

Canon

SPEEDLITE

EL-100



Advanced User Guide

Introduction

To avoid shooting problems and accidents, first read the “Safety Instructions” (pages 8-9). Also, read this manual carefully to ensure that you use the product correctly.

Read This Instruction Manual while also Referring to Your Camera’s Instruction Manual

Before using the product, read this Instruction Manual and your camera’s Instruction Manual to familiarize yourself with their operations. Be sure to store this manual safely, too, so that you can refer to it again when necessary.

* Explanations in this manual are based on use with an EOS DIGITAL camera.

Using with an EOS Film Camera

Autoflash photography is possible in conjunction with EOS film cameras equipped with an E-TTL II/E-TTL autoflash metering system. Note that autoflash photography is not possible with EOS film cameras equipped with a TTL autoflash metering system.

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Conventions Used in this Manual

Icons in this Manual

(p.**): Reference page numbers for more information.



: Warning to prevent shooting problems.



: Supplemental information.

Basic Assumptions

- The operation procedures assume that the Speedlite is attached to the camera and that both are turned on.
- The icons used for buttons, dials, and symbols in the text match the icons found on the Speedlite and the camera.
- The operation procedures assume that the Custom Functions of the Speedlite, and the menu and Custom Functions of the camera are at their default settings.
- All figures such as the flash counts are based on the use of two AA/LR6 alkaline batteries and Canon's testing standards.

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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.

- 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, benzene 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.

- 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 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.

- 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. The use of a tripod or similar equipment is recommended when using the product in hot places and for people with circulation problems or less sensitive skin.

**CAUTION**

Denotes the risk of injury.

- 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.

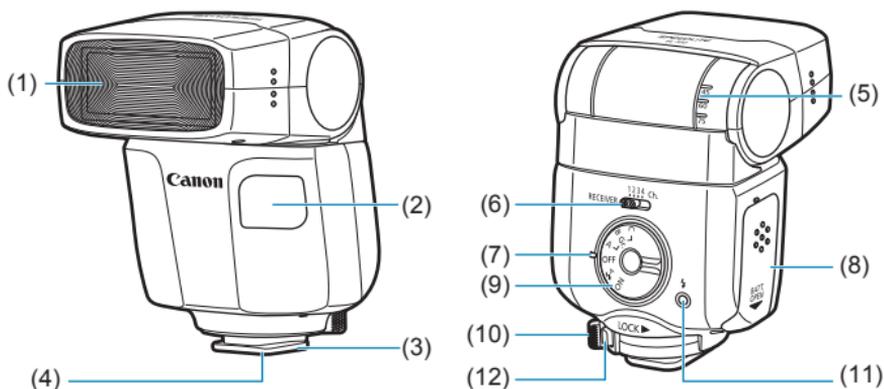
- Do not leave the product in places exposed to extremely high or low temperatures.

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.

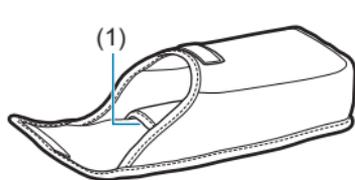
Nomenclature



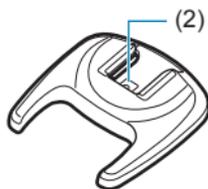
- (1) Flash head (Light-emitting unit)
- (2) Optical transmission wireless sensor
- (3) Mounting foot
- (4) Contacts
- (5) Bounce angle index
- (6) Channel switch

- (7) Power lamp
- (8) Battery compartment cover
- (9) Mode dial
- (10) Mounting foot lock lever
- (11) Flash-ready lamp
- (12) Lock-release button

Accessories Provided



Speedlite case



Mini stand

- (1) Mini stand pocket
- (2) Attachment

1

Getting Started and Basic Operations

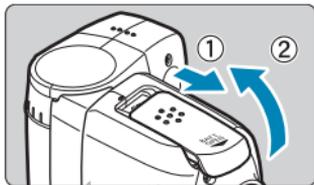
This chapter describes the preparations before starting flash photography and the basic shooting operations.

Cautions for firing continuous flash

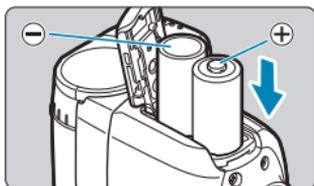
- To avoid wearing out and damaging the flash head due to overheating, do not fire the flash continuously at full output more than 30 times. After firing the flash continuously at full output this many times, stop using the flash for at least 40 min.
- If you fire the flash continuously at full output for the above listed number of times, and then fire the flash again repeatedly at short intervals, the safety function may activate and restrict flash firing. When flash firing is restricted, the firing interval is automatically set to approx. 45 sec. Stop using the flash for at least 40 min.
- For details, see “Flash Firing Restrictions due to Temperature Increase” on page 56.

Installing the Batteries

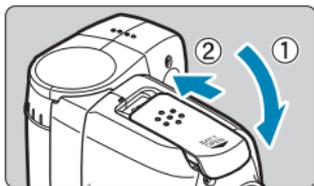
Install two AA/R6 batteries for power supply.



1 Open the cover.



2 Install the batteries.



3 Close the cover.

 **CAUTION**

- **Do not use “AA/R6 lithium batteries”.**

Note that certain AA/R6 lithium batteries may become extremely hot in rare cases during use. Due to safety reasons, do not use “AA/R6 lithium batteries”.

- **Do not use the Speedlite while touching the same part for a long period of time.**

Even if the product does not feel too hot, prolonged contact with the same body part may cause skin redness or blistering due to low-temperature contact burns. Using a tripod is recommended in very hot places or for people with circulation problems or less sensitive skin.



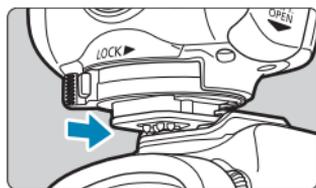
Using AA/R6 batteries other than the alkaline type may cause contact failure due to the irregular shape of the battery contacts.



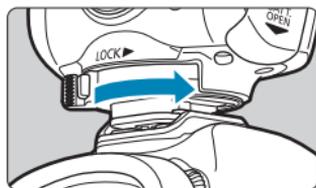
- Use a new set of two batteries of the same brand. When replacing the batteries, replace both at the same time.
- AA/HR6 Ni-MH batteries can also be used.
- For details on the flash interval and flash count, refer to the separate Supplemental Information.

Attaching and Detaching the Speedlite to and from the Camera

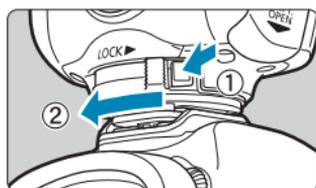
Always turn off the Speedlite beforehand.



1 Attach the Speedlite.



2 Secure the Speedlite.

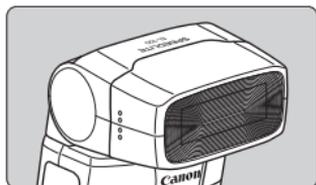


3 Detach the Speedlite.

Switching Flash Coverage

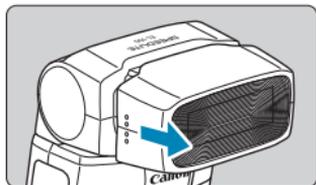
Adjust the flash head so the flash coverage is suitable for the focal length of your lens.

Using lenses with a wider angle of view than the flash coverage may cause vignetting.



Normal position

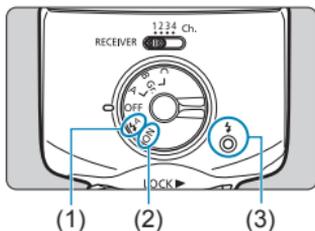
- Maximum flash coverage can be used with RF/EF 24mm (EF-S/EF-M 15mm) lenses.



Extended

- Can be used with RF/EF 50mm (EF-S/EF-M 30mm) or larger lenses.

Turning on the Power

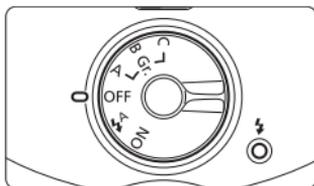


1 Set the Mode dial to **ζ^A** (1) or **<ON>** (2).

2 Check that the flash is ready.

- The flash-ready lamp (3) is red when the flash is fully charged.
- Shooting is also possible while the flash-ready lamp is blinking (using Quick flash). Flash output will be 1/2 to 1/6 of full output.

Mode Dial



• **<ON>**

The flash fires constantly as you shoot.

• **ζ^A**

The flash fires automatically as needed (depending on shooting modes and conditions) when used with cameras that support auto flash firing.

In **[A+]** or **[P]** mode on the EOS R, the flash also turns on or off in response to these operations with the camera power switch.

• **<OFF>**

Turns the flash off.

• **<Gr. A / B / C >**

Set when using the flash as a receiver in optical wireless flash photography. For details, see Chapter 4, “Wireless Flash Photography: Optical Transmission.”



- Leaving the Mode dial set to $\langle \frac{1}{2}^A \rangle$ when using cameras that support auto flash firing may prevent full charging and firing during shooting, depending on shooting conditions or the state of the battery.
- Quick flash is not available under these conditions.
 - Cameras that do not support E-TTL II/E-TTL
 - Optical wireless flash photography
 - Stroboscopic flash
 - Manual flash photography with flash output outside the range 1/4 to 1/128

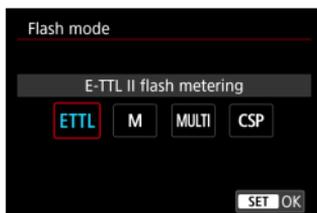
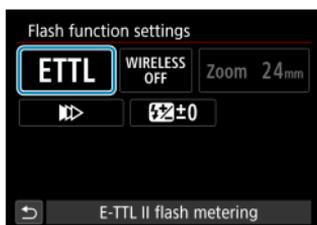


- With the Mode dial set to $\langle \frac{1}{2}^A \rangle$, aiming the flash head straight ahead is recommended. Switch to suitable flash coverage for the lens' angle of view (p.15).
- With cameras that do not support auto flash firing, the flash will always fire when you shoot with the Mode dial set to $\langle \frac{1}{2}^A \rangle$.

ETTL: Fully Automatic Flash Photography

When you set the camera's shooting mode to <P> (Program AE) or a fully automatic mode, you can shoot in E-TTL II/E-TTL fully automatic flash mode.

Note that for some cameras, [E-TTL II flash metering] is automatically used when the flash Mode dial is set to <A>.



1 Set the flash mode to [E-TTL II flash metering].

- Select the flash mode setting item from the camera's [Flash function settings] or [External flash func. setting] screen (p.28).
- Select [E-TTL II flash metering].

2 Switch the flash coverage.

- Switch to a suitable flash coverage for your lens (p.15).

3 Focus and shoot.

- Confirm that <A> is lit in the viewfinder or (in Live View) on the screen.

- If your shots are dark (underexposed), try approaching the subject or increasing the ISO speed.
- “Fully automatic” refers to <A+>, <A>, and <CA> shooting modes.

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

Set the camera's shooting mode to <**Tv**> (shutter-priority AE), <**Av**> (aperture-priority AE), <**Fv**> (flexible-priority AE), or <**M**> (manual exposure) to use E-TTL II/E-TTL autoflash for that mode.

Tv	Enables you to set the shutter speed manually. Based on your shutter speed, the camera sets an aperture to provide standard exposure. <ul style="list-style-type: none">● If the aperture value blinks, adjust the shutter speed until it stops blinking.
Av	Enables you to set the aperture manually. Based on your aperture, the camera sets a shutter speed to provide standard exposure. <ul style="list-style-type: none">● If the shutter speed blinks, adjust the aperture until it stops blinking.
Fv	Enables you to set the shutter speed or aperture manually. <ul style="list-style-type: none">● If the aperture value blinks when you set a shutter speed, adjust the shutter speed until it stops blinking.● If the shutter speed blinks when you set an aperture, adjust the aperture until it stops blinking.
M	Enables you to set both the shutter speed and aperture manually. Light from the flash provides standard exposure for the main subject, but exposure for the background varies depending on your specified shutter speed and aperture.



If you use the <**DEP**> or <**A-DEP**> shooting mode, the result will be the same as using the <**P**> (Program AE) mode.

Flash Sync Speeds and Apertures by Shooting Mode

	Shutter Speed	Aperture
P	Automatically set (at least 1/X sec.)	Automatically set
Tv	Manually set (at least 1/X sec.)	Automatically set
Av	Automatically set (at least 1/X sec.)	Manually set
Fv	Manually set / Automatically set (at least 1/X sec.)	Automatically set / Manually set
M	Manually set (at least 1/X sec.)	Manually set

- "1/X sec." represents the camera's maximum flash sync speed. Note that minimum flash sync speeds vary by camera.

2

Flash Functions

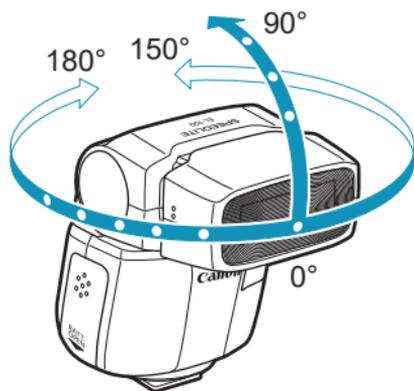
This chapter describes functions available on the flash.
For functions available from the camera, see page 27.

Bounce

By pointing the flash head toward a ceiling or wall, you can utilize the reflection of the flash light off the surface for flash photography, making it possible to soften the shadows of the subject for a more natural-looking shot. This shooting technique is called “Bounce flash photography”.

Setting the Bounce Direction

- You can turn the flash head as shown. Shooting with the flash head extended is recommended.



- If the ceiling or wall for bouncing the flash light on is too far away, shooting with the appropriate exposure may not be possible since the bounced flash light may not reach the subject.
- If your shots are too dark, either reduce the aperture value (f /number) to open the aperture, or increase the ISO speed and try again.
- Select a ceiling or wall that is close to a white color for bouncing the flash light off for high reflectance. If the bounce surface is not white, a color cast may result in the picture or shooting with the appropriate exposure may not be possible since the bounced flash light may not reach the subject.

Modeling Flash

When the camera's depth-of-field preview button is pressed, the flash fires continuously for approx. 1 sec. This feature is called "modeling flash". This is useful for checking shadows cast on the subject by the flash light.



- To avoid wearing out and damaging the flash head due to overheating, do not fire the modeling flash more than 30 times. If you fire the modeling flash more than this, stop using the flash for at least 40 min.
- After you fire the modeling flash this many times, continuing to fire the flash at short intervals will activate a safety function and restrict flash firing to an interval of approx. 45 sec. Stop using the flash for at least 40 min.
- During Live View shooting, firing the modeling flash by operating the camera is not possible.
- Modeling flash is not available with EOS M or EOS R cameras.

FEL: FE Lock

The FE (Flash Exposure) lock locks the correct flash exposure setting for any part of the subject.

1 Focus on the subject.

2 Lock the flash exposure.

- Set the flash mode to **[E-TTL II flash metering]** (p.18).
- Center the subject in the viewfinder or on the screen, and then press the camera's FE Lock button.
The position of the FE Lock button varies by camera. For details, refer to the camera's Instruction Manual.
- ▶ The Speedlite fires a preflash, and the flash exposure is locked.
- ▶ **"FEL"** is displayed in the viewfinder or on the screen for about half a second.
A metering circle (and **<⚡*>**, on some models) is displayed in the center of the screen on EOS M and EOS R cameras.
- Each time you press the FE Lock button, the Speedlite fires a preflash and stores the flash output required at that time in memory.

- If suitable exposure cannot be obtained with the FE lock, **<⚡*>** blinks in the viewfinder or on the screen. Approach the subject, increase the ISO speed, or open the aperture before you lock the flash exposure again.
- FE lock may not be effective if the subject is too small in the viewfinder or on the screen.

On some cameras, each press of the FE Lock button switches between firing a preflash and unlocking flash exposure.

Other Functions

Color Temperature Information Transmission

This function adjusts the white balance depending on the color temperature of the flash light by transmitting the color temperature information to the EOS DIGITAL camera when the flash fires. When you set the camera's white balance to <AWB>, <AWBW>, or <⚡>, the function is enabled automatically.

Refer to the camera's Instruction Manual to find out if it is compatible with this function.

AF-Assist Beam

Intermittent flashes are emitted automatically to assist with autofocusing when it is difficult due to low light or low-contrast subjects.



If focusing is difficult with the AF-assist beam, select an AF point in or near the center.



- The AF-assist beam does not fire in optical wireless flash photography.
- AF-assist beam firing can be disabled from the camera. For details, refer to the camera's Instruction Manual.

Auto Power Off Function

- The power will turn off automatically after approx. 90 sec. of idle use. To turn on the Speedlite again, press the shutter button halfway.
- Auto power off takes effect in approx. 60 min. when the flash is set up as a receiver (p.42).



- Auto power off can be disabled (C.Fn-01, p.40).
- You can change the time until auto power off takes effect on a receiver flash (C.Fn-10, p.40).

3

Flash Functions Available from the Camera

This chapter describes flash functions available from the camera.

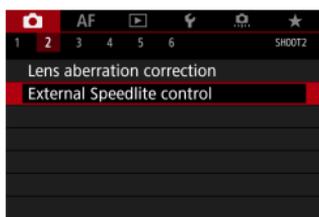


Operations in this chapter are available when the camera's shooting mode is set to <Fv/P/Tv/Av/M/Bulb(B)>.

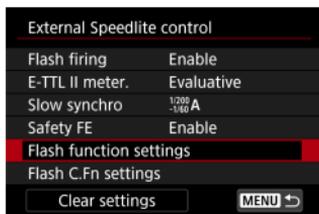
Setting Flash Functions from the Camera

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 menu instructions, refer to the camera's Instruction Manual.



- 1 Select [: Flash control] or [: External Speedlite control].

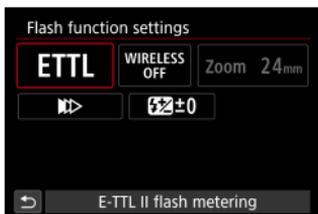


- 2 Select [Flash function settings] or [External flash func. setting].

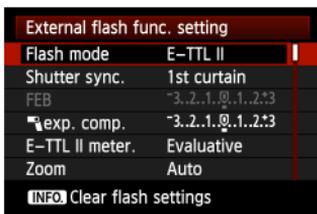
- 3 Set the item.

- The setting screen and items displayed vary depending on the camera.

Example 1



Example 2



Settings Available on the Flash Function Settings Screen

● Flash firing

To perform flash photography, set to **[Enable]**. To use the flash's AF-assist beam only, set to **[Disable]**.

● E-TTL II flash metering

For normal exposures, set it to **[Evaluative]**. If **[Average]** is set, the flash exposure will be averaged for the entire scene metered by the camera.

● Slow synchro

You can set the flash sync speed for flash photography in aperture-priority AE mode or Program AE mode.

● Flash synchronization speed in Av mode

You can set the flash synchronization speed when shooting in aperture-priority AE mode.

● Safety FE

To avoid overexposure from the flash firing during the day or at close range, the camera can automatically reduce the ISO speed for suitable exposure when set to ISO Auto.

● Flash mode

You can select **[E-TTL II flash metering]** (p.18), **[Manual flash]** (p.33), or **[MULTI flash (stroboscopic)]** (p.35). **[Continuous shooting priority mode]** (p.37) is also available on some cameras.

● Shutter sync settings (p.31)

You can select the flash firing timing/method from **[First-curtain synchronization]**, **[Second-curtain synchronization]**, or **[High-speed synchronization]**.

● Flash exposure compensation (p.38)

With a similar procedure as exposure compensation, you can adjust the flash output.

- **Wireless functions** (p.41)

You can set up optical wireless flash photography.

- **Flash Custom Function settings** (p.39)

You can set Speedlite Custom Functions.

- **Clear settings** (p.39)

When **[Clear flash settings]** or **[Clear external flash set.]** is selected, you can revert the settings of Speedlite to their default settings.

 Some functions may not be displayed, depending on the camera. Also, some functions cannot be set when the flash Mode dial is set to $\frac{1}{2}^A$.

- 
- **[Flash firing]** and **[E-TTL II meter.]** are displayed in step 2 or step 3 on page 28. (Display layouts and procedures vary by camera model.)
 - The settings available vary by the camera used, and flash mode, etc.

▶▶▶ Second-curtain Sync/⚡ High-speed Sync



Using second-curtain sync at low shutter speeds enables natural shots of subject motion trails, such as car lights.



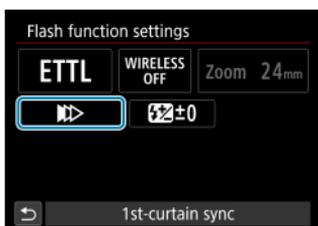
First-curtain sync



High-speed sync enables flash photography at even higher shutter speeds than the maximum flash sync shutter speed. This is effective when you want to shoot in the **<Av>** mode (open aperture) with background blur in locations such as outdoors in daylight.

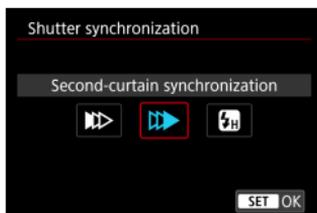


Normal flash



1 Access the [Shutter synchronization] setting screen.

- Select the shutter sync setting item from the [Flash function settings] or [External flash func. setting] screen (p.39).



2 Select an item.

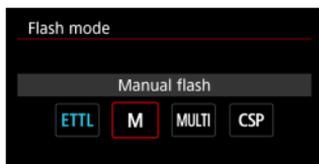
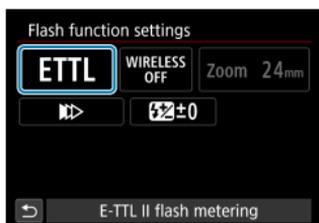
- Second-curtain sync is not available during wireless flash photography.
- With high-speed sync, the faster the shutter speed, the lower the guide number becomes.

M: Manual Flash

You can set any flash output from 1/1 full output to 1/128 power.

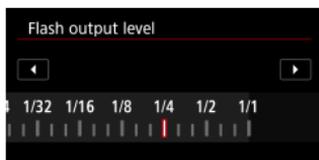
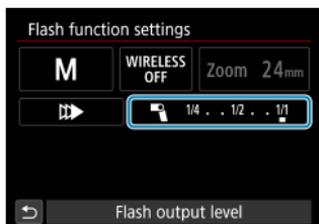
1 Set the flash mode.

- Select the flash mode setting item from the **[Flash function settings]** or **[External flash func. setting]** screen (p.28).
- Select **[Manual flash]**.



2 Set the flash output.

- Select the flash output setting item from the **[Flash function settings]** or **[External flash func. setting]** screen.
- Use **[◀] [▶]** to set the level.



- Use a flash meter (commercially available) to determine the required flash output to obtain a correct flash exposure.
- Setting the camera's shooting mode to **<Av>** or **<M>** is recommended.
- For manual flash guide numbers, refer to the separate Supplemental Information.

Metered Manual Flash Exposure

When using an EOS-1D series camera, the flash exposure level can be manually set before shooting. This is effective when you are close to the subject. Use an 18% gray reflector (commercially available) and shoot as follows.

1 Configure the camera and Speedlite settings.

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

2 Focus on the subject.

- Focus manually.

3 Set up an 18% gray reflector.

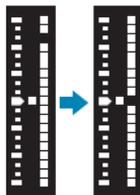
- Place the gray reflector at the subject's position.
- Aim the camera so that the entire spot metering circle within the viewfinder center is over the gray reflector.

4 Press the **<M-Fn>**, **<✳>**, or **<FEL>** button.

- ▶ The Speedlite fires a preflash and stores the required flash output for suitable flash exposure in memory.
- ▶ On the right side of the viewfinder, the exposure level indicator will show the flash exposure level against the 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.

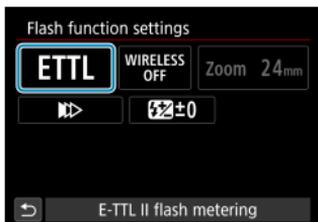
- Remove the gray reflector and take the picture.

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

MULTI: Stroboscopic Flash

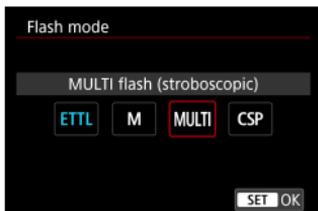


Using stroboscopic flash at low shutter speeds enables you to capture continuous movement in a single shot.



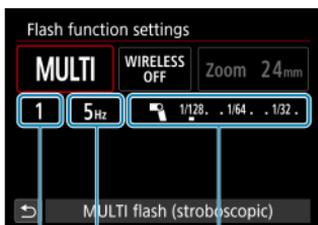
1 Set the flash mode.

- Select the flash mode setting item from the **[Flash function settings]** or **[External flash func. setting]** screen (p.28).
- Select **[MULTI flash (stroboscopic)]**.



2 Set the flash count, frequency, and output.

- Select and set the setting items from the **[Flash function settings]** or **[External flash func. setting]** screen.



(1) (2) (3)

- (1) Flash count
- (2) Flash frequency
- (3) Flash output level

Calculating the Shutter Speed

Flash count ÷ Flash frequency = Shutter speed

For example, if the flash count is set to 10 (times) and flash frequency to 5 (Hz), set the shutter speed to 2 sec. or longer.



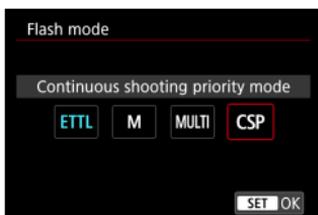
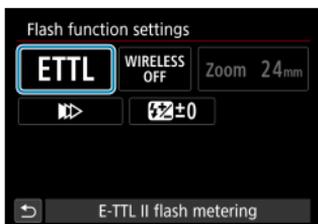
- To avoid wearing out or damaging the flash head from overheating, do not use stroboscopic flash repeatedly more than 15 times. After 15 shots, stop using the flash for at least 10 min.
- Shooting more than 15 times will activate a safety function and restrict flash firing. Stop using the flash for at least 40 min.



- Stroboscopic flash is most effective when shooting subjects with high reflectance against a dark background.
- Use of a tripod and remote switch or remote control (sold separately) is recommended.
- Flash output cannot be set to 1/1 or 1/2 power.
- Stroboscopic flash is also available when the camera's shooting mode is set to <Bulb(B)>.
- For details on the maximum continuous flash count, refer to the separate Supplemental Information.
- A flash count display of "----" indicates that the flash will fire continuously until the shutter closes or the flash charge is depleted.

CSP: Continuous Shooting Priority Mode

Flash photography in continuous shooting priority (CSP) mode is available on some cameras. Continuous shooting priority mode automatically decreases the flash output by one stop and increases the ISO speed by one stop. This is useful in continuous shooting, or when you wish to conserve the flash battery power. For details, refer to the Instruction Manual of cameras with this feature.



Set the flash mode.

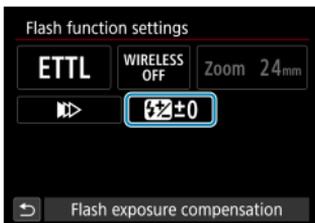
- Select the flash mode setting item from the **[Flash function settings]** or **[External flash func. setting]** screen (p.28).
- Select **[Continuous shooting priority mode]**.



High aperture values and distant subjects reduce the benefits of this mode (continuous firing and lower battery consumption).

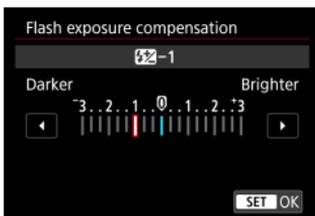
Flash Exposure Compensation

With a similar procedure as exposure compensation, you can adjust the flash output.



1 Access the [Flash exposure compensation] screen.

- Select [Flash exposure compensation] from the [Flash function settings] or [External flash func. setting] screen (p.28).



2 Set the flash exposure compensation amount.

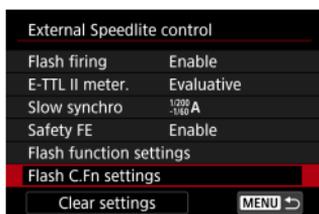
- Use [◀] [▶] to set the level.



Generally, set an increased exposure compensation for bright subjects and set a decreased exposure compensation for dark subjects.

C.Fn: Flash Custom Function Settings

You can set Custom Functions for the Speedlite from the camera's menu screen. The details displayed vary by the camera.

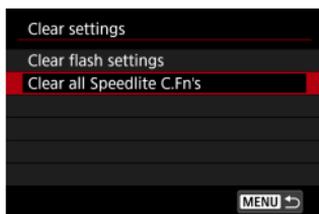


- 1 Select [Flash C.Fn settings] or [External flash C.Fn setting].



- 2 Select a Custom Function.

- Set the function.



- To clear all Custom Function settings, on the [External Speedlite control] or [Flash control] screen, select [Clear all Speedlite C.Fn's] or [Clear ext. flash C.Fn set.].

Setting Custom Functions

C.Fn-01: Auto power off (p.25)

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

C.Fn-10: Receiver auto power off timer

You can change the time until auto power off takes effect on receivers in optical wireless flash photography.

- **0: 60 minutes**
- **1: 10 minutes**

C.Fn-11: Receiver auto power off cancel

In optical wireless flash photography, you can turn on receivers that were automatically turned off by turning on the sender.

You can change the time for the receiver units in the auto power off state to accept this function.

- **0: Within 8 hours**
- **1: Within 1 hour**

4

Wireless Flash Photography: Optical Transmission

This chapter describes wireless flash photography using the optical transmission wireless sender/receiver function. For details on the accessories required in optical wireless flash photography, refer to the separate Supplemental Information.



- Operations in this chapter are available when the camera's shooting mode is set to <Fv/P/Tv/Av/M/Bulb(B)>.
- Set the Mode dial of the sender to <ON> (p.16).



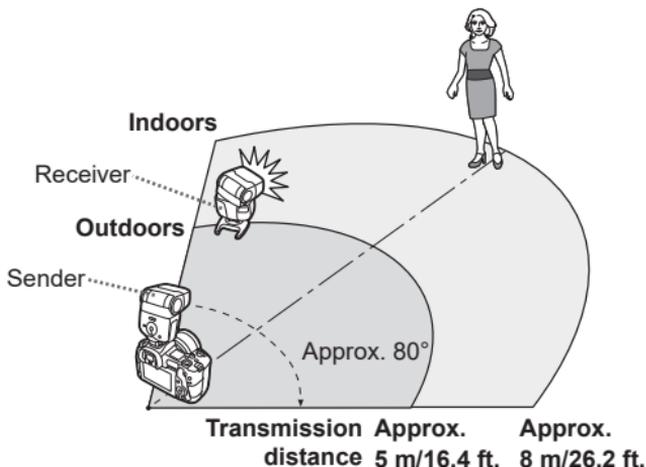
- The EL-100 is used as the sender and receiver flash unit in explanations.
- The EL-100 attached to the camera is referred to as the "sender," and other EL-100 units controlled wirelessly are referred to as "receivers."

⚡ Optical Transmission Wireless Flash Photography

You can use another Canon Speedlite compatible with optical wireless flash photography to shoot with wireless multiple-flash lighting.

Positioning and Operation Range

● Autoflash using one receiver (p.44)



- To avoid interfering with transmission, do not place any obstacles between the sender unit and receiver unit.
- The transmission distance differs according to the sender unit used. Refer to the Instruction Manual of the device that is equipped with the sender function.
- Before shooting, perform a test shooting.

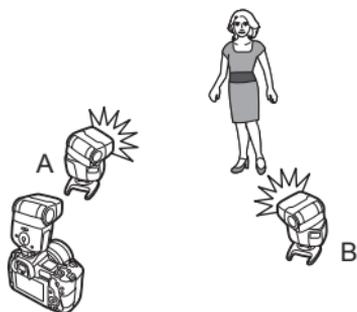
- Place the wireless sensor of the receiver unit facing the sender unit.
- Devices other than the EL-100 that support optical wireless sender functions can also be used to control EL-100 units set up as receivers. In this case, refer to the device's manual for instructions on setting up the device as a sender.
- Position the receiver unit, using the provided mini stand (p.10).

Wireless Multiple-Flash Photography

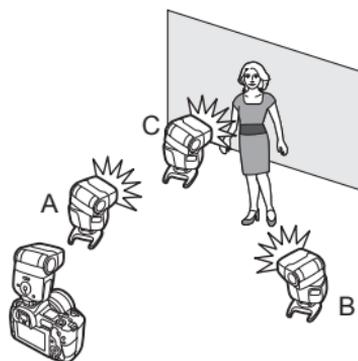
E-TTL II/E-TTL autoflash photography is possible with two or three receiver groups, and the flash ratio (proportion of flash output) can be adjusted as needed.

E-TTL II/E-TTL autoflash photography is also possible with all flash units firing at the same output level (p.47).

● Autoflash with receiver groups



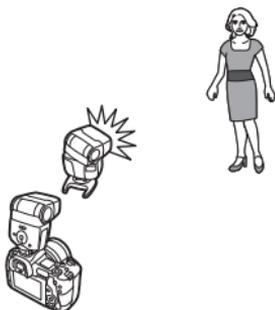
2 groups (A, B) (p.49)



3 groups (A, B, C) (p.50)

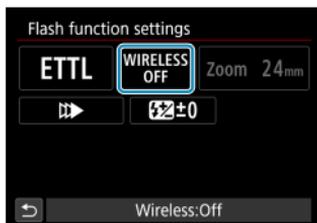
ETTL: Fully Automatic Wireless Flash Photography

Autoflash Using One Receiver



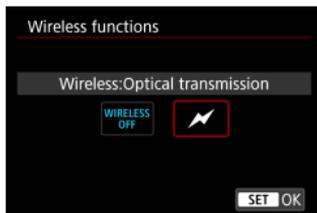
This section describes basic fully automatic wireless shooting with EL-100 senders and receivers.

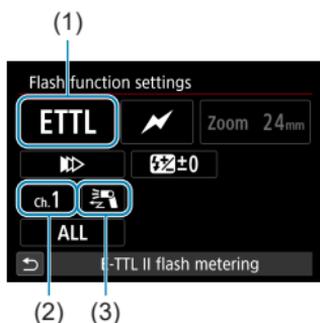
Setting up senders



1 Configure the wireless optical transmission.

- Select the wireless functions setting item from the **[Flash function settings]** or **[External flash func. setting]** screen (p.28).
- Select **[Wireless:Optical transmission]**.



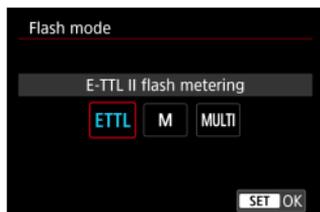


2 Configure the flash mode, optical channel, and sender flash firing.

- Select and set the setting items from the **[Flash function settings]** or **[External flash func. setting]** screen.

- (1) Flash mode
- (2) Optical channel
- (3) Sender flash firing

- In (1), set the flash mode to **[E-TTL II flash metering]**.



- In (2), set the sender's optical channel.



- In (3), set **[Sender flash firing]** to **[Enable]**.

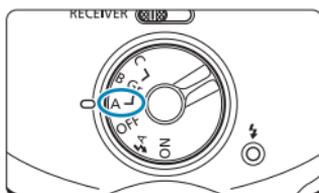


Setting up receivers



3 Set an optical channel.

- Set the channel switch to the same channel as set on the sender.
- Firing is not possible unless the sender and receiver channels match.



4 Set the flash group.

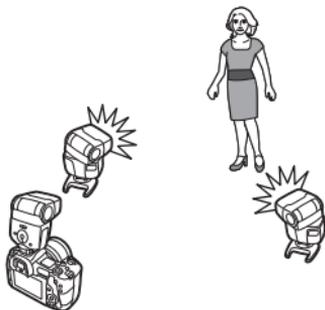
- Set the Mode dial to < **A** >.

5 Position the camera and the flash. (p.42)

! 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.

- To fire the sender flash as well, activate sender firing in step 5 (p.16).
- Press the camera's depth-of-field preview button to fire the modeling flash (p.23).
- You can change the time until the receiver unit's auto power off takes effect (C.Fn-10, p.40).

Autoflash Using Multiple Receivers



Use more receivers when more light is needed, or as an easy way to ensure ample lighting. Shoot as described in “Autoflash Using One Receiver” (p.44).

When the sender flash group is set to **[ALL]**, all flash units fire at the same output, and the total, combined output is automatically controlled to provide standard exposure.



When sender flash firing is set to **[Enable]**, the flash units in group A fire.

Advanced Shooting with Fully Automatic Wireless Flash

Since the following functions set on the sender unit will be set automatically to the receiver units on this wireless system, you do not need to operate the receiver unit(s).

- **FE lock** (p.24)
- **High-speed sync** (⚡ / p.31)
- **Manual flash** (p.33, 53)
- **Stroboscopic flash** (p.35)
- **Flash exposure compensation** (⚡ / p.38)

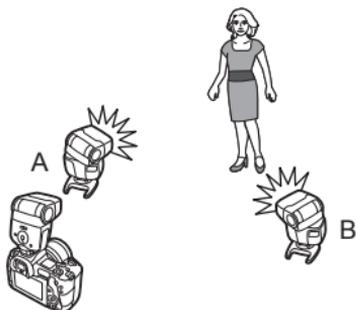
⚠ The stroboscopic frequency in optical wireless flash photography is 1–199 Hz (250–500 Hz is not supported).

Sender Flash Unit

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.

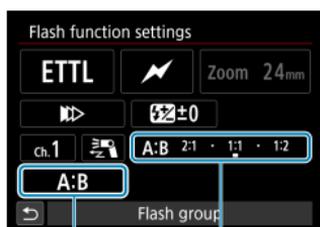
A:B: Wireless Multiple-Flash Photography with Flash Ratio

Autoflash with Two Receiver Groups



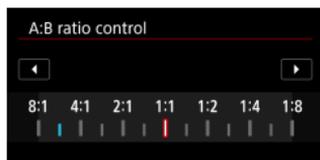
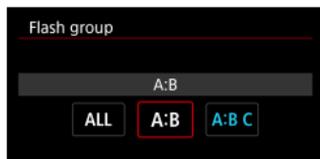
Receivers can be assigned to flash groups A and B, and you can adjust the relative output of each. Exposure is automatically controlled so that the groups' combined output provides standard exposure.

Setting up senders



(1)

(2)



1 Set the flash group and ratio.

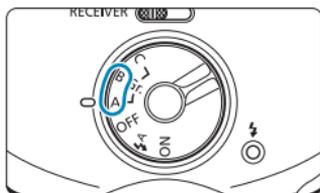
- Select and set the setting items from the **[Flash function settings]** or **[External flash func. setting]** screen (p.28).

(1) Flash group
(2) A:B ratio control

- In (1), set the flash group to **[A:B]**.

- In (2), use [**◀**] [**▶**] to set the flash ratio of group A to group B.

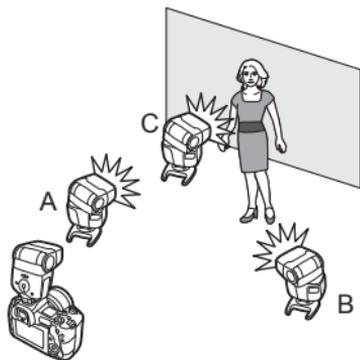
Setting up receivers



2 Set the flash group.

- Set the Mode dial of each receiver to the group in which it will fire (< **A** > or < **B** >).

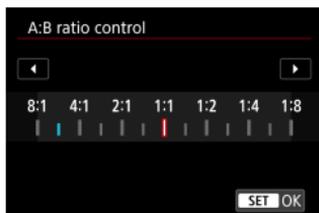
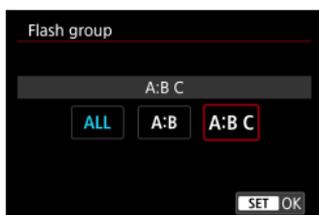
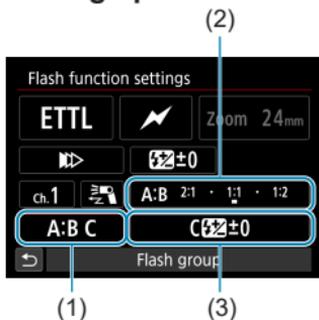
Autoflash with Three Receiver Groups



Once flash groups A and B have been set up, you can add group C. Group C is effective in eliminating shadows in the background behind subjects.

Basic settings are the same as for “Autoflash with Two Receiver Groups” (p.49).

Setting up senders



1 Set the flash group, flash ratio, and flash exposure compensation.

- Select and set the setting items from the **[Flash function settings]** or **[External flash func. setting]** screen (p.28).

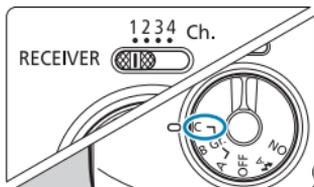
- (1) Flash group
- (2) A:B ratio control
- (3) Group C exposure compensation

- In (1), set the flash group to **[A:B C]**.

- In (2), use [**◀**] [**▶**] to set the flash ratio of group A to group B.

- In (3), use [**◀**] [**▶**] to set the flash exposure compensation of group C.

Setting up receivers

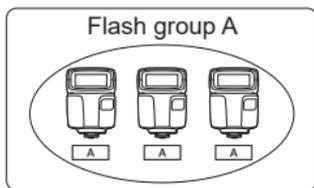


2 Set up the receiver for flash group C.

- Set the channel switch to the same channel as set on the other receivers.
- Set the Mode dial to < **C** >.

Group Control

You can add more receivers when more light or sophisticated lighting is needed. For added receivers, specify the flash group (A, B, or C) that you want to be brighter. There is no limit to how many receivers can be added.



For example, when three receivers are set to flash group < **A** >, they are all controlled as a single flash unit in group A.

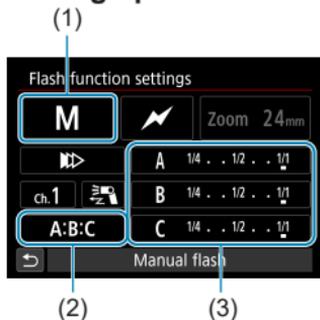
- To fire the three groups of A, B, and C, set to **[A:B C]**. Group C does not fire when set to **[A:B]**.
- Aiming the units in flash group C directly at subjects may cause overexposure.

Flash ratios from 8:1 to 1:1 to 1:8 correspond to 3:1 to 1:1 to 1:3 when converted into number of stops.

M: Wireless Multiple-Flash Photography with Manual Output

You can shoot with a specified flash output for each flash group.

Setting up senders

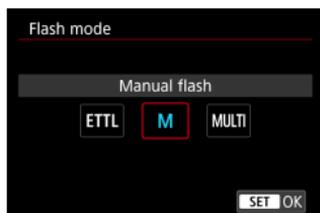


1 Set the flash mode, group, and output.

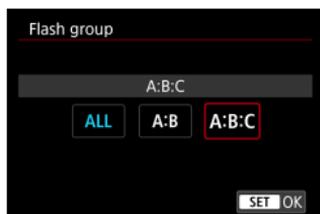
- Select and set the setting items from the **[Flash function settings]** or **[External flash func. setting]** screen.

- (1) Flash mode
- (2) Flash group
- (3) Flash output level

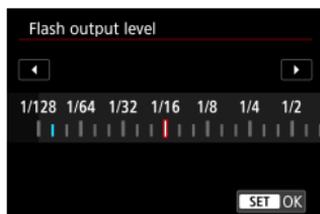
- In (1), set the flash mode to **[Manual flash]**.



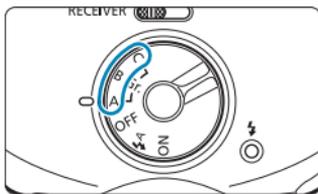
- In (2), set the flash group. To adjust the flash output of each group separately, specify **[A:B]** or **[A:B:C]**.



- In (3), select a flash group and use **[◀]** **[▶]** to set the flash output.



Setting up receivers



2 Set the flash group.

- Set the Mode dial of receivers to one of the specified groups (< **A** >, < **B** >, or < **C** >).

 To fire multiple receivers together at the same output, set **[Flash group]** to **[ALL]**.

5

Reference

Flash Firing Restrictions due to Temperature Increase

When continuous flash or modeling flash is repeatedly fired in short intervals, the temperature of the flash head, batteries, and the area near the battery compartment may increase.

Repeated flash firing gradually increases the firing interval to avoid wearing out or damaging the flash head from overheating. Continuing to fire the flash in this state will automatically restrict flash firing.

Flash Firing Restriction

As the internal temperature rises, the firing interval increases to approx. 10 sec. Continuing to fire the flash further increases the flash firing interval to approx. 45 sec.

Stop using the flash for at least 40 min. when firing is restricted.

Continuous Flash Count and Rest Time

Stop using the flash for at least 40 min. after firing it at full output more than 30 times repeatedly or using modeling flash repeatedly more than 30 times.

CAUTION

When performing continuous flash, do not touch the flash head, batteries, or the area near the battery compartment.

When continuous flash or modeling flash is repeatedly fired at short intervals, do not touch the flash head, batteries, or the area near the battery compartment.

The flash head, batteries, and area near the battery compartment may become hot, resulting in the risk of burn.

-  Do not open or close the flash battery compartment cover while flash firing is restricted. Doing so is very dangerous since the flash firing restriction is canceled.
- If flash photography is performed in high temperatures, the firing restrictions may be activated before the number of flashes listed above is fired.
- For cautions on the number of flash firings, see page 11 (continuous flashes) or page 23 (modeling flash).
- The Speedlite may not fire in rare cases due to environmental factors such as temperature rise.

Troubleshooting Guide

If a problem occurs with the flash, first refer to this Troubleshooting Guide. If this Troubleshooting Guide does not resolve the problem, contact your dealer or nearest Canon Service Center.

Normal Flash Photography

The power does not turn on.

- Make sure the batteries are installed in the correct orientation (p.12).
- Make sure the battery compartment cover is closed (p.12).
- Replace the batteries with new ones.

The Speedlite does not fire.

- On the camera's **[Flash control]** or **[External Speedlite control]** screen, set **[Flash firing]** to **[Enable]** (p.29).
- Insert the mounting foot into the camera's hot shoe all the way, slide the lock lever to the right, and secure the Speedlite to the camera (p.14).
- If the electrical contacts of the Speedlite or camera are dirty, wipe the contacts (p.10) with a dry cloth, etc.
- Stop using the flash for at least 40 min. after continuous firing over a short period, which will cause the flash head temperature to rise and restrict flash firing (p.56).

The power turns off by itself.

- The Speedlite's auto power off has been activated (p.25). Press the shutter button halfway (p.25).

Pictures are underexposed or overexposed.

- If the main subject looks very dark or very bright, set flash exposure compensation (p.38).
- If there is a highly reflective object in the picture, use FE lock (p.24).
- With high-speed sync, the faster the shutter speed, the lower the guide number becomes. Approach the subject or increase the ISO speed (p.31).

The bottom of the picture looks dark.

- Move at least 0.7 m/2.3 ft. away from the subject.
- Remove the lens hood if attached.

The picture periphery looks dark.

- Set a flash coverage wider than the shooting angle of view (p.15).

The picture is very blurred.

- Use a tripod, or set the shooting mode to the **<P>** program AE or fully automatic mode (p.19). Note that you can also set the sync speed in **[Flash sync. speed in Av mode]** or **[Slow synchro]** (p.29).

Functions cannot be set.

- Set the camera's shooting mode to **<Fv/P/Tv/Av/M/Bulb(B)>**. Note that some functions are not available in some shooting modes.
- Set the Speedlite's Mode dial to **<ON>** (p.16).

Optical Transmission Wireless Flash Photography

Receivers do not fire, or mistakenly fire at full output.

- When using the flash as a sender, select **[Wireless:Optical transmission]** on the camera (p.44). When using the flash as a receiver, set the channel switch to the same channel as set on the sender (p.44).
- Make sure the receiver unit is within the transmission range of the sender unit (p.42).
- Point the wireless sensor of the receiver unit toward the sender unit (p.42).
- Position the receiver unit at a location with the clearest possible view of the sender unit.
- If the sender unit and receiver unit are too close, the transmission may not take effect properly.
- When using the camera's built-in flash as the sender unit, raise the camera's built-in flash, and set **[Wireless func.]** on the camera's **[Built-in flash settings]** screen.

The sender fires.

- The sender fires even when **[Sender flash firing]** is set to **[Disable]**, in order to control receivers optically (p.44).

Pictures are overexposed.

- When using autoflash with groups A, B, and C, do not aim flash units in group C at the subject (p.52).

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The descriptions in this Instruction Manual are current as of July 2018. For information on the compatibility with any products introduced after this date, contact any Canon Service Center. For the latest version Instruction Manual, refer to the Canon Web site.