SPEEDLITE TRANSMITTER
ST-E10

Advanced User Guide

E

CT2-D152-B

Contents

Introduction

The Speedlite Transmitter ST-E10 is a transmitter for wireless flash photography that can control up to 5 groups (15 units) of Canon Speedlites supporting wireless multiple-flash shooting using radio transmission.

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.
This product provides dust and water resistance but cannot keep out all dust, dirt, water, or traces of salt.

Read in conjunction with camera/Speedlite manuals

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

Using the transmitter with a camera

This product can only be used with cameras equipped with a multi-function shoe.

Precaution on continuous flash firing

Flash units will fire repeatedly in continuous shooting with a 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.

Instruction Manual

The included Instruction Manual provides basic information on the Speedlite Transmitter.

- **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/A004/

About This Guide

Icons in This Guide

	Links to pages with related topics.
	Warning to prevent shooting problems.
	Supplemental information.
?	Troubleshooting tips.

Basic Assumptions

- It is assumed that you have turned on the camera, transmitter, and flash unit.
- The icons used for buttons, dials, and symbols in the text match the icons found on the transmitter, cameras, and Speedlites.
- Transmitter features can be configured from the camera.
- Default settings are assumed for menu functions/Custom Functions of the camera, as well as Custom/Personal Functions of the transmitter and flash unit.

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.

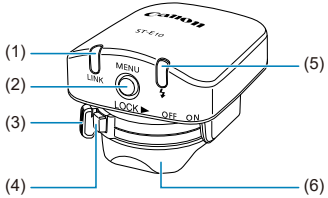
⚠WARNING: Denotes the risk of serious injury or death.

- Keep the product out of the reach of young children.
  The cover is dangerous if swallowed. If swallowed, seek immediate medical assistance.
- 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.
- 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.

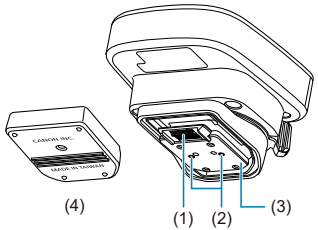
⚠CAUTION: Follow the cautions below. Otherwise physical injury or property damage may result.

- 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.

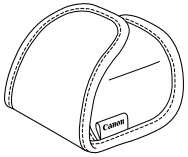
Part Names



(1)	< LINK > Radio transmission confirmation lamp
(2)	< MENU > Menu button
(3)	Mounting foot lock lever
(4)	Lock-release button
(5)	< ϟ > Charge/power lamp
(6)	Dust- and water-resistant adapter



(1)	Contacts
(2)	Mounting foot locking pin
(3)	Mounting foot
(4)	Cover



Case

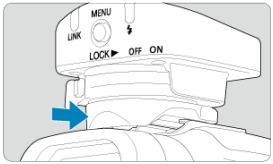
Getting Started

This chapter describes the preparations before starting wireless flash photography.

- Attaching and Detaching the Transmitter
- Turning on the Power
- Accessing the Camera Menu for the Transmitter

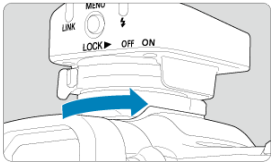
Attaching and Detaching the Transmitter

1. **Attach the transmitter.**



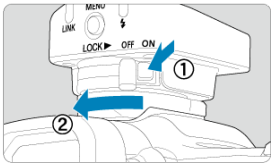
- Insert the mounting foot in the multi-function shoe until it clicks into place.

2. **Secure the transmitter.**



- On the mounting foot, slide the mounting foot lock lever to the right.
- When the lock lever clicks in place, it is locked.

3. **Detach the transmitter.**



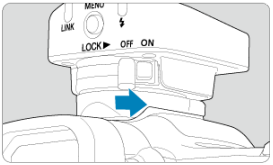
- While pressing the lock-release button, slide the mounting foot lock lever left and remove the transmitter.
- Reattach the cover to protect the contacts.

Caution

- Make sure the transmitter is securely attached to the camera. Loose attachment may cause malfunctioning, and the transmitter may fall off.
- Do not touch the contacts with your fingers. This may lead to corrosion. Corroded contacts may cause malfunctioning.

Turning on the Power

1. **Set the power to <ON>.**

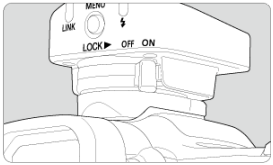


- Slide the mounting foot lock lever to the <ON> position.

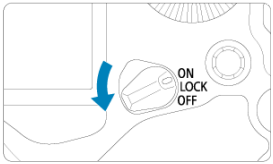
Accessing the Camera Menu for the Transmitter

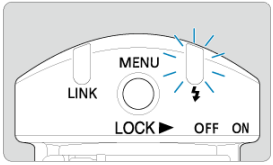
Auto Power Off

1. **With the transmitter attached (), set the power to <ON> ().**



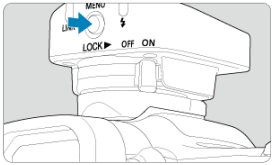
2. **Set the camera's power switch to <ON>.**





- Power is supplied to the transmitter, and <ϟ> is lit in red.

3. **Press the <MENU> button.**



- [**Flash function settings**] is displayed on the camera screen.

Note

- All transmitter features are configured from this camera menu.
- The transmitter's settings are stored even when you detach it from the camera. The settings are maintained when you reattach the transmitter.
- You can set the camera to beep when the receiver is fully charged (C.Fn-20).
- The transmitter is powered by the camera.

Auto Power Off

The unit will turn off automatically 5 min. after the camera's auto power off feature is activated, if no operation is performed. To wake it, either wake the camera or press the <MENU> button on the ST-E10. Note that during the time until the ST-E10 goes off automatically, it will continue to consume camera battery power.

Wireless Flash Photography

This chapter describes how to shoot with wireless flash using radio transmission.
See the system map ( ) for the accessories required for radio transmission wireless flash shooting.

Caution

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

Note

- The ST-E10 attached to the camera is referred to as a “sender,” and other Speedlites controlled wirelessly are referred to as “receivers.”

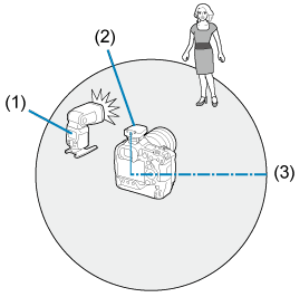
Wireless Flash Photography

Positioning and Operation Range

Shooting with sophisticated wireless lighting from multiple flash units is as easy as normal E-TTL II/E-TTL autoflash shooting when you use the transmitter with a Canon Speedlite supporting radio transmission wireless shooting as the receiver.
The system is designed so that the settings of the transmitter (sender) attached to the camera are automatically applied to the wirelessly controlled Speedlite (receiver). This eliminates the need to operate receivers when shooting.

Positioning and Operation Range

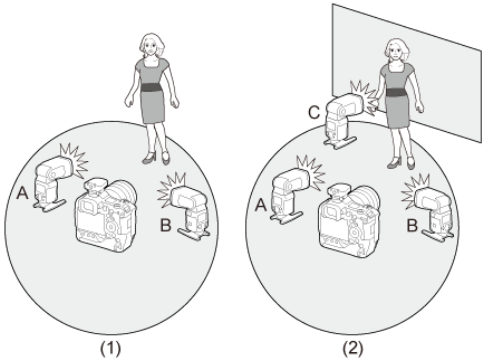
- **Autoflash using one receiver ( )**



(1) RECEIVER EL-1
(2) SENDER ST-E10
(3) Transmission distance: Approx. 30 m / 98.4 ft.

Autoflash using 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. In addition, you can set and shoot in a different flash mode for each firing group, with up to five groups.



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

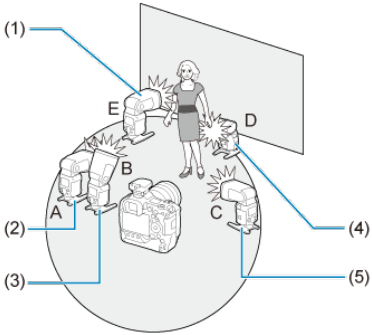
Caution

- Take a few test shots in advance.
- The transmission distance may be shorter depending on conditions such as the positioning of the flash units, the surrounding environment, and the weather.

Note

- Set up receivers using the mini stand included with them.

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



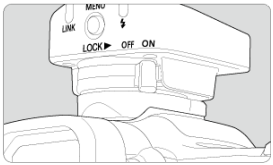
* This is only one example of flash mode settings.
5 groups (A, B, C, D, E)
(1) Auto external flash metering
(2) E-TTL II
(3) Manual flash
(4) Manual flash
(5) Manual flash

Wireless Settings

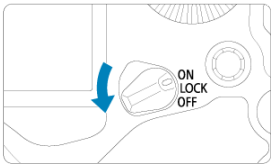
Set the sender (ST-E10) and receivers (flash units) for wireless shooting as follows.

Setting the Sender

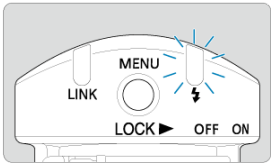
1. **With the transmitter attached (), set the power to < ON > ().**



2. **Set the camera's power switch to < ON >.**

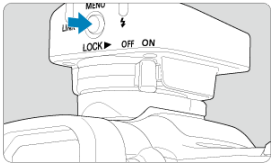


3. **Check < ϟ >.**



- Confirm that < ϟ > is lit in red.

4. **Press the < MENU > button.**



- Confirm that [**Flash function settings**] is displayed on the camera screen.

Setting the Receiver

As receiver units, specify flash units compatible with wireless flash photography using radio transmission.
For instructions on configuring receiver settings, refer to the instruction manual of the flash unit.

Transmission Channel/Wireless Radio ID Settings

To avoid interference with other photographers' wireless systems that have multiple flash units controlled by radio transmission, or with other wireless devices that use radio waves, you can change the transmission channel and wireless radio ID. Set the same channel and ID for both the sender and receiver.

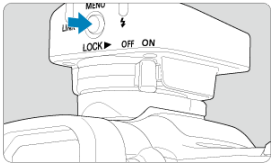
Caution

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

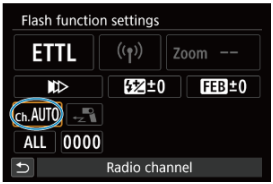
Setting the sender's transmission channel and wireless radio ID

Set the sender's transmission channel and wireless radio ID as follows. **Set the same channel and ID for both the sender and receiver.** For instructions on configuring receiver settings, refer to the Speedlite instruction manual.

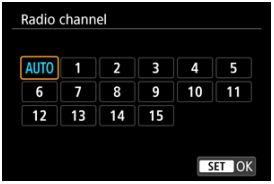
1. **Press the < MENU > button.**



2. **Select [Radio channel].**

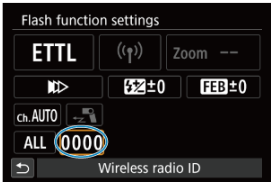


3. **Set a transmission channel.**

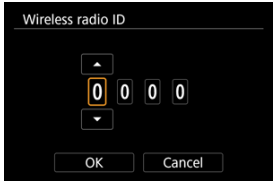


- Select [**AUTO**] or a channel from 1 to 15, then select [**OK**].

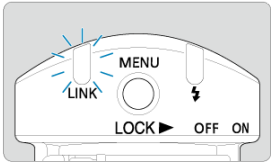
4. **Select [Wireless radio ID].**



5. **Set a wireless radio ID.**



- Specify a four-digit number, then select [**OK**].



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

< LINK > Lamp

You can determine the connection status from the state of the < LINK > lamp.

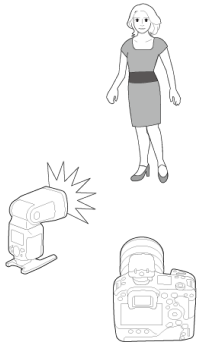
Status	Description	Action
Lit	Connected	–
Off	Not connected	Check the channel and ID
Blinking	Too many units	Do not exceed 16 senders and receivers, combined
	Error	Restart the sender and receiver

Caution

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

ETTL: Fully Automatic Wireless Flash Photography

- Autoflash Using One Receiver
- Autoflash Using Multiple Receivers



This section describes basic fully automatic wireless shooting with the ST-E10 attached to the camera as a sender to control a flash unit (receiver) wirelessly.

Autoflash Using One Receiver

1. **Set the flash unit as a receiver.**

   - For instructions on configuring receiver settings, refer to the instruction manual of the flash unit.
   - Set A, B, or C as the firing group. It will not fire if set to D or E.

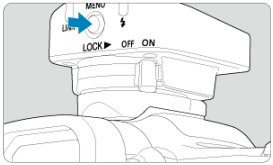
2. **Check the channel and ID.**

   - If the transmission channels and wireless radio IDs of the sender unit and receiver unit are different, set them to the same settings ( ).

3. Position the camera and flash unit.

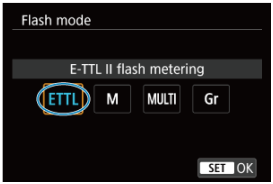
- Position them within the range shown in Positioning and Operation Range.

4. Press the < MENU > button.



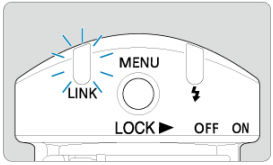
- [**Flash function settings**] is displayed on the camera screen.

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



- Select [**E-TTL II flash metering**] and then [**OK**].
- The receiver unit is set automatically to < ETTL > during shooting, controlled by the sender unit.

6. Check the connection and make sure the flash unit is charged.



- Confirm that the < LINK > lamp is lit.
- When the receiver flash is charged, the AF-assist beam emitter blinks at approx. 1 sec. intervals.
- The charge lamp on the sender is lit when all flash units are fully charged.

7. Check the performance.

- Take some test shots to make sure the flash unit fires. If it does not fire, check that it is placed within the transmission range ( ).

8. Take the picture.

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

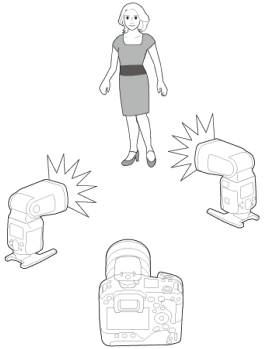
Caution

- Radio transmission is not possible unless the < LINK > lamp is lit. Check the transmission channels and wireless radio IDs of the sender unit and receiver unit again. If you cannot connect with the same settings, turn the sender unit and receiver unit off and on again.

Note

- You can set the camera to beep when receivers are fully charged (C.Fn-20).

Autoflash Using Multiple Receivers



Use more receivers and fire them as a single flash unit when more light is needed or as an easy way to ensure ample lighting.
Add receivers, and then shoot as described in “Autoflash Using One Receiver” ( ). A, B, or C can be set as the firing group.
Flash units added as receivers all fire at the same output, and the total, combined output is automatically controlled to provide standard exposure.

Advanced Shooting with Fully Automatic Wireless Flash

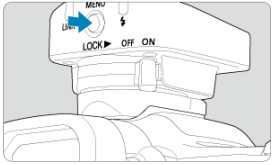
This wireless system eliminates the need to set up the following features on receivers, which are automatically configured based on transmitter (sender) settings.

- Flash Exposure Compensation< >
- FEB< >
- High-Speed Synchronization< >
- Second-Curtain Synchronization< >
- FE Lock

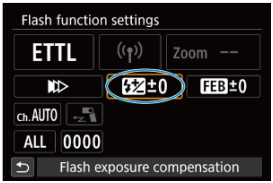
Flash Exposure Compensation

Just as exposure compensation is adjustable, you can also adjust flash output.

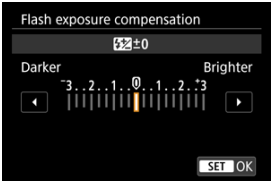
1. **Press the < MENU > button.**



2. **Select [Flash exposure compensation].**



3. **Set the flash exposure compensation amount.**



- After setting the compensation amount, select [**OK**].
- “0.3” indicates 1/3 stops and “0.7” indicates 2/3 stops.
- To cancel flash exposure compensation, return the compensation amount to “±0.”

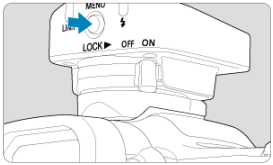
Note

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

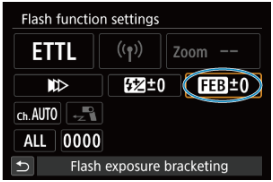
FEB

You can take three shots while automatically changing the flash output. This is called FEB (Flash Exposure Bracketing).

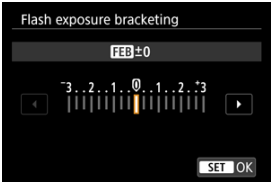
1. **Press the < MENU > button.**



2. **Select [Flash exposure bracketing].**



3. **Set the FEB level.**



- After setting the FEB level, select [**OK**].
- “0.3” indicates 1/3 stops and “0.7” indicates 2/3 stops.
- When used with flash exposure compensation, FEB shooting is centered on your specified flash exposure compensation amount.

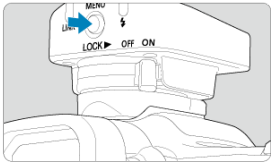
Note

- After the three shots are taken, FEB is canceled automatically.
- Before shooting with FEB, consider setting the camera drive mode to single shooting, and make sure the flash units are charged. When the drive mode is set to continuous shooting, shooting automatically stops after three consecutive shots are taken.
- You can use FEB together with flash exposure compensation or FE lock.
- You can set FEB to remain enabled after shooting the three shots (C.Fn-03).
- You can change the FEB shooting sequence (C.Fn-04).

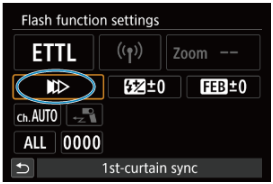
High-Speed Synchronization

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

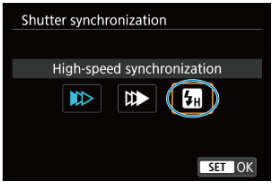
1. **Press the < MENU > button.**



2. **Select [Shutter synchronization].**



3. **Select [High-speed synchronization].**



- Select [**High-speed synchronization**] and then [**OK**].
- Before shooting, confirm that < H > appears on the camera screen.

Caution

- With high-speed sync, the faster the shutter speed, the shorter the effective flash range will be.

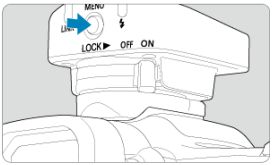
Note

- < H > is not displayed on the camera screen when the shutter speed is less than the maximum flash sync shutter speed.
- To return to normal flash firing, select [**First-curtain synchronization**] in step 3.

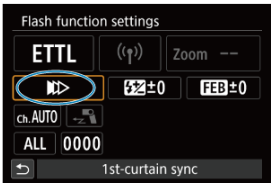
Second-Curtain Synchronization

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).

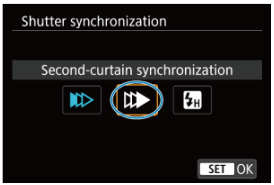
1. **Press the < MENU > button.**



2. **Select [Shutter synchronization].**



3. **Select [Second-curtain synchronization].**



- Select [**Second-curtain synchronization**] and then [**OK**].

Note

- Second-curtain sync works well in < **B** > (bulb) shooting mode.
- Flash units fire twice in [**E-TTL II flash metering**] flash mode. The first firing, which does not indicate malfunctioning, is preflash to determine flash output.
- To return to normal flash firing, select [**1st-curtain sync**] in step 3.

FE Lock

Shooting with FE (flash exposure) Lock provides suitable flash exposure over your specified area of the subject.
Use the camera to configure FE lock. For instructions, refer to the instruction manual of the camera and flash unit.

Note

- < ϟ > blinks on the camera screen if suitable exposure cannot be obtained with FE lock. Move the receiver closer to the subject or open the aperture, and then lock the flash exposure again. You can also try setting a higher ISO speed before performing FE lock again.
- FE lock may not be effective if the subject is too small in the viewfinder.

Using Multiple Senders

You can designate two or more sender units. 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.

Caution

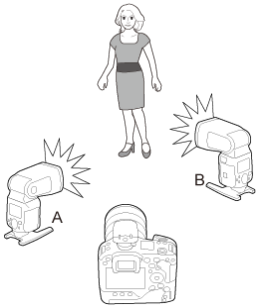
- When the < LINK > lamp is not lit, it indicates that the flash unit is not connected yet. After checking the transmission channel and wireless radio ID, turn each sender unit off and on again.
- Limit the total number of senders and receivers during radio transmission wireless shooting to 16 units.

Note

- You can shoot even when the sender unit is a sub-sender.

ETTL: Wireless Multiple-Flash Photography with Flash Ratio

Autoflash with Two Receiver Groups

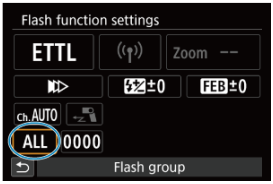


You can adjust the lighting balance (flash ratio) with receivers separated into 2 groups, A and B.
The total (sum) of light from firing groups A and B is automatically controlled to a achieve standard exposure.

1. **Set the firing group of the receivers.**

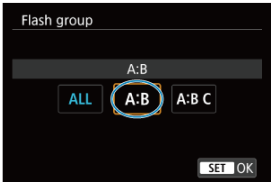
   - Set this manually on each receiver.
   - Set 1 receiver to < A > and the other to < B >.
   - For instructions on configuring receiver settings, refer to the instruction manual of the flash unit.

2. **Select [Flash group].**



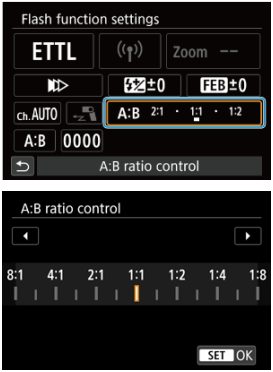
- Complete steps 2–4 using the sender.

3. **Set to [A:B].**



- Select [**A:B**] and then [**OK**].

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

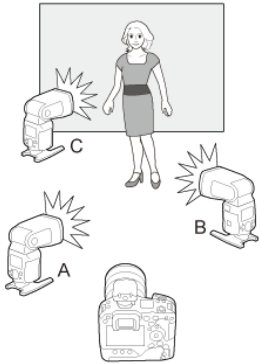


- Set the A:B flash ratio, then select [**OK**].

5. **Take the picture.**

- The receiver will fire at the set flash ratio.

Autoflash with Three Receiver Groups

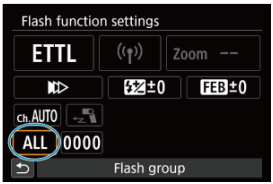


Once flash groups A and B have been set up, you can add group C to fire with multiple flash units. For an overview of flash control, see “Group Control.”
C is useful when you want lighting that eliminates the subject's background shadow.

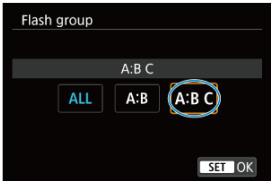
1. **Set a flash unit as firing group C.**

   - For instructions on configuring receiver settings, refer to the instruction manual of the flash unit.

2. **Select [Flash group].**

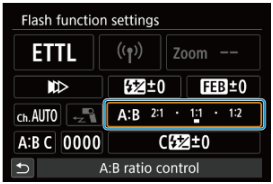


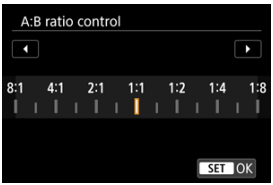
3. **Set to [A:B C].**



- Select [**A:B C**] and then [**OK**].

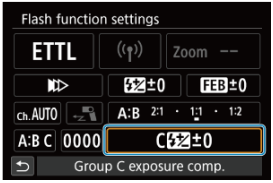
4. **Set the A:B flash ratio.**

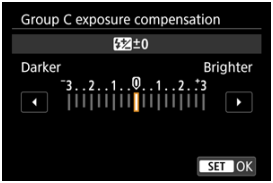




- Set the A:B flash ratio, then select [**OK**].

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





- After setting the compensation amount, select [**OK**].

6. **Take the picture.**

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

Group Control

Firing group A

You can add more receivers when more light or sophisticated lighting is needed. For added receivers, simply specify the flash group (A, B, or C) that you want to be brighter. Up to 15 receivers are supported.

For example, when three receivers are set to flash group < A >, they are all controlled as a single, high-output flash unit 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 set to [**A:B**].
- Aiming the units in flash group C directly at subjects may cause overexposure.

Note

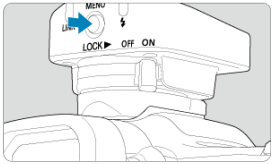
- Flash ratios from 8:1 to 1:1 to 1:8 correspond to 3:1 to 1:1 to 1:3 (in 1/2-stop increments) as converted to number of stops.

M: Wireless Multiple-Flash Photography with Manual Flash Output

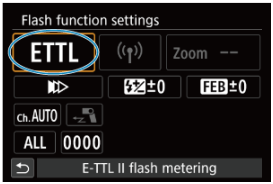
MULTI: Stroboscopic Flash

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

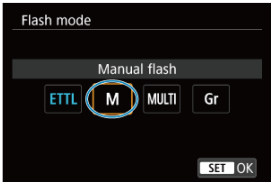
1. **Press the <MENU> button.**



2. **Select [Flash mode].**

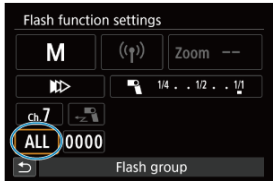


3. **Set the flash mode to [Manual flash].**



- Select [**Manual flash**] and then [**OK**].

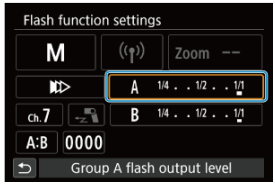
4. **Select [Flash group].**



5. **Set the firing group.**

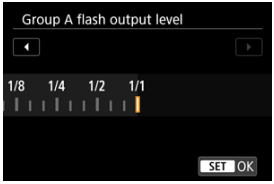
- Select [**Fire all (no separate control)**], [**A:B**], or [**A:B:C**], and then [**OK**].
  - For the same output from all receivers, select [**Fire all (no separate control)**].
  - To set the output for firing groups A and B, select [**A:B**].
  - To set the output for firing groups A, B, and C, select [**A:B:C**].

6. **Select a firing group.**



- Select the group to which the flash output applies.

7. **Set the flash output.**



- After setting the output, select [**OK**].
- Repeat steps 3 and 4 to set the flash output of all groups.

8. **Take the picture.**

- Each group fires at the set flash output.

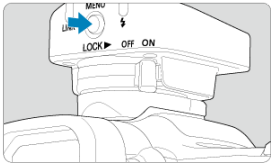
Note

- Specify A, B, or C as the receiver firing group when using [**Fire all (no separate control)**]. Flash firing will not fire if set to D or E.
- To fire multiple receivers at the same flash output level, select [**Fire all (no separate control)**] in step 5.

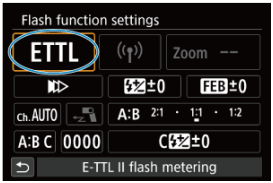
MULTI: Stroboscopic Flash

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

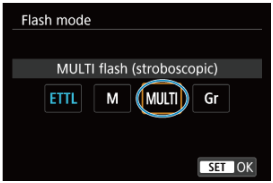
1. **Press the < MENU > button.**



2. **Select [Flash mode].**

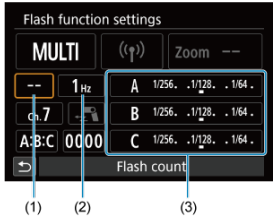


3. **Set the flash mode to [MULTI flash (stroboscopic)].**



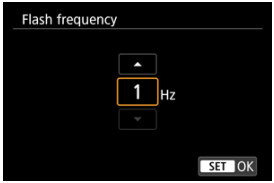
- Select [**MULTI flash (stroboscopic)**] and then [**OK**].

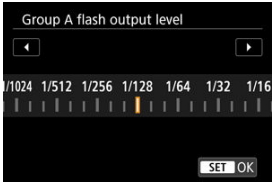
4. **Select an item.**



- Select the flash count (1), frequency (2), or output (3), then select [**OK**].

5. **Set the value.**





- After setting the value, select [**OK**].
- Repeat steps 4–5 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 receiver flash heads from overheating, do not use stroboscopic flash repeatedly more than 10 times. After 10 shots, stop using the flash for at least 15 min.
- Shooting more than 10 times may activate a safety function and restrict flash firing. Stop using the flash for at least 15 min.

Note

- Stroboscopic flash is most effective for subjects with high reflectance against a dark background.
- Using a tripod and remote switch is recommended.
- Stroboscopic 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 flash 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 ( ) and second-curtain sync ( ) are not available with stroboscopic flash.

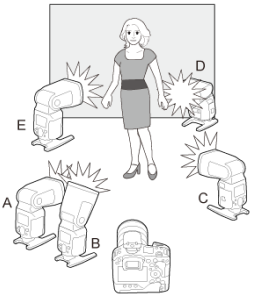
Maximum continuous flash count

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

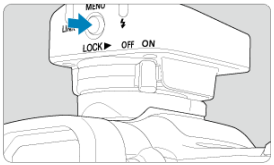
Flash Output / Hz	10	11	12–14	15–19	20–50	60–199	250–500
1/4	2	2	2	2	2	2	2
1/8	4	4	4	4	4	4	4
1/16	8	8	8	8	8	8	8
1/32	20	20	20	18	16	12	10
1/64	50	40	40	35	30	20	15
1/128	70	70	60	50	40	40	30
1/256	100	100	100	100	80	80	60
1/512	100	100	100	100	100	100	100
1/1024	100	100	100	100	100	100	100
1/2048	100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

Gr: Shooting in a Different Flash Mode for Each Group

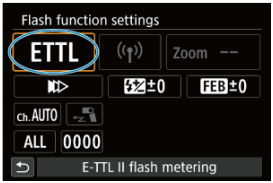


You can set and shoot in a different flash mode for each firing group, with up to five groups (A, B, C, D, and E).
The flash modes that can be set are (1) E-TTL II / E-TTL autoflash, (2) manual flash, and (3) auto external flash metering. In flash mode (1) or (3), exposure is controlled to obtain standard exposure for the main subject from all groups combined.
This function is for advanced users who are very knowledgeable and experienced in lighting.

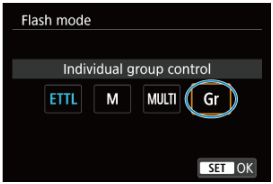
1. **Press the < MENU > button.**



2. **Select [Flash mode].**



3. **Set the flash mode to [Individual group control].**

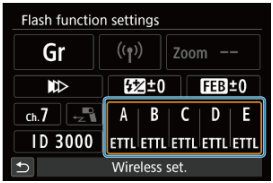


- Select [**Individual group control**] and then [**OK**].
- The receiver unit's flash mode is set automatically during shooting, controlled by the sender unit.

4. **Set the firing group of the receivers.**

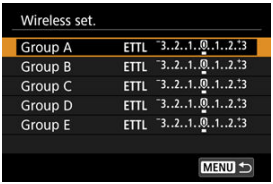
- Set this manually on each receiver.
- Set the firing group (A, B, C, D, or E) for all receivers.
- For instructions on configuring receiver settings, refer to the instruction manual of the flash unit.

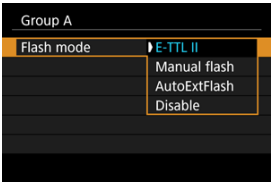
5. **Set the flash mode.**



- Select [**Wireless set.**].

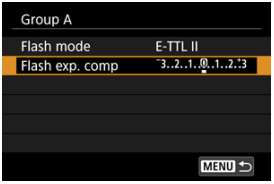
Setting the flash mode

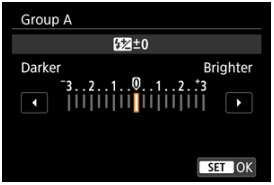




- For the selected firing group, choose [**E-TTL II**], [**Manual flash**], [**AutoExtFlash**], or [**Disable**].

Setting the flash output and flash exposure compensation amount





- Configure flash features available in the flash mode.
- For [**Manual flash**], set the flash output. For [**E-TTL II**] or [**AutoExtFlash**], set the flash exposure compensation amount as needed.
- Repeat step 4 to configure flash features for all firing groups.

Caution

- For [**AutoExtFlash**] flash mode, make sure the receivers support auto external flash metering. Firing in this flash mode is not possible if auto external flash metering is not supported.
- In [**E-TTL II**] or [**AutoExtFlash**] 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.

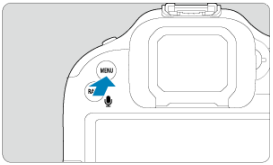
Note

- For details on [**AutoExtFlash**], refer to the instruction manual of flash units that support auto external flash metering.
- The order of firing among firing groups does not need to be consecutive; for example, A, C, E can be set.
- Set any group you do not wish to fire to [**Disable**] when setting the flash mode in step 3.

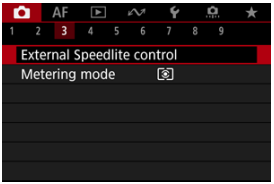
Clearing Transmitter Settings

You can restore default settings for wireless shooting.

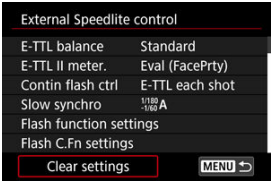
1. **On the camera, press the <MENU> button.**

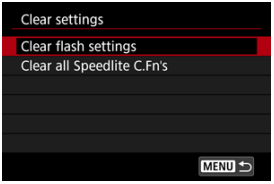


2. **Select [External Speedlite control].**



3. **Select [Clear settings].**





- Select [**Clear flash settings**] and then [**OK**].
- The transmitter settings are cleared, and the flash mode is set to [**E-TTL II**].

Note

- Clearing the settings does not clear the transmission channel, wireless radio ID, and Custom Function ( ) settings.

Test Firing from Receivers

Flash units set as receivers can be used to test firing of other flash units. For instructions, refer to the instruction manual of the flash unit.

Note

- When there are multiple senders, the one that was started first fires.

Remote Release from Receivers

Flash units set as receivers can be used to shoot remotely, enabling remote control shooting. For instructions, refer to the instruction manual of the flash unit.

Caution

- Shooting is not possible when autofocus fails. It is recommended that you set the lens focus mode switch to < MF > and focus manually before releasing the shutter.

Note

- Remote release is performed with “single shooting” regardless of the camera's drive mode setting.
- When there are multiple senders, remote release applies to the one that was started first.

Setting Transmitter Functions from the Camera

This chapter describes how to set transmitter functions from the camera menu.

Caution

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

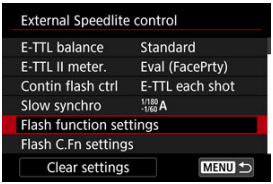
- Control from Camera's Menu Screen

Control from Camera's Menu Screen

You can set flash functions and Custom Functions from the camera menu.
For camera instructions, refer to the camera instruction manual.

Transmitter Function Settings

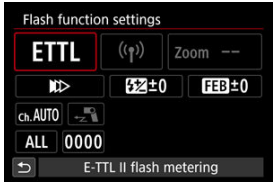
1. **Select [Flash function settings].**



- In [**External Speedlite control**], select [**Flash function settings**].

2. Set the function.

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



Settings Available in [External Speedlite control]

The configurable functions are as follows. Available settings vary depending on the camera and flash mode used, wireless function settings, and other conditions.

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
Slow synchro	
Flash mode	E-TTL II flash metering (autoflash) / Manual flash / MULTI flash (stroboscopic) / Individual group control
Wireless functions	Wireless:Radio transmission
Shutter synchronization	First-curtain synchronization / Second-curtain synchronization / High-speed synchronization
Flash exposure compensation	
Flash exposure bracketing	
Clear settings	

Flash firing

For wireless flash photography, set to [**Enable**]. Setting to [**Disable**] disables wireless flash photography.

E-TTL balance

You can set the finish (taste) of the flash photo according to your preference. This setting enables you to adjust the ratio of ambient light to flash unit 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. Flash exposure compensation may be necessary depending on the scene.

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.

Slow synchro

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

Flash mode

You can choose the flash mode from [**E-TTL II flash metering**], [**Manual flash**], [**MULTI flash (stroboscopic)**], or [**Individual group control**] to suit your desired flash photography.

Wireless functions

Automatically set to wireless flash photography using radio transmission. For details, see “Wireless Flash Photography.”

Shutter synchronization

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

Flash exposure compensation

Just as exposure compensation is adjustable, you can also adjust flash output.

Flash exposure bracketing

You can take three shots while automatically changing the flash output.

Clear settings

You can restore default transmitter settings.

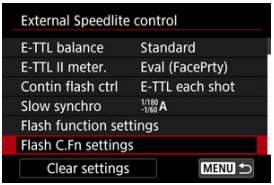
Note

- With [**Flash mode**] set to [**Individual group control**], choose [**E-TTL II**], [**Manual flash**], [**AutoExtFlash**], or [**Disable**] as the flash mode for each group.

Transmitter Custom Function Settings

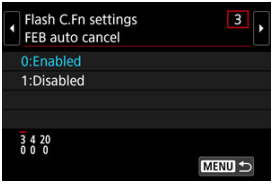
You can set Custom Functions for the transmitter from the camera menu. The information displayed varies depending on the camera used. For details on Custom Functions, see "Custom Function Setting Items."

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

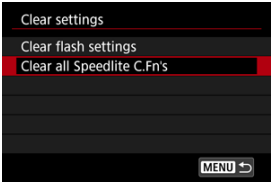


- In [**External Speedlite control**], select [**Flash C.Fn settings**].

2. **Set the Custom Function.**



- Select the Custom Function number and set the function.



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

Customizing the Transmitter

This chapter describes how to customize the transmitter with the Custom Functions (C.Fn).

Caution

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

Setting Custom Functions

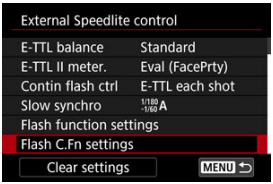
- C.Fn: Custom Functions
- Custom Function List
- Clearing All Custom Functions

You can customize transmitter functions to suit your shooting preferences. The functions for this purpose are called Custom Functions.

C.Fn: Custom Functions

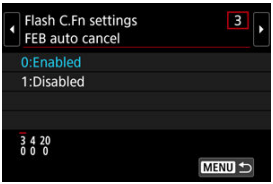
You can set Custom Functions for the transmitter from the camera menu. The information displayed varies depending on the camera used.

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



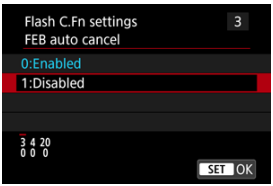
- In [**External Speedlite control**], select [**Flash C.Fn settings**].

2. **Set the Custom Function.**



- Select the Custom Function number and set the function.

3. **Change the setting.**

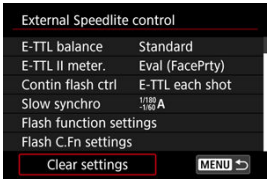


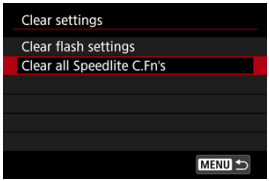
- Select an option and then [**OK**].

Custom Function List

Number	Item
C.Fn-03	FEB auto cancel
C.Fn-04	FEB sequence
C.Fn-20	Beep

Clearing All Custom Functions





To clear all the Custom Function settings, select [**Clear settings**] in the camera menu and then [**Clear all Speedlite C.Fn's**].

Custom Function Setting Items

C.Fn-03: FEB auto cancel

You can set whether or not to cancel FEB automatically after shooting three shots with FEB.

- **0: Enable**
- **1: Disable**

C.Fn-04: FEB sequence

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

- **0: 0 → – → +**
- **1: – → 0 → +**

C.Fn-20: Beep

You can set the camera to beep when receivers are fully charged.

- **0: Off**
- **1: On**

Reference

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

- ST-E10 System
- Troubleshooting Guide
- Specifications

ST-E10 System

Wireless Flash Photography	
Transmitter equipped with sender functionality (1)	Speedlite equipped with receiver functionality (2)

(1) **Speedlite Transmitter ST-E10**

(2) **Speedlites equipped with radio transmission wireless receiver functionality**
EL-1, 600EX II-RT, 600EX-RT, 430EX III-RT

Troubleshooting Guide

If a problem occurs with the transmitter, first refer to this troubleshooting guide. If this troubleshooting guide does not resolve the problem, contact your dealer or nearest Canon Service Center.

Normal shooting

The power does not turn on.

- Insert the mounting foot in the camera's multi-function shoe until it clicks into place, then slide the mounting foot lock lever to the right to secure the unit to the camera ( ).
- Clean the transmitter and camera contacts if they are dirty.

The power turns off by itself.

- The transmitter's auto power off has been activated ( ). Either wake the camera or press the < MENU > button on the ST-E10.

The camera's battery life does not last long.

- The ST-E10 consumes camera battery power even if the camera's power-saving or auto power off functions have been activated. Turn off the ST-E10 when possible if you are not using it.

Receiver units do not fire.

- Make sure receiver units support wireless flash photography using radio transmission.
- Set the transmission channels and wireless radio IDs of the sender unit and receiver units to the same number ( ).
- Make sure receiver units are within transmission range of the sender unit ( ).

Receiver units sometimes fail to fire or unexpectedly fire at full output.

- Position the receiver units at a location with the clearest possible view of the sender unit.
- Make sure receivers are facing the sender unit.

Pictures are under or overexposed.

- If the main subject looks very dark or very bright, set flash exposure compensation ( ).
- If there is a highly reflective object 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 ( ).
- When using autoflash with three firing groups (A, B, and C), do not fire with firing group C pointing toward the main subject ( ).
- When shooting with each firing group set to its own flash mode, do not fire multiple firing groups set to [**AutoExtFlash**] or [**E-TTL II**] when they are pointing toward the main subject ( ).

The picture is very blurred.

- Shooting with the shooting mode set to < **Av** > Aperture-priority AE or < **P** > Program AE mode under low light activates slow-sync shooting, which results in slower shutter speeds. Either use a tripod or set the flash sync speed in [**Slow synchro**] ( ).

Specifications

Type

Radio transmission wireless Speedlite transmitter

Exposure control

Flash exposure compensation	±3 stops in 1/3- or 1/2-stop increments
FEB	±3 stops in 1/3- or 1/2-stop increments
High-speed synchronization	Supported * For details on cameras that support this feature, refer to the Canon website.
Second-curtain synchronization	Supported * For details on cameras that support this feature, refer to the Canon website.
Manual flash output setting range	1/1 to 1/8192 (in 1/3-stop increments) * For high-speed synchronization, minimum flash output is 1/128. * The minimum flash output level depends on the flash used.
Stroboscopic (MULTI) flash setting	**Flash count**: 1 to 100 **Flash frequency**: 1 to 500 Hz **Flash output setting range**: 1/4 to 1/8192 (in 1-stop increments) * The minimum flash output level depends on the flash used.

Radio transmission wireless function

Communication functions	**Standards compliance**: IEEE802.15.4, ARIB STD-T66 **Transmission method**: Primary modulation: OQPSK Secondary modulation: DS-SS **Transmission frequency**: 2405 to 2475 MHz **Transmission channel**: Channel 1–15 Setting: Auto/Manual **Transmission ID**: 0000 to 9999 Setting: Manual **Transmission distance**[*1*2]: Approx. 30 m / 98.4 ft. **Group**: Up to 5 groups (A, B, C, D, E) **Number of transmission units**: Up to 16 senders and receivers in total **Number of sender units**: Up to 15 * Unit 2 and subsequent units will be subsenders **Number of receiver units**: Up to 15 **Maximum output power**: 0.0018 W *1: With no obstructions between sender and receiver and no radio interference from other devices. *2: The transmission distance may be shorter depending on the placement conditions, surrounding environment, weather conditions, etc.

Power source

Speedlite transmitter power source	Supplied from the camera
Auto power off	The power is automatically turned off if there is no operation for 5 minutes after the camera auto power off.

Dimensions and weight

Dimensions	**W x H x D (approx.)**	45.5 x 37.8 x 53.6 mm 1.79 x 1.49 x 2.11 in.
Weight	**Weight (approx.)**	48 g / 1.7 oz.

Operating environment

Operating temperature	0–45°C / 32–113°F
Operating humidity	85% or less

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

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