration (approx. 12 or 16 sec.) of the operation for the button you pressed, based on when you release the button.

- In reference to buttons or setting positions, the guide uses the same icons or display items found on the Speedlite.

	Links to pages with related topics.
	Warning to prevent shooting problems.
	Supplemental information.
☆	☆ to the right of page titles indicates functions only available with the camera set to Creative Zone modes (< **Fv** >, < **P** >, < **Tv** >, < **Av** >, < **B** >, or < **M** >).
?	Troubleshooting tips.

Basic Assumptions

- Instructions apply to the Speedlite and camera with the power on ( ).
- The icons used for buttons, dials, and symbols in the text match the icons found on the Speedlite and the camera.
- Functions can be set by pressing the joystick vertically or horizontally or turning < > for selection.
- Function setup is exited by pressing the < > button.
- Default settings are assumed for Custom/Personal Functions of the Speedlite, as well as menu functions/Custom Functions of the camera.

Safety Instructions

Be sure to read these instructions in order to operate the product safely.
Follow these instructions to prevent injury or harm to the operator of the product or others.

⚠WARNING: Denotes the risk of serious injury or death.

- Keep the product out of the reach of young children.

The cover is dangerous if swallowed. If swallowed, seek immediate medical assistance.

- Keep batteries out of the reach of children.
- Use only power sources specified in this instruction manual for use with the product.
- Do not disassemble or modify the product.
- Do not expose the product to strong shocks or vibration.
- Do not touch any exposed internal parts.
- Stop using the product in any case of unusual circumstances such as the presence of smoke or a strange smell.
- Do not use organic solvents such as alcohol, benzine or paint thinner to clean the product.
- Do not get the product wet. Do not insert foreign objects or liquids into the product.
- Do not use the product where flammable gases may be present.

This may cause electric shock, explosion or fire.

- Do not touch the product connected to a power outlet during lightning storms.

This may cause electric shock.

- Observe the following instructions when using commercially available batteries or provided battery packs.
  - Use batteries/battery packs only with their specified product.
  - Do not heat batteries/battery packs or expose them to fire.
  - Do not charge batteries/battery packs using non-authorized battery chargers.
  - Do not expose the terminals to dirt or let them come into contact with metallic pins or other metal objects.
  - Do not use leaking batteries/battery packs.
  - When disposing of batteries/battery packs, insulate the terminals with tape or other means.

This may cause electric shock, explosion or fire.
If a battery/battery pack leaks and the material contacts your skin or clothing, flush the exposed area thoroughly with running water. In case of eye contact, flush thoroughly with copious amounts of clean running water and seek immediate medical assistance.

- Observe the following instructions when using a battery charger.
  - Periodically remove any dust buildup from the power plug and power outlet using a dry cloth.
  - Do not plug in or unplug the product with wet hands.
  - Do not use the product if the power plug is not fully inserted into the power outlet.
  - Do not expose the power plug and terminals to dirt or let them come into contact with metallic pins or other metal objects.
  - Do not touch the battery charger or AC adapter connected to a power outlet during lightning storms.
  - Do not place heavy objects on the power cord. Do not damage, break or modify the power cord.
  - Do not wrap the product in cloth or other materials when in use or shortly after use when the product is still warm in temperature.
  - Do not leave the product connected to a power source for long periods of time.
  - Do not charge batteries/battery packs at temperatures outside the range of 5 - 40 °C (41 - 104 °F).

This may cause electric shock, explosion or fire.

- Do not allow the product to maintain contact with the same area of skin for extended periods of time during use.

This may result in low-temperature contact burns, including skin redness and blistering, even if the product does not feel hot.

- Follow any indications to turn off the product in places where its use is forbidden.

Not doing so may cause other equipment to malfunction due to the effect of electromagnetic waves and even result in accidents.

- Do not leave batteries near pets.

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

⚠CAUTION:

Follow the cautions below. Otherwise physical injury or property damage may result.

- Do not fire the flash near the eyes.

It may hurt the eyes.

- Flash emits high temperatures when fired. Keep fingers, any other part of your body, and objects away from the flash unit while taking pictures.

This may cause burns or malfunction of the flash.

- Do not leave the product in places exposed to extremely high or low temperatures.

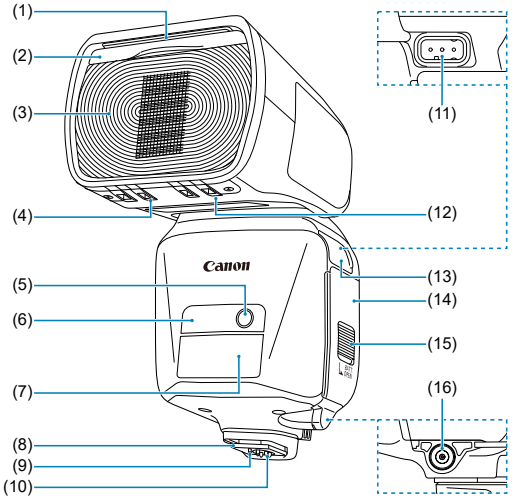
The product may become extremely hot/cold and cause burns or injury when touched.

- Do not touch any parts inside the product.

This may cause injury.

Part Names

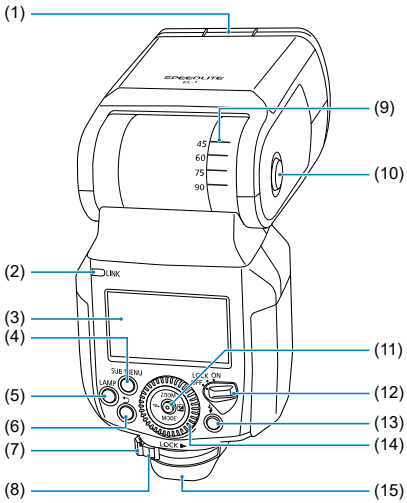
- LCD Panel
- Battery Charger LC-E6
- Battery Charger LC-E6E
- Included Accessories



(1)	Catchlight panel (shown stowed)
(2)	Wide panel (shown stowed)
(3)	Flash head (light-emitting unit)
(4)	Color filter detector
(5)	External flash metering receiver
(6)	Optical transmission wireless receiver
(7)	AF-assist beam emitter
(8)	Mounting foot
(9)	Mounting foot locking pin
(10)	Contacts
(11)	External power source socket
(12)	Bounce adapter detector
(13)	Terminal cover
(14)	Battery compartment cover
(15)	Battery compartment cover lock
(16)	Sync terminal

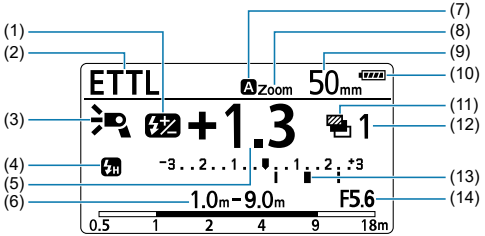
Note

- Not equipped with remote release terminal (release cable SR-N3 cannot be used).


(1)
(9)
(10)
(2)
(3)
(4)
(11)
(5)
(12)
(6)
(13)
(7)
(14)
(8)
(15)
SPEEDLITE
45
60
75
90
LINK
SUB MENU
LAMP
LOCK ON
ZOOM
MODE
LOCK

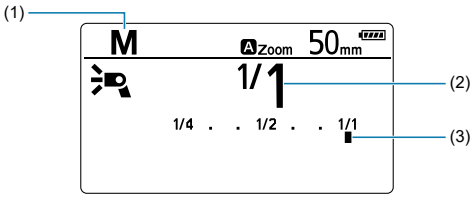
(1)	Bounce adapter / color filter attachment part
(2)	<LINK> Radio transmission confirmation lamp
(3)	LCD panel
(4)	<SUB MENU> Sub menu button
(5)	<LAMP> LAMP button
(6)	<↩> Undo button
(7)	Mounting foot lock lever
(8)	Lock-release button
(9)	Bounce angle index
(10)	Bounce lock-release button
(11)	Joystick <ZOOM> Zoom <MODE> Flash mode <⇆> Wireless / linked shooting setting <±> Flash exposure compensation / flash output setting
(12)	Power switch <ON> Power ON <LOCK> Button / dial lock (Power ON) <OFF> Power OFF
(13)	<ϟ> Flash-ready lamp / test flash button
(14)	<◎> Select dial
(15)	Dust-proof and drip-proof adapter

E-TTL II / E-TTL Autoflash (), Continuous Shooting Priority Mode ()



(1)	< > Flash exposure compensation
(2)	< ETTL > E-TTL II / E-TTL autoflash < CSP > Continuous shooting priority mode
(3)	< > Standard < > Guide number priority < > Even coverage < > Bounce upward < > Bounce downward < > Bounce adapter attached < > Color filter attached < > Temperature increase (flash firing restriction) < > Modeling lamp lit
(4)	< > First-curtain sync (normal shooting) < > Second-curtain sync < > High-speed sync
(5)	Flash exposure compensation amount
(6)	Effective flash range / shooting distance < m > Value in meters < ft > Value in feet
(7)	< CHARGE > Charge indicator < A > Auto < M > Manual
(8)	< Zoom > Zoom indicator < WP > Wide panel + bounce warning < WIDE > Out of flash coverage range warning
(9)	Flash coverage (focal length)
(10)	Battery level indicator
(11)	< > Flash exposure bracketing
(12)	FEB sequence
(13)	Flash exposure level
(14)	< F > Aperture value

Manual flash ( )

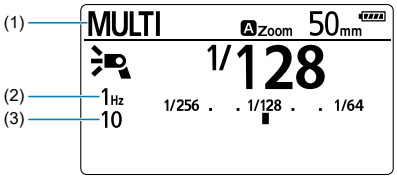


(1)	<M> Manual flash
(2)	Manual flash output
(3)	Manual flash level

Note

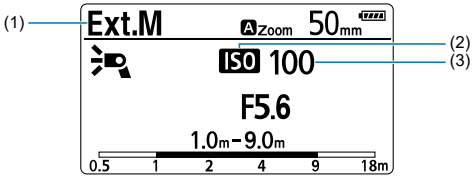
- These are only examples of display. Actual display only shows current settings.
- The LCD panel is illuminated in response to button or dial operations ( ).

Stroboscopic flash ( )



(1)	<MULTI> Stroboscopic flash
(2)	Flash frequency
(3)	Flash count

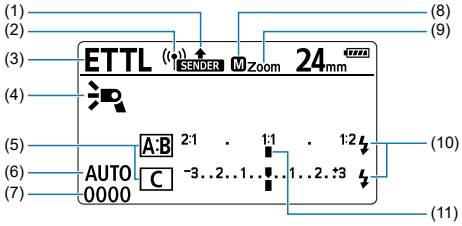
Auto/manual external flash metering ( )



(1)	<**Ext.A**> Auto external flash metering <**Ext.M**> Manual external flash metering
(2)	<ISO> ISO display
(3)	ISO speed

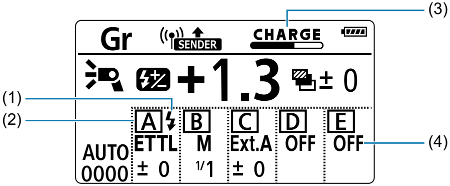
Radio Transmission Wireless Shooting / Optical Transmission Wireless Shooting (/)

Sender unit



(1)	< SENDER > Configured as a sender < SUB SENDER > Configured as a sub-sender*1
(2)	< > Radio transmission wireless < > Optical transmission wireless
(3)	Flash mode < ETTL > E-TTL II / E-TTL autoflash < M > Manual flash < MULTI > Stroboscopic flash < Gr > Group firing*1
(4)	< > Sender flash firing ON < > Sender flash firing OFF
(5)	Firing group control
(6)	< Ch > Transmission channel < AUTO > Transmission channel set automatically*1
(7)	Wireless radio ID*1
(8)	< CHARGE > Sender / receiver charge indicator
(9)	< Tv > Synchronization speed warning*1
(10)	< > Receiver charging completed*1
(11)	Flash ratio

* 1: < > Radio transmission wireless only



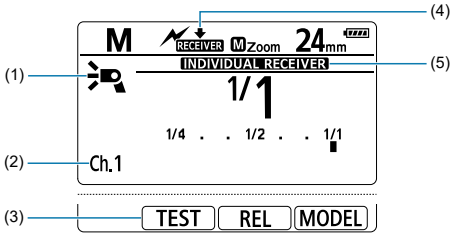
(1)	< ϟ > Receiver charging completed*1
(2)	Firing group control
(3)	Sender / receiver charge indicator
(4)	Group firing mode*2

* 1: < ((•)) > Radio transmission wireless only
* 2: < Gr > Group firing only

Note

- < CHARGE > is no longer displayed after senders and receivers in radio transmission wireless flash photography are fully charged.
- < ETTL >, < M >, < Ext.A >, and < OFF > are available as flash modes for < Gr > group firing.

Receiver unit

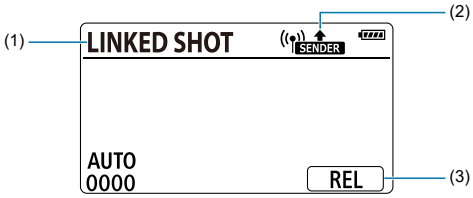


(1)	< > Receiver
(2)	< Ch > Transmission channel
(3)	< TEST > Test flash*1 < REL > Remote release*1 < MODEL > Modeling flash*1
(4)	< RECEIVER > Configured as a receiver
(5)	< INDIVIDUAL RECEIVER > Individual receiver*2

*1: < > Radio transmission wireless only

*2: < > Optical transmission wireless only

Radio transmission: linked shooting ( )

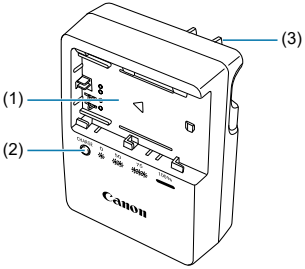


(1)	< **LINKED SHOT** > Linked shooting
(2)	< SENDER > Configured as a sender < RECEIVER > Configured as a receiver
(3)	< REL > Release*1

* 1: < SENDER > Only when configured as a sender.

Battery Charger LC-E6

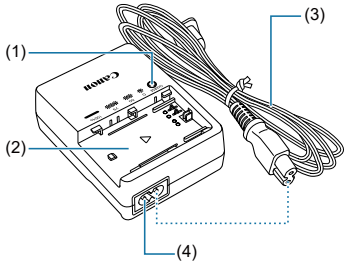
Charger for Battery Pack LP-EL.



(1)	Battery slot
(2)	Charge lamp
(3)	Power plug

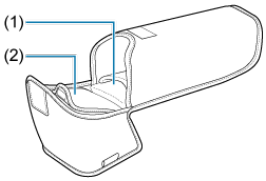
Battery Charger LC-E6E

Charger for the Battery Pack LP-EL.

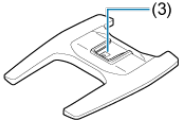


(1)	Charge lamp
(2)	Battery slot
(3)	Power cord
(4)	Power cord socket

Included Accessories



Speedlite case
(1) Mini stand storage pocket
(2) Bounce adapter / color filter housing unit



Mini stand
(3) Mounting part

Bounce adapter SBA-EL

Color filter SCF-ELOR1

Color filter SCF-ELOR2

Battery Charger LC-E6/LC-E6E*

Battery Pack LP-EL

* Battery Charger LC-E6 or LC-E6E is provided (The LC-E6E comes with a power cord).

Getting Started and Basic Operations

This chapter describes the preparations before starting flash photography and the basic shooting operations.

Caution

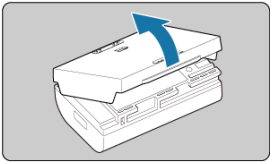
Precautions on continuous flash firing

- To avoid wearing out or damaging flash heads from overheating, do not fire the flash continuously at full output more than approx. 55 times. After firing continuously at full output for the above listed number of times, allow a rest time of at least 10 min. When the fan is stopped, the number of continuous full flashes decreases.
- After continuous firing at full output this many times, further continuous firing at short intervals may activate a safety function that restricts firing. At a firing restriction level of 1, the firing interval is automatically set to approx. 8 sec. If this happens, allow a rest time of at least 50 min.
- For details, see Flash Firing Restriction Due to Temperature Increase.

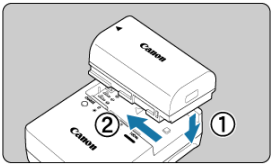
- Charging the Battery
- Inserting the Battery
- Attaching and Detaching the Speedlite
- Turning on the Power
- Fully Automatic Flash Photography
- E-TTL II / E-TTL Autoflash, by Shooting Mode
- Checking Battery Information

Charging the Battery

1. **Remove the protective cover.**

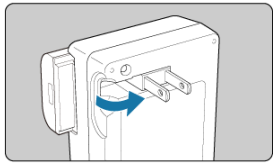


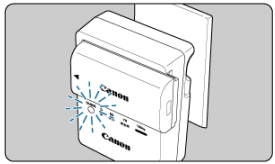
2. **Fully insert the battery into the charger.**



3. Recharge the battery.

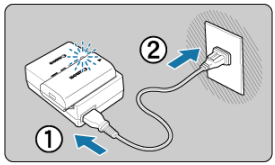
For LC-E6





- As shown by the arrow, flip out the battery charger's prongs and insert the prongs into a power outlet.

For LC-E6E



- Connect the power cord to the charger and insert the plug into a power outlet.
- Recharging starts automatically and the charge lamp blinks in orange.

Charge Level	Charge Lamp	
	Color	Display
0–49%	Orange	Blinks once per second
50–74%		Blinks twice per second
75% or higher		Blinks three times per second
Fully charged	Green	Remains lit

- **Charging a depleted battery takes approx. 2 hr. and 10 min. at room temperature (23°C/73°F).** Charging time varies greatly depending on ambient temperature and remaining capacity.

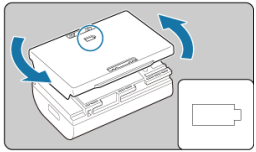
- For safety, charging in low temperatures (5–10°C/41–50°F) takes longer (up to approx. 4 hr.).

- **The Speedlite does not come pre-charged.**
  Charge before use.

- **Charge on the day of use, or the day before.**
  Batteries gradually lose their charge while in storage.

- **After charging the battery, remove it and unplug the charger.**

- **The protective cover can be attached facing certain directions to indicate charged or depleted status.**
  Depending on the direction that you attach the cover, different colors are visible through the window (< ▭ >). By deciding the colors to use for charged and depleted batteries and attaching the cover accordingly, you can see the battery status at a glance.



- **When the Speedlite is not in use, remove the battery.**
  If the battery is left in the Speedlite over extended periods, the trace amount of current that continues to flow may lead to over-discharge and reduce the life of the battery. Store the battery with the protective cover attached. Note that storing the battery when it is fully charged may reduce its performance.

- **The battery charger can also be used in other countries.**
  The charger is compatible with 100–240 V AC 50/60 Hz household power. If necessary, attach a commercially available plug adapter for the country or region. To avoid damage, do not connect to portable voltage transformers.

- **Batteries that lose their charge quickly despite being fully charged may need to be replaced.**
  Check battery recharge performance before purchasing a new one.

Caution

- After unplugging the charger, do not touch the prongs for approx. 10 sec.
- Batteries are not charged unless the remaining capacity is lower than approx. 90%.

Note

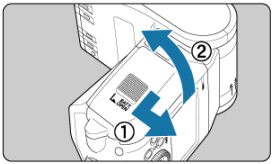
Battery storage

- Store in a cool, dry, and well-ventilated place.
- Even if the battery is removed, the trace amount of current that continues to flow internally may eventually lead to over-discharge and prevent further use despite charging.
- Before extended storage, charge the battery to approx. 50% about once a year.

Inserting the Battery

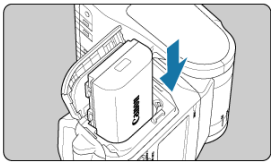
Use Battery Pack LP-EL as the power source.

1. **Open the cover.**



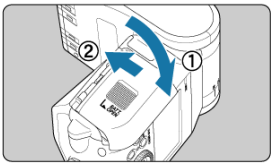
- While sliding the lock lever down, slide the lid to the right to open the battery compartment lid.

2. **Insert the battery.**



- Insert the battery contacts-first, as shown by the marking.

3. **Close the cover.**



- Close the battery compartment lid and slide it to the left.
- When it clicks in place, the battery compartment cover is locked.

Firing interval and number of flashes

EL-1 (Ver.2) alone

Firing Interval		Flash Count
Quick Flash	Normal Flash	
Approx. 0.1 to 0.8 sec.	Approx. 0.1 to 0.9 sec.	Approx. 340 to 2380 times

* The Quick flash function enables flash photography before the flash is fully charged ( ).

⚠ Caution

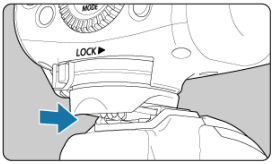
- **After continuous flash firing, do not touch the flash head, battery, or near the battery compartment.**
  After repeated use of continuous flash or modeling flash at short intervals, do not touch the flash head, battery, or near the battery compartment. The flash head, battery, and area near the battery compartment may become hot, which poses a risk of burns.
- **Do not allow the product to maintain contact with the same area of skin for extended periods of time during use.**
  This may result in low-temperature contact burns, including skin redness and blistering, even if the product does not feel hot.

Note

- The battery should be charged when < > is displayed, or if the LCD panel goes blank during flash recharging.

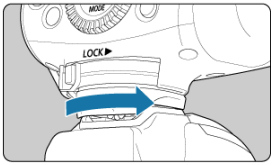
Attaching and Detaching the Speedlite

1. **Attach the Speedlite.**



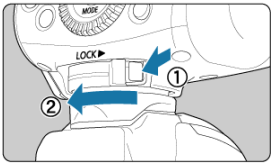
- Insert the Speedlite mounting foot **all the way** into the hot shoe.

2. **Secure the Speedlite.**



- Slide the mounting foot lock lever to the right.
- The lock lever is locked when it clicks into place.

3. **Detach the Speedlite.**



- While pressing the lock-release button, slide the lock lever left and remove the Speedlite.

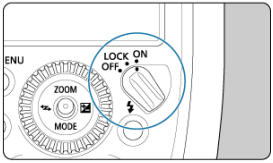
Caution

- Be sure to turn off the Speedlite before attaching or detaching it.

Turning on the Power

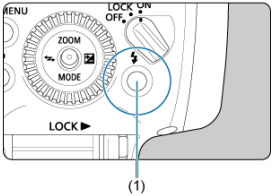
- Quick Flash
- Auto Power Off
- Locking Flash Operations
- LCD Panel Illumination

1. **Turn the power switch to <ON>.**



- Flash recharging begins.
- <CHARGE> appears on the LCD panel during recharging. After flash recharging, it is no longer displayed, and the Speedlite beeps.

2. **Confirm that flash recharging is finished.**



- The flash-ready lamp changes as follows: **off** → **red (blinking)** (Quick flash ready) → **red (lit)** (fully charged).
- To fire a test flash, press the test flash button (flash-ready lamp, (1)).

Caution

- Test flash firing is not available while a camera's metering timer is active.

Note

- Flash settings are retained even after the power is turned off.
- Beeping after flash recharging can be disabled in P.Fn-06.

Quick Flash

Quick flash enables flash photography even when the flash-ready lamp is still blinking in red (before fully charged). It is available in all camera drive modes. Although flash output is limited to approx. 1/2 to 1/3 of fully charged output, this feature is useful for shooting with a shorter firing interval.
In manual flash photography, Quick flash is available when the flash output is set to 1/4 to 1/8192. Note that Quick flash is not available when using stroboscopic flash or in wireless flash photography.

Caution

- Using Quick flash in continuous shooting may cause underexposure, due to the reduced flash output.

Note

- For details on < CHARGE > display when the Speedlite is set as a sender in radio transmission wireless flash photography, see LCD Panel Illumination.
- Quick flash can be disabled in P.Fn-02.

Auto Power Off

This feature conserves battery power by turning the Speedlite off automatically if it is left idle for approx. 90 sec. To restore power to the Speedlite, either press the camera shutter button halfway or press the test flash button (flash-ready lamp).
Auto power off takes effect in approx. 5 min. when the Speedlite is set as a sender in radio transmission wireless flash photography ( ) or configured for linked shooting ( ).

Note

- Auto power off can be disabled in C.Fn-01.

Locking Flash Operations

Button and dial operations of the Speedlite can be disabled by setting the power switch to < LOCK >. This can help prevent accidentally changing the Speedlite settings.
< LOCKED > is displayed on the LCD panel in response to button or dial operations.

Note

- Even with the power switch set to < LOCK >, test flash firing and modeling lamp illumination are available. Note that the LCD panel is illuminated in response to button or dial operations.

LCD Panel Illumination

The LCD panel is illuminated for approx. 12 sec. (12) in response to button or dial operations.
For details on LCD panel illumination when the Speedlite is set as a sender in radio transmission wireless flash photography, see LCD Panel Illumination.

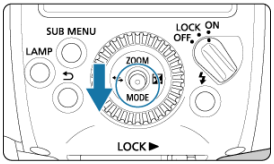
Note

- LCD panel illumination can be changed in C.Fn-22.

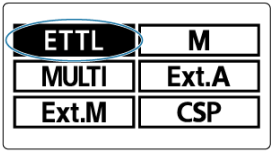
Fully Automatic Flash Photography

E-TTL II and E-TTL fully automatic flash shooting is available when the camera is set to < **P** > (Program AE) or fully automatic shooting mode.

1. **Select < MODE > with the joystick.**



2. **Select < ETTL >.**

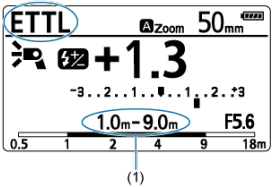


- Press the joystick vertically or horizontally or turn < ◎ > to select < ETTL >, then push the joystick straight in.

3. **Focus on the subject.**

- Press the shutter button halfway to focus.
- The shutter speed and aperture value are displayed in the viewfinder.
- Confirm that < ϟ > appears in the viewfinder.

4. Take the picture.



* This is an example of display when the camera is in < **P** > (Program AE) mode.

- Confirm that the subject is within the effective flash range (1).
- Pressing the shutter button completely fires the flash and takes a picture.

Note

- If the subject in your shot looks dark (underexposed), try approaching the subject before you shoot again. You can also increase the ISO speed when using a digital camera.
- Fully automatic modes include < A+ >, < ▭ >, and < CA >.
- < **ETTL** > is shown on the LCD panel, even when the Speedlite is used with cameras supporting E-TTL II.

E-TTL II / E-TTL Autoflash, by Shooting Mode

- Auto Zoom for Sensor Size
- Transmission of Color Temperature Information
- AF-Assist Beam

E-TTL II or E-TTL autoflash suitable for the current shooting mode is used automatically – simply set the camera shooting mode to < **Tv** > (shutter-priority AE), < **Av** > (aperture-priority AE), < **Fv** > (flexible-priority AE), or < **M** > (manual exposure).

Tv	Select this mode when you want to set the shutter speed manually. The camera sets a suitable aperture value for the shutter speed to obtain standard exposure based on metering by the camera. ● Aperture values blink to warn about underexposed or overexposed backgrounds. Adjust the shutter speed until the aperture value stops blinking.
Av	Select this mode when you want to set the aperture value manually. The camera sets a suitable shutter speed for the aperture value to obtain standard exposure based on metering by the camera. ● Shooting with a tripod is recommended, because slow shutter speeds are used for low-light scenes. ● Shutter speeds blink to warn about underexposed or overexposed backgrounds. Adjust the aperture value until the shutter speed stops blinking.
Fv	Any shutter speed or aperture value can be set. ● If the aperture value blinks when you set a shutter speed, adjust the shutter speed until the aperture value stops blinking. ● If the shutter speed blinks when you set an aperture value, adjust the aperture value until the shutter speed stops blinking.
M	Select this mode if you want to set both the shutter speed and aperture value manually. Light from the flash provides standard exposure for subjects. Background exposure varies depending on your specified shutter speed and aperture value.

* When shooting with < **DEP** > or < **A-DEP** >, the result is the same as flash shooting using < **P** > (Program AE).

Flash sync speed and aperture value, by shooting mode

	Shutter Speed	Aperture Value
P	Set automatically (1/X sec. to 1/60 sec.)*1	Set automatically
Tv	Manually set (1/X sec. to 30 sec.)	Set automatically
Av	Set automatically (1/X sec. to 1/60 sec.)*1	Set manually
Fv	Set manually / automatically (at least 1/X sec.)	Set manually / automatically
M	Set manually (1/X sec. to 30 sec., Bulb)	Set manually

* 1/X sec. represents the camera's maximum flash sync shutter speed.
* 1: On cameras that support slow synchro, varies by settings.

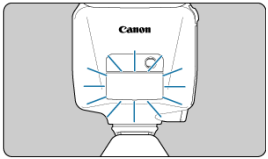
Auto Zoom for Sensor Size

EOS DIGITAL cameras have three sizes of image sensors, and the effective shooting angle of view of the attached lens varies depending on the size of the image. The Speedlite automatically recognizes the image sensor size of the EOS Digital camera and sets optimal flash coverage for the effective shooting angle of view of the lens in a focal length range of 24–200 mm.

Transmission of Color Temperature Information

This feature provides optimal white balance in flash photography by using color temperature information at the moment of firing, which is transmitted by the Speedlite to the EOS Digital camera. It is automatically enabled when camera white balance is set to < AWB >, < AWBW >, or < ϟ >. Refer to the specifications in your camera's Instruction Manual to find out if it is compatible with this function.

AF-Assist Beam



When it is difficult to autofocus on the subject in low-light or when contrast is low during viewfinder shooting, the infrared AF-assist beam built into the flash automatically flashes to help autofocus.
The AF-assist beam supports 28 mm and longer focal lengths of the lens and its effective range (at 28 mm focal length) is approx. 0.6 - 10 m / 2.0 - 32.8 ft. at the center in the viewfinder and approx. 0.6 - 5 m / 2.0 - 16.4 ft. at the periphery (AF points other than the center AF point).

Caution

- Focusing with the AF-assist beam of an external Speedlite may be difficult when using a peripheral AF point on the camera, or when using wide-angle or telephoto lenses. In this case, use the center AF point or an AF point near the center.

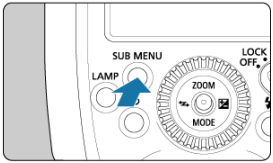
Note

- During Live View shooting, the AF-assist beam is emitted even when the AF method is set to [**Quick mode**].
- AF-assist beam firing can be disabled in C.Fn-08.
- The AF-assist beam can be projected using the intermittent flash firing method (P.Fn-01).

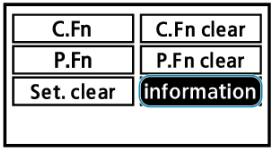
Checking Battery Information

You can check the status of the battery in use.

1. **Press the <SUB MENU> button.**

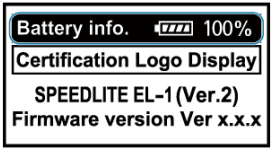


2. **Display the information screen.**

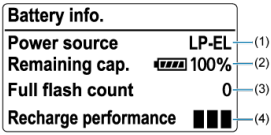


- Press the joystick vertically or horizontally or turn <◎> to select <Information>, then push the joystick straight in.

3. **Display the [Battery info.] screen.**



- Press the joystick vertically or turn < > to select < Battery info. >, then push the joystick straight in.



(1) Identifies the battery in use.

(2) Shows a battery level indicator and the remaining capacity as a percentage.

(3) Shows a record of the current battery flash count, expressed as a full flash count. The count is reset after recharging.

(4) Shows the battery recharge performance, indicating battery health.

■■■: Recharge performance good

■■□: Moderate

■□□: Battery replacement recommended

Caution

- Using a genuine Canon Battery Pack LP-EL is recommended. Non-genuine batteries may not offer peak Speedlite performance, and they may lead to malfunctioning.

Note

- If the message [**Cannot communicate with battery Use this battery?**] appears, follow the instructions displayed.

Advanced Flash Photography

This chapter describes advanced shooting methods using Speedlite features.

Caution

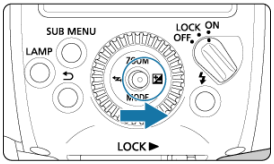
- Features on pages with ☆ in the upper right are not available when the camera is in Full Auto or Basic Zone modes. All operations in this chapter are available with the camera shooting mode set to <Fv>, <P>, <Tv>, <Av>, <M> or <**Bulb** (B)> (Creative Zone).

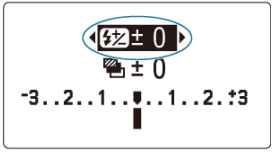
- Flash Exposure Compensation ☆
- Flash Exposure Bracketing ☆
- FE Lock ☆
- High-Speed Sync ☆
- Second-Curtain Sync ☆
- Bounce
- Flash Coverage Setting ☆
- Manual Flash ☆
- Stroboscopic Flash ☆
- Flash External Metering ☆
- Continuous Shooting Priority Mode ☆
- Modeling Lamp
- Modeling Flash ☆
- Color Filter
- Clearing Speedlite Settings ☆

Flash Exposure Compensation ☆

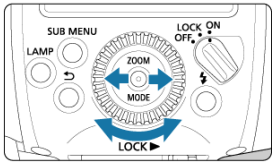
Just as exposure compensation is adjusted, you can also adjust flash output. The amount of flash exposure compensation can be set in a range of ±3 stops, in 1/3-stop increments.

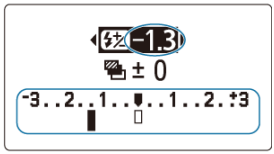
1. **Select < > with the joystick.**





2. Set the flash exposure compensation amount.





- Press the joystick horizontally or turn < ◎ > to set the amount of compensation, then push the joystick straight in.
- “0.3” represents 1/3 stop and “0.7,” 2/3 stop.
- To cancel flash exposure compensation, return the value to “±0.”
- After you set a new value, it will not change if you press the joystick vertically.
- After changing the value, the changed value will not be set if the < ⮌ > button is pressed.

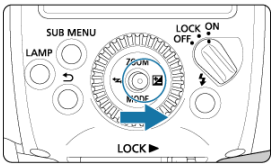
Note

- In general, use positive compensation for bright subjects and negative compensation for dark ones.
- When exposure compensation is set in 1/2-stop increments on the camera, flash exposure compensation is set in a range of ±3 stops in 1/2-stop increments.
- The Speedlite setting takes precedence if flash exposure compensation is set on both the Speedlite and the camera.
- You can set the flash exposure compensation amount by turning < ◎ > directly without selecting < ⚡ > with the joystick (C.Fn-13).

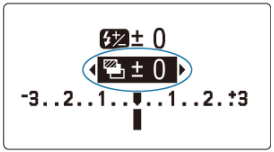
Flash Exposure Bracketing ☆

You can take three shots while automatically changing the flash output. This feature is referred to as flash exposure bracketing (FEB). The setting range is ±3 stops, in 1/3-stop increments.

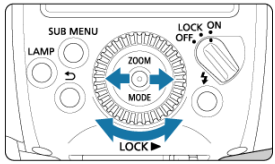
1. **Select < ⊠ > with the joystick.**

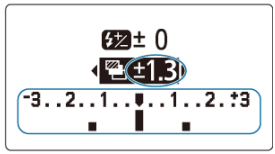


2. **Press the joystick down to select FEB.**



3. Set the FEB level.





- Press the joystick horizontally or turn < ◎ > to set the FEB level, then push the joystick straight in.
- “0.3” represents 1/3 stop and “0.7,” 2/3 stop.
- When used with flash exposure compensation, FEB shooting is centered on your specified flash exposure compensation amount. < ◀ > or < ▶ > appears at the ends of the indicator if the flash exposure level exceeds ±3 stops.
- After you set a new value, it will not change if you press the joystick vertically.
- After changing the value, the changed value will not be set if the < ⮌ > button is pressed.

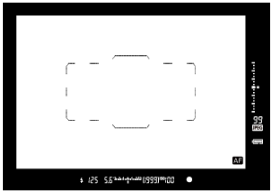
Note

- FEB is automatically canceled after the three shots are taken.
- Before shooting with FEB, consider setting the camera drive mode to single shooting, and confirm that flash recharging is finished. In continuous shooting drive mode, shooting automatically stops after three consecutive shots.
- You can use FEB together with flash exposure compensation or FE lock.
- When exposure compensation is set in 1/2-stop increments on the camera, flash exposure compensation is set in a range of ±3 stops in 1/2-stop increments.
- You can disable auto cancellation of FEB after three shots in C.Fn-03.
- You can change the FEB shooting sequence (C.Fn-04).

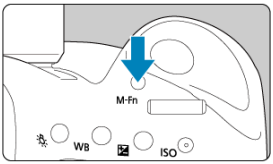
FE Lock ☆

Shooting with flash exposure (FE) locked provides suitable flash exposure over your specified area of the subject.
With <ETTL> or <CSP> is displayed in the panel, push the <M-Fn> or <✳> (AE lock) and <FEL> buttons on the camera.

1. **Focus on the subject.**



2. **Press the <M-Fn> button (☺16).**



- Center the subject in the viewfinder, then press the camera's <M-Fn> button.
- The Speedlite fires a preflash and stores the flash output required for the subject.
- [**FEL**] appears in the viewfinder for about half a second.
- Each time you press the <M-Fn> button, the Speedlite fires a preflash and stores the flash output required at that time.

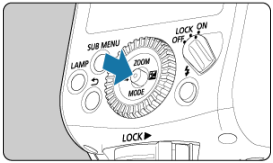
Note

- < ϟ > blinks in the viewfinder if suitable exposure cannot be obtained with FE lock. Approach the subject or open the aperture, then try locking the flash exposure again. You can also set a higher ISO speed and perform FE lock again when using a digital camera.
- If the target subject is too small in the viewfinder, FE lock may not be effective.

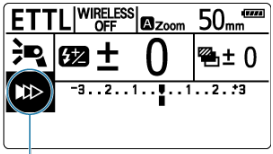
High-Speed Sync ☆

High-speed sync enables flash photography at even higher shutter speeds than the maximum flash sync shutter speed. This is effective when shooting with an open aperture in < **Av** > (aperture-priority AE) mode to blur the background behind subjects outdoors in daylight, for example.

1. **Push the joystick straight in.**



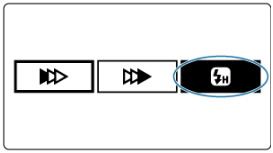
2. **Select the item shown in (1).**



(1)

- Press the joystick vertically or horizontally or turn < ◎ > to select the item, then push the joystick straight in.

3. **Select <H>.**



- Press the joystick horizontally or turn <◎> to select <H>, then push the joystick straight in.
- Before shooting, confirm that <H> appears in the viewfinder.

Caution

- With high-speed sync, the faster the shutter speed, the lower the guide number. You can check the effective flash range on the LCD panel.
- To avoid wearing out or damaging the flash head from overheating, the Speedlite may reduce the continuous flash count in repeated shooting with high-speed sync.

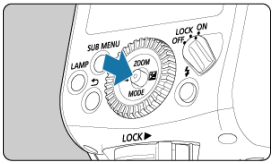
Note

- <H> is not displayed in the viewfinder at shutter speeds slower than the maximum flash sync shutter speed.
- To return to normal flash firing, select <▶▷> (first-curtain sync) in step 3 (<▶▷> is not displayed on the screen after configuration).

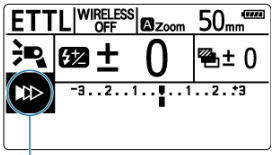
Second-Curtain Sync ☆

Using second-curtain sync at low shutter speeds enables natural shots of subject motion trails, such as car lights. The flash fires immediately before the camera finishes shooting (before the shutter closes).

1. **Push the joystick straight in.**



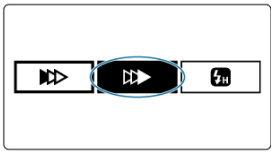
2. **Select the item shown in (1).**



(1)

- Press the joystick vertically or horizontally or turn < ◎ > to select the item, then push the joystick straight in.

3. **Select < ▷▷▶ >.**



- Press the joystick horizontally or turn < ◎ > to select < ▷▷▶ >, then push the joystick straight in.

Note

- Second-curtain sync works well in < **B** > (Bulb) shooting mode.
- The Speedlite fires twice in < **ETTL** > flash mode. The first firing, which does not indicate malfunctioning, is preflash to determine flash output.
- To return to normal flash firing, select < ▶▷▷ > (first-curtain sync) in step 3 (< ▶▷▷ > is not displayed on the screen after configuration).

Bounce

< > Close-Range Flash Photography

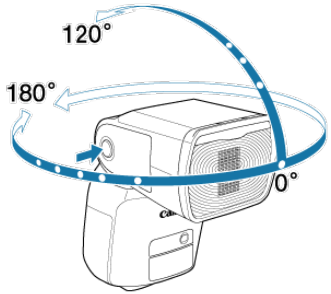
Catchlight Shooting

< > Shooting with a Bounce Adapter

Pointing the flash head at a ceiling or wall to use the light reflected from it can soften subject shadows, enabling more natural-looking shots. This shooting method is referred to as bounce flash photography.

Setting the orientation of the flash head

- You can turn the flash head while pressing the bounce lock-release button as shown. Turning or tilting the flash head changes the display to < >.
- With the Speedlite set to < A > (Auto) flash coverage, turning the flash head sets flash coverage to 50 mm, and <----> is displayed.
- You can also set the flash coverage manually ( ).

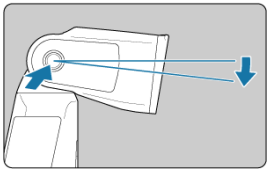


Note

- Bouncing light off ceilings or walls that are too far away may not provide sufficient exposure, because not enough light will reach the subject.
- If your shots are too dark, reduce the aperture value (f/number) to open the aperture and try again. You can also increase the ISO speed when using a digital camera.
- Choose a plain white or off-white ceiling or wall to bounce the light off, because these are more reflective. Reflections off non-white surfaces may not provide sufficient exposure – not enough light may reach the subject, and your shots may be affected by the color of surface used.
- Using Quick flash in bounce flash photography is more likely to cause underexposure, from the reduced flash output.

< > Close-Range Flash Photography

When you position the flash head down by 7° while pressing the bounce lock-release button, you can shoot subjects at a short distance in a range of approx. 0.5 to 2 m / 1.6 to 6.6 ft.
Tilting the flash head down by 7° changes the display to < >.

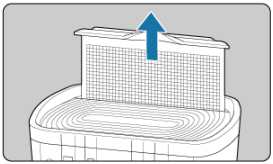


Catchlight Shooting

Using the catchlight panel when shooting a portrait enables you to capture reflected light in a person's eyes and create a more vivid expression.

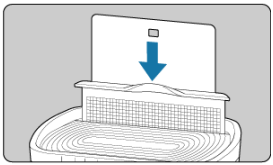
1. **Tilt the flash head up 90°.**

2. **Pull up the wide panel.**

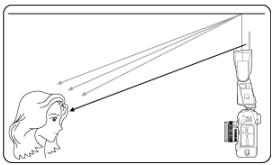


- Lift the tab in the middle of the wide panel.
- The white catchlight panel comes out with it.

3. **Push back the wide panel.**



- Push back the wide panel by itself, leaving only the catchlight panel up.
- Shooting is the same as in normal bounce flash photography.



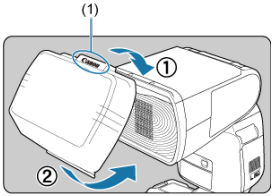
Caution

- Position the flash head toward the front and 90° up. When the flash head is rotated to the left or right, the catchlight is not very effective.
- To effectively obtain the catchlight in a person's eyes, shoot within approx. 1.5 m / 4.9 ft. from the subject (at ISO 100 with f/2.8).
- Do not pull up the wide panel with excessive force. Doing so may detach the wide panel from the Speedlite.

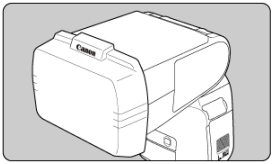
< > Shooting with a Bounce Adapter

If you attach the provided bounce adapter to the Speedlite and bounce the flash light on the ceiling or wall, etc., you can spread the flash light across a larger area and suppress the shadows of the subject.
Also, if the flash head is turned 90° upward to bounce the flash light on the ceiling, etc., the diffused flash light emitted from the sides of the bounce adapter falls on the front of the subject (shooting distance guidance: within approx. 1.5 m / 4.9 ft., at ISO 100 with f/2.8), further suppressing the shadow of the subject. When shooting portraits, the catchlight effect can also be obtained.

1. **Attach the bounce adapter.**



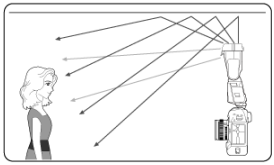
(1) "Canon" logo



- Attach the adapter securely to the flash head until it clicks in place, as shown.
- Check that the display changes to < >.
- When removing the adapter, follow the procedure in reverse order. Raise the removal tab on the lower side of the adapter, then remove the adapter from the flash head.

2. Take the picture.

- Take the picture with the flash light bouncing off the ceiling, walls, or the like.



Caution

- When the bounce adapter is attached, or when the bounce adapter and the wide panel are used together, underexposure may result since the guide no. decreases. Take necessary countermeasures such as increasing the ISO speed on the camera or applying flash exposure compensation ( ).
- When Quick flash ( ) is fired with the bounce adapter attached, taking the picture after the flash-ready lamp is lit in red is recommended since the flash output may not be sufficient.
- The flash coverage is set automatically when the bounce adapter is attached. It cannot be changed manually.
- If you attach the bounce adapter to the flash when using an EOS DIGITAL camera released up to 2004, set the white balance to < AWB >. When shooting with < > set, you may not be able to obtain the appropriate white balance.

Note

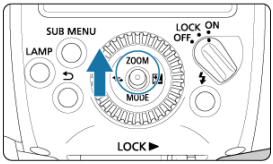
- The flash light is further softened when the wide panel ( ) is used together with the bounce adapter.
- If the subject is dark (underexposed) when you check the shot image, perform the flash exposure compensation ( ). You can also increase the ISO speed when using a digital camera.

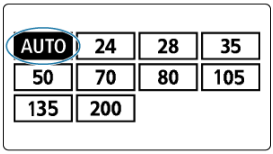
Flash Coverage Setting

Wide Panel

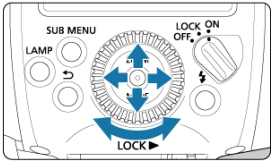
Flash coverage can be set automatically or manually. Set to < A > (Auto) for automatic adjustment of flash coverage to suit the focal length (shooting angle of view) of the attached lens and the size of the image sensor ( ). With < M > (Manual), you can manually set flash coverage in a range of 24–200 mm.

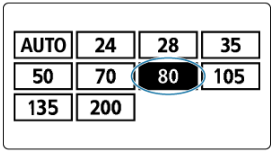
1. **Select < ZOOM > with the joystick.**





2. Set the flash coverage.





- Press the joystick vertically or horizontally or turn < ◎ > to select the flash coverage, then push the joystick straight in.
- To set automatically, select < AUTO >, and to set manually, select a value (focal length in mm).

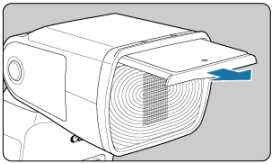
Note

- Flash coverage that you set manually should match or exceed the shooting angle of view, to avoid vignetting.
- A < ! WIDE > warning is displayed on the LCD panel when a lens with a focal length less than 24 mm is attached. Similarly, a < ! WIDE > warning is displayed when you are using a camera with an image sensor smaller than full-frame and the actual shooting angle of view exceeds that of a 24 mm lens.
- When shooting with the sync terminals of the camera and the Speedlite connected by a commercially-available sync cord, set the flash coverage manually.

Wide Panel

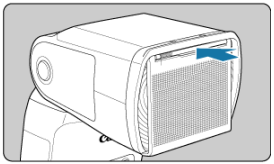
The built-in wide panel enables flash photography covering the angle of view of an ultra wide-angle lens with a focal length of 14 mm.

1. **Pull out the wide panel.**



- Pull out the tab in the middle of the wide panel.
- The white catchlight panel comes out with it.

2. **Push back the catchlight panel.**



- Push back the catchlight panel by itself, leaving the wide panel down.

Caution

- A < WP > warning appears on the LCD panel when the wide panel is used in bounce flash photography, because underexposure is more likely to occur under these conditions.
- Do not pull out the wide panel with excessive force. This may detach it from the Speedlite.
- Not compatible with shooting angles of view from the EF15mm f/2.8 Fisheye or EF8-15mm f/4L Fisheye USM.

Note

- Flash coverage is set automatically when the wide panel is used. It cannot be changed manually.

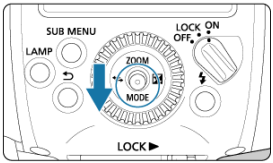
Manual Flash ☆

Setting Manual Flash Output from FE Memory

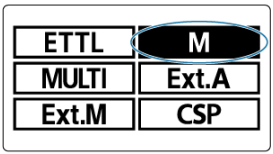
Metered Manual Flash Exposure

Flash output can be set in a range of 1/8192 to full output (1/1), in 1/3-stop increments. By using a commercially available flash meter, you can determine the flash output required for suitable exposure. Setting the camera shooting mode to < **Av** > or < **M** > is recommended.

1. **Select < MODE > with the joystick.**

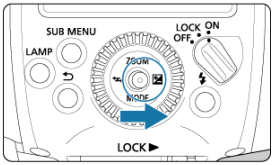


2. **Set the flash mode to < M >.**

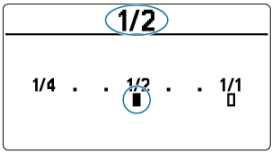


- Press the joystick vertically or horizontally or turn < ◎ > to select < M >, then push the joystick straight in.

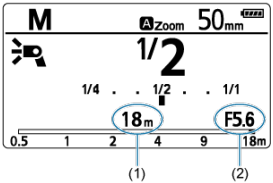
3. **Select < ⊡ > with the joystick.**



4. **Set the flash output.**



- Press the joystick horizontally or turn < ◎ > to set the flash output, then push the joystick straight in.



- The approximate shooting distance (1) and the aperture value (2) are displayed when you press the camera shutter button halfway.

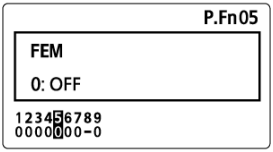
Note

- If high-speed sync or optical transmission wireless is set, the setting range of the flash output will be 1/1 to 1/128.
- For details on guide numbers when manual flash is used, see Specifications.
- Flash output can also be set directly by turning < ◎ > without first selecting < MODE > with the joystick, if you configure C.Fn-13.

Setting Manual Flash Output from FE Memory

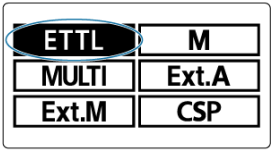
The flash output level used when shooting in <ETTL> flash mode can be applied as the level for <M> flash mode.

1. **Set up the FE memory function.**

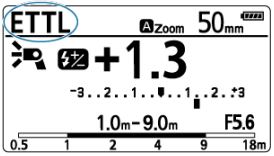


- Set the P.Fn-05 <FEM> setting in the personal functions to 1:ON ( ).

2. **Shoot in <ETTL> flash mode.**

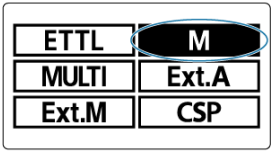


- Select <MODE> with the joystick.
- Press the joystick vertically or horizontally or turn < > to select < ETTL >, then push the joystick straight in.



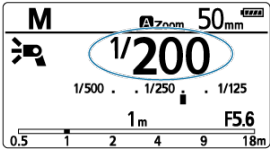
- Press the shutter button completely to shoot.

3. **Set the flash mode to <M>.**



- Select <MODE> with the joystick.
- Press the joystick vertically or horizontally or turn <◎> to select <M>, then push the joystick straight in.

4. **Check the flash output.**



Caution

- Before firing with the Speedlite set to <ETTL>, make sure the flash-ready lamp is red (fully charged).
- If you adjust the ISO speed, aperture value, or other settings that involve flash output (such as light intensity or flash zoom) after shooting with the Speedlite set to <ETTL>, we recommend shooting with it set to <ETTL> again.
- Color temperature of the Speedlite may differ greatly from that of the ambient light when the camera white balance is set to <AWB>, and color tones of shots may differ between <ETTL> and <M> settings when flash compensation is set to the negative side and [**E-TTL balance**] is set to [**Ambience priority**]. If the color temperature difference is large, installing a color filter may improve the hue.
  - Fluorescent lamp (white daylight) → Color filter light
  - Tungsten lamp → Color filter dense
  - Sunlight → filter not required
- When using FE memory in wireless multi-flash shooting, configure settings for <ETTL> and <M> firing groups identically in advance. When <ETTL> is set to <A:B C>, set <M> to <A:B:C>.
- The effective flash range indicated for <ETTL> may not match the focus distance indicated for <M>, depending on shooting conditions.

Note

- When P.Fn-05 <FEM> is set to 2:ON / MODE ETTL↔M, just push the joystick down to switch between <ETTL> and <M>.

Metered Manual Flash Exposure

When using an EOS-1D series camera, the flash exposure level can be manually set before shooting. This is effective in close-range flash photography. Use a standard 18% gray reflector (commercially available) and shoot as follows.

1. **Configure the camera and Speedlite settings.**

   - Set the camera shooting mode to < **M** > or < **Av** >.
   - Set the Speedlite flash mode to < **M** >.

2. **Focus on the subject.**

   - Focus on the subject manually.

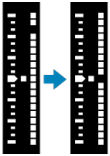
3. **Set up the 18% gray reflector.**

   - Place it at the position of the subject.
   - Aim the camera so that the reflector fills the entire spot metering circle in the viewfinder.

4. **Press the < M-Fn > or < ✳ > / < FEL > button (⏱16).**

   - The Speedlite fires a preflash and stores the flash output required for suitable flash exposure.
   - On the right side of the viewfinder, the exposure level indicator shows the flash exposure level relative to standard exposure.

5. **Set the flash exposure level.**



- Adjust the Speedlite's manual flash output and the aperture so that the flash exposure level aligns with the standard exposure index.

6. **Take the picture.**

- Remove the gray reflector and take the picture.

Note

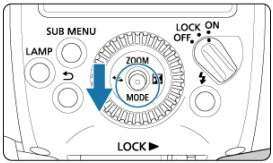
- Metered manual flash exposure is available only with EOS-1D series cameras.

Stroboscopic Flash ☆

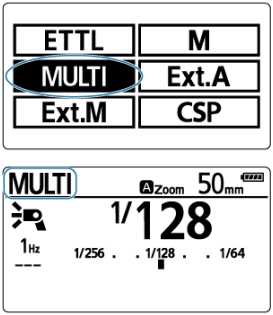
Calculating the Shutter Speed

Using stroboscopic flash at low shutter speeds enables you to capture continuous movement in a single shot, as in sequential photography.
For stroboscopic flash, set the flash output, flash count, and flash frequency (flash count per second, equivalent to Hz). For details on the maximum continuous flash count, see Maximum continuous flash count.

1. **Select <MODE> with the joystick.**

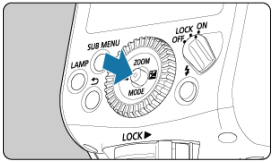


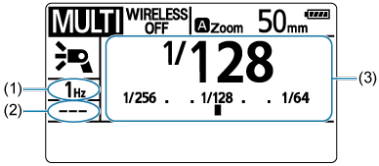
2. **Set the flash mode to <MULTI>.**



- Press the joystick vertically or horizontally or turn <◎> to select <MULTI>, then push the joystick straight in.

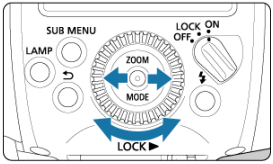
3. Push the joystick straight in, then select an item.

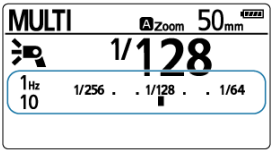




- Press the joystick vertically or horizontally or turn the < ◎ > to select the flash frequency (1), flash count (2), or flash output (3), then push the joystick straight in.

4. Set the value.





- Press the joystick horizontally or turn < ◎ > to set the value, then push the joystick straight in.
- Repeat steps 3–4 until the flash frequency, count, and output are all configured.

Calculating the Shutter Speed

To ensure that the shutter remains open until all stroboscopic firing is finished, calculate a shutter speed to set on the camera as follows.
Flash count ÷ flash frequency = shutter speed
For example, when flash count is set to 10 (times) and flash frequency to 5 (Hz), set the shutter speed to at least 2 sec.

Caution

- To avoid wearing out or damaging flash heads from overheating, do not use stroboscopic flash repeatedly more than 30 times. After 30 times, stop using the Speedlite for at least 10 min.
- Shooting more than 30 times may activate a safety function and restrict flash firing. If this happens, allow a rest time of at least 50 min.

Note

- Stroboscopic flash is most effective for highly reflective subjects against a dark background.
- Using a tripod and remote switch is recommended.
- Flash output cannot be set to 1/1 or 1/2.
- Stroboscopic flash is also available when the camera is in <**Bulb** (**B**)> shooting mode.
- A flash count display of "----" indicates that the Speedlite will fire continuously until the shutter closes or the charge runs out, with the maximum flash count as listed in Maximum continuous flash count.
- High-speed sync ( ) is not available with stroboscopic flash.

Maximum continuous flash count

Maximum flash count is as follows when the flash count is indicated as "----" (bar display).

Flash Output / Hz	1	2	3	4	5	6–7	8–9
1/4	7	6	5	4	4	3	3
1/8	14	14	12	10	8	6	5
1/16	30	30	30	20	20	20	10
1/32	60	60	60	50	50	40	30
1/64	90	90	90	80	80	70	60
1/128	100	100	100	100	100	90	80
1/256	100	100	100	100	100	100	100
1/512	100	100	100	100	100	100	100
1/1024	100	100	100	100	100	100	100
1/2048	100	100	100	100	100	100	100
1/4096	100	100	100	100	100	100	100
1/8192	100	100	100	100	100	100	100

Flash Output / Hz	10	11	12–14	15–19	20–50	60–199	250–500
1/4	2	2	2	2	2	2	2
1/8	4	4	4	4	4	4	4
1/16	8	8	8	8	8	8	8
1/32	20	20	20	18	16	12	10
1/64	50	40	40	35	30	20	15
1/128	70	70	60	50	40	40	30
1/256	100	100	100	100	80	80	60
1/512	100	100	100	100	100	100	100
1/1024	100	100	100	100	100	100	100
1/2048	100	100	100	100	100	100	100
1/4096	100	100	100	100	100	100	100
1/8192	100	100	100	100	100	100	100

Flash External Metering ☆

☑ <Ext.A>: Auto External Flash Metering

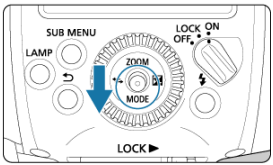
☑ <Ext.M>: Manual External Flash Metering

The Speedlite's built-in external metering sensor measures the flash light reflected from the subject in real time and automatically stops the flash firing when the standard exposure is reached.
"Auto external flash metering" can be used with the EOS DIGITAL cameras released in and after 2007. "Manual external flash metering" can be used with all EOS cameras.

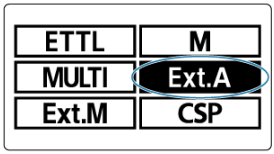
<Ext.A>: Auto External Flash Metering

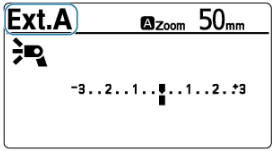
You can shoot in fully automatic flash mode. The flash output is automatically adjusted according to the ISO speed and aperture set on the camera.

1. **Select <MODE> with the joystick.**

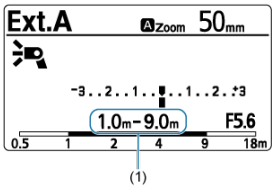


2. **Set the flash mode to <Ext.A>.**





- Press the joystick vertically or horizontally or turn <◎> to select <Ext.A>, then push the joystick straight in.



- When you press the camera's shutter button halfway, the effective flash range (1) is displayed.

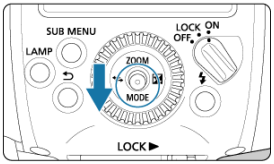
Note

- When <Ext.A> is set, you can use flash exposure compensation (🖉) and FEB (🖉).

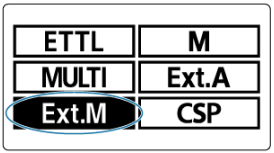
<Ext.M>: Manual External Flash Metering

You can manually set the Speedlite with the ISO speed and aperture set on the camera. The flash output is automatically adjusted according to the ISO speed and aperture that you set.

1. **Select <MODE> with the joystick.**

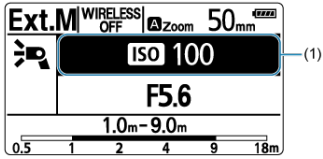


2. **Set the flash mode to <Ext.M>.**

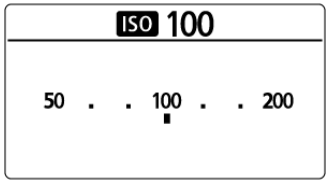


- Press the joystick vertically or horizontally or turn <◎> to select <Ext.M>, then push the joystick straight in.

3. **Set the same ISO speed as on the camera.**

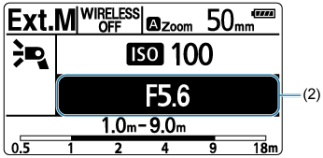


- Push the joystick straight in.
- Press the joystick vertically or horizontally or turn < ◎ > to select item (1), then push the joystick straight in.

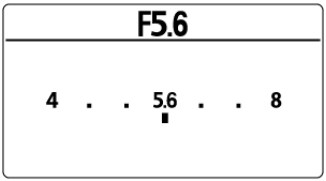


- Push the joystick to the left or right or turn < ◎ > to set the ISO speed, then push the joystick vertically.
- The ISO speed can be set within a range of ISO 25 to ISO 819200, in 1/3 increments.

4. **Set the same aperture as on the camera.**



- Press the joystick vertically or horizontally or turn < > to select item (2), then push the joystick straight in.



- Push the joystick to the left or right or turn < > to set the aperture value, then push the joystick vertically.
- The effective flash range corresponding to the preset ISO speed and aperture value is displayed.

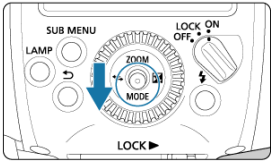
Note

- When < **Ext.M** > is set, you can use a commercially available sync cord to connect the sync terminals of the camera and the flash and then shoot with the flash separated from the camera.
- Even if you connect a different Speedlite to the Speedlite's sync terminal with a sync cord, it will not fire.

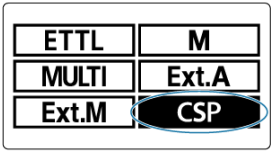
Continuous Shooting Priority Mode ☆

Depending on the camera, flash shooting may be carried out with the [**CSP**] (continuous shooting priority mode). In the continuous shooting priority mode, the flash output is automatically lowered by one stop compared to normal flash shooting, and the ISO speed is automatically raised by one stop instead. This is effective when taking continuous shots or when you want to save the battery power of the flash. For details, see the instruction manual of the camera that supports auto external flash metering.

1. **Select <MODE> with the joystick.**



2. **Set the flash mode.**



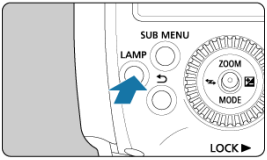
- Press the joystick vertically or horizontally or turn <◎> to select <CSP>, then push the joystick straight in.

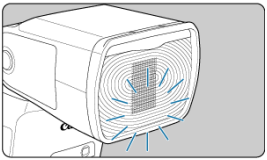
Note

- If the aperture value is large or the distance to the subject is far, it will be difficult to achieve continuous flashes and reduce the battery consumption and so on.
- For cameras that do not support continuous shooting priority mode, the flash mode is set to <ETTL> when shooting.

Modeling Lamp

Pressing the <LAMP> button illuminates the modeling lamp for 5 min. To turn it off, press the button again.
This is useful for checking subject shadows created by the Speedlite.
Pressing the camera shutter button completely turns off the modeling lamp.





Caution

- Avoid looking directly at the modeling lamp at close range, which may cause visual impairment.
- If you shoot with the modeling lamp lit, underexposure may result. Perform exposure compensation and flash exposure compensation where necessary.
- When the flash does not fire, such as when the flash is disabled or when shooting a movie, the modeling lamp does not turn off automatically even if you press the shutter button fully.
- A warning appears when the modeling lamp becomes hot ( ).
- The modeling lamp may dim or turn off if the ambient temperature around it becomes too high.

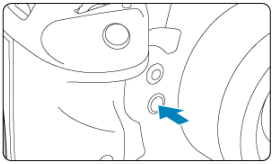
Note

- You can change how the modeling lamp is activated in C.Fn-18.
- You can adjust the brightness and color temperature of the modeling lamp (P.Fn-08).
- You can select how long the modeling lamp remains on in P.Fn-09.
- The brightness drops when you use a wide panel, bounce adapter, or color filter.

Modeling Flash ☆

When you press the aperture button on the camera, the flash fires continuously for about 1 second. This feature is referred to as modeling flash. This is useful for checking shadows cast on the subject by the flash light and the lighting balance during wireless flash shooting (,).

1. **Press the depth-of-field preview button on the camera.**



- The Speedlite fires continuously for approx. 1 sec.

Caution

- To avoid wearing out or damaging flash heads from overheating, do not fire the modeling flash more than 55 times. After firing the modeling flash for the above listed number of times, allow a rest time of at least 50 minutes.
- After firing modeling flash this many times, further continuous firing at short intervals may activate a safety function that restricts firing. At a firing restriction level of 1, the firing interval is automatically set to approx. 8 sec. If this happens, allow a rest time of at least 50 min.
- During Live View shooting, firing the modeling flash (by operating the camera) is not possible.
- When using EOS R series cameras, firing the modeling flash (by operating the camera) is not possible. Set C.Fn-02 to 1 or 2 ( ) and use the test flash button to perform modeling flash.

Note

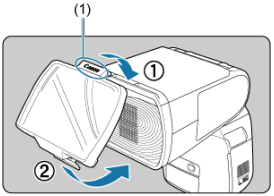
- During normal flash shooting or when using the flash as the sender unit in radio transmission/optical transmission wireless shooting, you can fire the modeling flash with the test flash button (C.Fn-02).

Color Filter

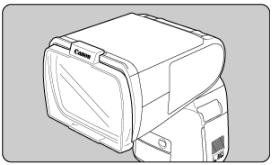
When shooting with flash under incandescent illumination (a tungsten light source), reddish, unnatural colors may result on the subject's background where the flash light does not reach. By attaching the provided color filter to the flash, automatic correction is made by the camera's white balance function so that both the subject and background can be shot with appropriate white balance.

Filter	Contrast	Correction Effect	Application
Color filter (orange)	Light	Weak	Compensates for the effect of an incandescent light bulb
	Dense	Strong	

1. **Attach the color filter.**



(1) "Canon" logo



- Attach the filter securely to the flash head until it clicks in place as shown in the figure.
- Check that the display changes to < >.
- To remove the filter, follow the procedure in reverse order. Raise the attachment tab on the lower side of the filter and remove the filter from the flash head.

2. Take the picture.

- Set the camera's white balance to < ϟ >, then take the picture.
- With EOS DIGITAL cameras released in and after 2012, you can also set the white balance to < AWB > for shooting (except with EOS REBEL T5/1200D).
- Check the resulting image and perform white balance correction on the camera as required.

Caution

- The flash guide number decreases when you use the color filter. When performing manual flash or stroboscopic flash, compensate the flash output by approx. +1/3 stop with the "Low density" filter and by approx. +1 stop with the "High density" filter.
- Do not use a commercially-available color filter in combination with the provided color filter.

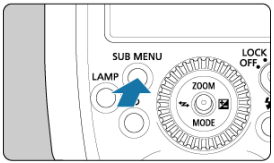
Note

- With cameras that are not compatible with color temperature information transmission (), take a shot and set it for manual white balance using the color filter in the shooting environment, set the white balance to < >, and shoot.
- When shooting with a flash with a color filter and wide angle lens attached, the peripheral light intensity may drop.
- If dirt or dust adheres to the color filter, wipe it off with a soft, dry cloth.
- You can also attach the bounce adapter () when using the color filter.
- If you want to shoot with the ambiance of tungsten-light (warm color cast), set the white balance compensation toward the amber side.

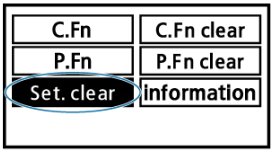
Clearing Speedlite Settings ☆

You can revert the settings of the Speedlite shooting functions and wireless shooting settings to their defaults.

1. **Press the <SUB MENU> button.**

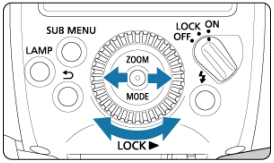


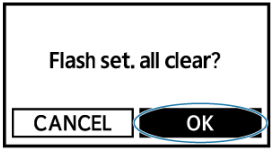
2. **Select <** Set. clear **>.**



- Press the joystick vertically or horizontally or turn < ◎ > to select < Set. clear >, then push the joystick straight in.

3. Clear the settings.





- Press the joystick horizontally or turn < ◎ > to select < OK >, then push the joystick straight in.
- The Speedlite settings are cleared, preparing it for normal flash photography in < ETTL > flash mode.

Note

- Even when the settings have been cleared, the transmission channel and wireless radio ID for wireless shooting as well as the settings of the Custom Functions (C.Fn) and Personal Functions (P.Fn) will not be cleared.

Setting Flash Functions from the Camera

This chapter describes how to configure flash functions from the camera menu.

Caution

- Operations described in this chapter are not available when the camera is in Full Auto or Basic Zone modes. Set the camera's shooting mode to <Fv>, <P>, <Tv>, <Av>, <M>, or <**Bulb** (B)> (Creative Zone).

- Flash Control from the Camera Menu

Flash Control from the Camera Menu

Flash Function Settings

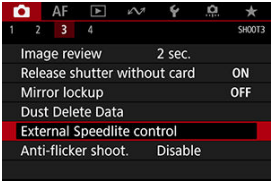
Settings Available on the Flash Function Settings Screen

Flash C.Fn Settings

When using EOS DIGITAL cameras released in and after 2007, you can set flash functions or Custom Functions from the camera's menu screen.
For camera instructions, refer to the camera instruction manual.

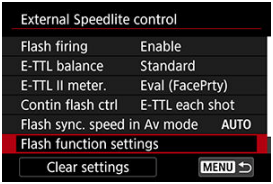
Flash Function Settings

1. **Select [External Speedlite control].**



- Select [**External Speedlite control**] or [**Flash control**].

2. **Select [Flash function settings].**

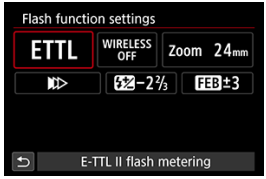


- Select [**Flash function settings**] or [**External flash func. setting**].
- The setting screen is displayed.

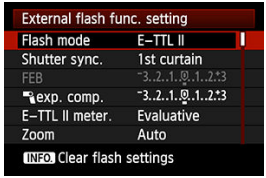
3. Set the function.

- **The setting screen and items displayed vary depending on the camera.**
- Select an item and set the function.

Example 1



Example 2



Settings Available on the Flash Function Settings Screen

EOS DIGITAL cameras released in and after 2012

On the camera's [**Flash function settings**] or [**External flash func. setting**] screen, you can configure settings for normal flash photography, radio transmission wireless flash photography, or optical transmission wireless flash photography.
* Although the EOS REBEL T100/4000D/3000D, EOS REBEL T7/1500D/2000D, EOS REBEL T6/1300D and EOS REBEL T5/1200D was released from 2012 onwards, the settable functions are the same as with the EOS DIGITAL cameras released from 2007 to 2011.

EOS DIGITAL cameras released from 2007 to 2011

EOS-1Ds Mark III, EOS-1D Mark IV/III, EOS 5D Mark II, EOS 7D, EOS 60D, EOS 50D, EOS 40D, EOS REBEL T3i/600D, EOS REBEL T2i/550D, EOS REBEL T1i/500D, EOS REBEL XSi/450D, EOS REBEL T3/1100D, EOS REBEL XS/1000D
On the camera's [**Flash function settings**] or [**External flash func. setting**] screen, you can configure settings for normal flash photography or optical transmission wireless flash photography. For radio transmission wireless flash photography, configure the settings on the Speedlite.

Main functions you can configure are as follows. The settings available vary by the camera used, flash mode, and wireless function settings, etc.

Function	
Flash firing	Enable / Disable
E-TTL balance	Ambience priority / Standard / Flash priority
E-TTL II meter.	Eval (FacePrty) / Evaluative / Average
Contin flash ctrl	E-TTL each shot / E-TTL 1st shot
Flash sync. speed in Av mode	
Flash mode	E-TTL II flash metering (autoflash) / Manual flash / MULTI flash (stroboscopic) / Auto external flash metering / Manual external flash metering / Continuous shooting priority mode
Wireless functions	Wireless:Off / Radio transmission / Optical transmission
Flash zoom (flash coverage)	
Shutter synchronization	First-curtain synchronization / Second-curtain synchronization / High-speed synchronization
Flash exposure compensation	
Flash exposure bracketing	

Flash firing

To enable flash photography, set to [**Enable**]. To enable only the AF-assist beam of the Speedlite, set to [**Disable**].

E-TTL balance

You can set your preferred appearance (balance) for flash shots. This setting enables you to adjust the ratio of ambient light to Speedlite light output.

E-TTL II meter.

Set to [**Eval (FacePrty)**] for flash metering suitable for shots of people. High-speed continuous shooting is slower than when [**Evaluative**] or [**Average**] is selected. Set to [**Evaluative**] for flash metering that emphasizes firing in continuous shooting. If [**Average**] is set, flash exposure is averaged for the entire metered scene. Depending on the scene, flash exposure compensation may be necessary.

Contin flash ctrl

Set to [**E-TTL each shot**] to perform flash metering for each shot. Set to [**E-TTL 1st shot**] to perform flash metering for only the first shot before continuous shooting. The flash output level for the first shot is applied to all subsequent shots. Useful when prioritizing continuous shooting speed without recomposing shots.

Flash sync. speed in Av mode

You can set the flash-sync speed for flash photography in < **Av** > (aperture-priority AE) mode.

Flash mode

You can choose the flash mode from [**E-TTL II flash metering**], [**Manual flash**], [**MULTI flash (stroboscopic)**], [**Auto external flash metering**], [**Manual external flash metering**], or [**Continuous shooting priority mode**] to suit your desired flash photography.

Wireless functions

You can set radio transmission wireless flash shooting and optical transmission wireless flash shooting. For details, refer to "Radio Transmission Wireless Flash Photography" and "Optical Transmission Wireless Flash Shooting".

Flash zoom (flash coverage)

You can set the Speedlite flash coverage. Set to [**Auto**] for automatic configuration of flash coverage to suit the lens focal length and image sensor size ( ).

Shutter synchronization

As the flash firing timing/method, you can choose from [**First-curtain synchronization**], [**Second-curtain synchronization**], or [**High-speed synchronization**]. For normal flash photography, set to [**First-curtain synchronization**].

Flash exposure compensation

Just as exposure compensation is adjusted, you can also adjust flash output. The amount of flash exposure compensation can be set in a range of ±3 stops, in 1/3-stop increments.

Flash exposure bracketing

Enables automatic adjustment to different flash output levels as three shots are taken at once. The setting range is ±3 stops, in 1/3-stop increments.

Clear settings

Select [**Clear flash settings**] or [**Clear settings**] to restore Speedlite settings to defaults.

Caution

- With a bounce adapter is attached, [**Flash zoom**] (flash coverage) is not available if flash coverage is automatically set, such as when using the wide panel.

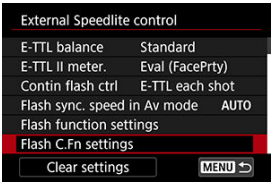
Note

- [**Built-in flash firing**] and [**E-TTL II meter.**] are displayed in step 2 or step 3 in the "Flash Function Settings" (Display layouts and procedures vary by camera model).
- Flash exposure compensation cannot be performed from the camera when it is set on the Speedlite. If both are set at the same time, the Speedlite setting takes precedence.

Flash C.Fn Settings

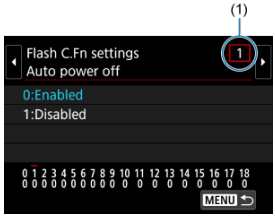
You can set Custom Functions for the Speedlite from the camera menu. The details displayed vary by the camera used. If C.Fn-21 to 23 are not displayed, set them by operating the Speedlite. For details on Custom Functions, see Customization with Custom Functions.

1. **Select [Flash C.Fn settings].**

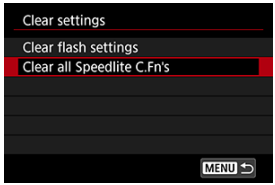


- Select [**Flash C.Fn settings**] or [**External flash C.Fn setting**].

2. Set the Custom Function.



- Select the Custom Function number (1), then set the function.



- To clear all the Custom Function settings, select [**Clear settings**] in step 1, then select [**Clear all Speedlite C.Fn's**] or [**Clear ext. flash C.Fn set.**].

Caution

- For cameras released in 2011 or earlier and the EOS REBEL T100/4000D/3000D, EOS REBEL T7/1500D/2000D, EOS REBEL T6/1300D, and EOS REBEL T5/1200D, selecting [**Clear all Speedlite C.Fn's**] or [**Clear ext. flash C.Fn set.**] does not cancel the C.Fn-21 to 23 settings. When the procedure described in "Clearing All the Custom/Personal Functions" on page is performed (), all the Custom Functions (except C.Fn-00) are cleared.
- Personal Functions (P.Fn) cannot be set or collectively cleared from the camera menu screen. Set them on the Speedlite.

Radio Transmission Wireless Flash Photography

This chapter describes radio transmission wireless flash photography using sender and receiver functionality.
Sender / receiver functions can be used with Speedlites compatible with radio transmission wireless flash photography.

Caution

- Operations described in this chapter are not available when the camera is in Full Auto or Basic Zone modes. Set the camera's shooting mode to <Fv>, <P>, <Tv>, <Av>, <M>, or <Bulb (B)> (Creative Zone).
- When it is important to maintain the wireless connection, do not operate the power switch or move parts such as the battery compartment cover. The wireless connection will be terminated.

Note

- The EL-1 (Ver.2) attached to the camera is referred to as a “sender,” and other Speedlites controlled wirelessly are referred to as “receivers.”
- The EL-1 (Ver.2) allows remote release (remote shooting) from the receiver unit (). For details, refer to the instruction manual of a Speedlite equipped with remote release functionality.

- Radio Transmission Wireless Flash Photography
- Wireless Settings
- Autoflash with One Receiver
- Autoflash with Two Receiver Groups
- Autoflash with Three Receiver Groups
- Wireless Multiple-Flash Photography with Flash Ratio
- Shooting in Group-Specific Flash Modes
- Firing Test Flash/Modeling Flash from Receivers
- Remote Release from Receivers
- Linked Shooting

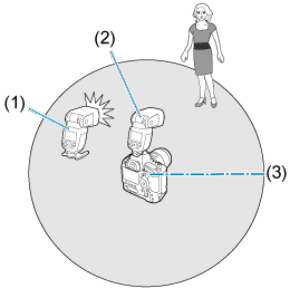
Radio Transmission Wireless Flash Photography

- Positioning and Range
- Difference between Radio Transmission and Optical Transmission
- Group Control
- Restrictions for Specific Cameras

Shooting with wireless lighting from multiple flash units is as easy as normal E-TTL II / E-TTL autoflash shooting when you use Canon Speedlites supporting radio transmission wireless flash photography.
The system is designed so that the settings of the EL-1 (Ver.2) (sender) are automatically applied to wirelessly controlled Speedlites (receivers). This eliminates the need to operate receivers during shooting.

Positioning and Range

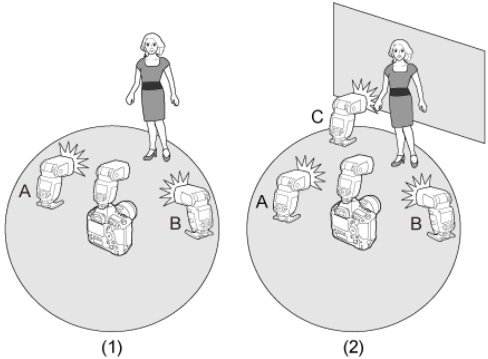
- **Autoflash with one receiver ( )**



(1) RECEIVER EL-1 (Ver.2)
(2) SENDER EL-1 (Ver.2)
(3) Transmission range: Approx. 30 m / 98.4 ft.

Autoflash with groups of receivers (,)

E-TTL II / E-TTL autoflash photography is possible with two or three receiver groups, and the flash ratio (proportion of flash output) can be adjusted as needed.



(1) 2 groups (A, B)
(2) 3 groups (A, B, C)

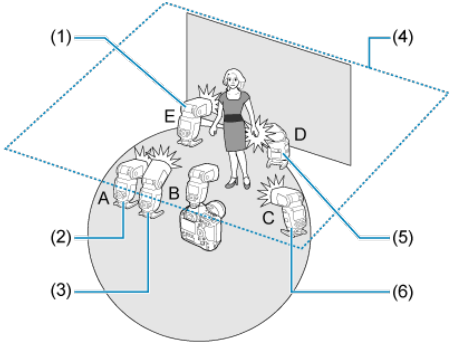
Caution

- Take a few test shots in advance, and test flash firing ( ).
- Transmission range may be shorter depending on factors such as Speedlite positioning, the surrounding environment, and weather conditions.

Note

- Set up receivers using the included mini stand.

- **Shooting in a different flash mode for each group ( )**



* This is only one example of flash mode settings.
(1) E-TTL II
(2) E-TTL II
(3) Manual flash
(4) Ceiling
(5) Manual flash
(6) Manual flash

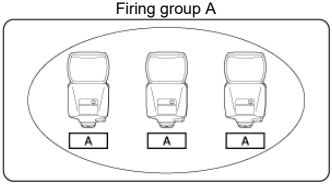
Difference between Radio Transmission and Optical Transmission

Wireless shooting using radio transmission provides some advantages over wireless shooting using optical transmission, such as less interference from obstacles and not having to point the receiver's wireless sensor toward the sender unit. The main functional differences are as follows.

Function		Radio Transmission	Optical Transmission
Transmission distance		Approx. 30 m / 98.4 ft.	Approx. 15 m / 49.2 ft. (indoors)
Firing group control		Up to 5 groups*1 (A, B, C, D, E)	Up to 3 groups (A, B, C)
Receiver control		Up to 15	No restriction
Channel		Auto, Ch. 1–15	Ch. 1–4
Wireless radio ID		0000–9999	–
Receiver controls	**Test flash**	○	–
	Modeling flash	Yes*2	–
	Release	Yes*3	–

* 1-3: Restrictions exist depending on the camera (*1: Restrictions for Specific Cameras, Shooting in Group-Specific Flash Modes, *2: Firing Test Flash/Modeling Flash from Receivers, *3: Remote Release from Receivers).

Group Control



You can add receivers when more light or sophisticated lighting is needed. For added receivers, simply specify the firing group (A, B, or C) that you want to be brighter.
For example, when three receivers are set to firing group < A >, they are all controlled as a single, high-output Speedlite in group A.

Caution

- To fire the three groups of A, B, and C, set to < A:B C >. Group C does not fire when Speedlites are set to < A:B >.
- Aiming the units in firing group C directly at subjects may cause overexposure.

Note

- Flash ratios from 8:1 to 1:1 to 1:8 correspond to 3:1 to 1:1 to 1:3 (in 1/2-stop increments) as converted to number of stops.

Restrictions for Specific Cameras

Depending on the camera, functions in radio transmission wireless flash photography may be limited.

EOS DIGITAL cameras released in and after 2012

When using the flash with EOS DIGITAL cameras released in and after 2012, you can shoot without any restrictions on the flash mode and flash synchronization speed, etc.
* Although EOS REBEL T100/4000D/3000D, EOS REBEL T7/1500D/2000D, EOS REBEL T6/1300D and EOS REBEL T5/1200D were released after 2012, restrictions on functions are the same as with EOS DIGITAL cameras released up to 2011 (See the following explanation for details).

EOS cameras compatible with E-TTL and released up to 2011

When using the flash with the cameras listed below, radio transmission wireless shooting using E-TTL autoflash is not possible. Use manual flash ( ) or optical transmission wireless flash shooting ( ).

EOS-1Ds, EOS-1D, EOS-1V, EOS-3, EOS Elan II/Elan II E/50/50E,
EOS REBEL 2000/300, EOS REBEL G/500N,
EOS REBEL XS N/REBEL G II/3000N/66, EOS IX, EOS IX Lite/IX7

Also, when using the flash with an EOS DIGITAL camera or EOS film camera released up to 2011, the following restrictions apply.

(1) **The maximum flash synchronization shutter speed is one step slower.**
Check the maximum flash sync shutter speed (X = 1/*** sec.) of your camera and shoot with a shutter speed up to 1 stop slower than the maximum flash sync shutter speed (Example: At X = 1/250 seconds, radio transmission wireless flash photography is possible within a range of 1/125 to 30 seconds).
If you lower the shutter speed by one step from the maximum flash synchronization shutter speed, the < Tv > warning icon will disappear.

(2) **High-speed sync shooting is not possible.**

(3) **Group firing ( ) is not possible.**

(4) **Modeling flash from the receiver ( ) and remote release from the receiver ( ) are not possible.**

(5) **It cannot be used as a "receiver camera" during linked shooting ( ).** It can only be used as a "sender camera".

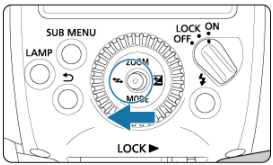
Wireless Settings

- Setting as Sender
- Setting as Receiver
- Setting the Transmission Channel / Wireless Radio ID
- < LINK > Lamp and Connection Indicator
- Sender Flash Firing On / Off
- Memory Function

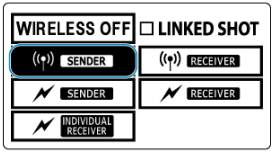
Set the sender and receiver for radio transmission wireless flash photography with E-TTL II / E-TTL autoflash as follows.

Setting as Sender

1. **Select < > with the joystick.**

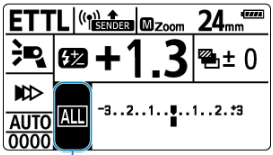


2. **Set to < ((•)) SENDER >.**



- Press the joystick vertically or horizontally or turn < ◎ > to select < ((•)) SENDER >, then push the joystick straight in.

3. **Select the firing method.**

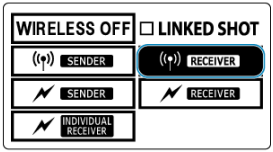


(1)

- Push the joystick straight in.
- Press the joystick vertically or horizontally or turn < ◎ > to select item (1), then push the joystick straight in.
- Press the joystick horizontally or turn < ◎ > to choose from < ALL >, < A:B >, or < A:B C >, then push the joystick straight in.

Setting as Receiver

1. **Set to < RECEIVER >.**



- Configure this setting on Speedlites to use as receivers.
- Select < RECEIVER > just as you set up the sender.

Caution

- Before normal flash photography, select < WIRELESS OFF > to clear the wireless (sender/receiver) settings.

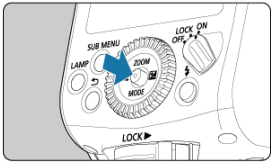
Setting the Transmission Channel / Wireless Radio ID

Set the sender's transmission channel and wireless radio ID as follows. **Set the same channel and ID for both the sender and receivers.** For receiver instructions, refer to the instruction manual of Speedlites equipped with radio transmission wireless receiver functionality.

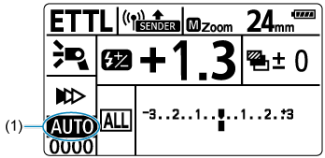
Caution

- Set different wireless radio IDs for each channel, because interference between systems with Speedlites controlled by radio transmission may occur even if the units are set to different transmission channels.

1. **Push the joystick straight in.**

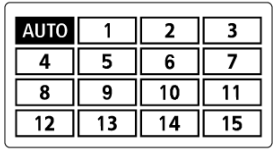


2. **Select item (1).**



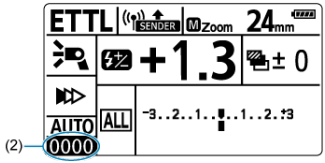
- Press the joystick vertically or horizontally or turn < ◎ > to select the channel item, then push the joystick straight in.

3. **Set a transmission channel.**



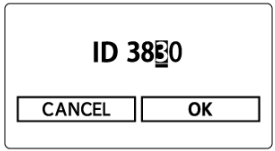
- Press the joystick vertically or horizontally or turn < ◎ > to choose from < AUTO > or channels 1–15, then push the joystick straight in.

4. **Select item (2).**

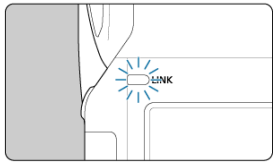


- Select the ID item just as you set the transmission channel, then push the joystick straight in.

5. **Set the wireless radio ID.**



- Press the joystick horizontally or turn < ◎ > to select the position (digit) to set, then push the joystick straight in.
- Press the joystick vertically or turn < ◎ > to select a number in the range 0–9, then push the joystick straight in.
- Set a 4-digit number the same way, then select < OK >.



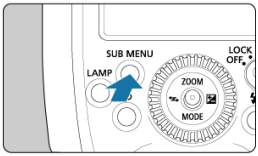
- The < LINK > lamp is lit in green when communication is established between the sender and receiver.

Scanning and setting sender transmission channels

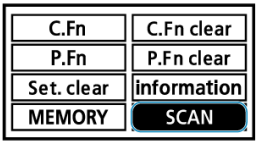
You can scan radio signal conditions and then set the sender transmission channel automatically or manually. Setting the channel to [AUTO] will automatically reset the Speedlite to the channel with the strongest signal. When setting the channel manually, you can review scan results as you reset it.

● Scanning when currently set to [AUTO]

1. **Press the <SUB MENU> button.**



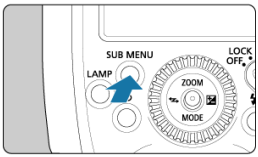
2. **Run the scan.**



- Press the joystick vertically or horizontally or turn < ◎ > to select < SCAN >, then push the joystick straight in.
- Select < OK >.
- The scan is performed, and the setting is reset to the channel with the strongest signal.

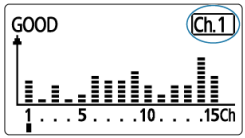
Scanning when currently set to a channel (1–15)

1. **Press the <SUB MENU> button.**

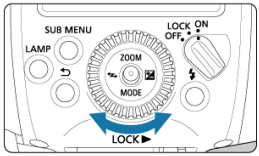


2. **Run the scan.**

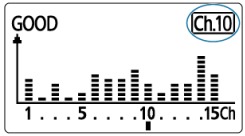
- Press the joystick vertically or horizontally or turn < ◎ > to select < SCAN >, then push the joystick straight in.
- Select < OK >.
- The scan is performed, and a graph of signal conditions is displayed.
- Higher peeks in the graph indicate stronger signals.



3. Set the channel.



- Push the joystick up / down / left / right or turn < ◎ > to select from Ch.1 to 15.
- Push the joystick straight in to set the channel.

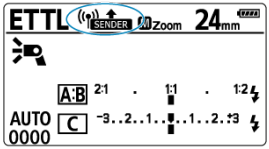


< LINK > Lamp and Connection Indicator

You can determine the connection status from the state of the < LINK > lamp or the icon on the LCD panel.

Status	Description	Action
Lit	Connected	–
Off	Not connected	Check the channel and ID
Off	Too many units	Do not exceed 16 senders and receivers, combined
Off	Error	Restart the senders and receivers
Lit	Connected*1	–
Lit	Connected*2	–

* 1: When the sender side is connected to the sub-sender
* 2: When the sender side is connected for linked shooting



Display	Description	Action
SENDER / RECEIVER	Connected	–
SENDER / RECEIVER	Not connected	Check the channel and ID
SENDER / RECEIVER	Too many units	Do not exceed 16 senders and receivers, combined
	Error	Restart the senders and receivers
SUB SENDER	Connected*1	–

* 1: When the sender side is connected to the sub-sender

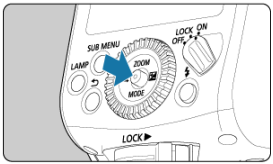
Caution

- Receivers do not fire unless the sender and receiver channels match. Set both to the same number, or set both to [AUTO].
- Receivers do not fire unless the sender and receiver wireless radio IDs match. Set to the same number.

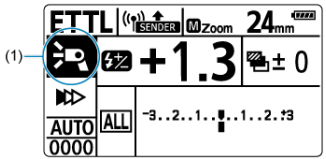
Sender Flash Firing On / Off

You can set whether the sender fires along with the receivers it controls wirelessly. When sender flash firing is enabled, the sender fires as firing group A.

1. **Push the joystick straight in.**

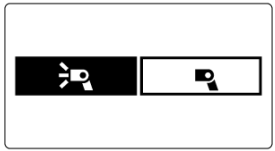


2. **Select the item shown in (1).**



- Press the joystick vertically or horizontally or turn < ◎ > to select the item, then push the joystick straight in.

3. **Set sender flash firing.**

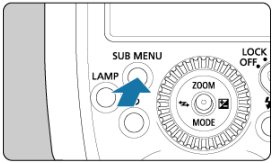


- Turn < > to enable or disable sender flash firing, then push the joystick straight in.
  - < >: Sender flash firing ON
  - < >: Sender flash firing OFF

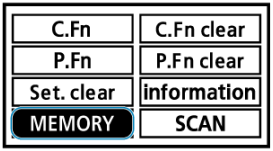
Memory Function

You can save the wireless settings to the sender unit and receiver unit and recall the settings later. Operate each sender or receiver unit individually to save or recall its settings.

1. **Press the <SUB MENU> button.**

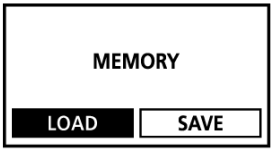


2. **Select < MEMORY >.**



- Press the joystick vertically or horizontally or turn < ◎ > to select < MEMORY >, then push the joystick straight in.

3. **Save or load the settings.**



Save

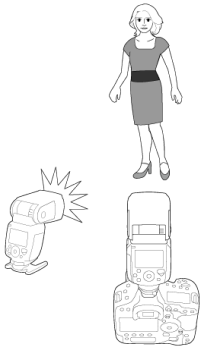
- Press the joystick horizontally or turn < ◎ > to select < SAVE >, then push the joystick straight in.
- Press the joystick horizontally or turn < ◎ > to select < OK >, then push the joystick straight in.
- The settings are saved (stored in the memory).

Load

- Press the joystick horizontally or turn < ◎ > to select < LOAD >, then push the joystick straight in.
- Press the joystick horizontally or turn < ◎ > to select < OK >, then push the joystick straight in.
- The settings that were saved are set.

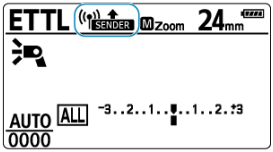
Autoflash with One Receiver

- LCD Panel Illumination
- Flash Photography Applying Wireless Features
- Using Multiple Senders



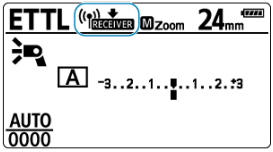
This section describes basic fully automatic wireless shooting with an EL-1 (Ver.2) attached to the camera as a sender and an EL-1 (Ver.2) set as a receiver.

1. **Set up a unit as the sender.**



- Set the EL-1 (Ver.2) attached to the camera as a sender ( ).
- You can also use other devices equipped with radio transmission wireless sender functionality as senders.

2. **Set up a unit as the receiver.**



- Set the EL-1 (Ver.2) for wireless control by the sender as the receiver ( ).
- You can also use other EX-series Speedlites that are equipped with a radio transmission wireless receiver function.

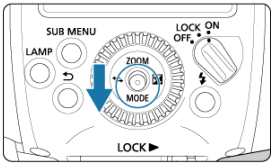
3. **Check the channel and ID.**

- Set the same transmission channel and wireless radio ID on senders and receivers, if they are different ( ).

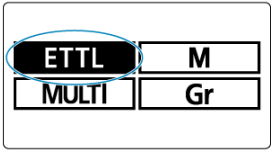
4. **Position the camera and other Speedlite.**

- Position them within the range shown in Positioning and Range.

5. **Use the joystick on the sender to select <MODE>.**

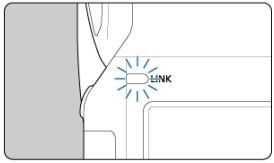


6. Set the flash mode to <ETTL>.

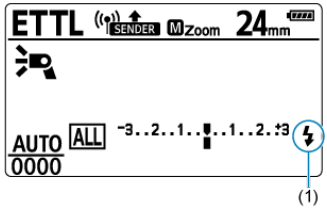


- Press the joystick vertically or horizontally or turn <◎> to select <ETTL>, then push the joystick straight in.
- The receiver is automatically set to <ETTL> during shooting, as controlled by the sender.
- Confirm that firing group control is set to <ALL>.

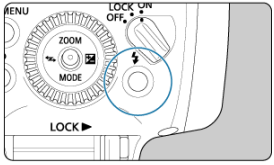
7. Check the connection and make sure the flash units are charged.



- Confirm that the < LINK > lamp is lit in green.
- When the receiver flash is ready, the AF-assist beam emitter blinks at approx. 1-second intervals.
- The sender beeps after all Speedlites have been recharged when P.Fn-06 is set to [0] ( ).

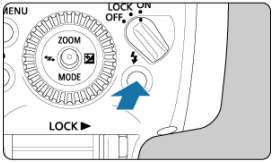


- Confirm that the < ϟ > icon (1) indicating completion of sender/receiver charging appears on the sender LCD panel (< CHARGE > is not displayed).
- For details on sender LCD panel illumination, see LCD Panel Illumination.



- Check that the sender unit's flash-ready lamp is lit.

8. Check operation.



- Press the sender test flash button.
- The Speedlites fire. If it does not fire, confirm that it is within transmission range ( ).

9. Take the picture.

- Just as in normal flash photography, shoot after configuring the camera.

Caution

- Radio transmission is not possible unless the < LINK > lamp is lit. Double-check the transmission channels and wireless radio IDs of senders and receivers. If you cannot connect with the same settings, restart the senders and receivers.

Note

- Flash coverage of the sender and receiver is set to 24 mm. You can also set the flash coverage manually.
- The sender can also fire ( ).
- You can fire the modeling flash by pressing the camera's depth-of-field preview button ( ).
- Auto power off takes effect in approx. 5 min. when the Speedlite is set as a sender.
- To turn on a receiver that is in auto power off mode, press the sender test flash button.
- Test flash firing is not available while a camera's flash timer or similar functions are active.
- You can change the time until auto power off takes effect on a receiver in C.Fn-10.
- You can set up beeping when all Speedlites (senders and receivers) are fully charged in P.Fn-06.
- You can disable the blinking of the AF-assistant beam emitter when the receiver unit is fully charged (C.Fn-23).

LCD Panel Illumination

In wireless flash photography, the sender LCD panel is on or off depending on whether senders and receivers (firing groups) are charged.
The sender LCD panel is lit when the sender and receiver are not fully charged. LCD panel illumination turns off approx. 12 sec. after senders and receivers are fully charged.
The sender LCD panel is lit again when sender and receiver charging resumes as you take pictures.

Caution

- < CHARGE > is displayed on the sender LCD panel as long as the sender or any receiver (firing groups) is not fully charged. Before shooting, confirm that < CHARGE > is not displayed on the LCD panel.

Flash Photography Applying Wireless Features

The wireless system eliminates the need to set up the following features on receivers, which are automatically configured based on sender settings. This enables wireless flash photography much like normal flash photography.

- **Flash Exposure Compensation** < >
- **Flash Exposure Bracketing** < >
- **FE Lock**
- **High-Speed Sync** < >
- **Second-Curtain Sync** < >
- **Manual Flash**
  - **Wireless Multiple-Flash Photography with Flash Ratio**
- **Stroboscopic Flash**

Note

- You can also set flash exposure compensation and flash coverage manually on each receiver.
- With an EL-1 (Ver.2) set as sender, wireless second-curtain sync shooting is possible with an EL series Speedlite (except EL-100), 600EX II-RT, 600EX-RT, or 430EX III-RT set as receiver.

Using Multiple Senders

Multiple devices can be set as senders. Wireless flash photography under the same lighting arrangement (with the same receivers) is also possible using other cameras, by switching the camera that the sender is attached to.
< SUB SENDER > is displayed on the LCD panel when multiple senders are used.

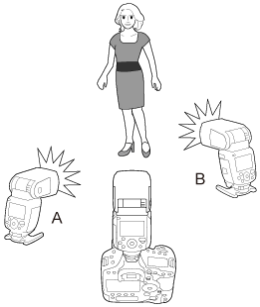
Caution

- < LINK > lamps that are off or < SENDER > display on LCD panels indicates that the Speedlites are not connected. After checking the transmission channel and wireless radio ID, restart each sender.
- Do not exceed a total of 16 senders and receivers in wireless flash photography.

Note

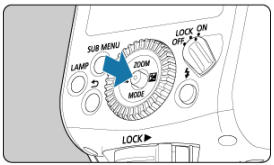
- Flash photography is possible even when the sender is a sub-sender.

Autoflash with Two Receiver Groups



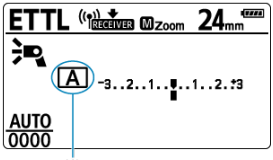
Receivers can be divided into firing groups A and B, and you can adjust the lighting balance (flash ratio) between them.
Exposure is automatically controlled, so that the groups' combined output provides standard exposure.

1. **Push the joystick straight in.**



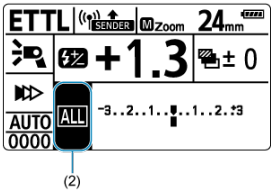
- Complete these settings on each receiver.

2. **Set the receiver firing group in (1).**



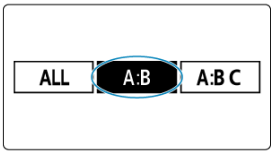
- Select either < A > or < B > for the firing group.
- Set one receiver to < A > and another to < B >.

3. **Set the sender firing group in (2).**



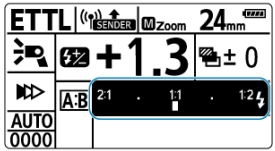
- Complete steps 3–5 on the sender.
- Press the joystick vertically or horizontally or turn < ◎ > to select the item, then push the joystick straight in.

4. **Set to < A:B >.**



- Press the joystick horizontally or turn < ◎ > to select < A:B >, then push the joystick straight in.

5. **Set the A:B flash ratio.**

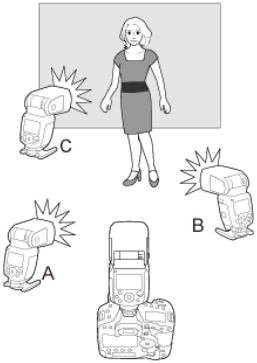


- Push the joystick straight in to select the item shown in the figure.
- Press the joystick horizontally or turn < ◎ > to set the A:B flash ratio, then push the joystick straight in.

6. **Take the picture.**

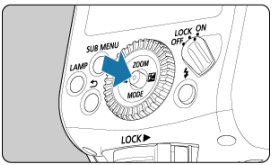
- The receivers fire at the flash ratio you have set.

Autoflash with Three Receiver Groups

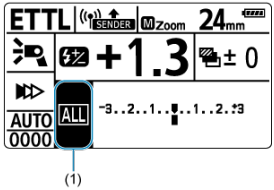


Once firing groups A and B have been set up, you can fire with multiple Speedlites by adding group C. For an overview of flash control, see Group Control.
Group C is useful when you want to eliminate shadows in the background behind subjects.

1. **Push the joystick straight in.**

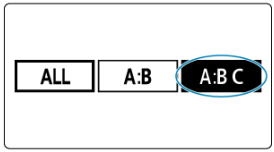


2. **Select the item shown in (1).**



- Press the joystick vertically or horizontally or turn < ◎ > to select the item, then push the joystick straight in.

3. **Set to < A:B C >.**



- Press the joystick horizontally or turn < ◎ > to select < A:B C >, then push the joystick straight in.

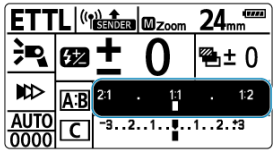
4. **Add Speedlites to firing group A, B, or C and position them.**

- Confirm that all receivers and the sender are set to the same transmission channel and wireless radio ID.
- Set up receivers for group A, B, or C and position them.

5. **Check the channel and ID.**

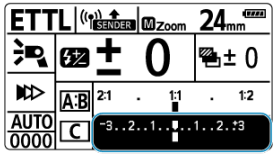
- Set the same transmission channel and wireless radio ID on senders and receivers, if they are different ( ).

6. **Set the A:B flash ratio.**



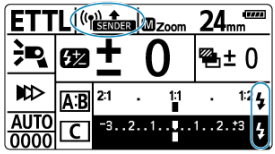
- Push the joystick straight in to select the item shown in the figure.
- Press the joystick horizontally or turn < ◎ > to set the A:B flash ratio, then push the joystick straight in.

7. **Set the flash exposure compensation amount for firing group C.**

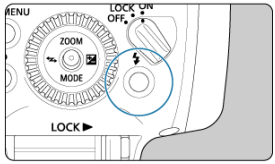


- Push the joystick straight in to select the item shown in the figure.
- Press the joystick horizontally or turn < ◎ > to set the amount of compensation, then push the joystick straight in.

8. **Check the connection and make sure the flash units are charged.**

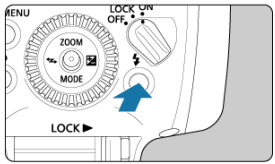


- Make sure < SENDER > is not displayed on the sender LCD panel.
- Check that the < ϟ > icon indicating that receiver charging is completed is lit on the sender unit's LCD panel (< CHARGE > is not displayed).
- For details on sender LCD panel illumination, see LCD Panel Illumination.



- Check that the sender unit's flash-ready lamp is lit.

9. **Check operation.**



- Press the test flash button on the sender.
- The Speedlites fire. If they do not fire, confirm that they are within transmission range ( ).

10. Take the picture.

- Just as in normal flash photography, shoot after configuring the camera.

Caution

- Radio transmission is not possible when < SENDER > is displayed on the LCD panel. Double-check the transmission channels and wireless radio IDs of senders and receivers. If you cannot connect with the same settings, restart the senders and receivers.
- Aiming the units in firing group C directly at subjects may cause overexposure.

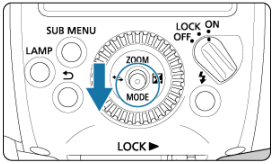
Note

- You can fire the modeling flash by pressing the camera's depth-of-field preview button ( ).
- Auto power off takes effect in approx. 5 min. when the Speedlite is set as a sender.
- To turn on a receiver that is in auto power off mode, press the sender test flash button.
- Test flash firing is not available while a camera's flash timer or similar functions are active.

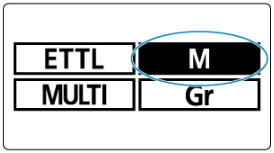
Wireless Multiple-Flash Photography with Flash Ratio

This section describes wireless multiple-flash shooting in manual flash mode. For each firing group, you can set flash output in a range from full 1/1 output to 1/8192 output, in 1/3-stop increments. All settings are configured on the sender.

1. **Select <MODE> with the joystick.**

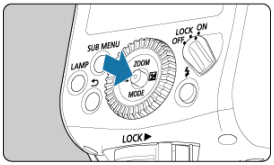


2. **Set the flash mode to <M>.**

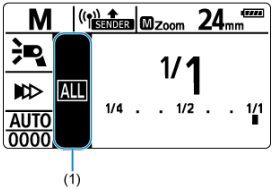


- Press the joystick vertically or horizontally or turn <◎> to select <M>, then push the joystick straight in.

3. **Push the joystick straight in.**

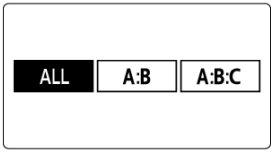


4. **Select the item shown in (1).**



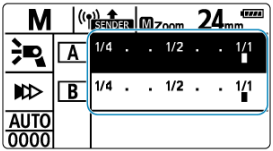
- Press the joystick vertically or horizontally or turn < ◎ > to select the item, then push the joystick straight in.

5. **Configure the firing group setting.**



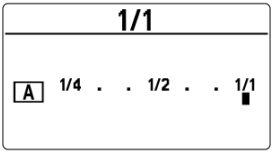
- Press the joystick horizontally or turn < ◎ > to select a firing option from the following. This enables wireless multiple-flash photography with firing groups A–C added.
  - For the same output from all receivers, select < ALL >.
  - To set the output for firing groups A and B, select < A:B >.
  - To set the output for firing groups A, B, and C, select < A:B:C >.

6. Select a firing group.



- If you selected < A:B > or < A:B:C > in Step 2, push the joystick vertically and then push the joystick up and down, or turn < ◎ > to select the group to set the flash output.

7. Set the flash output.



- Push the joystick straight in.
- Press the joystick horizontally or turn < ◎ > to set the flash output, then push the joystick straight in.
- Repeat Step 3 and 4 to set the flash output of all the groups.

8. Take the picture.

- Each group fires at the specified flash output.

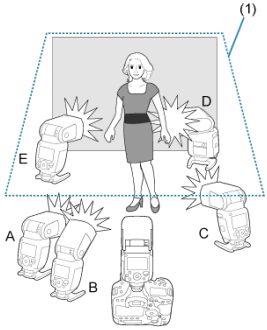
Caution

- When high-speed sync or optical transmission wireless is set, the setting range will be 1/1 to 1/128.
- Speedlites other than the EL-1 (Ver.2) used as receivers may not display low flash firing levels correctly.

Note

- When < ALL > is set, set A, B, or C as the firing group for receivers. They will not fire when set to D or E.
- To fire multiple receivers at the same flash output, select < ALL > in step 2.

Shooting in Group-Specific Flash Modes



(1) Ceiling

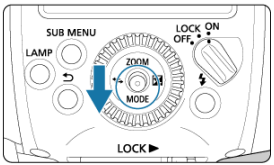
When using an EOS DIGITAL camera released in and after 2012, you can shoot in a different flash mode set for each firing group with up to 5 groups (A, B, C, D, and E). Available flash modes include (1) E-TTL II / E-TTL autoflash, (2) manual flash, and (3) auto external flash metering. When the flash mode is (1) or (3), exposure is controlled to result in standard exposure for the main subject as a single group.
This function is for advanced users who are very knowledgeable and experienced in lighting.

Caution

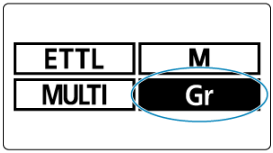
- For cameras released in 2011 or earlier and the EOS REBEL T100/4000D/3000D, EOS REBEL T7/1500D/2000D, EOS REBEL T6/1300D, and EOS REBEL T5/1200D, wireless flash photography is not possible in < Gr > flash mode. Shooting with up to 3 groups (A, B, and C) will be applied ( ).

---

1. **Use the joystick on the sender to select < MODE >.**

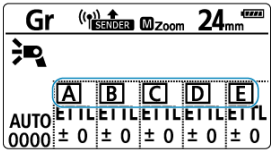


2. **Set the flash mode to <Gr>.**



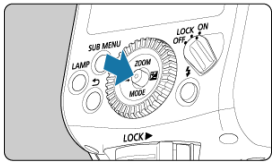
- Press the joystick vertically or horizontally or turn <◎> to select <Gr>, then push the joystick straight in.
- The receiver flash mode is set automatically during shooting, as controlled by the sender.

3. **Set the firing groups of the receivers.**

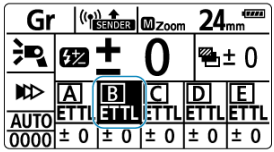


- Set a firing group (A–E) for each receiver.

4. Configure each firing group.

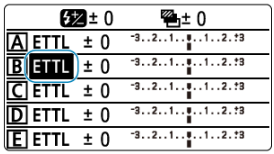


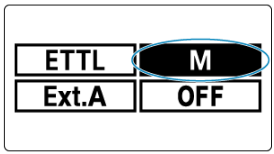
- On the sender, set the flash mode of each firing group.
- Push the joystick straight in.



- Press the joystick vertically or horizontally or turn < ◎ > to select a firing group, then push the joystick straight in.

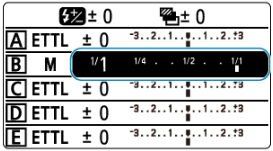
Setting the flash mode

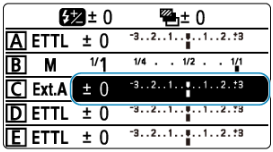




- Press the joystick vertically or horizontally or turn < ◎ > to select the flash mode from <**ETTL**>, <**M**>, or <**Ext.A**>.

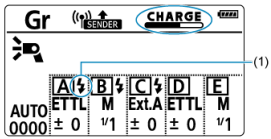
Setting the flash output and flash exposure compensation amount





- Press the joystick vertically or horizontally or turn < ◎ > to select the item, then push the joystick straight in.
- Press the joystick horizontally or turn < ◎ > to set the flash output or flash exposure compensation amount, then push the joystick straight in.
- When using the < **M** > mode, set the flash output. For < **ETTL** > or < **Ext.A** >, set the flash exposure compensation amount as needed.
- Repeat step 3 to configure flash features for all firing groups.

5. Before shooting, confirm that flash recharging is finished.



- When < CHARGE > is displayed, you can determine which firing groups are not fully charged from the icons. For example, the icon shown in (1) indicates that firing group < A > is fully charged.
- < CHARGE > is no longer displayed after all groups are fully charged.
- For other details on checking recharge status, see step 7 in Autoflash with One Receiver.
- Each receiver fires at the same time in the flash mode you have set.

Caution

- For < **Ext.A** > flash mode, make sure the receivers support auto external flash metering. Receivers will not fire unless it is supported.
- In < **ETTL** > or < **Ext.A** > flash mode, exposure is controlled to obtain standard exposure for the main subject as if using a single group, which may cause overexposure if multiple firing groups are pointing toward the main subject.

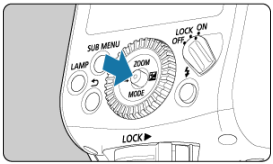
Note

- For details on < **Ext.A** >, refer to the instruction manual of Speedlites that support auto external flash metering.
- Letters of groups that fire do not need to be in consecutive alphabetical order; for example, A, C, E can be set.
- Set any group you do not wish to fire to < OFF > when configuring flash modes in step 3.

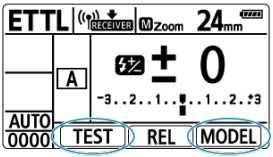
Firing Test Flash/Modeling Flash from Receivers

Test flash or modeling flash ( ) can be fired in radio transmission wireless flash photography from EL-1 (Ver.2) Speedlites set as receivers.

1. **Push the joystick straight in.**



2. **Fire the flash.**



[Test flash firing]

- Press the joystick vertically or horizontally or turn < > to select < TEST >, then push the joystick straight in.

[Modeling flash] ( )

- Press the joystick vertically or horizontally or turn < > to select < MODEL >, then push the joystick straight in.
- The wireless system fires test or modeling flash after the receiver transmits a firing signal to the sender.

Caution

- Modeling flash is not possible from a receiver unit with cameras released up to 2011 or with EOS REBEL T100/4000D/3000D, EOS REBEL T7/1500D/2000D, EOS REBEL T6/1300D or EOS REBEL T5/1200D.
- For precautions on modeling flash, see Modeling Flash.
- When C.Fn-02-1 is set on the sender unit (), modeling flash will not be fired even if you select < MODEL >.

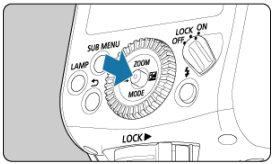
Note

- When there are multiple senders (), the firing signal is transmitted to the main sender.

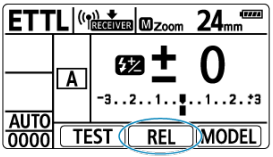
Remote Release from Receivers

When using an EOS digital camera released in 2012 or later, EL-1 (Ver.2) Speedlites set as receivers can be used to shoot remotely in radio transmission wireless flash photography, enabling remote control shooting.

1. **Push the joystick straight in.**



2. **Take the picture.**



- Press the joystick vertically or horizontally or turn < > to select < REL >, then push the joystick straight in.
- The sender shoots after the receiver transmits a firing signal to it.

Caution

- Remote release is not possible from a receiver unit in cameras released up to 2011 or EOS REBEL T100/4000D/3000D, EOS REBEL T7/1500D/2000D, EOS REBEL T6/1300D or EOS REBEL T5/1200D.
- Shooting is not possible unless the camera can focus on subjects with AF. Consider setting the lens focus mode switch to < MF > and focusing manually before remote release.

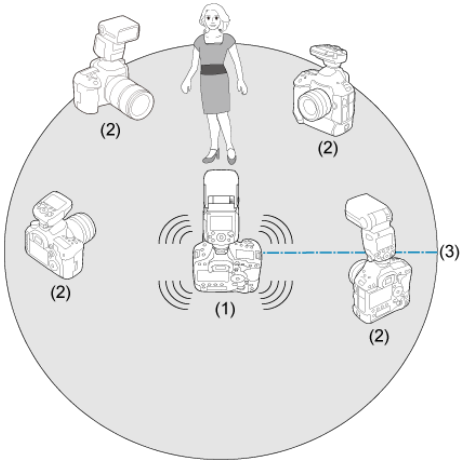
Note

- The camera shoots in single shooting mode regardless of the current drive mode setting.
- When there are multiple senders (), the firing signal is transmitted to the main sender.
- <RELEASE> is displayed on the sender LCD panel during remote release from receivers.

Linked Shooting

If you use an EOS digital camera released in 2012 or later (except the EOS REBEL T100/4000D/3000D, EOS REBEL T7/1500D/2000D, EOS REBEL T6/1300D, and EOS REBEL T5/1200D), linked shooting is supported, in which shooting with the sender camera automatically triggers shutter release by receiver cameras. You can perform linked shooting with up to 16 sender and receiver cameras in all. This is useful when shooting a subject from multiple angles at the same time.
For linked shooting, attach Speedlites or Speedlite Transmitters that support radio transmission wireless flash photography to the cameras. Note that when used with a camera released in 2011 or earlier* or the EOS REBEL T100/4000D/3000D, EOS REBEL T7/1500D/2000D, EOS REBEL T6/1300D, or EOS REBEL T5/1200D, the unit can only be used as the “sender camera unit.” The unit cannot be used as a "receiver camera unit".

* Some cameras are not supported.



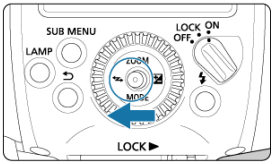
(1) Sender camera
(2) Receiver cameras
(3) Transmission range: Approx. 30 m / 98.4 ft.

Note

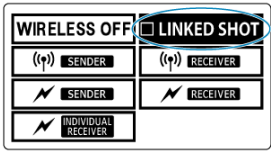
- For convenience in this guide, the EL-1 (Ver.2) and the other cameras set up for linked shooting are referred to as the “sender camera” and “receiver cameras,” respectively.

Before following these steps, attach a Speedlite or transmitter to all cameras you will use in linked shooting. For instructions on setting up other devices, refer to the instruction manuals of the devices.

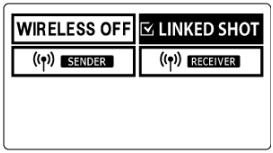
1. **Select < ⇆ > with the joystick.**



2. **Set to normal shooting mode.**

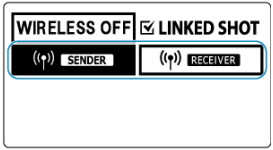


- Press the joystick vertically or horizontally or turn < ◎ > to select < ☐ LINKED SHOT >, then push the joystick straight in.



- Display then changes to < ☑ **LINKED SHOT** >.

3. **Set as a sender or receiver.**



- Press the joystick vertically or horizontally or turn < ◎ > to select < ((•)) SENDER > or < ((•)) RECEIVER >, then push the joystick straight in.

4. **Set the transmission channel and wireless radio ID.**

- For instructions, see Setting the Transmission Channel / Wireless Radio ID.

5. **Set up shooting on the camera.**

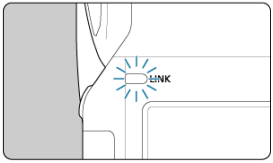
6. **Set up all Speedlites.**

- In the linked shooting setting, set up all Speedlites you will use in linked shooting as senders or receivers.
- Do the same for any transmitters you will use.
- Changing a Speedlite from receiver to sender in step 2 automatically changes other Speedlites (or transmitters) that were set as senders to receivers.

7. **Position the receiver cameras.**

- Position all receiver cameras within approx. 30 m / 98.4 ft. of the sender camera.
- Confirm that the < LINK > lamp of receivers is lit in green.

8. **Take the picture.**



- Before shooting, confirm that the sender's < LINK > lamp is lit in green.
- Shooting with the sender camera automatically activates shooting by receiver cameras.
- < RELEASE > appears on the LCD panel of receivers that were used in linked shooting.

Note

- To cancel linked shooting, change the setting in step 2 to < ☐ LINKED SHOT > on each Speedlite.
- This feature can be used for remote control of linked shooting even without attaching the sender Speedlite to a camera. To fire from all receiver cameras, push the sender joystick straight in, then press it vertically or horizontally or turn < ◎ > to select < REL >.
- Auto power off takes effect in approx. 5 min. in linked shooting, for both senders and receivers. If more time than this will pass between shots in linked shooting, set auto power off to [OFF] on both senders and receivers (C.Fn-01-1).
- Each Speedlite (senders and receivers) set to [0] in P.Fn-06 ( ) beeps after it is fully charged.

Caution

- Consider setting the lens focus mode switch to < MF > on receiver cameras and focusing manually before linked shooting. Receiver cameras cannot shoot in linked shooting unless they can focus on subjects with AF.
- There is a short time lag between the release of the receiver camera unit and the release timing of the sender camera unit. Perfectly simultaneous shooting is not possible.
- Flash can be fired in linked shooting when P.Fn-03 is set to [1] (), but if multiple Speedlites fire together, it may prevent suitable exposure or cause uneven exposure.
- Linked shooting is not possible when [**Flash firing**] is set to [**Disable**] under [**External Speedlite control**] or [**Flash control**] on the sender camera unit ().
- When set to P.Fn-03-0 (), if linked shooting is not possible while viewing the live view image, set [**Soft LV shooting**] or [**Silent LV shoot.**] in the menu of the sender camera unit to [**Disable**]. Depending on the camera model, the receiver camera unit may not link if it is set to [**Mode 1**] or [**Mode 2**].
- Transmission range may be shorter depending on factors such as Speedlite positioning, the surrounding environment, and weather conditions.
- This linked shooting is equivalent to linked shooting with the WFT series of wireless file transmitters. However, WFT series transmitters cannot be used in this linked shooting. Also note that the shutter-release time lag differs from that of the WFT series.

Caution

Linked shooting using Live View function

- When set to P.Fn-03-0 (), if the following cameras are combined and set as sender cameras, linked shooting in the Live View mode is not possible.
- Perform linked shooting after switching Live View shooting to viewfinder shooting or set the Speedlite to P.Fn-03-1.
  EOS REBEL T6S/760D, EOS REBEL T6i/750D, EOS REBEL T5i/700D,
  EOS REBEL T4i/650D, EOS REBEL T3i/600D, EOS REBEL T2i/550D,
  EOS REBEL T1i/500D, EOS REBEL XSi/450D, EOS REBEL XS/1000D

Optical Transmission Wireless Flash Shooting

This chapter describes how to use strobe shooting using the optical transmission wireless sender / receiver function.
Sender / receiver functions can be used with Speedlites compatible with optical transmission wireless flash shooting.

Caution

- Operations described in this chapter are not available when the camera is in Full Auto or Basic Zone modes. Set the camera's shooting mode to <Fv>, <P>, <Tv>, <Av>, <M>, or <Bulb (B)> (Creative Zone).

Note

- The instructions assume you are using the EL-1 (Ver.2) for both the sender flash and the receiver flash.
- The EL-1 (Ver.2) attached to the camera is referred to as a “sender,” and other Speedlites controlled wirelessly are referred to as “receivers.”

- Optical Transmission Wireless Flash Shooting
- Optical Transmission Wireless Settings
- Autoflash with One Receiver
- Autoflash with Two Receiver Groups
- Autoflash with Three Receiver Groups
- Wireless Multiple-Flash Photography with Flash Ratio
- Manual Flash / Stroboscopic Flash Set in the Receiver Unit

Optical Transmission Wireless Flash Shooting

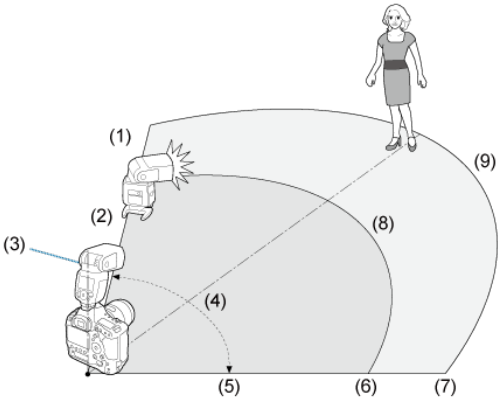
Positioning and Range

Group Control

Using a Canon Speedlite (receiver) with an optical transmission wireless shooting function, you can easily perform wireless multiple flash shooting in the same way as normal E-TTL II / E-TTL autoflash strobe photography.
The system is designed so that the settings of the EL-1 (Ver.2) (sender) are automatically applied to wirelessly controlled Speedlites (receivers). This eliminates the need to operate receivers during shooting.

Positioning and Range

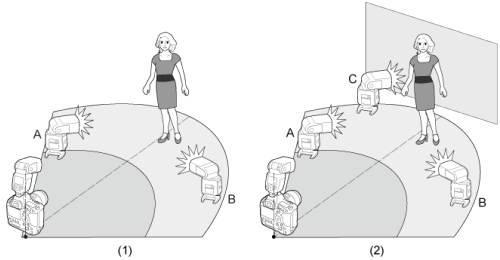
- **Autoflash with one receiver ( )**



(1) Indoors
(2) Outdoors
(3) SENDER
(4) About 80°
(5) Transmission range
(6) About 8 m / 26.2 ft.
(7) About 12 m / 39.4 ft.
(8) About 10 m / 32.8 ft.
(9) About 15 m / 49.2 ft.

Autoflash with groups of receivers (,)

E-TTL II / E-TTL autoflash photography is possible with two or three receiver groups, and the flash ratio (proportion of flash output) can be adjusted as needed.



(1) 2 groups (A, B)
(2) 3 groups (A, B, C)

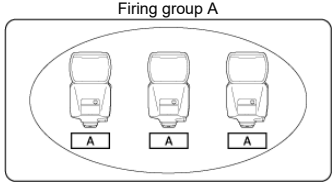
Caution

- Aiming the units in firing group C directly at subjects may cause overexposure.
- Take a few test shots in advance, and test flash firing ( ).
- To avoid interfering with transmission, do not place any obstacles between the sender unit and receiver unit.

Note

- Using the mini stand provided with the receiver unit, position the receiver of the receiver unit towards the sender unit.
- When shooting indoors, the transmission may be reflected off the wall, which may cause the camera to be activated even when the layout is still preliminary.

Group Control



You can add receivers when more light or sophisticated lighting is needed. For added receivers, simply specify the firing group (A, B, or C) that you want to be brighter. There is no restriction on the number of units.

For example, when three receivers are set to firing group < A >, they are all controlled as a single, high-output Speedlite in group A.

Caution

- To fire the three groups of A, B, and C, set to < A:B C >. Group C does not fire when Speedlites are set to < A:B >.
- Aiming the units in firing group C directly at subjects may cause overexposure.
- With certain EOS film cameras that support E-TTL autoflash, you cannot perform wireless multiple flash shooting with a flash ratio setting.

Note

- Flash ratios from 8:1 to 1:1 to 1:8 correspond to 3:1 to 1:1 to 1:3 (in 1/2-stop increments) as converted to number of stops.

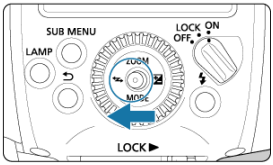
Optical Transmission Wireless Settings

- Setting as Sender
- Setting as Receiver
- Setting the Transmission Channel
- Sender Flash Firing On / Off
- Memory Function

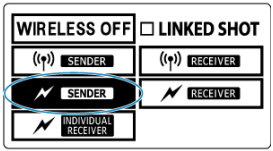
Set the sender and receiver for optical transmission wireless flash shooting with E-TTL II / E-TTL autoflash as follows.

Setting as Sender

1. **Select < ⇄ > with the joystick.**

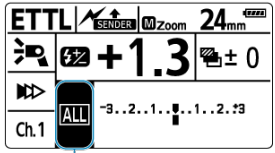


2. **Set to < SENDER >.**



- Press the joystick vertically or horizontally or turn < ◎ > to select < SENDER >, then push the joystick straight in.

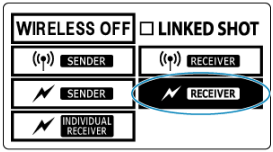
3. **Select the firing method.**



- Push the joystick straight in.
- Press the joystick vertically or horizontally or turn < ◎ > to select item (1), then push the joystick straight in.
- Push the joystick to the left or right, turn < ◎ > to select from < ALL > < A:B > < A:B C >, then push the joystick vertically (,).

Setting as Receiver

1. **Set to < RECEIVER >.**



- Configure this setting on Speedlites to use as receivers.
- Select < RECEIVER > just as you set up the sender.

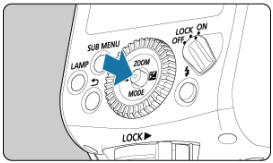
Caution

- To perform normal flash photography, select < WIRELESS OFF > to clear the sender settings.

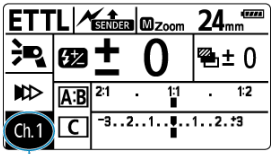
Setting the Transmission Channel

Follow the procedure below to set the communication channel of the sender unit. **The channel set should be the same for the sender unit and receiver unit.** For details on the receiver operation procedure, refer to the Instruction Manual of the Speedlite equipped with the optical transmission wireless receiver function.

1. **Push the joystick straight in.**



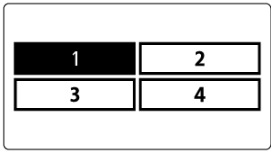
2. **Select the item shown in (1).**



(1)

- Press the joystick vertically or horizontally or turn < ◎ > to select the channel item, then push the joystick straight in.

3. **Set a transmission channel.**



- Push the joystick up / down / left / right or turn < ◎ > to select from Ch. 1 to 4, then push the joystick vertically.

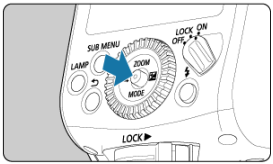
Caution

- Receivers do not fire unless the sender and receiver channels match. Set both to the same number.

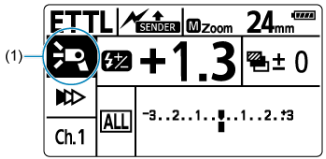
Sender Flash Firing On / Off

You can set whether the sender fires along with the receivers it controls wirelessly. When sender flash firing is enabled, the sender fires as firing group A.

1. **Push the joystick straight in.**

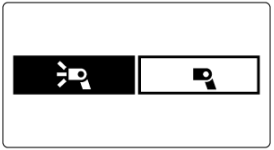


2. **Select the item shown in (1).**



- Press the joystick vertically or horizontally or turn < ◎ > to select the item, then push the joystick straight in.

3. **Set sender flash firing.**



- Press the joystick horizontally or turn < ◎ > to enable or disable sender flash firing, then push the joystick straight in.
  - < ⚡ >: Sender flash firing ON
  - < >: Sender flash firing OFF

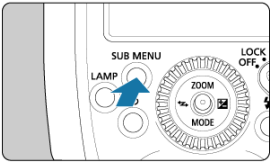
Caution

- Even when sender flash firing is set to OFF, the flash firing for controlling the receiver unit (optical transmission) is performed. Therefore, depending on the shooting conditions, the flash fired for controlling the receiver unit may be captured in the picture.

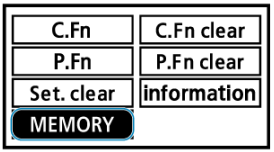
Memory Function

You can save the wireless settings to the sender unit and receiver unit and recall the settings later. Operate each sender or receiver unit individually to save or recall its settings.

1. **Press the <SUB MENU> button.**

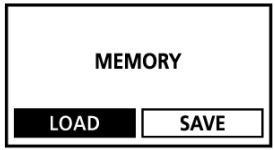


2. **Select < MEMORY >.**



- Press the joystick vertically or horizontally or turn < ◎ > to select < MEMORY >, then push the joystick straight in.

3. **Save or load the settings.**



Save

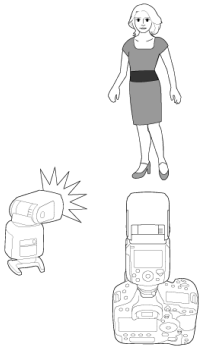
- Press the joystick horizontally or turn < ◎ > to select < SAVE >, then push the joystick straight in.
- Press the joystick horizontally or turn < ◎ > to select < OK >, then push the joystick straight in.
- The settings are saved (stored in the memory).

Load

- Press the joystick horizontally or turn < ◎ > to select < LOAD >, then push the joystick straight in.
- Press the joystick horizontally or turn < ◎ > to select < OK >, then push the joystick straight in.
- The settings that were saved are set.

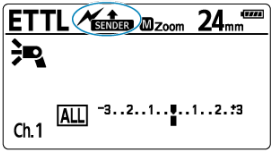
Autoflash with One Receiver

- Autoflash Photography Using Multiple Receiver Units
- Flash Photography Applying Wireless Features
- Using Multiple Senders



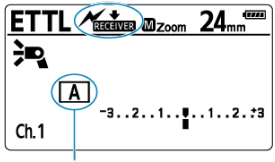
This section describes basic fully automatic wireless shooting with an EL-1 (Ver.2) attached to the camera as a sender and an EL-1 (Ver.2) set as a receiver.

1. **Set up a unit as the sender.**



- Set the EL-1 (Ver.2) attached to the camera as a sender ( ).
- Devices equipped with the optical transmission wireless sender function can also be used as a sender unit.

2. **Set up a unit as the receiver.**



- Set the EL-1 (Ver.2) for wireless control by the sender as the receiver ( ).
- You can also use other EX-series Speedlites that are equipped with an optical transmission wireless receiver function.
- You can use any of A, B, or C as the firing group (1).

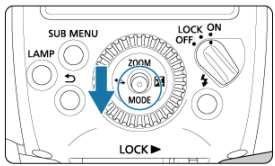
3. **Check the channel.**

- If the communication channels of the sender and receiver units are different, set them to the same channel ( ).

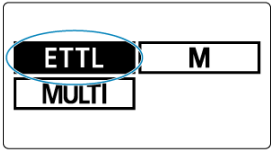
4. **Position the camera and other Speedlite.**

- Position them within the range shown in Positioning and Range.

5. **Use the joystick on the sender to select <MODE>.**

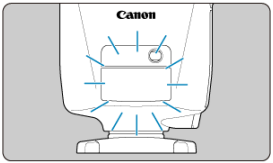


6. Set the flash mode to <ETTL>.

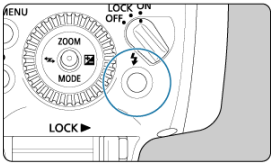


- Press the joystick vertically or horizontally or turn <◎> to select <ETTL>, then push the joystick straight in.
- The receiver is automatically set to <ETTL> during shooting, as controlled by the sender.
- Confirm that firing group control is set to <ALL>.

7. Confirm that flash recharging is finished.

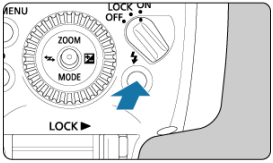


- When the receiver flash is ready, the AF-assist beam emitter blinks at approx. 1-second intervals.



- Check that the sender unit's flash-ready lamp is lit.

8. Check operation.



- Press the sender unit's test flash button.
- The Speedlites fire. If it does not fire, check that it is placed within the transmission range ( ).

9. Take the picture.

- Just as in normal flash photography, shoot after configuring the camera.

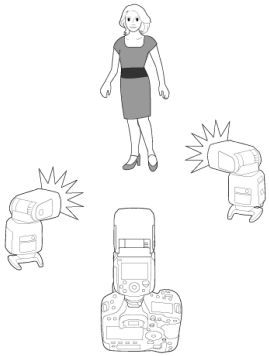
Caution

- If there is a fluorescent light or computer monitor near a receiver unit, the presence of the light source may cause the receiver unit to malfunction and fire inadvertently.
- During optical transmission wireless shooting, even if the sender and receiver units (firing group) are not all fully charged, < CHARGE > will not be displayed on the sender unit's LCD panel as it is with radio transmission wireless shooting (with sender flash firing OFF). Also, there is no function for illuminating or turning off the sender unit's LCD panel according to the charge status of the sender unit and receiver units.
- When P.Fn-06-0 is set on the sender unit ( ), the beep will sound when the sender unit is fully charged (This beep does not indicate that charging of all flash units is completed as it does with radio transmission wireless shooting).

Note

- Flash coverage of the sender and receiver is set to 24 mm. You can also set the flash coverage manually.
- The sender can also fire ( ).
- You can fire the modeling flash by pressing the camera's depth-of-field preview button ( ).
- To turn on a receiver that is in auto power off mode, press the sender test flash button.
- Test flash firing is not available while a camera's flash timer or similar functions are active.
- You can change the time until auto power off takes effect on a receiver in C.Fn-10.
- You can disable the blinking of the AF-assistant beam emitter when the receiver unit is fully charged (C.Fn-23).

Autoflash Photography Using Multiple Receiver Units



When you need more flash output or you want to perform lighting more easily, you can increase the number of receiver units and fire them as a single flash.
Add a receiver, and follow the same procedure listed in “Autoflash with One Receiver” ( ).
You can use any of A, B, or C as the firing group.
When the number of receiver units is increased or sender flash firing is set to ON, automatic control is performed to fire all flashes at the same flash output and to ensure that the total flash output results in the standard exposure.

Flash Photography Applying Wireless Features

The wireless system eliminates the need to set up the following features on receivers, which are automatically configured based on sender settings. This enables wireless flash photography much like normal flash photography.

- **Flash Exposure Compensation** < >
- **Flash Exposure Bracketing** < >
- **FE Lock**
- **High-Speed Sync** < >
- **Manual Flash**
  - **Wireless Multiple-Flash Photography with Flash Ratio**
- **Stroboscopic Flash**

Caution

- The flash frequency when performing stroboscopic flash during optical transmission wireless shooting can be set from 1 Hz to 199 Hz (settings from 250 Hz to 500 Hz are not available).

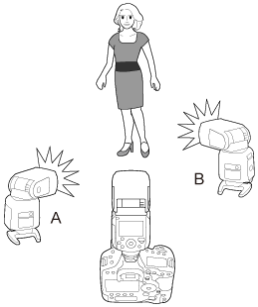
Note

- You can also set flash exposure compensation and flash coverage manually on each receiver.

Using Multiple Senders

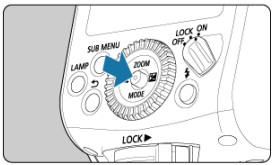
Multiple devices can be set as senders. Wireless flash photography under the same lighting arrangement (with the same receivers) is also possible using other cameras, by switching the camera that the sender is attached to.

Autoflash with Two Receiver Groups



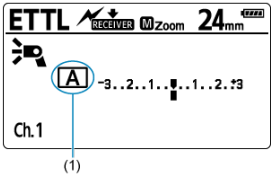
Receivers can be divided into firing groups A and B, and you can adjust the lighting balance (flash ratio) between them.
Exposure is automatically controlled, so that the groups' combined output provides standard exposure.

1. **Push the joystick straight in.**



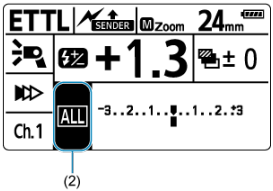
- Complete these settings on each receiver.

2. **Set the receiver firing group in (1).**



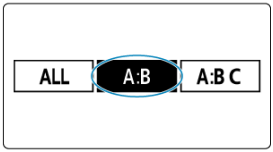
- Select either < A > or < B > for the firing group.
- Set one receiver to < A > and another to < B >.

3. **Set the sender firing group in (2).**



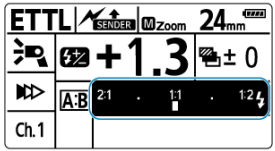
- Complete steps 3–5 on the sender.
- Press the joystick vertically or horizontally or turn < ◎ > to select the item, then push the joystick straight in.

4. **Set to < A:B >.**



- Press the joystick horizontally or turn < ◎ > to select < A:B >, then push the joystick straight in.

5. **Set the A:B flash ratio.**

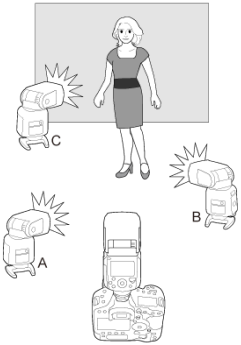


- Push the joystick straight in to select the item shown in the figure.
- Press the joystick horizontally or turn < ◎ > to set the A:B flash ratio, then push the joystick straight in.

6. **Take the picture.**

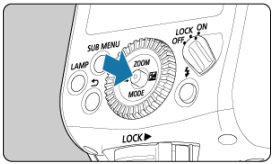
- The receivers fire at the flash ratio you have set.

Autoflash with Three Receiver Groups

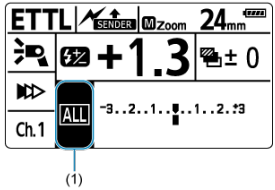


Once firing groups A and B have been set up, you can fire with multiple Speedlites by adding group C. For an overview of flash control, see Group Control.
Group C is useful when you want to eliminate shadows in the background behind subjects.

1. **Push the joystick straight in.**

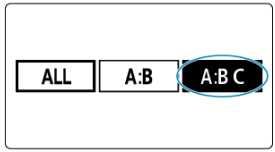


2. **Select the item shown in (1).**



- Press the joystick vertically or horizontally or turn < ◎ > to select the item, then push the joystick straight in.

3. **Set to < A:B C >.**



- Press the joystick horizontally or turn < ◎ > to select < A:B C >, then push the joystick straight in.

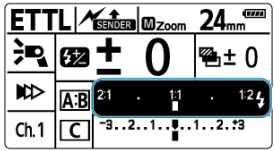
4. **Add Speedlites to firing group A, B, or C and position them.**

- Check whether all the receiver units are set to the same transmission channel as the sender unit.
- Set up receivers for group A, B, or C and position them.

5. **Check the transmission channel.**

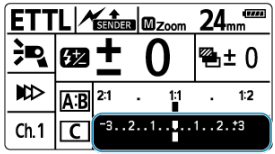
- If the channels of the sender unit and receiver unit are different, set them to the same number ( ).

6. **Set the A:B flash ratio.**



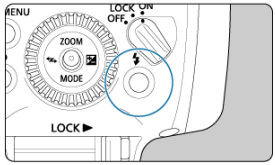
- Push the joystick straight in to select the item shown in the figure.
- Press the joystick horizontally or turn < ◎ > to set the A:B flash ratio, then push the joystick straight in.

7. **Set the flash exposure compensation amount for firing group C.**



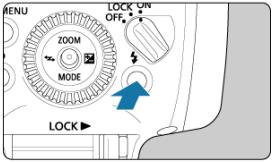
- Push the joystick straight in to select the item shown in the figure.
- Press the joystick horizontally or turn < ◎ > to set the amount of compensation, then push the joystick straight in.

8. **Confirm that flash recharging is finished.**



- Check that the sender unit's flash-ready lamp is lit.
- Check that the receiver unit is fully charged.

9. Check operation.



- Press the sender unit's test flash button.
- Firing groups A, B, and C will fire. If it does not fire, check that it is placed within the operation range.

10. Take the picture.

- Just as in normal flash photography, shoot after configuring the camera.

Caution

- To fire the three groups of A, B, and C, set to < A:B C >. Group C does not fire when Speedlites are set to < A:B >.
- Aiming the units in firing group C directly at subjects may cause overexposure.
- With certain EOS film cameras that support E-TTL autoflash, you cannot perform wireless multiple flash shooting with a flash ratio setting.
- If there is a fluorescent light or computer monitor near a receiver unit, the presence of the light source may cause the receiver unit to malfunction and fire inadvertently.

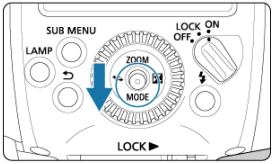
Note

- You can fire the modeling flash by pressing the camera's depth-of-field preview button ( ).
- To turn on a receiver that is in auto power off mode, press the sender test flash button.
- Test flash firing is not available while a camera's flash timer or similar functions are active.

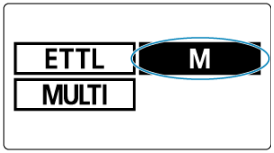
Wireless Multiple-Flash Photography with Flash Ratio

This section describes wireless multiple-flash shooting in manual flash mode. For each firing group, you can set flash output in a range from full 1/1 output to 1/128 output, in 1/3-stop increments. All settings are configured on the sender.

1. **Select <MODE> with the joystick.**

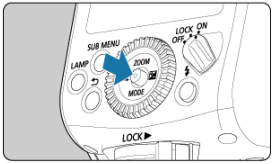


2. **Set the flash mode to <M>.**

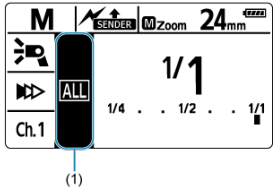


- Press the joystick vertically or horizontally or turn <◎> to select <M>, then push the joystick straight in.

3. **Push the joystick straight in.**

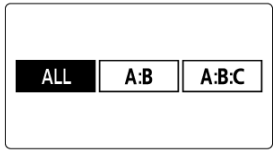


4. **Select the item shown in (1).**



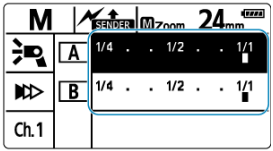
- Press the joystick vertically or horizontally or turn < ◎ > to select the item, then push the joystick straight in.

5. **Configure the firing group setting.**



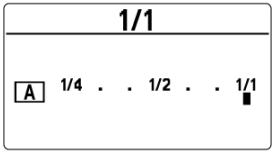
- Press the joystick horizontally or turn < ◎ > to select a firing option from the following. You can use wireless multiple flash shooting with firing groups A, B, and C added.
  - For the same output from all receivers, select < ALL >.
  - To set the output for firing groups A and B, select < A:B >.
  - To set the output for firing groups A, B, and C, select < A:B:C >.

6. Select a firing group.



- If you selected < A:B > or < A:B:C > in Step 2, push the joystick vertically and then push the joystick up and down, or turn < ◎ > to select the group to set the flash output.

7. Set the flash output.



- Push the joystick straight in.
- Press the joystick horizontally or turn < ◎ > to set the flash output, then push the joystick straight in.
- Repeat Step 3 and 4 to set the flash output of all the groups.

8. Take the picture.

- Each group fires at the specified flash output.

Note

- When < ALL > is set, A, B, or C can be set as the firing group for receivers. All the groups fire at the set flash output.

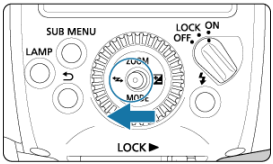
Manual Flash / Stroboscopic Flash Set in the Receiver Unit

Manual Flash

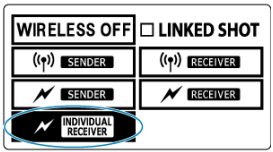
Stroboscopic Flash

You can directly operate the receiver unit to manually set the manual flash or stroboscopic flash. This function is called "individual receiver". This is useful when, for example, you use the Speedlite Transmitter ST-E2 (sold separately) to perform wireless manual flash or stroboscopic flash.

1. **Select < ⇆ > with the joystick.**

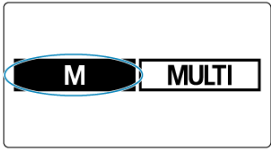


2. **Set the individual receiver.**



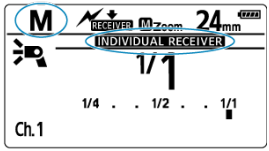
- Press the joystick vertically or horizontally or turn < ◎ > to select < INDIVIDUAL RECEIVER >, then push the joystick straight in.
- < INDIVIDUAL RECEIVER > appears on the LCD panel.

3. **Set the flash mode.**



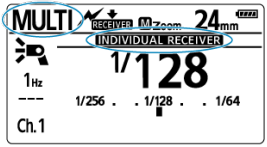
- Select < MODE > with the joystick.
- Push the joystick to the left or right or turn < ◎ > to select < M > or < MULTI >, then push the joystick vertically.

Manual Flash



Set the manual flash output. For details on the setting procedure, see "Manual Flash".

Stroboscopic Flash



Set the stroboscopic flash settings. For details on the setting procedure, see "Stroboscopic Flash".

Caution

- The flash frequency when performing stroboscopic flash during optical transmission wireless shooting can be set from 1 Hz to 199 Hz (settings from 250 Hz to 500 Hz are not available).

Note

- A receiver unit that is set as an individual receiver unit cannot be subject to flash mode control from the sender unit. The receiver unit fires in the flash mode that is set by individual receiver.

Customizing the Speedlite

This chapter describes how to customize the Speedlite with Custom/Personal Functions (C.Fn/P.Fn).

Caution

- Operations described in this chapter are not available when the camera is in Full Auto or Basic Zone modes. Set the camera's shooting mode to <Fv>, <P>, <Tv>, <Av>, <M>, or <Bulb (B)> (Creative Zone).

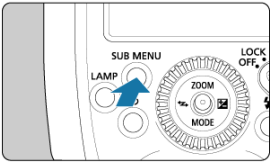
- Setting Custom and Personal Functions
- Customization with Custom Functions
- Customization with Personal Functions

Setting Custom and Personal Functions

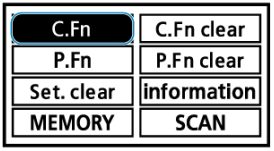
- C.Fn: Custom Functions
- P.Fn: Personal Functions
- Custom Function List
- Personal Function List
- Clearing All Custom/Personal Functions

You can customize Speedlite functions to suit your shooting preferences. The functions for this purpose are called Custom Functions and Personal Functions. Personal Functions also enable customization specifically for the EL-1 (Ver.2).

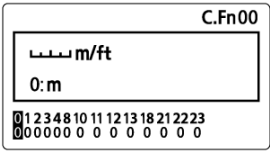
1. **Press the <SUB MENU> button.**



2. **Display the Custom Functions screen.**

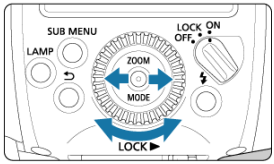


- Press the joystick vertically or horizontally or turn <◎> to select <C.Fn>, then push the joystick straight in.



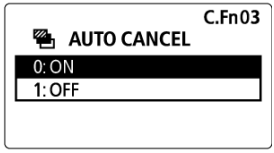
- The Custom Functions screen is displayed.

3. Select an item to set.



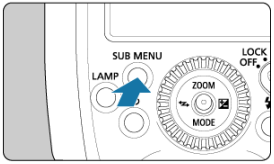
- Press the joystick horizontally or turn < ◎ > to select the item (number) to set.

4. Change the setting.

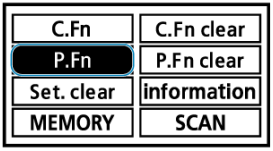


- Push the joystick straight in.
- Press the joystick vertically or turn < ◎ > to select an option, then push the joystick straight in.

1. **Press the <SUB MENU> button.**

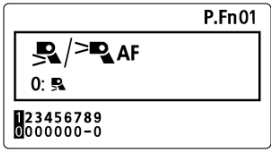


2. **Display the Personal Functions screen.**



- Select < P.Fn > as in step 2 for Custom Functions, then push the joystick straight in.

3. **Set the function.**



- Set Personal Functions as in steps 3–4 for Custom Functions.

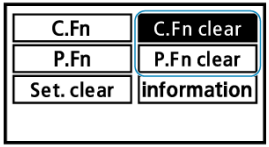
Custom Function List

Number	Item	
C.Fn-00	< m/ft >	Distance indicator display
C.Fn-01	< >	Auto power off
C.Fn-02	< MODELING FLASH >	Modeling flash
C.Fn-03	< AUTO CANCEL >	FEB auto cancel
C.Fn-04	< >	FEB sequence
C.Fn-08	< AF >	AF-assist beam firing
C.Fn-10	< >	Receiver auto power off timer
C.Fn-11	< >	Receiver auto power off cancel
C.Fn-12	< >	Flash recycle with external power source
C.Fn-13	< >	Flash exposure compensation setting
C.Fn-18	< MODELING LAMP >	Modeling lamp activation
C.Fn-21	< >	Light distribution
C.Fn-22	< >	LCD panel illumination
C.Fn-23	< >	Receiver charge confirmation

Personal Function List

Number	Item	
P.Fn-01	< AF >	AF-assist beam firing method
P.Fn-02	< QUICK >	Quick flash
P.Fn-03	< LINKED SHOT >	Flash firing during linked shooting
P.Fn-04	< DIRECT >	Change settings with dial
P.Fn-05	< FEM >	FE memory
P.Fn-06	< >	Beeping
P.Fn-07	< >	Fan
P.Fn-08	< MODELING LAMP >	Modeling lamp (brightness, color)
P.Fn-09	< MODELING LAMP >	Modeling lamp period of illumination

Clearing All Custom/Personal Functions



Select < C.Fn clear > or < P.Fn clear > on the screen shown above, then select < OK > to clear all custom functions or personal functions.

Caution

- Clearing all Custom Functions will not clear C.Fn-00.

Note

- You can also set or clear Speedlite Custom Functions from the camera menu ( ).

C.Fn-00: m/ft (Distance indicator display)

You can select meters or feet for the distance indicator display on the LCD panel.

- **0: m (Meters (m))**
- **1: ft (Feet (ft))**

Note

- The right end of the effective flash range on the LCD panel changes to < ▶ > when the effective flash distance exceeds 18 m / 60 ft.

C.Fn-01: (Auto power off)

To conserve power, the Speedlite turns off automatically if left idle for approx. 90 sec., but this function can be disabled.

- **0: ON**
- **1: OFF**

Note

- Auto power off takes effect in approx. 5 min. when the Speedlite is set as a sender in radio transmission wireless flash photography ( ) or configured for linked shooting ( ).

C.Fn-02: MODELING FLASH (Modeling flash)

- **0: (Enable: Depth-of-field preview button)**
  Press the camera's depth-of-field preview button to fire the modeling flash.
- **1: (Enable: Test flash button)**
  Press the Speedlite's test flash button to fire the modeling flash.
- **2: / (Enable with both buttons)**
  Press the camera's depth-of-field preview button or the Speedlite's test flash button to fire the modeling flash.
- **3: OFF (Disabled)**
  Disables the modeling flash.

C.Fn-03: AUTO CANCEL (FEB auto cancel)

You can set whether to cancel FEB automatically after the three shots are taken for FEB.

- **0: ON (Enabled)**
- **1: OFF (Disabled)**

C.Fn-04: (FEB sequence)

You can change the FEB shooting sequence. 0: Standard exposure, –: Negative compensation (darker), and +: Positive compensation (brighter).

- **0: 0 → – → +**
- **1: – → 0 → +**

C.Fn-08: AF (AF-assist beam firing)

- **0: ON (Enabled)**
- **1: OFF (Disabled)**
  Disables the Speedlite's AF-assist beam.

Note

- The flash mark displayed when C.Fn-08 is set changes according to the P.Fn-01 ( ) setting.

C.Fn-10: RECEIVER (Receiver auto power off timer)

You can change the time until auto power off takes effect when the Speedlite is set as a receiver in radio or optical transmission wireless flash photography. < > is displayed on the LCD panel when the receiver enters auto power off mode. Set this function for each receiver.

- **0: 60 min.**
- **1: 10 min.**

C.Fn-11: RECEIVER (Receiver auto power off cancel)

Receivers that have entered auto power off mode in radio or optical transmission wireless flash photography can be turned on by pressing the sender test flash button.
You can change the time allowed for receivers in auto power off mode to accept this signal. Set this function for each receiver.

- **0: 8 h (within 8 hr.)**
- **1: 1 h (within 1 hr.)**

C.Fn-12: (Flash recycle with external power source)

- **0: + (Flash unit and external power source)**
  Charges using both internal and external power sources.

- **1: (External power source only)**
  The internal power source is needed to control the Speedlite. By using an external power source for charging firing of the Speedlite, you can minimize the depletion of the internal power source.

C.Fn-13: (Flash exposure compensation setting)

- **0: + (button + dial)**

- **1: (Direct setting with dial)**
  You can turn < > to set the amount of flash exposure compensation or the flash output directly, without first selecting < > with the joystick.

C.Fn-18: MODELING LAMP (Modeling lamp activation)

You can select how the modeling lamp is activated.

- **0: <LAMP> (button)**

- **1: < x2 > (half-press shutter button twice)**

Note

- The <LAMP> button can still be used even with this setting set to [1].
- Although "Macro focusing lamp ON" appears in the camera menu screen, the setting that can be configured is "Modelling lamp ON".
- When the flash is used with the EOS D60 or EOS D30, it will not function correctly even if you briefly press the shutter button twice in a row. Turn the lamp ON/OFF with the <LAMP> button.

C.Fn-21: (Light distribution)

You can change the Speedlite's light distribution (flash coverage) characteristics relative to the shooting angle of view when flash coverage is set to < A > (Auto).

- **0: (Standard)**
  Optimal flash coverage for the shooting angle of view is set automatically.

- **1: (Guide number priority)**
  Effective when prioritizing flash output, although image edges are slightly darker than when set to [0]. Flash coverage is automatically set slightly more toward the telephoto end than the actual shooting angle of view. The display changes to < >.

- **2: (Light distribution priority)**
  Effective when minimizing vignetting, although the flash range is slightly shorter than when set to [0]. Flash coverage is automatically set slightly more toward the wide-angle end than the actual shooting angle of view. The display changes to < >.

C.Fn-22: (LCD panel illumination)

The LCD panel is illuminated in response to button or dial operations. You can change this illumination setting.

- **0: 12 sec. (illuminated for 12 sec.)**

- **1: OFF (Disable panel illumination)**

- **2: ON (stays on)**

C.Fn-23: RECEIVER (Receiver charge confirmation)

When the receiver unit is fully charged during wireless flash photography, the AF-assist beam emitter of the receiver unit blinks. You can disable this blinking. Set this function for each receiver.

- **0: / = (AF-assist beam, lamp)**

- **1: (lamp)**

P.Fn-01: AF (AF-assist beam projection method)

You can select the AF-assist beam projection method.

- **0: (Infrared AF-assist beam)**
- **1: (Intermittent flash firing method)**
  Fire the AF-assist beam using the intermittent flash firing method ( ).

Caution

- The AF-assist beam is not projected during live view shooting.
- If a color filter is attached ( ), the Speedlite will not fire intermittently to provide an AF-assist beam.
- For the EOS R series, an AF-assist beam is projected by the intermittent flash regardless of the projection method of the AF-assist beam and whether a color filter is fitted. Note that this beam may be emitted by the camera instead of by the Speedlite, depending on ambient brightness. Also, when a color filter is fitted and the setting is set to [**1: (Intermittent flash firing method)**], an AF-assist beam is projected by the camera.
- For the EOS M series, an AF-assist beam is not projected by the flash.

P.Fn-02: QUICK (Quick flash)

You can set whether to fire the flash (Quick flash) when the flash-ready lamp is still blinking in red (before fully charged), so there is less time to wait for recharging.

- **0: ON (Enabled)**
- **1: OFF (Disabled)**

Caution

- Using Quick flash in continuous shooting ( ) may cause underexposure, due to the reduced flash output.

P.Fn-03: LINKED SHOT (Flash firing during linked shooting)

You can set whether to fire the Speedlite attached to the camera in linked shooting ( ). Set for each Speedlite used in linked shooting.

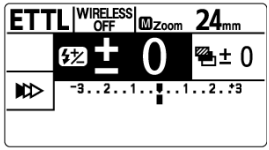
- **0: OFF (Disabled)**
  The Speedlite does not fire during linked shooting.
- **1: ON (Enabled)**
  The Speedlite fires during linked shooting.

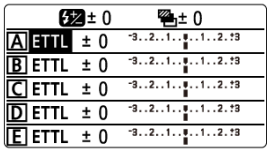
Caution

- Firing multiple Speedlites together in linked shooting may prevent suitable exposure or cause uneven exposure.

P.Fn-04: DIRECT (Change settings with dial)

You can select whether to allow direct configuration of the kinds of functions shown in the lower figure simply by turning < > on screens such as this one that are accessed by pushing the joystick straight in.





- **0: OFF (Disabled)**
  Normal method of operation.

- **1: ON (Enabled)**
  Enables selection of setting items (for the flash exposure compensation amount, manual flash output, firing group control, flash ratio, flash modes in group firing, receiver firing groups, and FEB) with the joystick and direct configuration simply by turning < >.
  When the flash mode is set to <MULTI>, you can set the "flash frequency" and "number of flashes" directly, and when it is set to <Ext.M>, you can set the "ISO speed" and "aperture value" directly.

Caution

- To select a setting item on the setting screen when P.Fn-04 is set to [1], press the joystick vertically or horizontally.

P.Fn-05: FEM (FE memory)

You can select whether to update, based on ETTL flash output, the flash output maintained in manual mode.

- **0: OFF**
- **1: ON**
- **2: ON / MODE ETTL↔M**

Note

- When P.Fn-05-2 is set, even if you push the joystick down to choose <MODE>, the mode will not change to a mode other than <ETTL> or <M>. To select another mode, push the joystick straight in to display the setting screen, press it vertically or horizontally or turn <◎> to select an item, then select the mode.

P.Fn-06: (Beeping)

You can enable beeping after the Speedlite is fully charged.

- **0: ON**
  In normal shooting (on-camera flash photography), the Speedlite beeps after it is fully charged.
  With the Speedlite set as a sender in radio transmission wireless flash photography, the sender beeps after all Speedlites (senders and receivers) are fully charged. Sender beeping enables you to confirm recharging of the entire wireless system. On receivers, P.Fn-06 can be set to [0] or [1]. With the Speedlite set as a sender in optical transmission wireless flash photography, or with Speedlites set as radio or optical wireless receivers in linked shooting ( ), each Speedlite set to [0] beeps after it is fully charged.

- **1: OFF**
  The Speedlite does not beep.

Caution

- Also when set to [0], the Speedlite beeps if high flash head or battery temperature has restricted firing ( ).

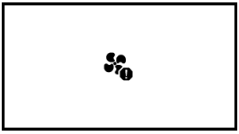
P.Fn-07: (Fan)

You can set whether to operate the fan.

- **0: ON**
- **1: OFF**

Caution

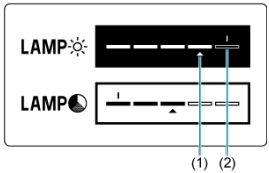
- If the fan breaks down or the rpm is high, a warning is displayed and the fan stops.



- When shooting a video with the flash connected to the camera, the fan actuation sound may be recorded.
- You can force the fan to stop when P.Fn-07-1 is set.
- When P.Fn-07-1 is set, the number of continuous flashes is lower than when the fan is moving and the required rest time until the warning icon is cleared is extended.
- When P.Fn-07-0 is set, the fan will start when the firing or modeling lamp is lit. The fan may start even if the flash is not fired depending on the internal temperature of the flash.
- When the fan breaks down, the number of continuous firings ( ) will be the same as when the fan is stopped regardless of the P.Fn-07 setting.

P.Fn-08: MODELING LAMP (Modeling lamp (brightness, color))

You can set the color and brightness of the modeling lamp.
Use the joystick to select < LAMP > or < LAMP >. Turn < > to select an option, then push the joystick straight in.



(1) Selected cursor position
(2) Default indicator

- LAMP: Press the joystick horizontally or turn < > to set modeling lamp brightness.
- LAMP: Press the joystick horizontally or turn < > to set the color temperature of the modeling lamp.

Note

- You can either push the joystick to the left or right when the modeling lamp is lit, or turn < > and push the joystick vertically to change the brightness and color temperature.

P.Fn-09: MODELING LAMP (Modeling lamp (period of illumination))

You can set the period of illumination of the modeling lamp.

- **0: 5 min**
- **1: 30 min**
- **2: Unlimited**

Reference

This chapter describes the flash system and includes frequently asked questions.

- Flash Firing Restriction Due to Temperature Increase
- Troubleshooting Guide
- Specifications
- Accessories
- Regulations

Flash Firing Restriction Due to Temperature Increase

Temperature Increase Warning

Continuous Flash Count and Rest Time

Repeated use of continuous, stroboscopic, or modeling flash at short intervals may increase the temperature of the flash head, battery, and areas near the battery compartment.
Repeated flash firing gradually increases the firing interval, up to approx. 4 sec., to avoid wearing out or damaging the flash head from overheating. Continuing to fire in this state will automatically restrict flash firing.
Note that when flash firing is restricted, a high-temperature warning icon is displayed, and the flash photography firing interval is automatically set to approx. 8 or 20 sec. (levels 1 and 2, respectively).

Temperature Increase Warning

At each of the two levels, a different warning icon is displayed as the internal temperature rises. Continuing to fire after level 1 is reached changes the state to level 2.

Display / Beeping	Level 1 (Firing Interval: Approx. 8 sec.)	Level 2 (Firing Interval: Approx. 20 sec.)
Icon		
LCD panel illumination	Lit	Blinking
Beeping	With P.Fn-06 set to [0]: Warning beep	

Modeling lamp temperature increase warning

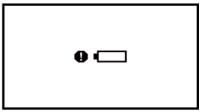
The following warning appears when the modeling lamp becomes hot.
To clear warning, push the joystick straight in, or press the < ⮌ > button.

The modeling lamp may dim or turn off if the ambient temperature around it becomes too high.

Display	Level 1		Level 2	
Icon				
	When on	When off	When on	When off
Brightness	When set to max. brightness: dimmed		Off	

Battery temperature increase warning

The following icon appears when the battery becomes hot. After this, display reverts to the same state as the temperature increase warning ( ).



Continuous Flash Count and Rest Time

The following table shows the estimated continuous flash count until level 1 warning display, along with the estimated rest time required until normal flash photography can be resumed.

Function		Estimated Continuous Flash Count Until Level 1 Warning		Estimated Rest Time Required
		Flash Coverage		
		14 mm–135 mm	150 mm–200 mm	
Continuous, at full output (🔗)	Fan drive	170 times or more	160 times or more	50 min. or longer
	Fan stop	50 times or more		
Modeling flash (🔗)	Fan drive	130 times or more		
	Fan stop	50 times or more		
Stroboscopic flash (🔗)		Varies depending on firing conditions		-

* As measured in manual flash mode according to Canon testing standards.

⚠ Caution

- **Do not touch the flash head, battery, or near the battery compartment after continuous flash firing.**
  After repeated use of continuous flash or modeling flash at short intervals, do not touch the flash head, battery, or near the battery compartment. The flash head, battery, and area near the battery compartment may become hot, which poses a risk of burns.

Caution

- Do not open or close the battery compartment cover while flash firing is restricted. This will cancel the flash firing restriction, which is potentially very dangerous.
- The firing interval becomes longer as the flash head becomes hotter, even if no level 1 warning is displayed.
- If level 1 warning is displayed, allow a rest time for at least 50 min.
- Even if you stop firing after a level 1 warning appears, a level 2 warning may still be displayed.
- Flash photography in <ETTL> flash mode or in high temperatures may restrict the flash count sooner than indicated in the table.
- For flash count precautions, see Precautions on continuous flash firing, Stroboscopic Flash, and Modeling Flash.
- In rare cases, environmental factors such as high temperatures may prevent firing.
- The number of continuous flashes until the warning (Level 1) is displayed is the number of times the EL-1 is used on its own and when it is used in combination with the compact battery pack CP-E4N (sold separately). When an external power source other than the CP-E4N is used, the number of continuous flashes until the warning (level 1) is displayed becomes fewer.
- When the bounce adapter is used, when the color filter is used, and when both the bounce adapter and color filter are used together, the number of continuous flashes until the warning is displayed becomes slightly fewer.
- The Speedlite does not issue a warning beep when P.Fn-06 is set to [1] (), even when firing is restricted.
- No warning is given by LCD panel illumination when C.Fn-22 is set to [1] (), even if the flash head becomes hot.
- When using Compact Battery Pack CP-E4N (sold separately), also refer to the CP-E4N Instruction Manual.

Troubleshooting Guide

- Power-related problems
- Normal flash photography
- Radio transmission wireless flash photography
- Linked shooting
- Optical transmission wireless flash shooting

Troubleshoot Speedlite issues as described in this section. If the problem persists, contact a Canon Service Center.

Power-related problems

Batteries cannot be charged with the charger.

- Batteries are not charged unless the remaining capacity is lower than approx. 90%.
- Do not use battery packs other than a genuine Canon Battery Pack LP-EL.

The charger lamp blinks rapidly.

- Constant, rapid orange blinking of the lamp indicates that a protection circuit has prevented charging because (1) there is a problem with the battery charger or battery, or (2) communication with a non-Canon battery has failed. In the case of (1), unplug the charger, reinsert the battery pack, and wait 2–3 minutes before plugging the charger in again. If the problem persists, contact a Canon Service Center.

The charger lamp does not blink.

- For safety, hot batteries inserted in the charger are not charged, and the lamp remains off. Charging also stops automatically if the battery becomes hot for any reason, in which case the lamp blinks continuously. Charging resumes automatically after the battery has cooled off.

[Cannot communicate with battery Use this battery?] appears.

- The battery pack may be damaged. If so, purchase a replacement.
- For safety, consider using a genuine Canon Battery Pack LP-EL.
- As a safety mechanism, flash recharging will take longer if you continue using an unresponsive battery pack.
- Reinsert the battery ( ).
- If the electrical contacts are dirty, use a soft cloth to clean them.

The battery becomes exhausted quickly.

- Use a fully charged battery ( ).
- The battery performance may have declined. See Checking Battery Information and check for battery performance issues. If battery performance is poor, purchase a replacement.
- Doing any of the following exhausts the battery faster.
  - Firing modeling flash repeatedly
  - Keeping the modeling lamp on for extended periods
  - Using wireless functions

The power turns off by itself.

- Auto power off has been activated. To prevent the power from turning off automatically, set C.Fn-01 to [1] on the Custom Functions screen ( ).

Normal flash photography

The power does not turn on.

- Make sure the battery compartment cover is closed ( ).
- Replace the battery with a new one.

The Speedlite does not fire.

- Insert the mounting foot all the way into the camera hot shoe and slide the lock lever right to secure the Speedlite to the camera ( ).
- If < CHARGE > remains displayed even after approx. 15 sec., replace the battery ( ).
- If the electrical contacts of the Speedlite or camera are dirty, wipe the contacts ( ) with a dry cloth, etc.
- The firing interval becomes longer ( ) after continuous firing over a short period, which will cause the flash head temperature to rise and restrict flash firing.
- For safety, batteries that are hot are not charged. Charging also stops automatically if the battery becomes hot for any reason. Charging resumes automatically after the battery has cooled off ( ).

The power turns off by itself.

- The Speedlite's auto power off has been activated ( ). Press the shutter button halfway, or press the test flash button ( ).

Pictures are under or overexposed.

- If the main subject looks very dark or very bright, set flash exposure compensation ( ).
- If there are highly reflective objects in the picture, use FE lock ( ).
- With high-speed sync, the faster the shutter speed, the lower the guide number. Move closer to the subject ( ).

The bottom of the picture looks dark.

- Shoot at least 0.5 m / 1.6 ft. away from the subject.
- When shooting within 1 m / 3.3 ft. of the subject, set the bounce angle down by 7° ( ).
- Remove any attached lens hoods.

The picture periphery looks dark.

- Set the flash coverage to < A > (Auto) ( ).
- When manually setting the flash coverage, set a flash coverage wider than the shooting angle of view ( ).
- Make sure C.Fn-21 is not set to [1] ( ).

Pictures are very blurry.

- Shooting in < Av > aperture-priority AE mode under low light automatically activates slow-sync shooting, which results in slower shutter speeds. Use a tripod, or set the shooting mode to < P > program AE or fully automatic mode (). Note that you can also set the flash sync speed in the setting [**Flash sync. speed in Av mode**] ().

Flash coverage is not set automatically.

- Set the flash coverage to < A > (Auto) ().
- Insert the mounting foot all the way into the camera hot shoe and slide the lock lever right to secure the Speedlite to the camera ().

Flash coverage cannot be set manually.

- Remove the bounce adapter ().
- Retract the wide panel ().

Functions cannot be set.

- Set the camera's shooting mode to < Fv >, < P >, < Tv >, < Av >, < M >, or <**Bulb** (B)> (Creative Zone).
- Set the Speedlite's power switch to < ON > instead of < LOCK > ().

The modeling lamp does not light up.

- Rest the unit for 30 minutes if the modeling lamp goes off. If the problem persists, contact a Canon Service Center.

Radio transmission wireless flash photography

Receivers do not fire or unexpectedly fire at full output.

- Set the sender to < SENDER > and receivers to < RECEIVER > ( ).
- Use the same settings for transmission channels and wireless radio IDs on the sender and receivers ( ).
- Make sure receivers are within transmission range of the sender ( ).
- Run a transmission channel scan and set the channel with the strongest signal ( ).
- To the extent possible, position receivers within a direct line of sight of the sender.
- Make sure receivers are facing the sender.
- The camera's built-in flash cannot be used as a sender in radio transmission wireless flash photography.

Pictures are overexposed.

- When using autoflash with three firing groups (A–C), do not fire with firing group C pointing toward the main subject ( ).
- When shooting with the flash mode set for each firing group, do not fire multiple firing groups set in < **ETTL** > < **Ext.A** > against the main subject ( ).

< Tv > is displayed.

- Set the shutter speed one step slower than the maximum flash sync shutter speed ( ).

Cannot remote release from a receiver unit.

- Remote release is not possible from a receiver unit in cameras released up to 2011 or EOS REBEL T100/4000D/3000D, EOS REBEL T7/1500D/2000D, EOS REBEL T6/1300D or EOS REBEL T5/1200D.

LCD panel illumination turns on and off.

- The sender LCD panel turns on or off based on receiver (firing group) recharge status. See LCD Panel Illumination.

Linked shooting

Standard exposure is not provided, or exposure is uneven.

- Firing multiple Speedlites together in linked shooting may prevent suitable exposure or cause uneven exposure. Consider firing only one Speedlite or using a self-timer to fire multiple units at different times.

The unit cannot be used as a receiver camera unit.

- When used with a camera released up to 2011 or with EOS REBEL T100/4000D/3000D, EOS REBEL T7/1500D/2000D, EOS REBEL T6/1300D or EOS REBEL T5/1200D, the unit can be used only as "sender camera unit". The unit cannot be used as a "receiver camera unit".

Optical transmission wireless flash shooting

Receivers do not fire or unexpectedly fire at full output.

- Set the sender to < SENDER > and receivers to < RECEIVER > ( ).
- Set the transmission channels of the sender unit and receiver unit to the same numbers ( ).
- Make sure receivers are within transmission range of the sender ( ).
- Point the wireless sensor of the receiver unit toward the sender unit ( ).
- To the extent possible, position receivers within a direct line of sight of the sender.
- If the sender unit and receiver unit are too close, the transmission may not take effect properly.
- When you use the built-in flash of the camera as a sender unit, raise the built-in flash of the camera and configure the [**Wireless functions**] settings in the [**Built-in flash settings**] of the camera.

The sender unit fires.

- Even when sender flash firing is set to OFF, the sender unit fires a small flash to control the receiver unit with optical transmission ( ).

Pictures are overexposed.

- When using autoflash with three firing groups (A–C), do not fire with firing group C pointing toward the main subject ( ).

Specifications

Type

Type	Shoe-mount E-TTL II / E-TTL autoflash Speedlite
Compatible cameras	EOS series supporting E-TTL II / E-TTL autoflash * For details, refer to the Canon website.

Flash head

Guide number

Normal flash guide number

Maximum guide number (at approx. ISO 100)

Light distribution	Unit	Flash coverage									
		14mm *1	24mm	28mm	35mm	50mm	70mm	80mm	105mm	135mm	200mm
Standard	m	14.0	26.9	27.7	31.9	36.4	42.2	46.1	49.4	52.2	58.0
	ft.	45.9	88.3	90.9	104.7	119.4	138.5	151.2	162.1	171.3	190.3
Guide number priority	m		31.9	31.9	36.4	42.2	47.5	52.2	54.4	58.0	58.0
	ft.		104.7	104.7	119.4	138.5	155.8	171.3	178.5	190.3	190.3
Light distribution priority	m		26.9	26.9	26.9	28.2	33.4	36.4	42.2	46.1	49.4
	ft.		88.3	88.3	88.3	92.5	109.6	119.4	138.5	151.2	162.1

* 1: When using the wide panel.

High-speed sync guide number

Maximum guide number (at approx. ISO 100)

Shutter speed	Unit	Flash coverage									
		14mm	24mm	28mm	35mm	50mm	70mm	80mm	105mm	135mm	200mm
1/125	m	8.7	16.7	17.2	19.8	22.6	26.3	28.7	30.7	32.5	36.1
	ft.	28.5	54.8	56.4	65.0	74.1	86.3	94.2	100.7	106.6	118.4
1/250	m	6.9	13.3	13.7	15.8	18.0	20.9	22.8	24.4	25.8	28.7
	ft.	22.6	43.6	44.9	51.8	59.1	68.6	74.8	80.1	84.6	94.2
1/500	m	4.9	9.4	9.7	11.1	12.7	14.7	16.1	17.3	18.2	20.3
	ft.	16.1	30.8	31.8	36.4	41.7	48.2	52.8	56.8	59.7	66.6
1/1000	m	3.5	6.6	6.8	7.9	9.0	10.4	11.4	12.2	12.9	14.3
	ft.	11.5	21.7	22.3	25.9	29.5	34.1	37.4	40.0	42.3	46.9
1/2000	m	2.4	4.7	4.8	5.6	6.4	7.4	8.1	8.6	9.1	10.1
	ft.	7.9	15.4	15.7	18.4	21.0	24.3	26.6	28.2	29.9	33.1
1/4000	m	1.7	3.3	3.4	3.9	4.5	5.2	5.7	6.1	6.4	7.2
	ft.	5.6	10.8	11.2	12.8	14.8	17.1	18.7	20.0	21.0	23.6
1/8000	m	1.2	2.3	2.4	2.8	3.2	3.7	4.0	4.3	4.6	5.1
	ft.	3.9	7.5	7.9	9.2	10.5	12.1	13.1	14.1	15.1	16.7

Manual flash guide number
Maximum guide number (at approx. ISO 100)

Flash output	Unit	Flash coverage									
		14mm	24mm	28mm	35mm	50mm	70mm	80mm	105mm	135mm	200mm
1/1	m	14.0	26.9	27.7	31.9	36.4	42.2	46.1	49.4	52.2	58.0
	ft.	45.9	88.3	90.9	104.7	119.4	138.5	151.2	162.1	171.3	190.3
1/2	m	9.9	19.0	19.6	22.6	25.7	29.8	32.6	34.9	36.9	41.0
	ft.	32.5	62.3	64.3	74.1	84.3	97.8	107.0	114.5	121.1	134.5
1/4	m	7.0	13.5	13.9	16.0	18.2	21.1	23.1	24.7	26.1	29.0
	ft.	23.0	44.3	45.6	52.5	59.7	69.2	75.8	81.0	85.6	95.1
1/8	m	4.9	9.5	9.8	11.3	12.9	14.9	16.3	17.5	18.5	20.5
	ft.	16.1	31.2	32.2	37.1	42.3	48.9	53.5	57.4	60.7	67.3
1/16	m	3.5	6.7	6.9	8.0	9.1	10.6	11.5	12.3	13.1	14.5
	ft.	11.5	22.0	22.6	26.2	29.9	34.8	37.7	40.4	43.0	47.6
1/32	m	2.5	4.8	4.9	5.6	6.4	7.5	8.1	8.7	9.2	10.3
	ft.	8.2	15.7	16.1	18.4	21.0	24.6	26.6	28.5	30.2	33.8
1/64	m	1.8	3.4	3.5	4.0	4.6	5.3	5.8	6.2	6.5	7.3
	ft.	5.9	11.2	11.5	13.1	15.1	17.4	19.0	20.3	21.3	24.0
1/128	m	1.2	2.4	2.4	2.8	3.2	3.7	4.1	4.4	4.6	5.1
	ft.	3.9	7.9	7.9	9.2	10.5	12.1	13.5	14.4	15.1	16.7
1/256 *1	m	0.9	1.7	1.7	2.0	2.3	2.6	2.9	3.1	3.3	3.6
	ft.	3.0	5.6	5.6	6.6	7.5	8.5	9.5	10.2	10.8	11.8
1/512 *1	m	0.6	1.2	1.2	1.4	1.6	1.9	2.0	2.2	2.3	2.6
	ft.	2.0	3.9	3.9	4.6	5.2	6.2	6.6	7.2	7.5	8.5
1/1024 *1	m	0.4	0.8	0.9	1.0	1.1	1.3	1.4	1.5	1.6	1.8
	ft.	1.3	2.6	3.0	3.3	3.6	4.3	4.6	4.9	5.2	5.9
1/2048 *1	m	0.3	0.6	0.6	0.7	0.8	0.9	1.0	1.1	1.2	1.3
	ft.	1.0	2.0	2.0	2.3	2.6	3.0	3.3	3.6	3.9	4.3
1/4096 *1	m	0.2	0.4	0.4	0.5	0.6	0.7	0.7	0.8	0.8	0.9
	ft.	0.7	1.3	1.3	1.6	2.0	2.3	2.3	2.6	2.6	3.0
1/8192 *1	m	0.2	0.3	0.3	0.4	0.4	0.5	0.5	0.5	0.6	0.6
	ft.	0.7	1.0	1.0	1.3	1.3	1.6	1.6	1.6	2.0	2.0

* 1: It cannot be used when setting high-speed sync or optical transmission wireless

Flash coverage (focal length; for 35mm full-frame)

14mm	Wide panel: Manual * Not compatible with EF15mm f/2.8 Fisheye or EF8-15mm f/4L Fisheye USM shooting angles of view
24mm	Zoom • A: Auto Flash coverage is set automatically, accounting for [**Auto zoom for sensor size**] and [**Light distribution**] settings at the lens focal length • M: Manual Flash coverage is set manually * [**Auto zoom for sensor size**] and [**Light distribution**] settings are not taken into account
28mm	
35mm	
50mm	
70mm	
80mm	
105mm	
135mm	
200mm	

Bounce angle

Bounce direction	**Bounce angle (approx.)**						
Up	0° *	45°	60°	75°	90°*	120°	
Down		7°					
Left	0° *	60°	75°	90°	120°	150°	180°
Right		60°	75°	90°	120°	150°	180°

* Position at which the bounce lock is engaged

Flash duration

Normal flash

Flash output	**Flash duration (Approx., sec.)**	**Flash output**	**Flash duration (Approx., sec.)**
1/1	1/920	**1/128**	1/41670
1/2	1/1390	**1/256**	1/51720
1/4	1/2720	**1/512**	1/62500
1/8	1/5220	**1/1024**	1/83330
1/16	1/9200	**1/2048**	1/86960
1/32	1/15540	**1/4096**	1/101690
1/64	1/28300	**1/8192**	1/130430

Color temperature information transmission

Supported

Color filter

A hard-type color filter (two types) is supported.

Exposure control

Flash modes (Exposure control modes)

Flash modes and available functions

Flash mode	Flash exposure compensation	FEB	FE lock	Wireless	
				Radio transmission	Optical transmission
E-TTL II / E-TTL autoflash *1	○	○	○	○	○
Manual flash				○	○
Stroboscopic flash				○	○
Auto external flash metering	○	○		○ *2	
Manual external flash metering					
Continuous shooting priority mode	○	○	○		
Group firing *3	○	○	○ *4	○	

* 1: Set automatically when the camera shooting mode is set to Basic Zone modes
* 2: Only Group firing is available
* 3: Can only be set when the Speedlite is used as a sender in radio transmission wireless operation
* 4: Only groups set to E-TTL II / E-TTL autoflash

Effective flash range

Dim interlocking range under the following conditions

- Sensor size: 35mm full-frame
- Flash coverage: 50 mm
- Aperture value: f/1.4
- ISO 100
- Light distribution: Standard

Firing conditions	Effective flash range (approx.)
Normal flash (Flash-ready lamp: lit)	0.5 - 26.0 m 1.6 - 85.3 ft.
Quick flash (Flash-ready lamp: blinking)	0.5 - 15.9 m 1.6 - 52.2 ft.
High-speed sync (Shutter speed: 1/250)	0.5 - 12.8 m 1.6 - 42.0 ft.

Flash exposure compensation

±3 stops, in 1/3-stop or 1/2-stop *1 increments
* The Speedlite's flash exposure compensation takes precedence if flash exposure compensation is performed by both the Speedlite and the camera. Users who prefer to enable flash exposure compensation by the camera should set flash exposure compensation by the Speedlite to 0.
* 1: Corresponds to exposure level increments on the camera

FEB

±3 stops, in 1/3-stop or 1/2-stop *1 increments
* FEB is automatically deactivated after three shots
* Can be used with flash exposure compensation and FE lock
* 1: Corresponds to exposure level increments on the camera

FE lock

Supported

FE memory

Supported

Synchronization

Wireless	Flash mode	1st-curtain sync	2nd-curtain sync	High-speed sync
OFF	E-TTL II / E-TTL autoflash	○	○	○
	Manual flash	○	○	○
	Stroboscopic flash	○		
	Auto external flash metering	○		
	Manual external flash metering	○		
	Continuous shooting priority mode	○	○	○
Radio transmission (Sender)	E-TTL II / E-TTL autoflash	○	○ *1	○
	Manual flash	○	○ *1	○
	Stroboscopic flash	○		
	Group firing	○	○ *1	○
Optical transmission (Sender)	E-TTL II / E-TTL autoflash	○		○
	Manual flash	○		○
	Stroboscopic flash	○		

* 1: For details on cameras that support this feature, refer to the Canon website.

Modeling lamp

Supported

Modeling flash

Supported
* Flash fires continuously for approx. 1 sec.

Flash recharge

Recharge time

Power supply	Recharge time (approx.)		Flash count (approx.)
	Normal flash	Quick flash	
Battery Pack LP-EL	0.1 - 0.9 sec.	0.1 - 0.8 sec.	335 - 2345

* Based on Canon testing standards

Flash-ready indication

	Normal flash (fully charged)	Quick flash	Charging in progress
Flash-ready lamp	Lit in red	Blinking in red (8 Hz)	Off
LCD panel display	Not displayed	Not displayed	CHARGE Recharge level indicated in a range of 1-5
Beep *1	○ *2	○ *3	-

* 1: With the relevant Personal Function (P.Fn-06, Beep) set to ON
* 2: With the relevant Personal Function (P.Fn-02, Quick flash) set to OFF
* 3: With the relevant Personal Function (P.Fn-02, Quick flash) set to ON

AF-assist beam

Infrared

- Light emitted
  Near-infrared light
- Compatible AF system
  TTL secondary image-forming phase-difference AF
- Effective range

AF points	Effective range (approx.)
At center	0.6 - 10.0 m / 2.0 - 32.8 ft.
At periphery	0.6 - 5.0 m / 2.0 - 16.4 ft.

* Lens focal length: 28 mm or longer
* AF points: Compatible with 1-191 points

Intermittent flash firing method

The AF-assist beam does not emit small series of flashes under the following conditions.
- When the Speedlite is used as a sender in optical transmission wireless operation
- With color filter attached

- Light emitted
  Visible light
- Compatible AF system
  - TTL secondary image-forming phase-difference AF
  - Dual Pixel CMOS AF
    * In camera compatibility, some restrictions apply
- Effective range

AF points	Effective range (approx.)
At center	0.6 - 10.0 m / 2.0 - 32.8 ft.
At periphery	0.6 - 5.0 m / 2.0 - 16.4 ft.

* Lens focal length: 24 mm or longer
* Direction emitted: Straight forward

Wireless functions for radio transmission

Wireless settings

Sender	Supported * Secondary and additional units serve as sub-senders and display a "SUB SENDER" icon * Sub-senders cannot be remotely controlled by a receiver unit
Receiver	Supported

Communication functions

Compliance standards	IEEE 802.15.4, ARIB STD-T66
Communication method	Primary modulation: OQPAK Secondary modulation: DS-SS
Transmission frequency	2405 - 2475 MHz
Channel	Channel 1 - 15 Setting: Auto / Manual
Wireless radio ID	0000 - 9999 Setting: Manual
Transmission range *1 *2	Approx. 30 m / 98.4 ft.
Groups	Up to 5 groups (A - E) * Sender units are set to Group A
Max. sender units	Up to 15 * Secondary and additional units serve as sub-senders
Max. receiver units	Up to 15

* 1: Without any obstructions between senders and receivers, and without radio interference from other devices
* 2: Transmission range may be shorter depending on factors such as how units are arranged, the surrounding environment, and weather conditions

Linked functions

Supports linked shooting with automatic shutter release of up to 16 cameras (sender: 1; receivers: 15) linked to shutter release on the sender camera.
* Shooting is not simultaneous, because receiver cameras shoot slightly after the sender camera shutter release timing

Wireless functions for optical transmission

Wireless settings

Sender	Supported
Receiver	Supported
Individual receiver	Supported

Communication functions

Communication method	Optical pulses
Channel	Channel 1 - 4
Transmission range (approx.)	From front of flash head • Indoors: 0.7 - 15 m / 2.3 - 49.2 ft. • Outdoors: 0.7 - 10 m / 2.3 - 32.8 ft.
Reception angle (approx.)	• Horizontally: 45° • Upward: 27°; Downward: 20°
Groups	Up to 3 groups (A - C)
Max. sender units	Unlimited
Max. receiver units	Unlimited

Power source

Battery pack	Battery Pack LP-EL * AA/LR6 alkaline batteries and Ni-MH batteries cannot be used
Battery level indicator	Provided (display in 5 levels)
External power source	Supported
Maximum flash count	Approx. 340 - 2380 * With a fully charged Battery Pack LP-EL
Radio transmission wireless shooting time	Approx. 17 hours continuously * With sender flash firing disabled, and using a fully charged Battery Pack LP-EL
Auto power off	Idle time before auto power off

Status	Custom Function	Time
During normal operation	C.Fn-01-0	Approx. 90 sec.
When set as a sender in optical wireless operation	C.Fn-01-0	
When set as a sender in radio wireless operation	C.Fn-01-0	Approx. 5 min.
During linked shooting	C.Fn-01-0	
When set as a receiver in radio or optical wireless operation	C.Fn-10-0	Approx. 60 min.
	C.Fn-10-1	Approx. 10 min.
Standby before power ON after auto power off when set as a receiver	C.Fn-11-0	Approx. 8 hr.
	C.Fn-11-1	Approx. 1 hr.

The Speedlite is reactivated in response to the following operations.

- Pressing the camera shutter button halfway
- Pressing the test flash button

Dimensions / Weight

Dimensions

Product	W × H × D (approx.)
Body	84.4 × 149.0 × 136.4 mm / 3.32 × 5.87 × 5.37 in.

Weight

Product	Weight (approx.)
Body only	566 g / 19.97 oz.
Body and battery (Battery Pack LP-EL)	681 g / 24.02 oz.

Operation environment

Working temperature range	0 - 45°C / 32 - 113°F
Working humidity	85 % or less

- All specifications above are based on Canon's testing standards.
- Product specifications and the exterior are subject to change without notice.

Accessories

Use of genuine Canon accessories is recommended
This product is designed to achieve optimum performance when used with genuine Canon accessories. Therefore, using this product with genuine accessories is highly recommended. Canon shall not be liable for any damage to this product and/or accidents such as malfunction, fire, etc. caused by the failure of non-genuine Canon accessories (e.g., a leakage and/or explosion of a battery). Please note that repairs arising out of the malfunction of non-genuine accessories will not be covered by the warranty for repairs, although you may request such repairs on a chargeable basis.

Caution

- Battery Pack LP-EL is dedicated to Canon products only. Using it with an incompatible battery charger or product may result in malfunction or accidents for which Canon cannot be held liable.

Regulations

Only for European Union and EEA (Norway, Iceland and Liechtenstein) and United Kingdom

These symbols indicate that this product is not to be disposed of with your household waste, according to the WEEE Directive (2012/19/EU), the Battery Regulation ((EU) 2023/1542) and/or national legislation implementing those Directives and Regulation and the UK Waste Electrical and Electronic Equipment Regulations and the UK Batteries and Accumulators Regulations.

If a chemical symbol is printed beneath the symbol shown above, in accordance with the Battery Regulation and the UK Batteries and Accumulators Regulations, this indicates that a heavy metal (Hg = Mercury, Cd = Cadmium, Pb = Lead) is present in this battery or accumulator at a concentration above an applicable threshold specified in the Battery Regulation and the UK Batteries and Accumulators Regulations.

This product should be handed over to a designated collection point, e.g., on an authorized one-for-one basis when you buy a new similar product or to an authorized collection site for recycling waste electrical and electronic equipment (EEE) and batteries and accumulators. Improper handling of this type of waste could have a possible impact on the environment and human health due to potentially hazardous substances that are generally associated with EEE. Your cooperation in the correct disposal of this product will contribute to the effective usage of natural resources.

For more information about the recycling of this product, please contact your local city office, waste authority, approved scheme or your household waste disposal service or visit

www.canon-europe.com/sustainability/approach/.