Canon

SPEEDLITE 600EX II-RT



E

INSTRUCTION MANUAL

Introduction

The Canon Speedlite 600EX II-RT is an EOS-dedicated external Speedlite, compatible with E-TTL II/E-TTL/TTL autoflash systems. The Speedlite can be used as an on-camera flash that attaches to the hot shoe of the camera (normal shooting), and as a master/slave unit during radio transmission/optical transmission wireless flash photography. In addition to these functions, the Speedlite also has dust and water resistance equivalent to EOS-1D series cameras.

Before Starting to Shoot, Be Sure to Read the Following

To avoid botched pictures and accidents, first read the “Safety Precautions” (pages 8-9). Also, read this manual carefully to ensure that you use the camera 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.

Using the Speedlite with a Camera

- **Using with an EOS DIGITAL camera (Type-A camera)**
  You can use the Speedlite for easy flash photography using autoflash control in the same way as a camera’s built-in flash.
- **Using with an EOS film camera**
  - **An EOS camera with E-TTL II/E-TTL autoflash metering system (Type-A camera)**
    You can use the Speedlite for easy flash photography using autoflash control in the same way as a camera’s built-in flash.
  - **An EOS camera with TTL autoflash metering system (Type-B camera)**
    See page 138.

*** This Instruction Manual assumes that the Speedlite is used with a Type-A camera.**

Chapters

	Introduction	2
1	**Getting Started and Basic Operations** Preparing for flash photography and basic flash photography	17
2	**Advanced Flash Photography** Advanced shooting utilizing the flash functions	27
3	**Setting Flash Functions with Camera Controls** Setting the flash functions from the camera's menu screen	51
4	**Wireless Flash Photography: Radio Transmission** Wireless (master/slave) flash photography using radio transmission	57
5	**Wireless Flash Photography: Optical Transmission** Wireless (master/slave) flash photography using optical transmission	89
6	**Customizing the Speedlite** Customizing with Custom Functions and Personal Functions	109
7	**Reference** System map, Troubleshooting guide, Using with a type-B camera	121

Conventions Used in this Manual

Icons in this Manual

- : Indicates the Select dial.
- : Indicates the Select/Set button.
- ⏱12/⏱16 : Indicates that the respective function remains active for approx. 12 sec. or 16 sec. after you let go of the button.
- (p.**) : Reference page numbers for more information.
- : Warning to prevent shooting problems.
- : Supplemental information.
- ☆ : ☆ shown on the upper right of the page title indicates that the function is performed when the camera's shooting mode is set to <**P**/**Tv**/**Av**/**M**/**bulb(B)**> (Creative Zone mode).

Basic Assumptions

- The operation procedures assume that both the Speedlite and the camera's power switches are turned ON.
- The icons used for buttons, dials, and symbols in the text match the icons found on the Speedlite and the camera.
- When <↩> is displayed at the Function button 4 position, the screen returns to the previous screen by pressing <↩>.
- The operation procedures assume that the Custom Functions and Personal Functions of the Speedlite, and the menu and Custom Functions of the camera are at their default settings.
- All figures such as the number of flashes are based on the use of four AA/LR6 alkaline batteries and Canon's testing standards.

Contents

Introduction 2

Chapters ... 3
Conventions Used in this Manual ... 4
Index to Features ... 7
Safety Precautions ... 8
Nomenclature ... 10
Accessories Provided ... 16

1 Getting Started and Basic Operations 17

Installing the Batteries ... 18
Attaching and Detaching the Speedlite to and from the Camera ... 20
Turning on the Power ... 21
ETTL: Fully Automatic Flash Photography ... 24
E-TTL II/E-TTL Autoflash by Shooting Mode ... 25

2 Advanced Flash Photography 27

Flash Exposure Compensation ... 28
FEB ... 29
FEL: FE Lock ... 30
High-speed Sync ... 31
Second-curtain Sync ... 32
Bounce ... 33
Short Distance Flash Photography ... 34
Catchlight Shooting ... 35
Bounce Photography with the Bounce Adapter ... 36
Zoom: Setting the Flash Coverage ... 38
Wide Panel ... 39
M: Manual Flash ... 40
Metered Manual Flash Exposure ... 41
MULTI: Stroboscopic Flash ... 42
Ext.A/**Ext.M**: Flash External Metering ... 45
Modeling Flash ... 47
Color Filter ... 48
Clearing Speedlite Settings ... 50

3 Setting Flash Functions with Camera Controls 51

Flash Control from the Camera's Menu Screen 52

4 Wireless Flash Photography: Radio Transmission 57

Radio Transmission Wireless Flash Photography 58
Wireless Settings 63
ETTL: Fully Automatic Wireless Flash Photography 68
A:B: Wireless Multiple-Flash Photography with Flash Ratio 73
M: Wireless Multiple-Flash Photography with Manual Output 77
Gr: Shooting in a Different Flash Mode for Each Group 79
Test Flash and Modeling Flash from a Slave Unit 82
Remote Release from a Slave Unit 83
Linked Shooting with Radio Transmission 84

5 Wireless Flash Photography: Optical Transmission 89

Optical Transmission Wireless Flash Photography 90
Wireless Settings 92
ETTL: Fully Automatic Wireless Flash Photography 96
A:B: Wireless Multiple-Flash Photography with Flash Ratio 101
M: Wireless Multiple-Flash Photography with Manual Output 105
INDIVIDUAL SLAVE Manual Flash/Stroboscopic Flash Setting on a Slave Unit ... 107

6 Customizing the Speedlite 109

C.Fn / **P.Fn**: Setting Custom and Personal Functions 110
C.Fn: Setting Custom Functions 113
P.Fn: Setting Personal Functions 118

7 Reference 121

600EX II-RT System 122
Flash Firing Restriction due to Temperature Increase 124
Troubleshooting Guide 127
Specifications 133
Using with a Type-B Camera 138
Radio Transmission Wireless Function 139
Index 145

Index to Features

Power Source

- Batteries → p.18
- Firing interval/frequency → p.18
- Power ON/OFF → p.21
- Flash ready → p.21
- Quick flash → p.21
- Auto power off → p.22

Operations

- Attaching and detaching the Speedlite → p.20
- Lock function → p.22
- LCD panel illumination → p.22

Normal Shooting

- E-TTL autoflash → p.24
- Autoflash by shooting mode → p.25
- Manual flash → p.40
- Stroboscopic flash → p.42
- Auto external flash metering → p.45
- Manual external flash metering → p.46
- Metered manual flash → p.41
- TTL autoflash → p.138

Functions

- Flash exposure compensation → p.28
- FEB → p.29
- FE lock → p.30
- High-speed sync → p.31
- Second-curtain sync → p.32
- Modeling flash → p.47
- AF-assist beam → p.26
- Flash coverage → p.38
  - Wide panel → p.39
- Bounce → p.33
  - Catchlight → p.35
  - Adapter → p.36
- Color filter → p.48
- Clearing settings (Reverting to defaults) → p.50
- Flash function settings → p.51
- Flash firing restriction → p.124
- Type-B camera → p.138

Radio Transmission Wireless Flash Photography

- E-TTL autoflash → p.68
  - Flash ratio → p.73
- Manual flash → p.77
- Group flash → p.79
- Test flash/ Modeling flash → p.82
- Remote release → p.83
- Linked shooting → p.84
- Memory function → p.67

Optical Transmission Wireless Flash Photography

- E-TTL autoflash → p.96
  - Flash ratio → p.101
- Manual flash → p.105
- Memory function → p.95
- Individual slave → p.107

Customization

- Custom Functions (C.Fn) → p.113
- Personal Functions (P.Fn) → p.118
- Clear all → p.112

Safety Precautions

The following precautions are provided to prevent harm or injury to yourself and others. Make sure to thoroughly understand and follow these precautions before using the product.

If you experience any malfunctions, problems, or damage to the product, contact the nearest Canon Service Center or the dealer from whom you purchased the product.

⚠ Warnings: Follow the warnings below. Otherwise, death or serious injuries may result.

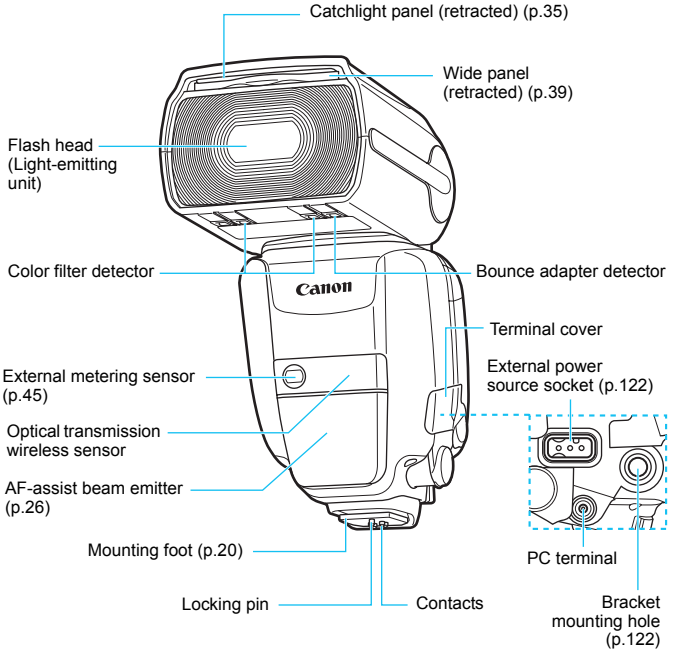
- To prevent fire, excessive heat, chemical leakage, explosions, and electrical shock, follow the safeguards below:
  - Do not insert any foreign metallic objects into the electrical contacts of the product, accessories, connecting cables, etc.
  - Do not use any batteries, power sources, or accessories not specified in the Instruction Manual. Do not use any deformed or modified batteries, or the product if it is damaged.
  - Do not short-circuit, disassemble, or modify the product or batteries. Do not apply heat or solder to the batteries. Do not expose the batteries to fire or water. Do not subject the batteries to strong physical shock.
  - Do not insert any battery's plus and minus ends incorrectly, or mix new batteries with used ones or batteries of different type.
- Do not use the product in locations where there is flammable gas. This is to prevent an explosion or a fire.
- Do not fire the flash at anyone driving a car or other vehicle. It may cause an accident.
- Do not disassemble or modify the equipment. High-voltage internal parts may cause electrical shock.
- If you drop the equipment and the casing breaks open to expose the internal parts, do not touch the exposed parts. There is a possibility of an electrical shock.
- Do not store the product in dusty or humid places or location with lots of oil smoke. This is to prevent a fire or electrical shock.
- Before using this product inside an airplane or hospital, check if it is allowed. Electromagnetic waves emitted by the product may interfere with the plane's instruments or the hospital's medical equipment.
- If a battery leaks, changes color, deforms, or emits smoke or fumes, remove it immediately. Be careful not to get burned in the process. It may cause a fire, electrical shock or burns if you keep using it.
- Keep the batteries and other accessories out of the reach of children and infants. If a child or infant swallows a battery or accessory, consult a physician immediately. (Battery chemicals may harm the stomach and intestines.)
- Be careful not to get the product wet. If you drop the product in the water or if water or metal get inside the product, promptly remove the batteries. This is to prevent fire, electrical shock, and burns.
- Do not cover or wrap the product with a cloth. Doing so may trap heat within and cause the casing to deform or catch fire.

- Keep the equipment out of the reach of children and infants, including when in use. Straps or cords may accidentally cause choking, electrical shock, or injury. Choking or injury may also occur if a child or infant accidentally swallows a part or accessory. If a child or infant swallows a part or accessory, consult a physician immediately.
- When the equipment is not in use, make sure to remove the batteries, and disconnect the external power source and cable from the equipment before storing. This is to prevent electrical shock, excessive heat, fire, or corrosion.
- Prevent any battery leakage from contacting your eyes, skin, and clothing. It can cause blindness or skin problems. If the battery leakage comes in contact with your eyes, skin, or clothing, flush the affected area with lots of clean water without rubbing it. See a physician immediately.
- Do not use paint thinner, benzene, or other organic solvents to clean the product. Doing so may cause fire or a health hazard.

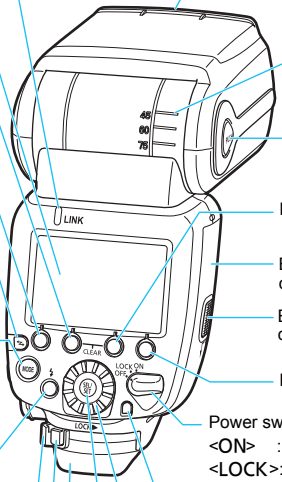
⚠ Cautions: Follow the cautions below. Otherwise physical injury or property damage may result.

- When the product is not in use for a prolonged period, make sure to remove the batteries before storing. This is to prevent malfunction or corrosion.
- When disposing of a battery, insulate the electrical contacts with tape. Contact with other metallic objects or batteries may cause a fire or an explosion.
- Do not use, store, or leave the product in a vehicle in the direct sunlight or with a high interior temperature, or near a high-temperature object. The product may become hot and cause burns if touched. Doing so may also cause battery heat generation, breakage, leakage, and the like.
- Do not fire the flash with the flash head (light-emitting unit) in contact with a human body or any object. Doing so may result in the risk of burns and fire.
- Do not fire the flash near the eyes. It may hurt the eyes.
- Do not leave the product in a low-temperature environment for an extended period of time. The product will become cold and may cause injury when touched.
- Do not directly touch any part of the product that becomes hot. Extended contact on the skin may result in low temperature contact burns.
- If you replace the batteries after continually firing, the batteries may be hot. Be careful not to get burned in the process. It may cause a skin burn.

Nomenclature



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



<LINK>
Radio transmission confirmation lamp (p.64, 66, 69, 72, 86)

LCD panel

Function button 2

Function button 1

<⚡z>
Wireless/ Linked shooting button (p.63, 92/85)

<MODE>
Flash mode button (p.24, 40, 42, 45, 46, 69, 77, 79, 97, 105, 107)

<⚡>
Flash-ready lamp/ Test flash button (p.21, 69, 97, 113)

Mounting foot lock lever (p.20)

Lock-release button (p.20)

Dust- and water-resistant adapter

Bounce adapter/ Color filter attachment (p.36/48)

Bounce angle index (p.33)

<PUSH> Bounce angle lock-release button (p.33)

Function button 3

Battery compartment cover (p.18)

Battery compartment cover lock lever (p.18)

Function button 4

Power switch (p.21)
<ON> : Power on
<LOCK>: Button/Dial lock (Power on)
<OFF> : Power off

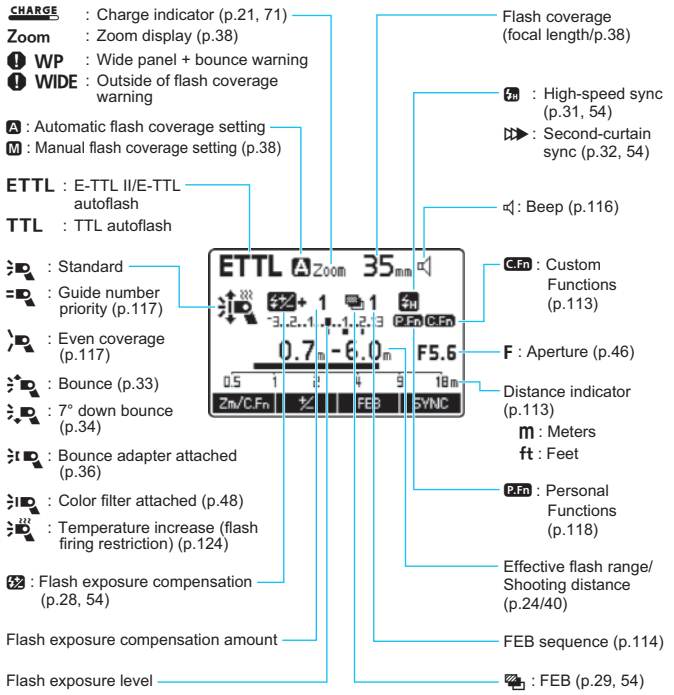
Flash exposure confirmation lamp (p.24, 70, 98)

<◎> Select dial

<●> Select/Set button

LCD Panel

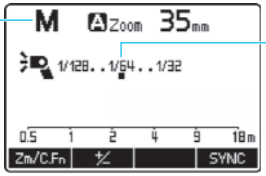
E-TTL II/E-TTL/TTL Autoflash (p.24)



- The displays shown are examples. The display will show only the settings currently applied.
- The functions displayed above function buttons 1 to 4, such as <Zm/C.Fn> and <▪>, change according to the setting status.
- When a button or dial is operated, the LCD panel illuminates (p.22).

Manual Flash (p.40)

M : Manual flash



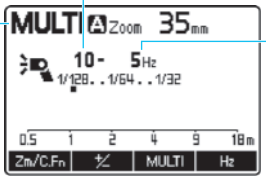
Manual flash output

Stroboscopic Flash (p.42)

MULTI : Multi (Stroboscopic) flash

Number of flashes

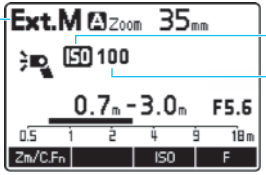
Flash frequency



Auto/Manual External Flash Metering (p.45/46)

Ext.A : Auto external flash metering

Ext.M : Manual external flash metering



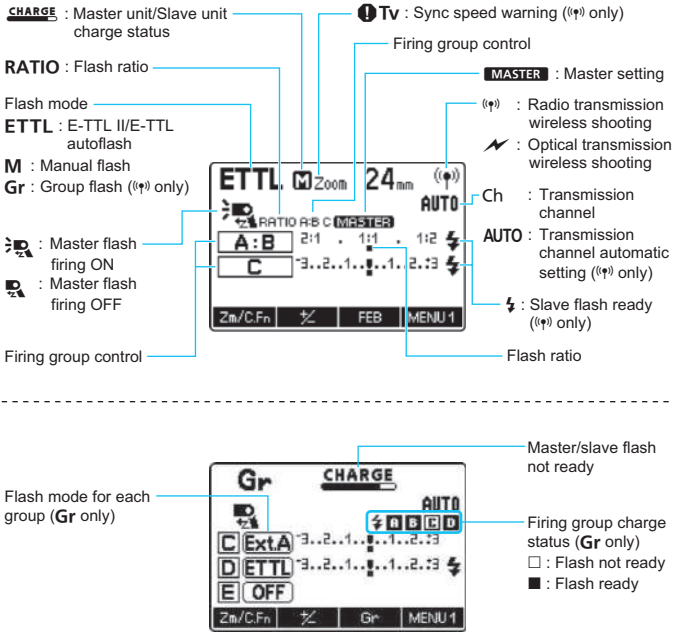
ISO : ISO display

ISO speed

Radio Transmission Wireless Shooting/ Optical Transmission Wireless Shooting

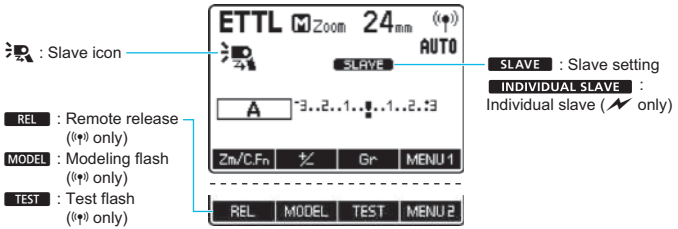
(p.57/89)

● Master unit

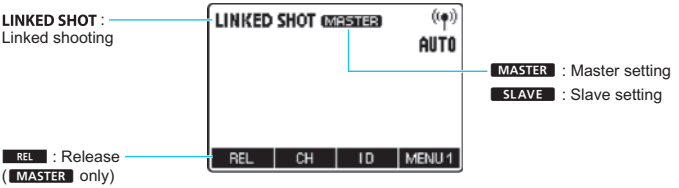


During radio transmission wireless shooting, when the master unit and slave unit are fully charged, <CHARGE> disappears. Also, during <Gr> flash photography, when all flash units are fully charged, the "firing group charge status" indication also disappears.

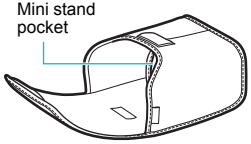
Slave unit



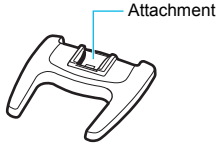
Radio Transmission: Linked Shooting (p.84)



Accessories Provided



Speedlite case



Mini stand
(p.58, 90)



Bounce adapter
SBA-E3
(p.36)



Color filter
SCF-E3OR1
(p.48)



Color filter
SCF-E3OR2
(p.48)

1

Getting Started and Basic Operations

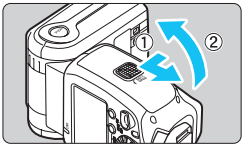
This chapter describes the preparations before starting flash photography and the basic shooting operations.

Cautions for firing continuous flash

- **To avoid degrading and damaging the flash head due to overheating, limit the continuous firing at full output up to "firing angle 14mm/20mm/24mm: 30 times", "firing angle 28mm: 35 times", or "firing angle 35mm to 200mm: 50 times." After firing continuously at full output for the above listed number of times, allow a rest time of at least 10 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. With flash firing restriction level 1, the firing interval is automatically set to approx. 8 sec. If this happens, allow a rest time of at least 40 min.**
- **For details, see "Flash Firing Restriction due to Temperature Increase" on page 124.**

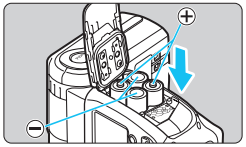
Installing the Batteries

Install four AA/R6 batteries for power supply.



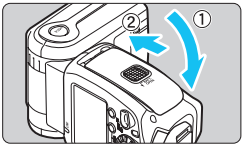
1 Open the cover.

- Slide the lock lever to the left as shown in ①, slide the cover down, and open the battery compartment cover.



2 Install the batteries.

- Make sure the “+” and “-” electrical contacts are correctly oriented as shown in the battery compartment.
- The grooves on the side surfaces of the battery compartment indicate “-”. This is convenient when replacing the batteries in a dark place.



3 Close the cover.

- Close the battery compartment cover and slide it up.
- ▶ When it clicks in place, the battery compartment cover is locked.

Firing Interval and Number of Flashes

● **600EX II-RT alone**

Firing Interval		Number of Flashes
Quick Flash	Normal Flash	
Approx. 0.1 to 3.3 sec.	Approx. 0.1 to 5.5 sec.	Approx. 100 to 700 times

- Based on new AA/LR6 alkaline batteries and Canon’s testing standards.
- The Quick flash function enables flash photography before the flash is fully charged (p.21).

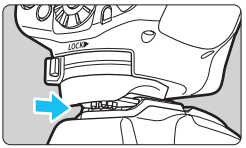
⚠ **CAUTION**

- **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”.
- **When continually firing, do not touch the flash head, batteries, or the area near the battery compartment.**
  When continuous flash or modeling flash is repeatedly fired with 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 become hot, resulting in the risk of burn.
- **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 for people with circulation problems or very sensitive skin, or when using the product in very hot places.

- Using AA/R6 batteries other than the alkaline type may cause contact failure due to the irregular shape of the battery contacts.
- For details on precautions when using the Compact Battery Pack CP-E4N (sold separately), also refer to the CP-E4N Instruction Manual.

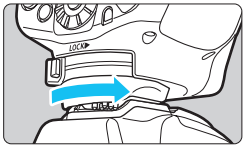
- When <▭> is displayed or the LCD panel display turns off during recharging, replace the batteries with new ones.
- Use a new set of four batteries of the same brand. When replacing the batteries, replace all four at one time.
- AA/HR6 Ni-MH batteries can also be used.

Attaching and Detaching the Speedlite to and from the Camera



1 Attach the Speedlite.

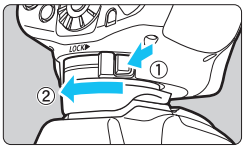
- Slip the Speedlite's mounting foot **all the way** into the camera's hot shoe.



2 Secure the Speedlite.

- Slide the mounting foot lock lever to the right.

▶ When the lock lever clicks in place, it is locked.

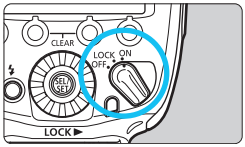


3 Detach the Speedlite.

- While pressing the lock-release button, slide the lock lever to the left and detach the Speedlite from the camera.

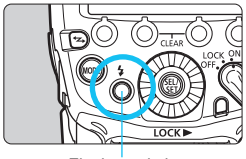
Be sure to turn off the Speedlite before attaching or detaching it.

Turning on the Power



1 Set the power switch to <ON>.

- The flash recharge starts.
- During recharging, < CHARGE > is displayed on the LCD panel. When flash recharge is complete, this indicator disappears.



Flash-ready lamp
(Test flash button)

2 Check that the flash is ready.

- The status of the flash-ready lamp changes from **off to green** (Quick flash ready) **to red** (fully charged).
- You can press the test flash button (flash-ready lamp) to fire a test flash.

Quick Flash

The Quick flash function enables flash photography when the flash-ready lamp is lit green (before the flash is fully charged). Quick flash is available regardless of the camera's drive mode setting. Although the flash output will be approx. 1/2 to 1/6 of the full output, it is useful for shooting with a shorter firing interval.
During manual flash photography, this function is available when the flash output is set to 1/4 to 1/128. Note that you cannot use Quick flash during stroboscopic flash and wireless flash photography.

- When Quick flash is fired during continuous shooting, underexposure may occur since the flash output decreases.
- A test flash cannot be fired when the camera's ⏱4 / ⏱6 / ⏱8 / ⏱10 / ⏱16 timer is active.

For the display of < CHARGE > when set as the master unit during radio transmission wireless shooting, see page 71.

Auto Power Off

To save battery power, the power will turn off automatically after approx. 90 sec. of idle use. To turn on the Speedlite again, press the camera's shutter button halfway or press the test flash button (flash-ready lamp). When set as the master unit for radio transmission wireless flash photogprahy (p.58) or set for linked shooting (p.86), the time until auto power off takes effect is approx. 5 min.

Lock Function

By setting the power switch to <LOCK>, you can disable the flash's button and dial operations. It is useful when you want to prevent the flash function settings from being accidentally changed after you set them.
If you operate a button or dial, < LOCKED > is displayed on the LCD panel. While the lock is active, the functions displayed above function buttons 1 to 4, such as <Zm/C.Fn>, < ±/ >, are not displayed.

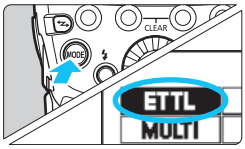
LCD Panel Illumination

When a button or dial is operated, the LCD panel illuminates for approx. 12 sec (⏱12).
During normal flash photography, when set as the master unit in radio transmission/optical transmission wireless flash photography (p.58/90) or when used for the master camera unit in linked shooting (p.84), the LCD panel illuminates in green.
When it is set as a slave unit in radio transmission/optical transmission wireless flash photography or when used for a slave camera unit in linked shooting, the LCD panel illuminates in orange.
For the LCD panel Illumination when set as the master unit during radio transmission wireless shooting, see page 71.

- The flash settings will remain in effect even after the power is turned off. To retain the settings when replacing the batteries, replace the batteries after turning off the power switch.
- You can fire a test flash while the power switch is set to <LOCK>. Also, when a button or dial is operated, the LCD panel illuminates.
- You can set a beep to sound when the Speedlite is fully charged (C.Fn-20/p.116).
- Auto power off can be disabled (C.Fn-01/p.113).
- You can change the setting of the LCD panel illumination (C.Fn-22/p.117).
- You can change the color of the LCD panel illumination (P.Fn-02 to 04/p.118).
- You can disable Quick flash (P.Fn-05/p.119).
- When P.Fn-06-1 is set (p.119) during linked shooting (p.84), you can fire the Quick flash.

ETTL: Fully Automatic Flash Photography

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



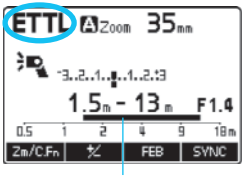
1 Set the flash mode to <ETTL>.

- Press the <MODE> button.
- Turn <◌> to select < ETTL >, then press <●>.
- Check that < MASTER > or < SLAVE > is not displayed.



2 Focus on the subject.

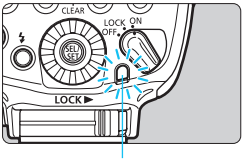
- Press the shutter button halfway to focus.
- ▶ The shutter speed and aperture are displayed in the viewfinder.
- Check that <ϟ> is lit in the viewfinder.



Effective flash range

3 Take the picture.

- Check that the subject is in the effective flash range.
- When you press the shutter button completely, the flash will fire and the picture will be taken.
- ▶ If the standard flash exposure is obtained, the flash exposure confirmation lamp lights for approx. 3 sec.



Flash exposure confirmation lamp

- If the flash exposure confirmation lamp does not light or if the subject is dark (underexposed) when you check the shot image, move closer to the subject and shoot again. You can also increase the ISO speed when using a digital camera.
- "Fully automatic mode" refers to <A+>, <□>, and <CA> shooting modes.
- Even when attached to a camera that supports the E-TTL II autoflash system, <**ETTL**> is displayed on the LCD panel.

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

Simply set the camera's shooting mode to <**Tv**> (shutter-priority AE), <**Av**> (aperture-priority AE), or <**M**> (manual exposure), and you can use E-TTL II/E-TTL autoflash suitable for each shooting mode.

Tv	Select this mode when you want to set the shutter speed manually. The camera will then automatically set the aperture matching the shutter speed to obtain the standard exposure based on the metering of the camera. ● If the aperture value blinks, it means that the background exposure will be underexposed or overexposed. Adjust the shutter speed until the aperture value stops blinking.
Av	Select this mode when you want to set the aperture manually. The camera will then automatically set the shutter speed, matching the aperture to obtain the standard exposure based on the metering of the camera. If the scene is dark, a slow sync speed will be used to obtain the standard exposure for both the main subject and background. The standard exposure for the main subject is obtained with the flash light, while the standard exposure for the background is obtained with a long exposure using a slow shutter speed. ● Since a slow shutter speed will be used for low-light scenes, using a tripod is recommended. ● If the shutter speed blinks, it means that the background exposure will be underexposed or overexposed. Adjust the aperture until the shutter speed stops blinking.
M	Select this mode if you want to set both the shutter speed and aperture manually. Standard exposure of the main subject is obtained with the flash light. The exposure of the background is obtained with the shutter speed and aperture combination you set.

● 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 (1/X sec. to 1/60 sec.)	Automatically set
Tv	Manually set (1/X sec. to 30 sec.)	Automatically set
Av	Automatically set (1/X sec. to 30 sec.)	Manually set
M	Manually set (1/X sec. to 30 sec., Bulb)	Manually set

● 1/X sec. is the camera's maximum flash sync speed.

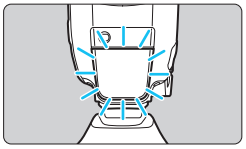
Auto Zoom Adjustment to Image Sensor Size

EOS DIGITAL cameras have three sizes of image sensors, and the effective shooting angle of view of the attached lens varies depending on the size of image sensor. 600EX II-RT automatically recognizes the image sensor size of the EOS DIGITAL camera and automatically sets the flash coverage that is ideal for the effective shooting angle of view of a lens for the focal length range of 20-200mm.

Color Temperature Information Transmission

This function optimizes the white balance during flash photography 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> or <ϟ>, the function is enabled automatically. Refer to the specifications in your camera's Instruction Manual to find out if it is compatible with this function.

AF-Assist Beam



When it is difficult to autofocus on the subject in low-light or when contrast is low during viewfinder shooting, the infrared AF-assist beam built into the flash automatically flashes to help autofocus.

The AF-assist beam supports all EOS cameras' AF points. The AF-assist beam supports 28 mm and longer focal lengths of the lens and its effective range (at 28mm focal length) is approx. 0.6 - 10 m/2.0 - 32.8 ft. at the center in the viewfinder and approx. 0.6 - 5 m/2.0 - 16.4 ft. at the periphery (AF points other than the center AF point).

If a peripheral AF point or a wide-angle or telephoto lens is used, achieving focus may be difficult with an EOS-dedicated, external Speedlite's AF-assist beam. In such a case, use the center AF point or an AF point close to the center.

- During Live View shooting, the AF-assist beam is emitted even when the AF method is set to [**Quick mode**].
- AF-assist beam firing can be disabled (C.Fn-08/p.115).

2

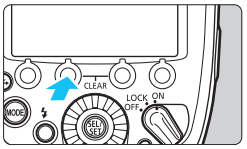
Advanced Flash Photography

This chapter describes advanced shooting operations utilizing the flash functions.

When the camera's shooting mode is set to a fully automatic mode or a Basic Zone mode, the functions with ☆ added to the right side of the page title cannot be set. Set the camera's shooting mode to <**P**/**Tv**/**Av**/**M**/**bulb(B)**> (Creative Zone mode) to enable all the operations in this chapter.

Flash Exposure Compensation ☆

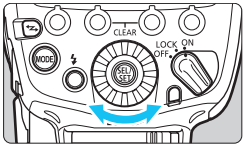
With a similar procedure as exposure compensation, you can adjust the flash output. The flash exposure compensation amount can be set up to ±3 stops in 1/3-stop increments.





1 Press the <⚡±> button.

- Press function button 2 <⚡±>.
- You can also set by pressing <◉>.
- ▶ <⚡> is displayed and the flash exposure compensation amount is highlighted.





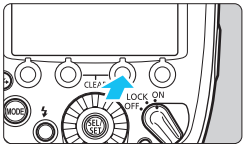
2 Set the flash exposure compensation amount.

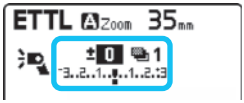
- Turn <◎> to set the flash exposure compensation amount, then press <◉>.
- ▶ The flash exposure compensation amount is set.
- "0.3" indicates 1/3 stop and "0.7" indicates 2/3 stops.
- To cancel flash exposure compensation, return the compensation amount to ±0.

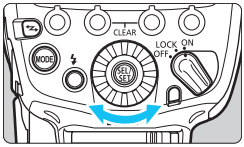
- Generally, set an increased exposure compensation for bright subjects and set a decreased exposure compensation for dark subjects.
- If the camera's exposure compensation is set in 1/2-stop increments, flash exposure compensation will be up to ±3 stops in 1/2-stop increments.
- When the flash exposure compensation is set on both the flash and the camera, priority is given to the flash setting.
- Without pressing the <⚡±> button, you can directly turn <◎> and set the amount of flash exposure compensation (C.Fn-13/p.116).

FEB ☆

You can take three shots while automatically changing the flash output. This is called FEB (Flash Exposure Bracketing). The settable range is up to ±3 stops in 1/3-stop increments.









1 Press the <FEB> button.

- Press function button 3 <FEB>.
- ▶ <⚄> is displayed and the FEB level display is highlighted.

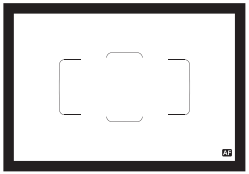
2 Set the FEB level.

- Turn <◎> to set the FEB level, then press <●>.
- ▶ The FEB level is set.
- “0.3” indicates 1/3 stop and “0.7” indicates 2/3 stops.
- When used together with flash exposure compensation, FEB shooting is performed based on the set flash exposure compensation amount. When the FEB range exceeds ±3 stops, the end of the flash exposure level shows <◀> or <▶>.

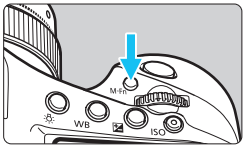
- After the three shots are taken, FEB is canceled automatically.
- Before shooting with FEB, it is recommended to set the camera’s drive mode to single shooting and check that the flash has been recharged. When the drive mode is set to continuous shooting, shooting automatically stops after three continuous shots are taken.
- You can use FEB together with flash exposure compensation or FE lock.
- If the camera’s exposure compensation is set in 1/2-stop increments, flash exposure compensation will be up to ±3 stops in 1/2-stop increments.
- You can set FEB to remain enabled after shooting the three shots (C.Fn-03/p.114).
- You can change the FEB shooting sequence (C.Fn-04/p.114).

FEL: FE Lock ☆

The FE (Flash Exposure) lock locks the correct flash exposure setting for any part of the subject.
With <**ETTL**> displayed on the LCD panel, press the camera's <M-Fn> button. For cameras without a <M-Fn> button, press the <✳> (AE lock) or <FEL> button.



1 Focus on the subject.



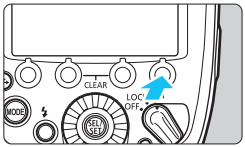
2 Press the <M-Fn> button (⏱16).

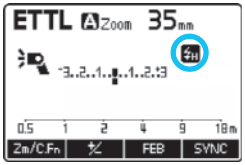
- With the subject at the center of the viewfinder, press the camera's <M-Fn> button.
- ▶ The Speedlite will fire a preflash and the required flash output for the subject is retained in memory.
- ▶ "**FEL**" will be displayed in the viewfinder for approx. 0.5 sec.
- Each time you press the <M-Fn> button, a preflash will be fired and the new flash output required at that time is retained in memory.

- If a correct exposure cannot be obtained when FE lock is performed, <ϟ> blinks in the viewfinder. Move closer to the subject or open the aperture, and perform FE lock again. You can also set a higher ISO speed and perform FE lock again when using a digital camera.
- If the target subject is too small in the viewfinder, FE lock may not be effective.

High-speed Sync ☆

With high-speed sync, you can shoot with a flash even at shutter speeds that exceed the maximum flash sync shutter speed. 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.





Display <ϟH>.

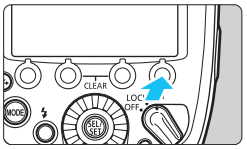
- Press function button 4 <SYNC> to display <ϟH>.
- Check that <ϟH> is lit in the viewfinder, then shoot.

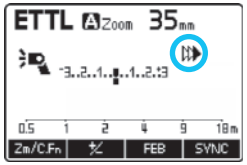
With high-speed sync, the faster the shutter speed, the lower the guide number becomes. You can check the effective flash range on the LCD panel.

- When the shutter speed is less than or equal to the maximum flash sync shutter speed, <ϟH> is not displayed in the viewfinder.
- To return flash firing to normal, press function button 4 <SYNC> to turn off <ϟH>.

⚡▶ Second-curtain Sync ☆

Shooting with a slow shutter speed and second-curtain sync captures the trail of the light sources of a moving subject, such as car lights, in a natural way. The flash fires right before the exposure finishes (shutter closes).





Display <⚡▶>.

- Press function button 4 <SYNC> to display <⚡▶>.

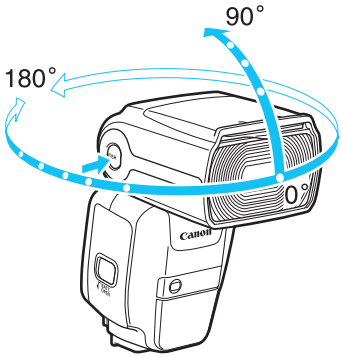
- The second-curtain sync works well when the camera's shooting mode is set to <**bulb(B)**> (bulb shooting).
- When the flash mode is set to <**ETTL**>, the flash fires twice. The first flash is a preflash to determine the flash output. It is not a malfunction.
- Second-curtain sync is not available during wireless flash photography.
- To return flash firing to normal, press function button 4 <SYNC> to turn off <⚡▶>.

Bounce

By pointing the flash head toward a ceiling or wall, the flash light will bounce off the surface before illuminating the subject, making it possible to soften the shadows of the subject for a more natural-looking shot. This shooting method is called “Bounce flash photography”.

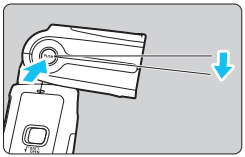
Set the Bounce Direction

- You can turn the flash head while pressing the <**PUSH**> button as shown. When you turn the flash head, the display changes to <>.
- When the flash head is turned with the flash coverage set to <A> (automatic), the flash coverage is set at 50 mm and <---> is displayed.
- You can also set the flash coverage manually (p.38).



- If the ceiling or wall to bounce the flash light on is too far away, shooting with the appropriate exposure may not be possible since the bounced flash may be too weak.
- If the picture appears dark, use a larger aperture opening (smaller f/ number) and try again. You can also increase the ISO speed when using a digital camera.
- The ceiling or wall to bounce the flash light on should be plain white for high reflectance. If the bounce surface is not white, shooting with the appropriate exposure may not be possible, since a color cast may result in the picture or the bounced flash may be too weak.
- When Quick flash is fired with bounce flash, underexposure may occur since the flash output decreases.

Short Distance Flash Photography

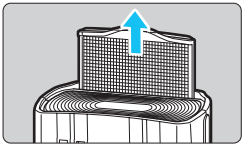


When you position the flash head down by 7° while pressing the <**PUSH**> button, you can shoot subjects at a short distance in a range of approx. 0.5 to 2 m / 1.6 to 6.6 ft.
When the flash head is positioned down by 7°, the display changes to <>.

Catchlight Shooting

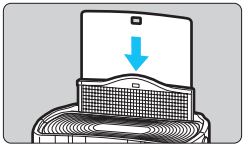
Using the catchlight panel when shooting a portrait enables you to capture reflected light in a person's eyes and create a more vivid expression.

1 Turn the flash head 90° up.



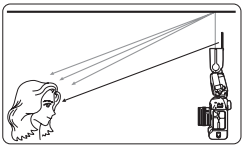
2 Pull up the wide panel.

- Pull up the protruding area located in the center of the wide panel.
- ▶ The white catchlight panel is pulled out at the same time.



3 Push back the wide panel.

- Push back the wide panel only, keeping just the catchlight panel up.
- Shoot using the same method as bounce flash.

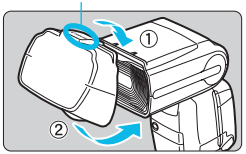


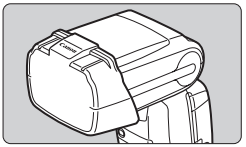
- Position the flash head toward the front and 90° up. When the flash head is rotated to the left or right, the catchlight is not very effective.
- To effectively obtain the catchlight in a person's eyes, shoot within approx. 1.5 m/4.9 ft. from the subject (at ISO 100 with f/2.8).
- Do not pull up the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

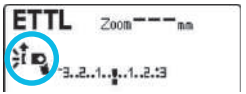
Bounce Photography with the Bounce Adapter

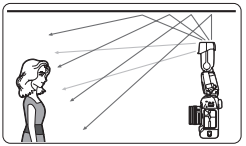
If you attach the provided bounce adapter to the Speedlite and bounce the flash light on the ceiling or wall, etc., you can spread the flash light across a larger area and suppress the shadows of the subject.
Also, if the flash head is turned 90° upward to bounce the flash light on the ceiling, etc.,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

"Canon" logo









1 Attach the bounce adapter.

- Attach the adapter securely to the flash head until it clicks in place, as shown.
- Check that the display changes to <⚡>.

- When removing the adapter, follow the procedure in reverse order. Raise the removal tab on the lower side of the adapter, then remove the adapter from the flash head.

2 Take the picture.

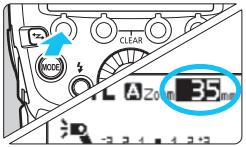
- Take the picture with the flash light bouncing off the ceiling, walls, or the like.

- When the bounce adapter is attached, or when the bounce adapter and the wide panel are used together, underexposure may result since the flash output decreases. Take necessary countermeasures such as increasing ISO speed on the camera or applying flash exposure compensation (p.28).
- When Quick flash (p.21) is fired with the bounce adapter attached, taking the picture after the flash-ready lamp is lit in red is recommended since the flash output may not be sufficient.
- The flash coverage is set automatically when the bounce adapter is attached. You cannot change the setting. (When the <Zm/C.Fn> button is pressed, <**BOUNCE ADAPTER**> is displayed.)
- If you attach the bounce adapter to the flash when using an EOS DIGITAL camera released up to 2004, set the white balance to <AWB>. If you shoot with <ϟ>, appropriate white balance may not be obtained.

- The flash light is further softened when the wide panel (p.39) is used together with the bounce adapter.
- If the subject is dark (underexposed) when you check the shot image, perform the flash exposure compensation (p.28). You can also increase the ISO speed when using a digital camera.

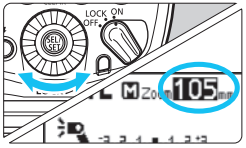
Zoom: Setting the Flash Coverage ☆

Flash coverage (the range covered by the flash light) can be set automatically or manually. With the <A> (automatic) setting, the flash coverage is adjusted automatically according to the focal length (shooting angle of view) of the lens in use and the image sensor size (p.26). With the <M> (manual) setting, you can manually set flash coverage in the range of 20 to 200 mm.



1 Press the <Zm/C.Fn> button.

- Press function button 1 <Zm/C.Fn>.
- ▶ The flash coverage value is highlighted.



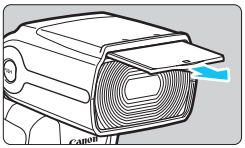
2 Set the flash coverage.

- When you want to set the flash coverage automatically, select <A>. When using the manual setting for the flash coverage, select <M> and the value (indicating the focal length in mm).
- Turn <◎> to set the flash coverage, then press <●>.

- When you set the flash coverage manually, set the same or a wider coverage than the angle of view for shooting to avoid darkening the periphery of the picture.
- When a lens with a focal length less than 20 mm is attached, the <! WIDE> warning is displayed on the LCD panel. When using a camera with the image sensor size smaller than full-frame, the <! WIDE> warning is displayed when the actual shooting angle of view is wider than the angle of view of a 20 mm lens.
- When shooting with the camera and Speedlite's PC terminal connected by a commercially-available sync cord, set the flash coverage manually.

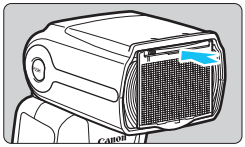
Wide Panel

When you use the flash's built-in wide panel together, you can perform flash photography covering the angle of view of an ultra-wide angle lens with focal length as wide as 14 mm.



1 Pull out the wide panel.

- Pull out the protruding area located in the center of the wide panel.
- ▶ The white catchlight panel is pulled out at the same time.



2 Push back the catchlight panel.

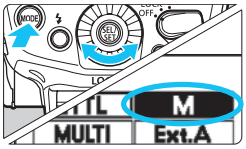
- Push back the catchlight panel only, keeping the wide panel down.

- Since underexposure may occur, the <⚠ WP> warning is displayed on the LCD panel when using the wide panel with bounce flash.
- Do not pull out the wide panel with excessive force. Doing so may detach the wide panel from the Speedlite.
- Angle of view of EF15mm f/2.8 Fisheye or EF8-15mm f/4L Fisheye USM is not supported.

The flash coverage is set automatically when using the wide panel. You cannot change the setting. (When the <Zm/C.Fn> button is pressed, <**WIDE PANEL**> is displayed.)

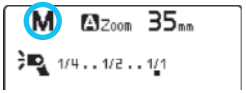
M: Manual Flash ☆

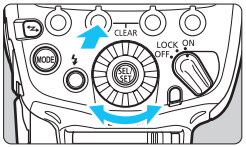
You can set the flash output from 1/1 full output to 1/128 power in 1/3-step increments.
Use a flash meter (commercially-available) to determine the required flash output to obtain a correct flash exposure. Setting the camera's shooting mode to <**Av**> or <**M**> is recommended.



1 Set the flash mode to <M>.

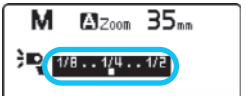
- Press the <**MODE**> button.
- Turn <◎> to select <M>, then press <●>.





2 Set the flash output.

- Press function button 2 <⚡>.
- ▶ The flash output level is highlighted.
- Turn <◎> to set the flash output, then press <●>.





Shooting distance Aperture

- When you press the camera's shutter button halfway, an indication of the shooting distance and the aperture value are displayed.

- For guide number details with manual flash, see page 137.
- The flash output can be set directly by turning <◎> without pressing the <⚡> button (C.Fn-13/p.116).

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 a 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.

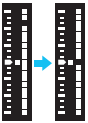
- Place the gray reflector at the subject's position.
- Aim the camera so that the entire spot metering circle within the viewfinder center is over the gray reflector.

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

- ▶ The Speedlite will fire a preflash and the required flash output for the correct flash exposure is retained 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.



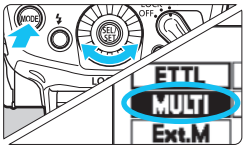
6 Take the picture.

- Remove the gray reflector and take the picture.

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

MULTI: Stroboscopic Flash ☆

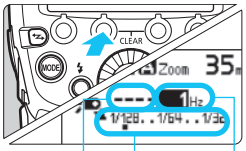
When using stroboscopic flash with a slow shutter speed, you can shoot multiple successive movements within a single picture, similar to stop-motion pictures.
With stroboscopic flash, set the flash output, number of flashes, and flash frequency (number of flashes per second = Hz). For the maximum number of continuous flashes, see page 44.





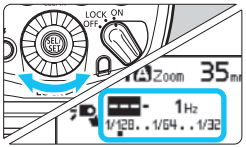
1 Set the flash mode to <MULTI>.

- Press the <MODE> button.
- Turn <◎> to select <MULTI>, then press <●>.



2 Select an item.

- Press the <±> function button for the flash output, press <MULTI> for the number of flashes, and press <Hz> for the flash frequency.
- ▶ You can set the item of the button you pressed.



3 Set the value.

- Turn <◎> to set the value, then press <●>.
- Repeat steps 2 and 3 to set the flash output, number of flashes, and flash frequency.

Calculating the Shutter Speed

To ensure that the shutter stays open until the end of the continuous flashes for stroboscopic flash, set the camera with a shutter speed calculated with the following equation.

Number of flashes ÷ Flash frequency = Shutter speed

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

- To avoid degrading and damaging the flash head due to overheating, set repeated shooting with stroboscopic flash to 30 times or less. After shooting 30 times, allow a rest time of at least 10 min.
- If you shoot repeatedly more than 30 times, the safety function may activate and restrict flash firing. If this happens, allow a rest time of at least 40 min.

- When performing stroboscopic flash, combining a highly reflective subject with a dark background is most effective.
- Using a tripod, remote switch, and Compact Battery Pack CP-E4N (sold separately/p.123) is recommended.
- Neither 1/1 power nor 1/2 power flash can be set.
- You can also perform stroboscopic flash even when the camera's shooting mode is set to **<bulb(B)>** (bulb shooting).
- When the number of flashes is displayed as "----", flashes are fired continuously until the shutter closes or the charge runs out. The maximum number of continuous flashes is shown in the table on the next page.
- High-speed sync (p.31) cannot be set during stroboscopic flash.

Maximum Number of Continuous Flashes

Hz / Flash Output	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

Hz / Flash Output	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

When the number of flashes is displayed as "----" (bar display), the maximum number of flashes is as shown in the table below.

- **1 to 199 Hz**

Flash Output	1/4	1/8	1/16	1/32	1/64	1/128
Number of Flashes	2	4	8	12	20	40

- **250 to 500 Hz**

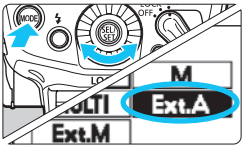
Flash Output	1/4	1/8	1/16	1/32	1/64	1/128
Number of Flashes	2	4	8	10	15	30

Ext.A/Ext.M: Flash External Metering ☆

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

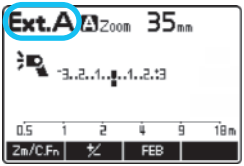
Ext.A: Auto External Flash Metering

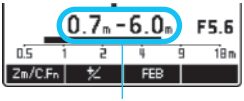
You can shoot in fully automatic flash mode. The flash output is automatically adjusted according to the ISO speed and aperture set on the camera.



Set the flash mode to <Ext.A>.

- Press the <MODE> button.
- Turn <dial> to select < Ext.A >, then press <SET>.





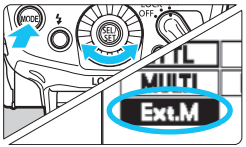
Effective flash range

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

- When <**Ext.A**> is set, flash exposure compensation (p.28) and FEB shooting (p.29) can be performed.
- If < Ext.A > is not displayed, set the flash Custom Function to C.Fn-05-2 (p.114).

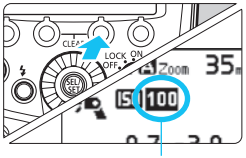
Ext.M: Manual External Flash Metering

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



1 Set the flash mode to <Ext.M>.

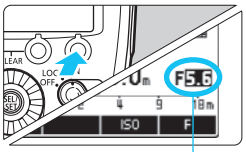
- Press the <MODE> button.
- Turn <◎> to select < Ext.M >, then press <◎>.



ISO speed

2 Set the same ISO speed as on the camera.

- Press function button 3 < ISO >.
- ▶ The ISO speed value is highlighted.
- Turn <◎> to set the ISO speed, then press <◎>.
- ISO speed can be set within a range of ISO 25 to ISO 51200, in 1/3 increments.



Aperture

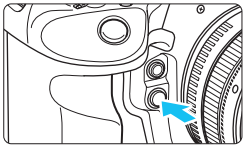
3 Set the same aperture as on the camera.

- Press function button 4 < F >.
- ▶ The aperture is highlighted.
- Turn <◎> to set the aperture value, then press <◎>.
- The effective flash range corresponding to the preset ISO speed and aperture value is displayed.

- When shooting with <**Ext.M**> set and the camera and Speedlite's PC terminals connected by a commercially-available sync cord, you can shoot without attaching the flash to the camera.
- Even if you connect a different Speedlite to the Speedlite's PC terminal with a sync cord, it will not fire.
- If < Ext.M > is not displayed in step 1, set the flash Custom Function to C.Fn-05-3 (p.114).

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 and the lighting balance during wireless flash photography (p.57, 89).



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

▶ The flash fires continuously for approx. 1 sec.

- To avoid degrading and damaging the flash head due to overheating, limit modeling flash up to "firing angle 14mm/20mm/24mm: 20 times", "firing angle 28mm: 25 times", or "firing angle 35mm to 200mm: 30 times." After firing modeling flash for the above listed number of times, allow a rest time of at least 10 min.
- If you fire modeling flash 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. With flash firing restriction level 1, the firing interval is automatically set to approx. 8 sec. If this happens, allow a rest time of at least 40 min.
- During Live View shooting, firing modeling flash (by operating the camera) is not possible.
- Modeling flash (by operating the camera) is disabled when using the flash with EOS M3, EOS M2, EOS M, EOS Elan II/Elan II E/50/50E, EOS REBEL 2000/300, EOS REBEL G/500N, EOS REBEL K2/3000V, EOS REBEL XS N/REBEL G II/3000N/66, EOS IX, or EOS IX Lite/IX7. Set C.Fn-02 to 1 or 2 (p.113), then fire modeling flash using the test flash button.

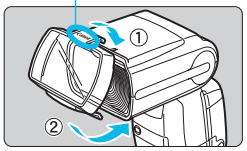
During normal flash photography or when using the flash as the master unit in radio transmission/optical transmission wireless shooting, you can fire the modeling flash with the test flash button (C.Fn-02/p.113).

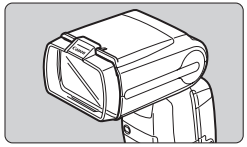
Color Filter

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

Filter	Density	Correction Effect	Application
Color filter (orange)	Low	Low	Compensates for the effect of an incandescent light bulb
	High	High	

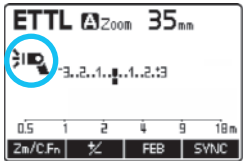
"Canon" logo





1 Attach the color filter.

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



2 Take the picture.

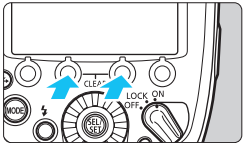
- Set the camera's white balance to <⚡>, then take the picture.
- With EOS DIGITAL cameras released in and after 2012, you can also set the white balance to <AWB> for shooting (except with EOS REBEL T5/1200D).
- Check the resulting image and perform white balance correction on the camera as required.

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

- With cameras that are not compatible with color temperature information transmission (p.26), take a shot and set it for manual white balance using the color filter in the shooting environment, set the white balance to <>, and shoot.
- When shooting with a flash with a color filter and wide angle lens attached, the peripheral light intensity may drop.
- If dirt or dust adheres to the color filter, wipe it off with a soft, dry cloth.
- You can also attach the bounce adapter (p.36) when using the color filter.
- If you want to shoot with the ambiance of tungsten-light (warm color cast), set the white balance compensation toward the amber side.

Clearing Speedlite Settings ☆

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



Clear the settings.

- Press function buttons 2 and 3 for seconds until <CLEARED> is displayed.
- ▶ The Speedlite settings are cleared, and normal shooting and <**ETTL**> flash mode will be set.

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

3

Setting Flash Functions with Camera Controls

This chapter describes how to set the flash functions from the camera's menu screen.

When the camera's shooting mode is set to a fully automatic mode or a Basic Zone mode, the operations in this chapter are not available. Set the camera's shooting mode to <**P**/**Tv**/**Av**/**M**/**bulb(B)**> (Creative Zone mode).

Flash Control from the Camera's Menu Screen

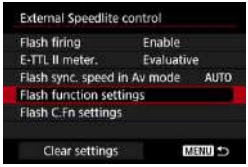
When using EOS DIGITAL cameras released in and after 2007, you can set flash functions or Custom Functions from the camera's menu screen.
For camera operations, refer to the camera's Instruction Manual.

Flash Function Settings



1 Select [External Speedlite control].

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



2 Select [Flash function settings].

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

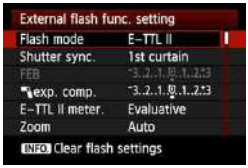
3 Set the function.

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

Example 1



Example 2



Settings Available on the Flash Function Settings Screen

- **EOS DIGITAL cameras released in and after 2012**
  On the camera's [**Flash function settings**] or [**External flash func. setting**] screen, you can configure normal shooting, radio transmission wireless shooting, or optical transmission wireless shooting settings.
  * Although EOS REBEL T6/1300D and EOS REBEL T5/1200D were released in and after 2012, the settable functions are the same as with EOS DIGITAL cameras released from 2007 to 2011.
- **EOS DIGITAL cameras released from 2007 to 2011**
  EOS-1Ds Mark III, EOS-1D Mark IV/III, EOS 5D Mark II, EOS 7D, EOS 60D, EOS 50D, EOS 40D, EOS REBEL T3i/600D, EOS REBEL T2i/550D, EOS REBEL T1i/500D, EOS REBEL XSi/450D, EOS REBEL T3/1100D, EOS REBEL XS/1000D

  On the camera's [**Flash function settings**] or [**External flash func. setting**] screen, you can configure normal shooting or optical transmission wireless shooting settings. To use "Radio transmission wireless shooting", set the functions by operating the flash.

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

Functions	
Flash firing	Enable / Disable
E-TTL II flash metering	Evaluative / Average
Flash synchronization speed in Av mode	
Flash mode	E-TTL II (autoflash) / Manual flash / MULTI flash / Auto external flash metering / Manual external flash metering
Shutter sync settings	1st curtain / 2nd curtain / High-speed
Flash exposure compensation	
FEB	
Zoom (flash coverage)	
Wireless flash functions	Wireless: OFF / Radio transmission / Optical transmission
Clear settings	

- **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. Flash exposure compensation may be necessary depending on the scene. This setting is for advanced users.

- **Flash synchronization speed in Av mode**
  You can set the flash synchronization speed when shooting in <**Av**> aperture-priority AE mode with flash.

- **Flash mode**
  You can select the flash mode from [**E-TTL II**], [**Manual flash**], [**MULTI flash**], [**AutoExtFlash**], and [**Man.ExtFlash**] to suit your desired flash photography.

- **Shutter sync settings**
  You can select the flash firing timing/method from [**1st curtain**], [**2nd curtain**], or [**High-speed synchronization**]. To perform normal flash photography, set [**1st curtain**].

- **Flash exposure compensation**
  With a similar procedure as exposure compensation, you can adjust the flash output. The flash exposure compensation amount can be set up to ±3 stops in 1/3-stop increments.

- **FEB**
  You can take three shots while automatically changing the flash output. The settable range is up to ±3 stops in 1/3-stop increments.

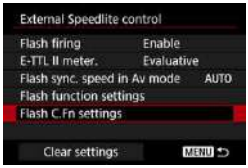
- **Zoom (flash coverage)**
  You can set the Speedlite flash coverage. When [**Auto**] is selected, the flash coverage is set automatically according to the focal length of the shooting lens and the image sensor size of the camera (p.26).
- **Wireless flash functions**
  You can set radio transmission wireless flash photography and optical transmission wireless flash photography. For details, see Chapter 4 (p.57) and Chapter 5 (p.89).
- **Clear settings**
  When [**Clear flash settings**] or [**Clear external flash set.**] is selected, you can revert the settings of Speedlite to their default settings.

- When the flash's Custom Function C.Fn-05 is set to [**1:TTL**] (p.114), [**TTL**] can be selected when [**Flash mode**] is set. When performing autoflash photography with an EOS DIGITAL camera, set C.Fn-05 to [**0:E-TTL II/E-TTL**].
- If the flash coverage is automatically set such as when the bounce adapter is attached or the wide panel is used, setting [**Zoom**] (flash coverage) is not possible.

- [**Flash firing**] and [**E-TTL II flash metering**] are displayed in step 2 or step 3 on page 52. (Display layouts and procedures vary by camera model.)
- When [**Flash sync. speed in Av mode**] is not displayed, it can be set with the camera's Custom Functions.
- When the flash exposure compensation is set on the flash, flash exposure compensation cannot be performed from the camera. If both are set at the same time, priority is given to the setting on the flash.

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. If C.Fn-20 to 23 are not displayed, set them by operating the Speedlite. For the Custom Functions, see pages 113-117.

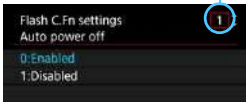


1 Select [Flash C.Fn settings].

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

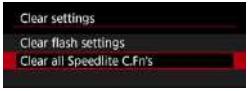
▶ The flash Custom Function settings screen is displayed.

Custom Function number



2 Set the Custom Function.

- Select the Custom Function number, then set the function.



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

- When using a camera released in 2011 or earlier, or with EOS REBEL T6/1300D or EOS REBEL T5/1200D, the C.Fn-20 to 23 settings are not cleared even if [**Clear all Speedlite C.Fn's**] or [**Clear ext. flash C.Fn set.**] is selected. When the procedure described in "Clearing All the Custom/Personal Functions" on page 112 is performed, all the Custom Functions (except C.Fn-00) are cleared.
- When using the flash with EOS DIGITAL cameras released in and after 2012, as auto external metering and manual external metering can be directly selected with the flash's <MODE> button, C.Fn-05-2, 3 are not selectable (except with EOS REBEL T6/1300D and EOS REBEL T5/1200D).
- Personal Functions (P.Fn/p.118) cannot be set or all cleared at once from the camera's menu screen. Set them by operating the Speedlite.

4

Wireless Flash Photography: Radio Transmission

This chapter describes wireless flash photography using the radio transmission wireless master/slave function.
For the accessories required for radio transmission wireless shooting, see the system map (p.122).
For the regions of use, restrictions, and precautions related to radio transmission, see page 139.

When the camera's shooting mode is set to a fully automatic mode or a Basic Zone mode, the operations in this chapter are not available. Set the camera's shooting mode to <**P**/**Tv**/**Av**/**M**/**bulb(B)**> (Creative Zone mode).

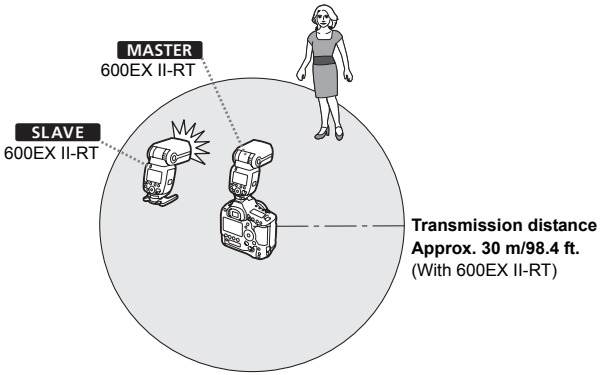
- The procedures for wireless flash photography are described, using the 600EX II-RT for both the master and slave unit.
- The 600EX II-RT attached to the camera is called "master", and the 600EX II-RT controlled wirelessly is called "slave".

Radio Transmission Wireless Flash Photography

Using a Canon Speedlite (master/slave) equipped with the radio transmission wireless shooting function, you can easily perform wirelessly-controlled shooting with multiple flashes in the same way as normal E-TTL II/E-TTL autoflash photography.
The system is designed so that the settings of the 600EX II-RT (master) attached to the camera are automatically applied to the wirelessly controlled 600EX II-RT (slave). Therefore, you do not need to operate the slave unit during shooting.

Positioning and Operation Range (Wireless flash photography examples)

- **Autoflash Photography Using One Slave Unit** (p.68)

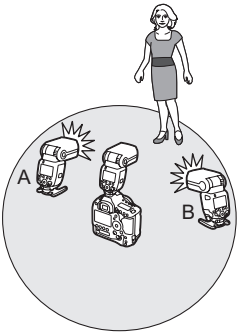


- You can also wirelessly control a 600EX II-RT set as the slave unit with a device that is equipped with the radio transmission wireless master function other than a 600EX II-RT. For details on setting the master unit functions, refer to the Instruction Manual of the device.
- Position the slave unit, using the provided mini stand (p.16).

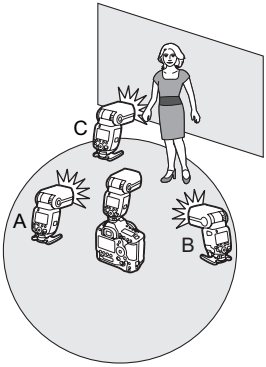
Wireless Multiple Flash Photography

You can divide the slave units into two or three groups and perform E-TTL II/E-TTL autoflash photography while changing the flash ratio (flash output rate).
In addition, you can set and shoot in a different flash mode for each firing group with up to 5 groups (p.60).

● Autoflash Photography with Slave Groups



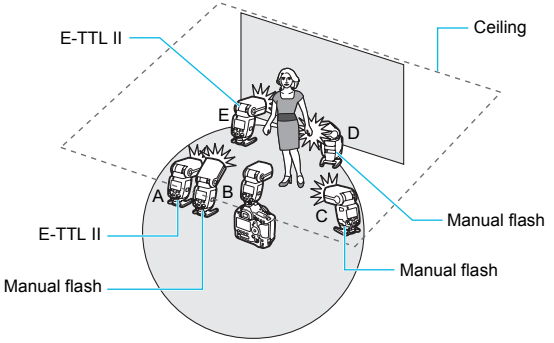
2 (A, B) groups (p.73)



3 (A, B, C) groups (p.75)

- The transmission distance may be shorter depending on the conditions such as the positioning of slave flashes, the surrounding environment, and weather conditions.
- Before shooting, perform a test flash (p.21) and test shooting.

● Shooting in a Different Flash Mode Set for Each Group (p.79)



* The flash mode settings are indicated only as an example.

Difference between Radio Transmission and Optical Transmission

Wireless shooting using radio transmission has advantages over wireless shooting using optical transmission, such as being less affected by obstacles, and not having to point the slave unit's wireless sensor toward the master unit. The main functional differences are as follows.

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

*1-3: Some restrictions apply depending on the camera used.
(*1: See p.61, 79 / *2: See p.82 / *3: See p.83.)

Restrictions on Functions Depending on the Camera Used

When performing radio transmission wireless flash photography, function restrictions may apply, depending on the camera used.

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

- **EOS cameras compatible with E-TTL and released up to 2011**
  When using the flash with the cameras listed below, radio transmission wireless shooting using E-TTL autoflash is not possible. Shoot with manual flash (p.77), stroboscopic flash (p.42) or optical wireless transmission (p.89).

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

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

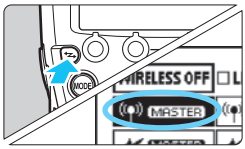
  1. **The maximum flash sync shutter speed becomes 1 stop slower.**
     Check the maximum flash sync shutter speed (X = 1/*** sec.) of your camera and shoot with a shutter speed up to 1 stop slower than the maximum flash sync shutter speed (Example: When X = 1/250 sec., radio transmission wireless shooting is possible from 1/125 sec. to 30 sec.).
     When you set the shutter speed 1 stop slower than the maximum flash sync shutter speed, the <❗Tv> warning icon will disappear.

2. **High-speed sync shooting is not possible.**
3. **Group flash** (p.79) **is not possible.**
4. **Modeling flash from the slave unit** (p.82) **as well as remote release from the slave unit** (p.83) **are not possible.**
5. **The camera cannot be used as part of a “slave camera unit” during linked shooting** (p.84)**.**
   The camera can only be used as part of a “master camera unit”.

Wireless Settings

To perform radio transmission wireless shooting, set the master unit and slave unit with the following procedure.

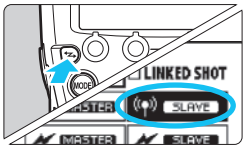
Master Unit Setting



Set to <((•)) MASTER >.

- Press the <⚡> button.
- Turn <◎> to select <((•)) MASTER >, then press <◉>.

Slave Unit Setting



Set to <((•)) SLAVE >.

- Operate and set the flash you want to set as the slave unit.
- Select <((•)) SLAVE > in the same way as for the master unit setting.

To perform normal flash photography, select < WIRELESS OFF > to clear the wireless (master/slave) settings.

Transmission Channel/Wireless Radio ID

To avoid interference with wireless flash systems using radio transmission used by other photographers or with other devices using radio waves (wireless), you can change the transmission channel and wireless radio ID. **Set the same channel and ID for both the master unit and slave unit.**

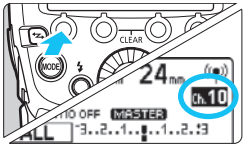
When establishing multiple radio transmission wireless flash systems in a place, interference between flash systems may occur even if the flashes are set to different channels. Set different wireless radio transmission IDs for each channel (p.64).

Setting the Transmission Channel/Wireless Radio ID

Use the following procedure to set the transmission channels and wireless radio IDs of the master unit and slave unit. **Set the same channel and ID for both the master unit and slave unit.** Note that the procedure is the same for the master unit and slave unit.

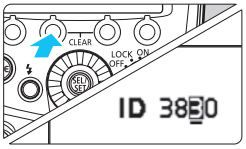
1 Display <MENU 3>.

- Press function button 4 to display <MENU 3>.



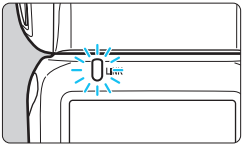
2 Set a transmission channel.

- Press function button 1 <CH>.
- Turn <dial> to select “AUTO” or any channel between Ch.1 to 15, then press <set>.



3 Set a wireless radio ID.

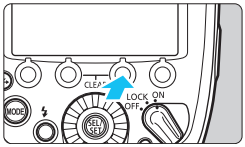
- Press function button 2 <ID>.
- Turn <dial> to select the position (digit) to be set, then press <set>.
- Turn <dial> to select a number from 0 to 9, then press <set>.
- Set a 4-digit number with the same procedure.
- ▶ When transmission between the master unit and slave unit is established, the <LINK> lamp is lit in green.



Scanning and Setting the Master Unit Transmission Channels

You can scan the radio reception status and set the master unit's transmission channel automatically or manually. When the channel is set to "AUTO", the channel with the best reception signal is set automatically. When setting the channel manually, you can reset the transmission channel while referring to the scan results.

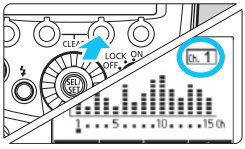
Scanning when "AUTO" is set



Run the scan.

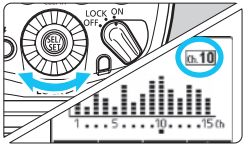
- Press function button 4 to display <MENU 3>.
- Press function button 3 <SCAN>.
- ▶ The scan is performed, and the channel with the best reception signal is set.

Scanning when a channel between Ch. 1 and 15 is set



1 Run the scan.

- Press function button 4 to display <MENU 3>.
- Press function button 3 <SCAN>.
- ▶ The scan is performed and the reception status is displayed in a graph.
- The higher the peak of the channel in the graph, the better the radio reception signal.



2 Set a channel.

- Turn <◎> to select a channel from Ch. 1 to 15.
- Press <●> to set the channel.

The <LINK> Lamp

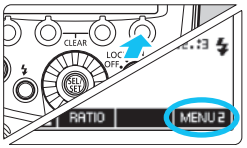
You can check the transmission status by viewing the color of the <**LINK**> lamp.

Color	Status	Description	Action
Green	Lit	Transmission OK	-
Red	Lit	Not connected	Check the channel and ID.
	Blinking	Too many units	Change the master and slave unit total to 16 or less.
		Error	Turn the master unit and slave unit off and on again.

- If the transmission channels of the master unit and slave unit are different, the slave unit will not fire. Set both to the same number or set both to “AUTO”.
- If the wireless radio IDs of the master unit and slave unit are different, the slave unit does not fire. Set to the same number.

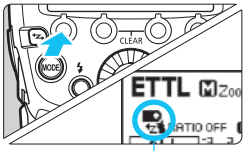
Master Flash Firing ON/OFF

You can set whether or not to fire the master unit as a wireless flash that controls the slave unit. When master flash firing is set to ON, the master unit is fired as firing group A.



1 Display <MENU 2>.

- Press function button 4 to display <MENU 2>.



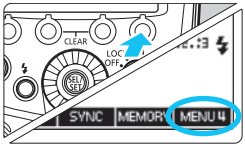
Master flash

2 Set the master flash firing.

- Press function button 1 <PA/PA> to set the master flash firing to ON or OFF.
  - PA : Master flash firing ON
  - PA : Master flash firing OFF

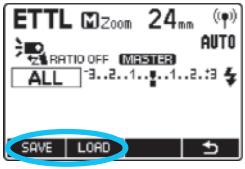
Memory Function

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



1 Display <MEMORY>.

- On the master unit, press function button 4 to display <MENU 4>.
- On the slave unit, press function button 4 to display <MENU 3>.



2 Save or load the settings.

- Press function button 3 <MEMORY>.

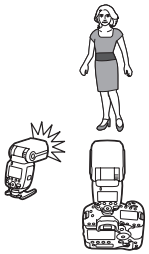
[Save]

- Press function button 1 <SAVE>.
- ▶ The settings are saved (stored in the memory).

[Load]

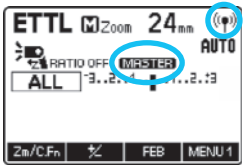
- Press function button 2 <LOAD>.
- ▶ The settings that were saved are set.

ETTL: Fully Automatic Wireless Flash Photography



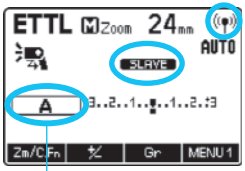
This section describes basic fully automatic wireless shooting when using a 600EX II-RT attached to the camera (master) and a 600EX II-RT set as a slave unit.

Autoflash Shooting Using One Slave Unit



1 Set the master unit.

- Set the 600EX II-RT attached to the camera as the master unit (p.63).
- You can also use a device equipped with the radio transmission wireless master function as the master unit.



Firing group

2 Set the slave unit.

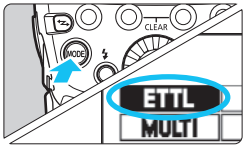
- Set the 600EX II-RT to be controlled wirelessly from the master as the slave unit (p.63).
- You can also use other EX-series Speedlites that are equipped with a radio transmission wireless slave function.
- Set the firing group to A, B, or C (p.73). The flash will not fire if it is set to D or E.

3 Check the channel and ID.

- If the transmission channels and wireless radio IDs of the master unit and slave unit are different, set them to the same settings (p.64, 65).

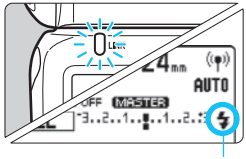
4 Position the camera and the flash.

- Position them within the range shown on page 58.

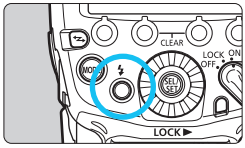


5 Set the flash mode to <ETTL>.

- Press the <MODE> button on the master unit.
- Turn <dial> to select < ETTL >, then press <SET>.
- The slave unit is set automatically to <ETTL> during shooting, controlled by the master unit.
- Check that the firing group control is set to < ALL >.

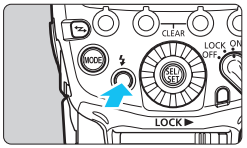


Slave flash ready



6 Check the transmission status and charge status.

- Check that the <LINK> lamp is lit in green.
- When the slave flash is ready, the AF-assist beam emitter blinks at approx. 1-second intervals.
- When C.Fn-20-1 is set on the master unit (p.116), the master unit's beep will sound when recharging of all flash units is completed.
- Check that the <⚡> icon is lit on the master/slave unit's LCD panel (< CHARGE > is not displayed).
- For the master unit's LCD panel illumination, see page 71.
- Check that the master unit's flash-ready lamp is lit.



7 Check the performance.

- Press the master unit's test flash button.
- ▶ The flash fires. If it does not fire, check that it is placed within the transmission range (p.58).

8 Take the picture.

- Set the camera and take the picture in the same way as with normal flash photography.
- ▶ If the standard flash exposure is obtained, the flash exposure confirmation lamp lights for approx. 3 sec.

If the <**LINK**> lamp is red, radio transmission has not been established. Check the transmission channels and wireless radio IDs of the master unit and slave unit again. If you cannot connect with the same settings, turn the master unit and slave unit off and on again.

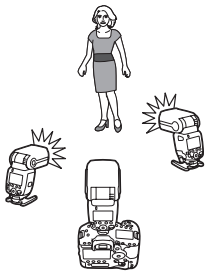
- The master/slave flash coverage is set to 24 mm. You can also set the flash coverage manually.
- To fire the master unit as well, set the master flash firing to ON (p.66) in step 5 on the preceding page.
- You can press the depth-of-field preview button on the camera to fire the modeling flash (p.47).
- When a Speedlite is set as the master unit, the time until auto power off takes effect is approx. 5 min.
- If the slave unit's auto power off takes effect, press the master unit's test flash button to turn on the slave unit. Note that the test flash cannot be performed while the camera's metering timer, etc. is operating.
- You can change the time until the slave unit's auto power off takes effect (C.Fn-10/p.115).
- You can enable a beep to sound when recharging of all the flash units (master/slave units) is complete (C.Fn-20/p.116).
- You can disable the blinking of the AF-assistant beam emitter when the slave unit is recharged (C.Fn-23/p.117).

LCD Panel Illumination

During radio transmission wireless shooting, the master unit's LCD panel illuminates or turns off according to the charge status of the master unit and slave units (firing groups).
The master unit's LCD panel illuminates if the master unit and slave units are not fully charged. When the master unit and slave units are fully charged, the LCD panel illumination will turn off after approx. 12 sec. When the charge of the master unit and slave units becomes insufficient as you take pictures, the master unit's LCD panel will be illuminated again.

If the master unit or any of the slave units (firing group) are not fully charged, <CHARGE> will be displayed on the master unit's LCD panel. Make sure to take the picture after checking either that the <CHARGE> icon is not displayed on the LCD panel or the LCD panel is not illuminated.

Autoflash Photography Using Multiple Slave Units



When you need more flash output or you want to perform lighting more easily, you can increase the number of slave units and fire them as a single flash.
To add slave units, perform the same procedure as "Autoflash Shooting Using One Slave Unit" (p.68). Set the firing group to A, B, or C (p.73). The flash will not fire if it is set to D or E.

When the number of slave units is increased or master flash firing is set to ON, automatic control is performed to fire all flashes at the same flash output and to ensure that the total flash output results in the standard exposure.

Advanced Shooting with Fully Automatic Wireless Flash

Since the following functions set on the master unit will be set automatically to the slave units with this wireless system, you do not need to operate the slave unit(s). For this reason, you can perform wireless flash photography in the same way as normal flash photography.

- **Flash exposure compensation** (/p.28)
- **FEB** (/p.29)
- **FE lock** (p.30)
- **High-speed sync** (/p.31)
- **Manual flash** (p.40, 77)
- **Stroboscopic flash** (p.42)

You can also directly operate the slave unit to separately set flash exposure compensation and flash coverage on each slave unit.

Master Units

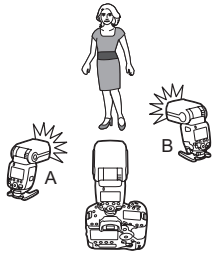
You can designate two or more master units. By preparing multiple cameras with master units attached, you can change cameras while keeping the same lighting (slave units) during wireless flash photography.
Note that when using two or more master units, the color of the <LINK> lamp will change depending on the order in which the master setting was performed. The first master (main master) is green, and the second and subsequent masters (sub-masters) are orange.

- If the <LINK> lamp is red, the connection has not been established. After checking the transmission channel and wireless radio ID, turn each master unit off and on again.
- During radio transmission wireless shooting, limit the total number of masters and slaves up to 16 units.

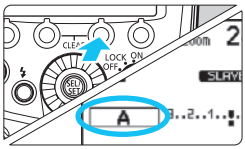
You can take pictures even when the master flash is set as a sub-master.

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

Autoflash Photography with Two Slave Groups

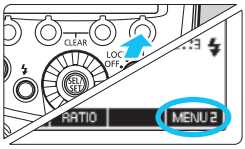


You can divide the slave units into two firing groups, A and B, and adjust the lighting balance (flash ratio) for shooting. The exposure is controlled automatically so that the total flash output of firing groups A and B results in the standard exposure.



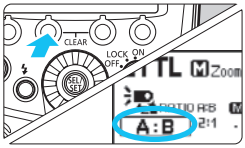
1 Set the firing group of the slave units.

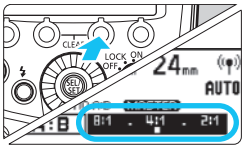
- Operate and set the slave units one by one.
- Press function button 4 to display <MENU 1>.
- Press function button 3 <Gr>, then select <A> or <B>.
- Set one unit to <A> and set the other to <B>.



2 Set the master unit to <A:B>.

- Operate and set the master unit with the procedures in steps 2 and 3.
- Press function button 4 on the master unit to display <MENU 2>.
- Press function button 2 <RATIO> and set to <A:B>.





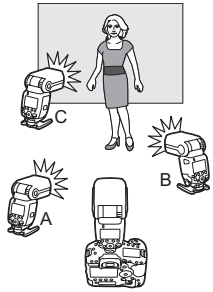
3 Set the A:B flash ratio.

- Press function button 3 <Gr>.
- Turn <dial> to set the flash ratio, then press <SET>.

4 Take the picture.

- ▶ The slave unit flashes at the set flash ratio.

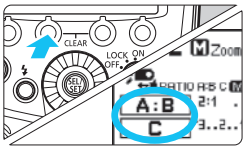
Autoflash Photography with Three Slave Groups



You can add firing group C to firing groups A and B. C is convenient to set lighting so as to eliminate the subject's shadow.
The basic setting procedure is the same as "Autoflash Photography with Two Slave Groups" (p.73).

1 Set the slave unit to firing group C.

- Set the slave unit you want to add to flash firing group <C> in the same way as step 1 on page 73.



2 Set the master unit to <A:B> <C>.

- Set master firing group control to <A:B> <C> in the same way as step 2 on page 73.

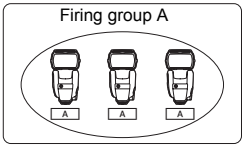
3 Set the A:B flash ratio.

- Set the A:B flash ratio in the same way as step 3 on the preceding page.

4 Set the flash exposure compensation amount for slave unit C.

- Set the amount as necessary.
- Press function button 3 <Gr>.
- Turn <dial>, then select <C>.
- Press function button 3 <C ±>.
- Turn <dial> to set the flash exposure compensation amount, then press <set>.

Group Control



If you need more flash output or wish to perform more sophisticated lighting, you can increase the number of slave units. Simply set an additional slave unit to the firing group (A, B, or C) whose flash output you want to increase. You can increase the number of slave units up to 15 units.

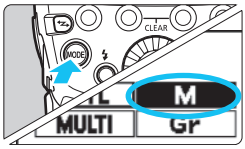
For example, if you set a firing group with three slave units to <A>, the three units are treated and controlled as a single firing group A with a large flash output.

- To fire the three firing groups A, B, and C at the same time, set <A:B> <C>. With the <A:B> setting, firing group C does not fire.
- If you shoot with firing group C pointing directly toward the main subject, overexposure may result.

The flash ratio of 8:1 to 1:1 to 1:8 is equivalent to 3:1 to 1:1 to 1:3 (1/2-stop increments) when converted to the number of stops.

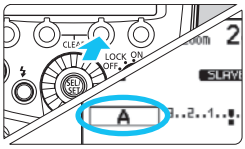
M: Wireless Multiple-Flash Photography with Manual Output

This section describes wireless (multiple-flash) shooting using manual flash. You can shoot with a different flash output setting for each slave unit (firing group).



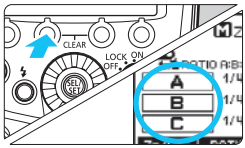
1 Set the flash mode to <M>.

- Press the <MODE> button on the master unit.
- Turn <dial> to select < M >, then press <set>.
- The slave unit is set automatically to <M> during shooting, controlled by the master unit.



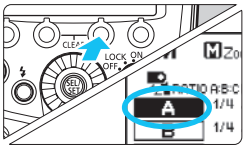
2 Set the firing group of the slave units.

- Operate and set the slave units one by one.
- Set to the group to be fired in step 3.
- Press function button 4 to display < MENU 1 >.
- Press function button 3 < Gr >, then select < A >, < B >, or < C >.



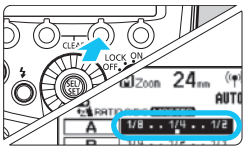
3 Set firing group control.

- Press function button 4 on the master unit to display < MENU 1 >.
- Press function button 2 < RATIO > to set the group to be fired.
- Each time you press the button, the setting switches in the following sequence: < ALL > → < A > < B > → < A > < B > < C >.



4 Select a firing group.

- Press function button 3 <Gr>.
- Turn <dial> to select the group to set the flash output to.



5 Set the flash output.

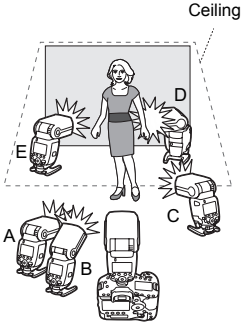
- Press function button 3 <✱±>.
- Turn <dial> to set the flash output, then press <dial>.
- When setting <A> <B> or <A> <B> <C>, repeat steps 4 and 5 to set the flash output of all firing groups.

6 Take the picture.

▶ Each group fires at the set flash ratio.

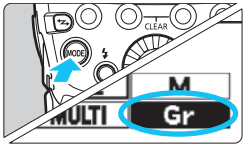
- When <ALL> is set, set A, B, or C as the firing group for the slave units. The flash will not fire if it is set to D or E.
- To fire multiple slave units with the same flash output, select <ALL> in step 3.

Gr: Shooting in a Different Flash Mode for Each Group



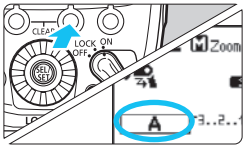
When using an EOS DIGITAL camera released in and after 2012, you can shoot in a different flash mode set for each firing group with up to 5 groups (A, B, C, D, and E). The flash modes that can be set are ① E-TTL II/E-TTL autoflash, ② Manual flash, and ③ Auto external flash metering. When the flash mode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

Wireless flash photography using the <**Gr**> flash mode cannot be performed with cameras released up to 2011 or with EOS REBEL T6/1300D or EOS REBEL T5/1200D. Shooting with up to 3 groups (A, B, and C) will be applied (p.75).



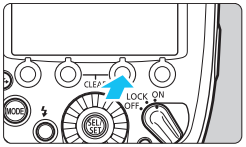
1 Set the flash mode to <Gr>.

- Press the <**MODE**> button on the master unit.
- Turn <◎> to select <Gr>, then press <◎>.
- The slave unit's flash mode is set automatically during shooting, controlled by the master unit.



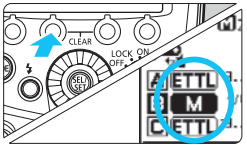
2 Set the firing group of the slave units.

- Operate and set the slave units one by one.
- Press function button 4 to display <MENU 1>.
- Press function button 3 <Gr>, then select <A>, <B>, <C>, <D>, or <E>.
- Set the firing group (A, B, C, D, or E) for all the slave units.



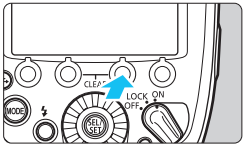
3 Set each firing group.

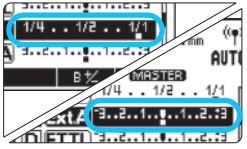
- Set the flash mode of each firing group by operating the master unit.
- With <MENU 1> displayed, press function button 3 <Gr> (⏱12).
- Turn <◎> to select the group to set the firing group.



Setting the flash mode

- Press function button 2 <✳ MODE>, then select the firing mode from <**ETTL**>, <**M**>, or <**Ext.A**>.

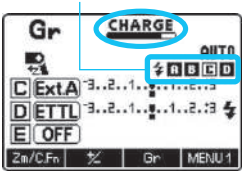




Setting the flash output and flash exposure compensation amount

- Press function button 3 <✳±>.
- Turn <◎> to set the flash output or flash exposure compensation amount, then press <◎>.
- When using the <**M**> mode, set the flash output. When using the <**ETTL**> or <**Ext.A**> mode, set the flash exposure compensation amount as required.
- Repeat step 3 to set the flash function of all firing groups.
- If you press function button 2 <±> when <MENU 1> is displayed, flash exposure compensation can be set for all the firing groups.

Firing group charge status
☐ : Flash not ready
■ : Flash ready



4 Check the charge status and then shoot.

- When <CHARGE> is displayed, you can check the firing groups that are not fully charged by the indication on the screen on the left. For example, when firing group <A> is fully charged, the <A> indication in the screen on the left changes to <■>.
- When all firing groups are fully charged, <CHARGE> and the charge status indication for the firing groups on the screen on the left disappear.
- For other charge confirmations, see step 6 on page 69.

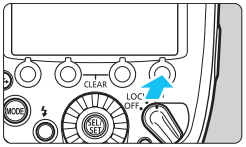
▶ Each slave unit fires simultaneously in the respective flash mode set.

- When setting the flash mode to <**Ext.A**>, make sure the slave units are the Speedlites supporting the Auto external flash metering. Firing in this flash mode is not possible if Auto external flash metering is not supported.
- When the flash mode is set to <**ETTL**> or <**Ext.A**>, exposure is controlled as a single group to obtain the standard exposure for the main subject. If you shoot with multiple firing groups pointing toward the main subject, overexposure may result.

- The order of firing among firing groups does not need to be consecutive; for example, A, C, E can be set.
- When you do not want a certain group to fire, press function button 1 <ON/OFF> to set <OFF> when setting the flash mode in step 3.

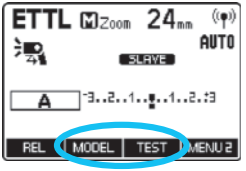
Test Flash and Modeling Flash from a Slave Unit

In radio transmission wireless shooting, you can fire the test flash and modeling flash (p.47) from a 600EX II-RT set as a slave unit.



1 Display <MENU 2>.

- Press the slave unit's function button 4 to display <MENU 2>.



2 Fire the flash.

[Test flash firing]

- Press the slave unit's function button 3 <TEST>.

[Modeling flash] (p.47)

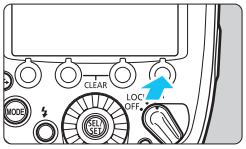
- Press the slave unit's function button 2 <MODEL>.
- ▶ A flash signal is sent from the slave unit to the master unit, and a wireless system test flash or modeling flash is fired.

- Modeling flash is not possible from a slave unit with cameras released up to 2011 or with EOS REBEL T6/1300D or EOS REBEL T5/1200D.
- For the precautions related to modeling flash, see page 47.
- When C.Fn-02-1 is set on the master unit (p.113), modeling flash will not be fired even if you select <MODEL>.

When there are two or more master units (p.72), the flash signal is sent to the main master that has the <LINK> lamp lit in green.

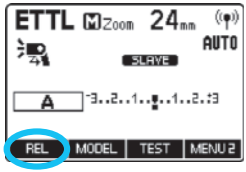
Remote Release from a Slave Unit

When using an EOS DIGITAL camera released in and after 2012, you can perform remote release (remote control shooting) from a 600EX II-RT set as a slave unit during radio transmission wireless shooting.



1 Display <MENU 2>.

- Press the slave unit's function button 4 to display <MENU 2>.



2 Take the picture.

- Press the slave unit's function button 1 <REL>.
- ▶ A release signal is sent from the slave unit to the master unit, and the picture is taken.

- Remote release is not possible from a slave unit with cameras released up to 2011 or with EOS REBEL T6/1300D or EOS REBEL T5/1200D.
- Shooting is not possible when autofocus fails. It is recommended that you set the focus mode switch of the lens to <**MF**>, manually focus on the subject, then release.

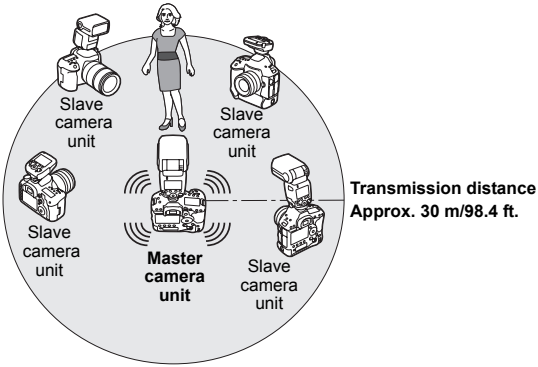
- Remote release is performed with "Single shooting" regardless of the camera's drive mode setting.
- When there are two or more master units (p.72), the release signal is sent to the main master that has the <**LINK**> lamp lit in green.

Linked Shooting with Radio Transmission

When using an EOS DIGITAL camera released in and after 2012 (except EOS REBEL T6/1300D and EOS REBEL T5/1200D), you can perform linked shooting, which automatically releases the shutter of a slave camera unit by linking it to the master camera unit. You can perform linked shooting with up to 16 units, including both master units and slave units. This is useful when you want to shoot a subject from multiple angles at the same time.

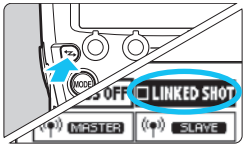
To perform linked shooting, attach a Speedlite or a Speedlite Transmitter that supports radio transmission wireless shooting to the camera.

Note that when used with a camera released up to 2011 or with EOS REBEL T6/1300D or EOS REBEL T5/1200D, the unit can be used only as “master camera unit”. The unit cannot be used as a “slave camera unit”.



The combination of an EOS camera and 600EX II-RT set with linked shooting function is called either “master camera unit/master unit” or “slave camera unit/slave unit”.

Before performing the operations below, attach a Speedlite or transmitter to all the cameras to be used for linked shooting. For details on setting other devices, refer to the Instruction Manual of the devices.





1 Set to normal shooting mode.

- Press the <⚡> button.
- Turn <◎> to select <□ LINKED SHOT>, then press <●>.

▶ The display changes to <☑ LINKED SHOT>.



2 Set the master/slave unit.

- Turn <◎> to select <((•)) MASTER> or <((•)) SLAVE>, then press <●>.

3 Set the transmission channel and wireless radio ID.

- Set the channel by pressing function button 2 <CH>, then set the ID by pressing function button 3 <ID>.
- For details on the setting procedure, see pages 63 to 66.

4 Set the camera's shooting functions.

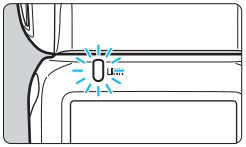
5 Set all the Speedlites.

- Set all the Speedlites to perform linked shooting to "master unit" or "slave unit" in linked shooting.

- Set the transmitters in the same way if any are to be used in linked shooting.
- When changing the setting from “slave unit” to “master unit” in step 2, other Speedlites (or transmitters) that were set as “master unit” until then automatically switch to “slave unit”.

6 Set up the slave camera units.

- Set up all the slave camera units within approx. 30 m/98.4 ft. of the master camera unit.
- Check that the <**LINK**> lamps of the slave units are lit in green.



7 Take the picture.

- Check that the <**LINK**> lamp of the master unit is lit in green and take the picture.

▶ The slave camera units are released with the release of the master camera unit.

▶ After shooting with linked shooting, the <**LINK**> lamps of the slave units are briefly lit in orange.

- When you want to clear linked shooting, operate the Speedlites one by one to change the setting to <☐ **LINKED SHOT**> in step 1.
- You can use this function as a remote control for linked shooting without attaching a Speedlite to a camera. When function button 1 < REL > on the master flash is pressed, all the slave camera units will be released.
- During linked shooting, the time until auto power off takes effect is approx. 5 min. for both the master and the slave units. When the interval of linked shooting is 5 min. or longer, set the “Auto power off” to “OFF” on both the master and the slave units (C.Fn-01-1, p.113).
- When C.Fn-20-1 is set (p.116), the beep will sound on each fully charged flash unit (master/slave).

- Setting the focus mode switches of the lenses attached to the slave cameras to <**MF**> and taking the picture with manual focusing is recommended. If focus cannot be achieved with autofocus, linked shooting is not possible with the corresponding slave camera units.
- There is a short time lag between the release of the slave camera unit and the release timing of the master camera unit. Perfectly simultaneous shooting is not possible.
- You can fire the Speedlite during linked shooting when P.Fn-06-1 is set (p.119), but the appropriate exposure may not be obtained or uneven exposure may result if you fire multiple Speedlites simultaneously during linked shooting.
- When [**Flash firing**] in [**External Speedlite control**] or [**Flash control**] is set to [**Disabled**] (p.54), linked shooting cannot be performed.
- If performing linked shooting is not possible with a Live View image displayed and P.Fn-06-0 set (p.119), set [**Silent LV shoot**] on the master camera unit menu to [**Disabled**]. If [**Mode 1**] or [**Mode 2**] is set, the slave camera units may not be released depending on the camera model used.
- The transmission distance may be shorter depending on the conditions such as the positioning of slave flashes, the surrounding environment, and weather conditions.
- The linked shooting function is the similar function as the linked shooting featured by the WFT series of wireless file transmitters. However, linked shooting cannot be performed in combination with the WFT series file transmitters. Moreover, the release time lag differs from linked shooting performed using the WFT series.

Linked Shooting Using Live View Function

Linked shooting in Live View is not possible when a Speedlite set to P.Fn-06-0 (p.119) is attached to one of the cameras below and set as the master camera unit.
Perform linked shooting after switching Live View shooting to viewfinder shooting or set the Speedlite to P.Fn-06-1.

EOS REBEL T6S/760D, EOS REBEL T6i/750D, EOS REBEL T5i/700D, EOS REBEL T4i/650D, EOS REBEL T3i/600D, EOS REBEL T2i/550D, EOS REBEL T1i/500D, EOS REBEL XSi/450D, EOS REBEL XS/1000D

MEMO

5

Wireless Flash Photography: Optical Transmission

This chapter describes wireless flash photography using the optical transmission wireless master/slave function.
For the accessories required for optical transmission wireless shooting, see the system map (p.122).

When the camera's shooting mode is set to a fully automatic mode or a Basic Zone mode, the operations in this chapter are not available. Set the camera's shooting mode to <**P**/**Tv**/**Av**/**M**/**bulb(B)**> (Creative Zone mode).

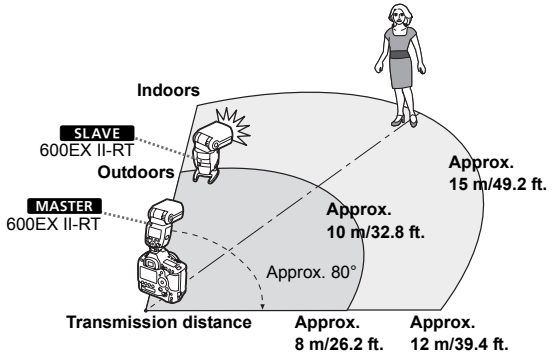
- The procedures for wireless flash photography are described, using the 600EX II-RT for both the master and slave unit.
- The 600EX II-RT attached to the camera is called "master", and the 600EX II-RT controlled wirelessly is called "slave".

Optical Transmission Wireless Flash Photography

Using a Canon Speedlite (master/slave) equipped with the optical transmission wireless shooting function, you can easily perform shooting with wireless multiple flash lighting in the same way as normal E-TTL II/E-TTL autoflash photography.
The system is designed so that the settings of the 600EX II-RT (master) attached to the camera are automatically applied to the wirelessly controlled 600EX II-RT (slave). Therefore, you do not need to operate the slave unit during shooting.

Positioning and Operation Range (Wireless flash photography examples)

- **Autoflash Photography Using One Slave Unit** (p.96)

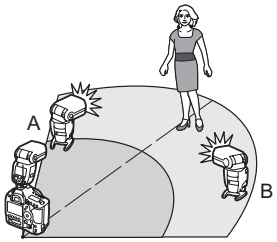


- Place with the wireless receiver of the slave unit facing the master.
- You can also wirelessly control a 600EX II-RT set as the slave unit with a device that is equipped with the optical transmission wireless master function other than a 600EX II-RT. For details on setting the master unit functions, refer to the Instruction Manual of the device.
- Position the slave unit, using the provided mini stand (p.16).

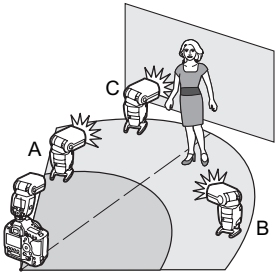
Wireless Multiple-Flash Photography

You can divide the slave units into two or three groups and perform E-TTL II/E-TTL autoflash photography while changing the flash ratio (flash output rate).

Autoflash Photography with Slave Groups



2 (A, B) groups (p.101)



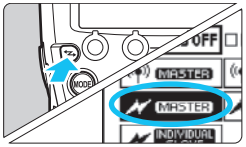
3 (A, B, C) groups (p.103)

- To avoid interfering with transmission, do not place any obstacles between the master unit and slave unit.
- The transmission distance differs according to the master unit used. Refer to the Instruction Manual of the device that is equipped with the master function.
- Before shooting, perform a test flash (p.21) and test shooting.

Wireless Settings

To perform optical transmission wireless shooting, set the master unit and slave unit with the following procedure.

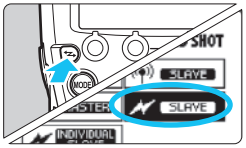
Master Unit Setting



Set to <⚡ MASTER >.

- Press the <⚡> button.
- Turn <◎> to select <⚡ MASTER >, then press <◎>.

Slave Unit Setting



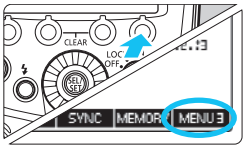
Set to <⚡ SLAVE >.

- Operate and set the flash you want to set as the slave unit.
- Select <⚡ SLAVE > in the same way as for the master unit setting.

To perform normal flash photography, select < WIRELESS OFF > to clear the wireless (master/slave) settings.

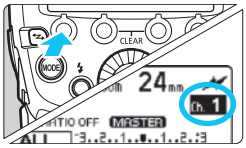
Transmission Channel Setting

To avoid interference with optical transmission wireless flash systems used by other photographers, you can change the transmission channel. **Set the same channel for both the master unit and slave unit.**



1 Display <CH>.

- On the master unit, press function button 4 to display <MENU 3>.
- On the slave unit, press function button 4 to display <MENU 2>.



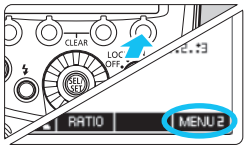
2 Set a transmission channel.

- Press function button 1 <CH>.
- Turn <dial> to select any channel between Ch.1 to 4, then press <set>.

If the transmission channels of the master unit and slave unit are different, the slave unit will not fire. Set both to the same number.

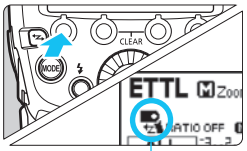
Master Flash Firing ON/OFF

You can set whether or not to fire the master unit as a flash that controls the slave unit. When master flash firing is set to ON, the master unit is fired as firing group A.



1 Display <MENU 2>.

- Press function button 4 to display <MENU 2>.



Master flash

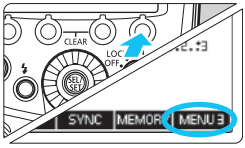
2 Set the master flash firing.

- Press function button 1 <▸ / ▸> to set the master flash firing to ON or OFF.
  - ▸ : Master flash firing ON
  - ▸ : Master flash firing OFF

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

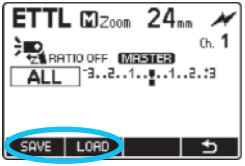
Memory Function

You can save the wireless settings to the master unit and slave unit, and recall the settings later. Operate each master or slave unit individually to save or recall its settings.



1 Display <MEMORY>.

- On the master unit, press function button 4 to display <MENU 3>.
- On the slave unit, press function button 4 to display <MENU 2>.



2 Save or load the settings.

- Press function button 3 <MEMORY>.

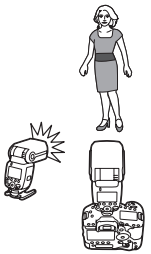
[Save]

- Press function button 1 <SAVE>.
- ▶ The settings are saved (stored in the memory).

[Load]

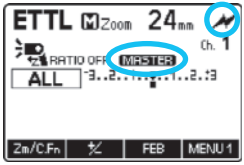
- Press function button 2 <LOAD>.
- ▶ The settings that were saved are set.

ETTL: Fully Automatic Wireless Flash Photography



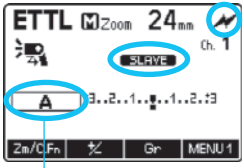
This section describes the basic fully automatic wireless shooting when using a 600EX II-RT attached to the camera (master) and a 600EX II-RT set as a slave unit.

Autoflash Photography Using One Slave Unit



1 Set the master unit.

- Set the 600EX II-RT attached to the camera as the master unit (p.92).
- You can also use a device equipped with the optical transmission wireless master function as the master unit.



Firing group

2 Set the slave unit.

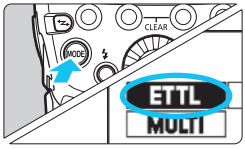
- Set the 600EX II-RT to be controlled wirelessly from the master unit as the slave unit (p.92).
- You can also use other EX-series Speedlites that are equipped with an optical transmission wireless slave function.
- You can use any of A, B, or C as the firing group.

3 Check the channel.

- If the channels of the master unit and slave unit are different, set them to the same number (p.93).

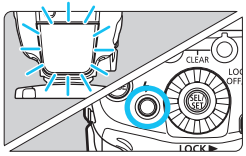
4 Position the camera and the flash.

- Position them within the range shown on page 90.



5 Set the flash mode to <ETTL>.

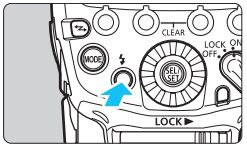
- Press the <MODE> button on the master unit.
- Turn <◎> to select < ETTL >, then press <●>.
- The slave unit is set automatically to <**ETTL**> during shooting, controlled by the master unit.
- Check that the firing group control is set to < ALL >.



6 Check that the flash is ready.

- When the slave flash is ready, the AF-assist beam emitter blinks with approx. 1-second intervals.
- Check that the master unit's flash-ready lamp is lit.

- If there is a fluorescent light or computer monitor near a slave unit, the presence of the light source may cause the slave unit to malfunction and fire inadvertently.
- During optical transmission wireless shooting, even if the master and slave units (firing group) are not all fully charged, < CHARGE > will not be displayed on the master unit's LCD panel as it is with radio transmission wireless shooting (with master flash firing OFF). Also, there is no function for illuminating or turning off the master unit's LCD panel according to the charge status of the master unit and slave units.
- When C.Fn-20-1 is set on the master unit (p.116), the beep will sound when the master unit is fully charged. (This beep does not indicate that charging of all flash units is completed as it does with radio transmission wireless shooting.)



7 Check the performance.

- Press the master unit's test flash button.

▶ The flash fires. If it does not fire, check that it is placed within the transmission range (p.90).

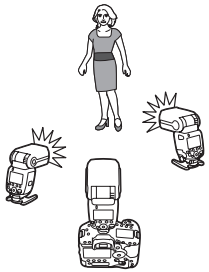
8 Take the picture.

- Set the camera and take the picture in the same way as with normal flash photography.

▶ If the standard flash exposure was obtained, the flash exposure confirmation lamp lights for approx. 3 sec.

- The master/slave flash coverage is set to 24 mm. You can also set the flash coverage manually.
- To fire the master unit as well, set the master flash firing to ON (p.94) in step 5 on the preceding page.
- You can press the depth-of-field preview button on the camera to fire the modeling flash (p.47).
- If the slave unit's auto power off takes effect, press the master unit's test flash button to turn on the slave unit. Note that the test flash cannot be performed while the camera's metering timer, etc. is operating.
- You can change the time until the slave unit's auto power off takes effect (C.Fn-10/p.115).
- You can disable the blinking of the AF-assistant beam emitter when the slave unit is recharged (C.Fn-23/p.117).

Autoflash Photography Using Multiple Slave Units



When you need more flash output or you want to perform lighting more easily, you can increase the number of slave units and fire them as a single flash.
To add slave units, perform the same procedure as “Autoflash Photography Using One Slave Unit” (p.96). You can use any of A, B, or C as the firing group.

When the number of slave units is increased or master flash firing is set to ON, automatic control is performed to fire all flashes at the same flash output and to ensure that the total flash output results in the standard exposure.

Advanced Shooting with Fully Automatic Wireless Flash

Since the following functions set on the master unit will be set automatically to the slave units on this wireless system, you do not need to operate the slave unit(s). For this reason, you can perform wireless flash photography in the same way as normal flash photography.

- **Flash exposure compensation** (/p.28)
- **FEB** (/p.29)
- **FE lock** (p.30)
- **High-speed sync** (/p.31)
- **Manual flash** (p.40, 105)
- **Stroboscopic flash** (p.42)

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

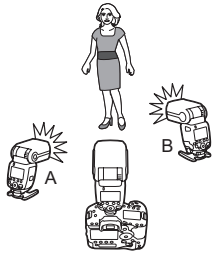
You can also directly operate the slave unit to individually set flash exposure compensation and flash coverage on each slave unit.

Master Units

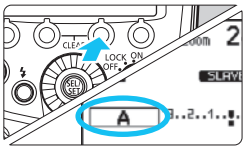
You can designate two or more master units. By preparing multiple cameras with master units attached, you can change cameras while keeping the same lighting (slave units) during wireless flash photography.

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

Autoflash Photography with Two Slave Groups

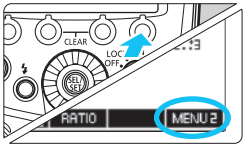


You can divide the slave units into two firing groups, A and B, and adjust the lighting balance (flash ratio) for shooting. The exposure is controlled automatically so that the total flash output of firing groups A and B results in the standard exposure.



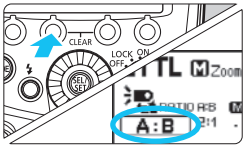
1 Set the firing group of the slave units.

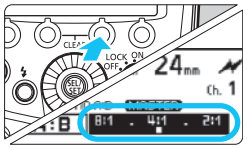
- Operate and set the slave units one by one.
- Press function button 4 to display <MENU 1>.
- Press function button 3 <Gr>, then select <A> or <B>.
- Set one unit to <A> and set the other to <B>.



2 Set the master unit to <A:B>.

- Operate and set the master unit with the procedures in steps 2 and 3.
- Press function button 4 on the master unit to display <MENU 2>.
- Press function button 2 <RATIO> and set to <A:B>.





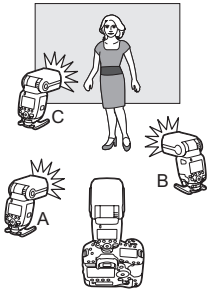
3 Set the A:B flash ratio.

- Press function button 3 <Gr>.
- Turn <dial> to set the flash ratio, then press <SET>.

4 Take the picture.

▶ The slave unit flashes at the set flash ratio.

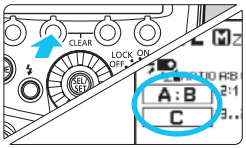
Autoflash Photography with Three Slave Groups



You can add firing group C to firing groups A and B. C is effective for lighting that eliminates a subject's shadow.
The basic setting procedure is the same as "Autoflash Photography with Two Slave Groups" (p.101).

1 Set the slave unit to firing group C.

- Set the slave unit you want to add to flash firing group <C> in the same way as step 1 on page 101.



2 Set the master unit to <A:B> <C>.

- Set master firing group control to <A:B> <C> in the same way as step 2 on page 101.

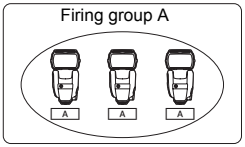
3 Set the A:B flash ratio.

- Set the A:B flash ratio in the same way as step 3 on the preceding page.

4 Set the flash exposure compensation amount for slave unit C.

- Set the amount as necessary.
- Press function button 3 <Gr>.
- Turn <dial>, then select <C>.
- Press function button 3 <C ±>.
- Turn <dial> to set the flash exposure compensation amount, then press <set>.

Group Control



If you need more flash output or wish to perform more sophisticated lighting, you can increase the number of slave units. Simply set an additional slave unit to the firing group (A, B, or C) whose flash output you want to increase. There is no restriction on the number of units.

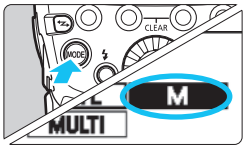
For example, if you set a firing group with three slave units to <A>, the three units are treated and controlled as a single firing group A with a large flash output.

- To fire the three firing groups A, B, and C at the same time, set <A:B> <C>. With the <A:B> setting, firing group C does not fire.
- If you shoot with firing group C pointing directly toward the main subject, overexposure may result.
- With certain EOS film cameras that support E-TTL autoflash, you cannot perform multiple flash wireless shooting with a flash ratio setting.

The flash ratio of 8:1 to 1:1 to 1:8 is equivalent to 3:1 to 1:1 to 1:3 (1/2-stop increments) when converted to the number of stops.

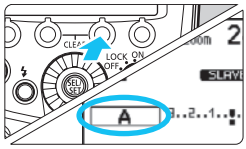
M: Wireless Multiple-Flash Photography with Manual Output

This section describes wireless (multiple-flash) photography using manual flash. You can shoot with a different flash output setting for each slave unit (firing group).



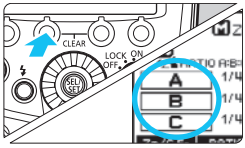
1 Set the flash mode to <M>.

- Press the <MODE> button on the master unit.
- Turn <dial> to select < M >, then press <set>.
- The slave unit is set automatically to <M> during shooting, controlled by the master unit.



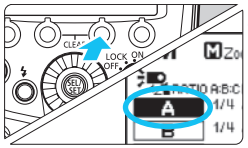
2 Set the firing group of the slave units.

- Operate and set the slave units one by one.
- Set to the group to be fired in step 3.
- Press function button 4 to display < MENU 1 >.
- Press function button 3 < Gr >, then select < A >, < B >, or < C >.



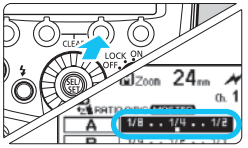
3 Set firing group control.

- Press function button 4 on the master unit to display < MENU 1 >.
- Press function button 2 < RATIO > to set the group to be fired.
- Each time you press the button, the setting switches in the following sequence: < ALL > → < A > < B > → < A > < B > < C >.



4 Select a firing group.

- Press function button 3 <Gr>.
- Turn <dial> to select the group to set the flash output to.



5 Set the flash output.

- Press function button 3 <✱±>.
- Turn <dial> to set the flash output, then press <set>.
- When setting <A> <B> or <A> <B> <C>, repeat steps 4 and 5 to set the flash output of all firing groups.

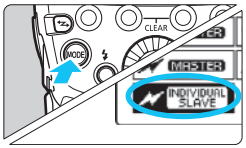
6 Take the picture.

▶ Each group fires at the set flash ratio.

- When <ALL> is set, you can use any of A, B, or C as the firing group.
- To fire multiple slave units with the same flash output, select <ALL> in step 3.

INDIVIDUAL SLAVE Manual Flash/Stroboscopic Flash Setting on a Slave Unit

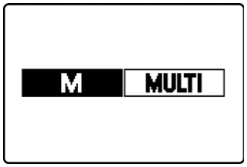
You can directly operate the slave unit to manually set the manual flash or stroboscopic flash. This function is called individual slave. This is useful when, for example, you use the Speedlite Transmitter ST-E2 (sold separately) to perform wireless manual flash or stroboscopic flash.



1 Set the individual slave.

- Press the <⚡> button.
- Turn <◎> to select <INDIVIDUAL SLAVE>, then press <◎>.

▶ < INDIVIDUAL SLAVE > appears on the LCD panel.



2 Set the flash mode.

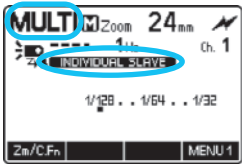
- Press the <MODE> button.
- Turn <◎> to select < M > or < MULTI >, then press <◎>.

Manual Flash



Set the manual flash output. For details on the setting procedure, see page 40.

Stroboscopic Flash



Set the stroboscopic flash settings. For details on the setting procedure, see page 42.

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

A slave unit that is set as an individual slave cannot receive flash mode control from the master unit. The slave unit fires in the flash mode that is set by individual slave.

6

Customizing the Speedlite

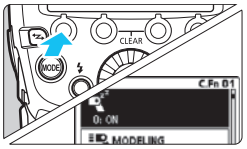
This chapter describes how to customize the Speedlite with the Custom Functions (C.Fn) and Personal Functions (P.Fn).

When the camera's shooting mode is set to a fully automatic mode or a Basic Zone mode, the operations in this chapter are not available. Set the camera's shooting mode to <**P**/**Tv**/**Av**/**M**/**bulb(B)**> (Creative Zone mode).

C.Fn / P.Fn: Setting Custom and Personal Functions

You can make precise adjustments to various flash functions to suit your picture-taking preferences with Custom Functions. The functions used to do this are called the Custom Functions and Personal Functions. The Personal Functions are customizable functions unique to the 600EX II-RT.

C.Fn: Custom Functions

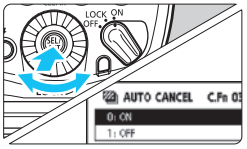


1 Display the Custom Functions screen.

- Press and hold function button 1 <Zm/C.Fn> until the screen is displayed.
- ▶ The Custom Functions screen is displayed.

2 Select an item to set.

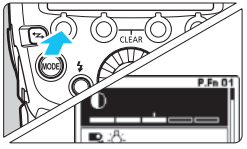
- Turn <dial> to select an item (number) to set.



3 Change the setting.

- Press <set>.
- ▶ The setting is displayed.
- Turn <dial> to select the desired setting, then press <set>.

P.Fn: Personal Functions



1 Display the Personal Functions screen.

- After performing step 1 in the Custom Functions procedure, press function button 1 <P.Fn>.
- ▶ The Personal Functions screen is displayed.

2 Set the function.

- Set the Personal Functions in the same way as steps 2 and 3 for the Custom Functions.

Custom Function List

Number	Function		Page
C.Fn-00	m/ft	Distance indicator display	p.113
C.Fn-01		Auto power off	
C.Fn-02	MODELING	Modeling flash	
C.Fn-03	AUTO CANCEL	FEB auto cancel	p.114
C.Fn-04		FEB sequence	
C.Fn-05	MODE	Flash metering mode	
C.Fn-08	AF	AF-assist beam firing	p.115
C.Fn-10		Slave auto power off timer	
C.Fn-11		Slave auto power off cancel	
C.Fn-12		Flash recycle with external power	p.116
C.Fn-13		Flash exposure compensation setting	
C.Fn-20		Beep	
C.Fn-21		Light distribution	p.117
C.Fn-22		LCD panel illumination	
C.Fn-23		Slave flash charge check	

Personal Function List

Number	Function		Page
P.Fn-01	◐	LCD panel display contrast	p.118
P.Fn-02		LCD panel illumination color: Normal shooting	
P.Fn-03		LCD panel illumination color: Master	
P.Fn-04		LCD panel illumination color: Slave	
P.Fn-05	QUICK	Quick flash	p.119
P.Fn-06	LINKED SHOT	Flash firing during linked shooting	

Clearing All the Custom/Personal Functions

When function button 2 <CLEAR>, then function button 1 <OK> are pressed on the Custom Function screen, all the Custom Functions that have been set are cleared.
Similarly, when the same operations are performed on the Personal Function screen, all the Personal Functions that have been set are cleared.

Even if you clear all Custom Functions, C.Fn-00 will not be cleared.

You can set or clear all Custom Functions of the Speedlite on the camera's menu screen (p.56).

C.Fn: Setting Custom Functions

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

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

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

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

C.Fn-01: (Auto power off)

When the Speedlite is not operated for approx. 90 seconds, the power turns off automatically to save energy. You can disable this function.

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

During master flash photography (p.70) in radio transmission wireless shooting or during linked shooting (p.86), the time until auto power off takes effect is approx. 5 min.

C.Fn-02: MODELING (Modeling flash)

0: **(Enabled (Depth-of-field preview button))**
Press the camera's depth-of-field preview button to fire the modeling flash.

1: **(Enabled (Test firing button))**
Press the Speedlite's test flash button to fire the modeling flash.

2: **/ (Enabled (with both buttons))**
Press the camera's depth-of-field preview button or the Speedlite's test flash button to fire the modeling flash.

3: **OFF (Disabled)**
Disables the modeling flash.

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

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

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

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-05: MODE (Flash metering mode)

You can change the automatic flash metering mode for flash photography.

0: E-TTL II/E-TTL
1: TTL
2: Ext.A (External metering: Auto)
3: Ext.M (External metering: Manual)

- When using an EOS DIGITAL camera or EOS REBEL T2/EOS 300X, do not set to 1. Depending on the model, the autoflash may not be controlled correctly; for example, the flash may not fire, or it may always fire at full output.
- When set to 1, 2, or 3, radio transmission/optical transmission wireless shooting is not possible.

- 1 is the setting for Type-B EOS film cameras (p.138).
- When using a Type-B camera, you cannot perform E-TTL II/E-TTL autoflash photography even when 0 is set.

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

0: ON (Enabled)
1: OFF (Disabled)
This disables the emission of the AF-assist beam from the Speedlite.

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

When set as a radio transmission/optical transmission wireless slave unit, the time until auto power off takes effect can be changed. Note that when the slave unit's auto power off takes effect, <> is displayed on the LCD panel. Set this function on each slave unit.
0: 60min (60 minutes)
1: 10min (10 minutes)

C.Fn-11: → (Slave auto power off cancel)

In radio transmission/optical transmission wireless shooting, when you press the test flash button of the master unit, you can turn on the slave units that are in the auto power off status.
You can change the time for the slave units in auto power off status to accept this function. Set this function on each slave unit.
0: 8h (Within 8 hours)
1: 1h (Within 1 hour)

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

0: + (External & internal power)
Charges using both internal and external power sources.

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

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

0: + (Speedlite button and dial)

1: (Speedlite dial only)
You can directly set the flash exposure compensation amount and flash output by turning <> without pressing the < > button.

C.Fn-20: (Beep)

You can enable a beep to sound when flash recharge is complete.

0: OFF (Disable)
The beep does not sound.

1: ON (Enable)
In normal shooting (on-camera flash photography), the beep will sound when the flash unit is fully charged.
When the Speedlite is set as the master during radio transmission wireless shooting, the beep will sound on the master unit when all flash units (masters and slave units) are fully charged. You can confirm recharging of the entire wireless system by the beep tone on the master. For the slave units, either 0 or 1 can be set for C.Fn-20.
When the Speedlite is set as the master during optical transmission wireless shooting, a slave in radio transmission/optical transmission wireless shooting, or a master/slave in linked shooting, a beep will sound on each flash set to 1 at full charge (p.84).

When 1 is set, the beep will also sound when the temperature of the flash head rises and flash firing is restricted (p.124).

C.Fn-21: (Light distribution)

You can change the flash light distribution (flash coverage) of the Speedlite in relation to the shooting angle of view when the flash coverage is set to <A> (automatic).

0: (Standard)
The optimum flash coverage for the shooting angle of view is set automatically.

1: (Guide number priority)
Although the periphery of the picture is slightly darker than the 0 setting, this is effective when you want to give priority to the flash output. The flash coverage is set automatically to a slightly more telephoto position than the actual shooting angle of view. The display changes to <>.

2: (Even coverage)
Although the possible flash photography distance becomes slightly shorter than the 0 setting, this is effective when you want to minimize light fall off at the periphery of the picture. The flash coverage is set automatically to a slightly wider position than the actual shooting angle of view. The display changes to <>.

C.Fn-22: (LCD panel illumination)

When a button or dial is operated, the LCD panel illuminates. You can change this illumination setting.

0: 12 sec (On for 12 sec)
1: OFF (Disable panel illumination)
2: ON (Illumination always on)

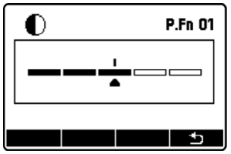
C.Fn-23: (Slave flash charge check)

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

0: / (AF-assist beam, lamp)
1: (lamp)

P.Fn: Setting Personal Functions

P.Fn-01: ◐ (LCD panel display contrast)



You can adjust the contrast of the LCD panel in 5 levels.

P.Fn-02: (LCD panel illumination color: Normal shooting)

You can set the color of the LCD panel illumination for normal shooting (on-camera flash photography).

0: GREEN (Green)
1: ORANGE (Orange)

P.Fn-03: (LCD panel illumination color: Master)

You can select the color of the LCD panel illumination for the Speedlite set as the master unit for wireless flash photography using radio/optical transmission or linked shooting.

0: GREEN (Green)
1: ORANGE (Orange)

P.Fn-04: (LCD panel illumination color: Slave)

You can select the color of the LCD panel illumination for the Speedlite set as the slave unit for wireless flash photography using radio/optical transmission or linked shooting.

0: ORANGE (Orange)
1: GREEN (Green)

P.Fn-05: QUICK (Quick flash)

You can set whether or not to fire the flash (fire the quick flash) when the flash-ready lamp is lit in green (before the flash is fully charged) to shorten the charge waiting time.

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

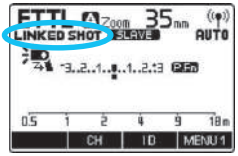
When P.Fn-06-1 and P.Fn-05-0 are set, quick flash is fired during continuous shooting (p.84). Note, however, that when Quick flash is fired during continuous shooting, underexposure tends to occur since the flash output decreases.

P.Fn-06: LINKED SHOT (Flash firing during linked shooting)

When performing linked shooting function (p.84), you can set whether or not to fire the flash attached to the camera. Set it on each flash to be used in linked shooting.

0: OFF (Disabled)
The flash does not fire during linked shooting.

1: ON (Enabled)



The flash fires during linked shooting. The display when 1 is set is different from that when 0 is set and is like the screen on the left.

If you fire multiple Speedlites simultaneously during linked shooting, the appropriate exposure may not be obtained or uneven exposure may result.

MEMO

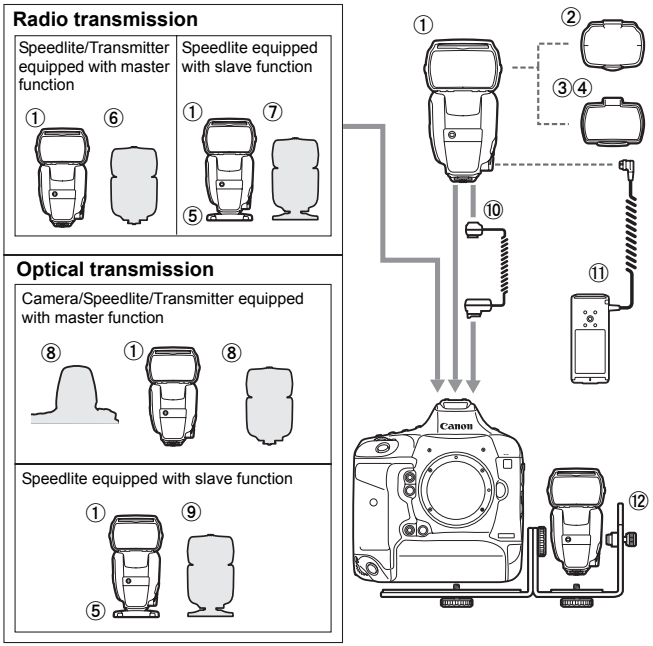
7

Reference

This chapter provides a system map and troubleshooting guide, describes the use of the Speedlite with Type-B cameras, etc.

600EX II-RT System

Wireless Flash Photography



① **Speedlite 600EX II-RT**
② **Bounce adapter SBA-E3** (provided with 600EX II-RT)
③ **Color filter SCF-E3OR1** (Low density/provided with 600EX II-RT)
④ **Color filter SCF-E3OR2** (High density/provided with 600EX II-RT)
⑤ **Mini stand** (provided with 600EX II-RT)

⑥ **Device equipped with radio transmission wireless master function**
600EX-RT, 430EX III-RT, ST-E3-RT

⑦ **Speedlite equipped with radio transmission wireless slave function**
600EX-RT, 430EX III-RT

⑧ **Device equipped with optical transmission wireless master function**
600EX-RT, 600EX, 580EX II, 580EX, 550EX, 90EX, MT-24EX, MR-14EX II, MR-14EX, ST-E2, and EOS DIGITAL cameras with optical transmission wireless master function by built-in flash

⑨ **Speedlite equipped with optical transmission wireless slave function**
600EX-RT, 600EX, 580EX II, 580EX, 550EX, 430EX III-RT, 430EX III, 430EX II, 430EX, 420EX, 320EX, 270EX II

⑩ **Off-Camera Shoe Cord OC-E3**
Enables the 600EX II-RT to be connected to the camera up to approx. 60 cm / 2 ft. away.

⑪ **Compact Battery Pack CP-E4N**
A small and lightweight external power source with superior portability. Equipped with dust and water resistance equivalent to 600EX II-RT.

⑫ **Speedlite Bracket SB-E2**

- Using an external power source other than Canon may result in a malfunction.
- When using a Speedlite without a function for switching the firing groups (A, B, C) in ⑨, you can use the Speedlite as a slave in firing group A during optical transmission wireless shooting (you cannot use it as a slave in firing group B or C).

For external power source, use of the Compact Battery Pack CP-E4N (sold separately) is recommended.

Flash Firing Restriction due to Temperature Increase

When continuous flash, stroboscopic 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.
When you perform firing repeatedly, the firing interval increases in steps within the range of up to approx. 4 sec. to avoid degrading or damaging the flash head due to overheating. When you perform firing repeatedly even more in this state, flash firing is restricted automatically.
Furthermore, when flash firing is restricted, a warning icon is displayed to indicate the increase in temperature, and the firing interval (with which the flash photography can be performed) will be automatically set to approx. 8 sec. (level 1) or approx. 20 sec. (level 2).

Temperature Increase Warning

As the internal temperature of the Speedlite increases, the warning is displayed in two levels. When you perform continuous firing repeatedly even more in the state in level 1, the state changes to level 2.

Display/Tone	Level 1 (Firing Interval: Approx. 8 sec.)	Level 2 (Firing Interval: Approx. 20 sec.)
Icon		
LCD panel illumination	Red (lit)	Red (blinking)
Beep	When C.Fn-20 is set to 1: warning beep on	

Number of Continuous Flashes and Rest Time

The following table shows the number of continuous flashes until the warning (level 1) is displayed, and the necessary rest time (guideline) until normal flash photography can be performed.

Function	Number of Continuous Flashes to Reach Level 1 Warning (Guideline)					Necessary Interval Time (Guideline)
	Flash Coverage					
	14mm	20mm	24mm	28mm	35mm or more	
Continuous full output flash (p.17)	60 times or more	65 times or more	70 times or more	85 times or more	100 times or more	40 min. or longer
Modeling flash (p.47)	40 times or more	40 times or more	40 times or more	50 times or more	60 times or more	
Stroboscopic flash (p.42)	Varies depending on firing conditions					

⚠ **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 battery compartment cover while flash firing is being restricted. Doing so is very dangerous since the flash firing restriction is canceled.
- Even when level 1 warning is not displayed, the firing interval will be extended as the flash head begins to heat up.
- If level 2 warning is displayed, allow a rest time for at least 40 min.
- Even if you stop flash firing after level 1 warning is displayed, level 2 warning may be displayed.
- If flash photography is performed in high temperatures, the firing restrictions may be activated before the number of flashes listed in the table on the preceding page is fired.
- For cautions on the number of flash firings, see page 17 (continuous flashes), page 42 (stroboscopic flash), or page 47 (modeling flash).
- The Speedlite may not fire in rare cases due to environmental factors such as temperature rise.
- The number of continuous flashes until the warning is displayed on the preceding page is the number when the 600EX II-RT is used by itself and when the Compact Battery Pack CP-E4N (sold separately) is used together with the 600EX II-RT. When an external power source other than the CP-E4N is used, the number of continuous flashes until the warning (level 1) is displayed becomes fewer.
- When the bounce adapter is used, when the color filter is used, and when both the bounce adapter and color filter are used together, the number of continuous flashes until the warning is displayed becomes slightly fewer.
- When C.Fn-20-0 is set (p.116), the warning beep does not sound even when flash firing is restricted.
- When C.Fn-22-1 is set (p.117), the warning with red illumination of the LCD panel will not be displayed even if the temperature of the flash head rises.
- When using Compact Battery Pack CP-E4N (sold separately), also refer to the CP-E4N Instruction Manual.

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 Shooting

The power does not turn on.

- Make sure the batteries are installed in the correct orientation (p.18).
- Make sure the battery compartment cover is closed (p.18).
- Replace the batteries with new ones.

The Speedlite does not fire.

- 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.20).
- If the <CHARGE> indication remains displayed for approx. 30 sec. or longer, replace the batteries (p.18).
- If the electrical contacts of the Speedlite or camera are dirty, wipe the contacts (p.10) with a dry cloth, etc.
- When you perform continuous firing repeatedly over a short period of time, causing the temperature of the flash head to rise and flash firing to be restricted, the firing interval increases (p.124).

The power turns off by itself.

- The Speedlite's auto power off has been activated (p.22). Press the shutter button halfway or press the test flash button (p.21).

Pictures are underexposed or overexposed.

- If the main subject looks very dark or very bright, set flash exposure compensation (p.28).
- If there is a highly reflective object in the picture, use FE lock (p.30).
- With high-speed sync, the faster the shutter speed, the lower the guide number becomes. Move closer to the subject (p.31).

The bottom of the picture looks dark.

- Move at least 0.5 m/1.6 ft. away from the subject.
- When shooting within 1 m/3.3 ft. of the subject, set the bounce angle down by 7° (p.34).
- Remove the lens hood if attached.

The picture periphery looks dark.

- Set the flash coverage to <A> (automatic) (p.38).
- When manually setting the flash coverage, set a flash coverage wider than the shooting angle of view (p.38).
- Make sure C.Fn-21-1 is not set (p.117).

The picture is very blurred.

- When the shooting mode is set to the <Av> aperture-priority AE mode and the scene is dark, slow sync is enabled automatically (the shutter speed becomes slower). Use a tripod, or set the shooting mode to the <P> program AE or fully automatic mode (p.25). Note that you can also set the sync speed in [**Flash sync. speed in Av mode**] (p.54).

The flash coverage is not set automatically.

- Set the flash coverage to <A> (automatic) (p.38).
- 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.20).

The flash coverage cannot be set manually.

- Remove the bounce adapter (p.36).
- Retract the wide panel (p.39).

Functions cannot be set.

- Set the camera's shooting mode to <P/Tv/Av/M/bulb(B)> (Creative Zone mode).
- Set the Speedlite's power switch to <ON> instead of <LOCK> (p.21).

● Radio Transmission Wireless Flash Photography

The slave unit does not fire or unexpectedly fires at full output.

- Set the master to <((•)) MASTER> and the slave to <((•)) SLAVE> (p.63).
- Set the transmission channels and wireless radio IDs of the master unit and slave unit to the same numbers (p.63-65).
- Make sure the slave unit is within the transmission range of the master unit (p.58).
- Run the transmission channel scan and set the channel with the best reception signal (p.65).
- Position the slave unit at a location with possible clearest view of the master unit.
- Face the front side of the slave's main body toward the master unit.
- The camera's built-in flash cannot be used as the master unit in radio transmission wireless shooting.

Pictures are overexposed.

- When using autoflash photography with three firing groups A, B, and C, do not fire with firing group C pointing toward the main subject (p.76).
- When shooting in a different flash mode set for each firing group, do not fire with multiple firing groups set to <**ETTL**> or <**Ext.A**> pointing toward the main subject (p.81).

<❗Tv> is displayed.

- Set the shutter speed 1 stop slower than the maximum flash sync speed (p.61).

Cannot remote release from a slave unit.

- Remote release is not possible from a slave unit with cameras released up to 2011 or with EOS REBEL T6/1300D or EOS REBEL T5/1200D.

The LCD panel illumination turns on and off.

- The master unit's LCD panel illuminates or turns off according to the charge status of the slave units (firing groups). See "LCD Panel Illumination" on page 71.

● Linked shooting

Standard exposure is not obtained. / Uneven exposure occurs.

- If you fire multiple Speedlites simultaneously during linked shooting, the appropriate exposure may not be obtained or uneven exposure may result. It is recommended to set only one Speedlite to fire or to use a self-timer to space out the timing of firing.

The unit cannot be used as a slave camera unit.

- When used with a camera released up to 2011 or with EOS REBEL T6/1300D or EOS REBEL T5/1200D, the unit can be used only as "master camera unit". The unit cannot be used as a "slave camera unit".

● Optical Transmission Wireless Flash Photography

The slave unit does not fire or unexpectedly fires at full output.

- Set the master unit to <⚡ MASTER> and set the slave unit to <⚡ SLAVE> (p.92).
- Set the transmission channels of the master unit and slave unit to the same numbers (p.93).
- Make sure the slave unit is within the transmission range of the master unit (p.90).
- Point the wireless sensor of the slave unit toward the master unit (p.90).
- Position the slave unit at a location with the clearest view possible of the master unit.
- If the master unit and slave unit are too close, the transmission may not take effect properly.
- When using the camera's built-in flash as the master unit, raise the camera's built-in flash, and set [**Wireless func.**] on the camera's [**Built-in flash func. setting**] screen.

The master unit fires.

- Even when master flash firing is set to OFF, the master unit fires a small flash to control the slave unit with optical transmission (p.94).

Pictures are overexposed.

- When using autoflash photography with three firing groups A, B, and C, do not fire with firing group C pointing toward the main subject (p.104).

Specifications

● Type

Type:	E-TTL II/E-TTL/TTL autoflash Shoe-mount Speedlite
Compatible cameras:	Type-A EOS cameras (E-TTL II/E-TTL autoflash) Type-B EOS cameras (TTL autoflash)

● Flash Head (Light-emitting unit)

Guide No.:	Approx. 60/197 (at 200 mm flash coverage, ISO 100, in meters/feet) * Without bounce adapter or color filter
Flash coverage:	Supports a shooting angle of view with a lens focal length of 20-200mm (with wide panel use: 14 mm) • Automatic setting (Automatically sets the flash coverage depending on the shooting angle of view and the image sensor size.) • Manual setting
Bounce:	90° up, 7° down, 180° left, 180° right Dedicated bounce adapter provided
Flash duration (Normal flash):	1/1 flash: approx. 1/890 sec. 1/2 flash: approx. 1/1200sec. 1/4 flash: approx. 1/2800 sec. 1/8 flash: approx. 1/5600sec. 1/16 flash: approx. 1/9700 sec. 1/32 flash: approx. 1/15000 sec. 1/64 flash: approx. 1/23000 sec. 1/128 flash: approx. 1/34000 sec.
Color temperature information transmission:	Flash light color temperature information transmitted to camera when flash is fired
Color filter:	2 dedicated color filters provided

● Exposure Control

Exposure control system:	E-TTL II/E-TTL/TTL autoflash, Manual flash, Stroboscopic flash, Auto external flash metering, Manual external flash metering
Effective flash range: (with EF50mm f/1.4 lens at ISO 100)	Normal flash: Approx. 0.5 - 27.8 m / 1.6 - 91.2 ft. Quick flash: Approx. 0.5 - 14.8 m / 1.6 - 48.6 ft. (at Guide No. 20.8/68.2, in meters/feet) High-speed sync: Approx. 0.5 - 14.7 m / 1.6 - 48.2 ft. (at 1/250 sec.)

Flash exposure compensation:	±3 stops in 1/3- or 1/2-stop increments
FEB:	±3 stops in 1/3- or 1/2-stop increments (can be combined with flash exposure compensation)
FE lock:	Possible with the camera's Multi-function button or FE lock/AE lock buttons
High-speed sync:	Possible * During radio transmission wireless shooting, high-speed sync is possible only with EOS DIGITAL cameras released in and after 2012 (except with EOS REBEL T6/1300D and EOS REBEL T5/1200D).
Manual flash:	1/1 - 1/128 power (1/3-step increments)
Stroboscopic flash:	Possible (1 - 500 Hz) * 1 Hz to 199 Hz during optical transmission wireless shooting
Modeling flash:	Fired with camera's depth-of-field preview button or Speedlite's test flash button

● Flash Recharge

Firing interval (Recharge time):	Normal flash: Approx. 0.1 - 5.5 sec., Quick flash: Approx. 0.1 - 3.3 sec. * When using AA/LR6 alkaline batteries
Flash-ready lamp:	Lights up in red: Normal flash available Lights up in green: Quick flash available

● AF-assist Beam

Method:	Infrared AF-assist beam
Compatible AF system:	TTL second image formation phase-difference AF 1 - 65 AF points (28 mm or longer lens focal length) Supported for viewfinder shooting, and Quick mode for Live View shooting or movie shooting
Effective distance:	At center: Approx. 0.6 - 10 m / 2.0 - 32.8 ft., At periphery: Approx. 0.6 - 5 m / 2.0 - 16.4 ft.

● Radio Transmission Wireless Master/Slave Function

Frequency:	2405 MHz - 2475 MHz
Modulation system:	Primary modulation: OQPSK, Secondary modulation: DS-SS
Wireless settings:	Master/slave
Transmission channel:	Auto, Ch. 1 - 15
Wireless radio ID:	0000 - 9999
Slave unit control:	Up to 5 groups (A, B, C, D, E), up to 15 units
Slave unit setting:	Firing group A, B, C, D, E
Transmission distance:	Approx. 30 m / 98.4 ft. * When there are no obstacles or obstructions between the master and slave units with no radio interference with other devices * Transmission distance may be shorter depending on the relative positions of the units, surrounding environment, weather conditions, etc.
Flash ratio control:	1:8 - 1:1 - 8:1, 1/2-step increments
Charge confirmation:	Display panel (master unit): Display contents/ illumination color, flash-ready lamp lights up (master unit/slave unit), beep (when C.Fn-20-1 is set on master unit/slave unit), and the AF-assist beam emitter blinks (slave unit) when fully charged
Linked shooting:	Possible

● Optical Transmission Wireless Master/Slave Function

Connection method:	Optical pulse
Wireless settings:	Master/slave
Transmission channel:	Ch. 1 - 4
Slave unit control:	Up to 3 groups (A, B, C)
Slave unit setting:	Firing groups A, B, C
Transmission distance:	Indoors: approx. 0.7 - 15 m / 2.3 - 49.2 ft., outdoors: approx. 0.7 - 10 m / 2.3 - 32.8 ft. (at the front)
Reception angle:	±40° horizontally and ±30° vertically, facing the master unit
Flash ratio control:	1:8 - 1:1 - 8:1, 1/2-step increments

Charge confirmation:	Flash-ready lamp lights up (master unit/slave unit), beep (when C.Fn-20-1 is set on master unit/slave unit), and the AF-assist beam emitter blinks (slave unit) when fully charged

● Customization Features

Custom Functions:	15 types
Personal Functions:	6 types

● Power Source

Speedlite power source:	Four AA/LR6 alkaline batteries * AA/HR6 Ni-MH batteries can be used
Number of flashes:	Approx. 100 - 700 times * When using AA/LR6 alkaline batteries
Radio transmission wireless shooting time:	Approx. 9 continuous hours * When Master flash firing OFF, using AA/LR6 alkaline batteries
Optical transmission wireless shooting time:	Approx. 1500 times * When Master flash firing OFF, using AA/LR6 alkaline batteries
Auto power off:	Power off after approx. 90 sec. of idle operation * When set as radio transmission wireless master unit, or in linked shooting: approx. 5 min. * When set as slave unit: approx. 60 min.
External power source:	Compact Battery Pack CP-E4N can be used

● Dimensions and Weight

Dimensions (W x H x D):	Approx. 78.7 x 143.2 x 122.7 mm / 3.10 x 5.64 x 4.83 in. (without dust- and water-resistant adapter)
Weight:	Approx. 435 g / 15.34 oz. (Speedlite only, excluding batteries)

● Operation Environment

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

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

Guide Number (ISO 100, in approx. meters/feet)

● Normal Flash (Full Output)/Quick Flash

Flash Coverage (mm)	14	20	24	28	35	50
Normal Flash (Full Output)	15 / 49.2	26 / 85.3	27 / 88.6	28 / 91.9	34 / 111.6	39 / 128.0
Quick Flash	Equivalent to approx. 1/2 - 1/6 of full output					

Flash Coverage (mm)	70	80	105	135	200
Normal Flash (Full Output)	46 / 150.9	49 / 160.8	54 / 177.2	57 / 187.0	60 / 196.9
Quick Flash	Equivalent to approx. 1/2 - 1/6 of full output				

● Manual Flash

Flash Output	Flash Coverage (mm)					
	14	20	24	28	35	50
1/1	15 / 49.2	26 / 85.3	27 / 88.6	28 / 91.9	34 / 111.6	39 / 128.0
1/2	10.6 / 34.8	18.4 / 60.4	19.1 / 62.7	19.8 / 65.0	24.0 / 78.7	27.6 / 90.6
1/4	7.5 / 24.6	13.0 / 42.7	13.5 / 44.3	14.0 / 45.9	17.0 / 55.8	19.5 / 64.0
1/8	5.3 / 17.4	9.2 / 30.2	9.5 / 31.2	9.9 / 32.5	12.0 / 39.4	13.8 / 45.3
1/16	3.8 / 12.5	6.5 / 21.3	6.8 / 22.3	7.0 / 23.0	8.5 / 27.9	9.8 / 32.2
1/32	2.7 / 8.9	4.6 / 15.1	4.8 / 15.7	4.9 / 16.1	6.0 / 19.7	6.9 / 22.6
1/64	1.9 / 6.2	3.3 / 10.8	3.4 / 11.2	3.5 / 11.5	4.3 / 14.1	4.9 / 16.1
1/128	1.3 / 4.3	2.3 / 7.5	2.4 / 7.9	2.5 / 8.2	3.0 / 9.8	3.4 / 11.2

Flash Output	Flash Coverage (mm)				
	70	80	105	135	200
1/1	46 / 150.9	49 / 160.8	54 / 177.2	57 / 187.0	60 / 196.9
1/2	32.5 / 106.6	34.6 / 113.5	38.2 / 125.3	40.3 / 132.2	42.4 / 139.1
1/4	23.0 / 75.5	24.5 / 80.4	27.0 / 88.6	28.5 / 93.5	30.0 / 98.4
1/8	16.3 / 53.5	17.3 / 56.8	19.1 / 62.7	20.2 / 66.3	21.2 / 69.6
1/16	11.5 / 37.7	12.3 / 40.4	13.5 / 44.3	14.3 / 46.9	15.0 / 49.2
1/32	8.1 / 26.6	8.7 / 28.5	9.5 / 31.2	10.1 / 33.1	10.6 / 34.8
1/64	5.8 / 19.0	6.1 / 20.0	6.8 / 22.3	7.1 / 23.3	7.5 / 24.6
1/128	4.1 / 13.5	4.3 / 14.1	4.8 / 15.7	5.0 / 16.4	5.3 / 17.4

Using with a Type-B Camera

This section describes the available and unavailable functions when using the Speedlite 600EX II-RT with a Type-B camera (EOS film camera supporting A-TTL/TTL autoflash).

When the Speedlite is attached to a Type-B camera, <TTL> is displayed on the flash LCD panel.

● Functions available with Type-B cameras

- TTL autoflash
- Speedlite flash exposure compensation
- FEB
- Manual flash
- Stroboscopic flash
- Second-curtain sync
- Manual external flash metering
- Optical transmission wireless flash photography
  - Manual flash
  - Stroboscopic flash

● Functions not available with Type-B cameras

- E-TTL II/E-TTL autoflash
- FE lock
- High-speed sync
- Quick flash
- Modeling flash
- Auto external flash metering
- Radio transmission wireless flash photography
- Linked shooting
- Optical transmission wireless flash photography
  - Autoflash photography
  - Flash ratio control

Radio Transmission Wireless Function

■ Countries and Regions Permitting Radio Transmission Wireless Function Use

Use of radio transmission wireless function is restricted in some countries and regions, and illegal use may be punishable under national or local regulations. To avoid violating radio transmission wireless function regulations, visit the Canon Web site to check where use is allowed.
Note that Canon cannot be held liable for any problems arising from radio transmission wireless function use in other countries and regions.

■ Model Number

600EX II-RT : DS401131 (including radio transmission wireless module model: CH9-1216)



FCC/IC NOTICE
Model: DS401131 (including Radio Transmission Wireless Module Model: CH9-1216, FCC ID: AZD216 / IC: 498J-216)

This device complies with Part 15 of FCC Rules and Industry Canada's license exempt RSSs. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

This equipment must not be co-located or operated in conjunction with any other antenna or equipment except Canon accessories supplied or designated for this product.

This equipment complies with FCC/IC radiation exposure limits set forth for an uncontrolled environment and meets the FCC radio frequency (RF) Exposure Guidelines and RSS-102 of the IC radio frequency (RF) Exposure rules. This equipment has very low levels of RF energy that is deemed to comply without testing of specific absorption rate (SAR).

Hereby, Canon Inc. declares that this DS401131 is in compliance with the essential requirements and other relevant provisions of Directive 1999/5/EC.

Please contact the following address for the original Declaration of Conformity:
CANON EUROPA N.V.
Bovenkerkerweg 59, 1185 XB Amstelveen, The Netherlands
CANON INC.
30-2, Shimomaruko 3-chome, Ohta-ku, Tokyo 146-8501, Japan

CE

Model: DS401131 systems

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Note: This equipment has been tested and found to comply with the limits for a class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

– Reorient or relocate the receiving antenna.
– Increase the separation between the equipment and receiver.
– Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
– Consult the dealer or an experienced radio/TV technician for help.

Do not make any changes or modifications to the equipment unless otherwise specified in the manual. If such changes or modifications should be made, you could be required to stop operation of the equipment.

CAN ICES-3 (B) / NMB-3 (B)

The apparatus shall not be exposed to dripping or splashing.
Batteries shall not be exposed to excessive heat such as sunshine, fire, or the like.
Dry batteries shall not be subjected to charging.



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

This symbol indicates that this product is not to be disposed of with your household waste, according to the WEEE Directive (2012/19/EU) and national legislation. This product should be handed over to a designated collection point, e.g., on an authorized one-for-one basis when you buy a new similar product or to an authorized collection site for recycling waste electrical and electronic equipment (EEE). Improper handling of this type of waste could have a possible negative impact on the environment and human health due to potentially hazardous substances that are generally associated with EEE. At the same time, your cooperation in the correct disposal of this product will contribute to the effective usage of natural resources. For more information about where you can drop off your waste equipment for recycling, please contact your local city office, waste authority, approved WEEE scheme or your household waste disposal service. For more information regarding return and recycling of WEEE products, please visit www.canon-europe.com/weee.

Graphical symbols placed on the equipment

⎓ Direct current

DISPOSE OF USED BATTERIES ACCORDING TO LOCAL REGULATIONS.

MEMO

MEMO

MEMO

Index

Numerics

12- or 2-sec. timer....4
18% gray reflector....41

A

Accessories....16
AF-assist beam....26, 115, 117
Auto external flash metering....45
Auto power off....22, 113, 115
Auto zoom adjustment to image sensor size....26
Av (Aperture-priority AE)....25

B

Batteries....18
Beep....69, 116
Bounce....33
  Bounce adapter....16, 36, 122

C

C.Fn....110, 111, 113
Case....16
Catchlight shooting....35
Clear all....56, 112
Clearing settings (Reverting to defaults)....50, 55
Color filter....16, 48, 122
Color temperature information transmission....26
Creative Zone....4, 27, 51, 57, 89, 109
Custom Functions (C.Fn)....110, 111, 113

D

Distance indicator display....24, 40, 113

E

Effective flash range....12, 24, 45
E-TTL II flash metering....54
E-TTL II/E-TTL autoflash....24, 25
Ext.A (Auto external flash metering)....45
Ext.M (Manual external flash metering)....46
External power....116, 123

F

FE lock (FEL)....30
FEB (Flash Exposure Bracketing)....29
Firing groups....73, 75, 77, 79, 101, 103, 105
Firing interval....18, 124
First-curtain sync....54
Flash control....52
Flash coverage....38, 117
Flash exposure compensation....28, 54, 72, 100
Flash exposure confirmation lamp....24
Flash exposure level....12, 28, 41
Flash firing restriction....124
Flash frequency....42
Flash function settings....51
Flash head (Light-emitting unit)....10, 33
Flash metering....54, 114
Flash mode....12, 13, 14, 24, 40, 54
Flash output....40, 42, 77, 105
Flash positioning....58, 90

Flash ratio
Three groups (A:B C) 75, 103
Two groups (A:B).....73, 101
Flash-ready lamp.....21, 69, 97, 119
Flash sync speed.....54, 61
Flash synchronization speed in Av mode.....54
Fully automatic flash photography..24
Function settings.....51

G
Gr (group firing) 79
Group control 76, 104
Guide number 137

H
High-speed sync.....31, 62, 72, 100
Hot shoe 20

I
INDIVIDUAL SLAVE 15, 107
Individual slave 107
ISO speed.....46

L
LCD Panel 12
Contrast.....118
Illumination 22, 71, 117
Illumination color 118
Light distribution.....117
Light-emitting unit (Flash head).....10, 33
LINK.....11, 66, 69
Linked shooting.....15, 84, 119
LINKED SHOT.....15, 84
LOCK.....22
Lock function.....22

M
M (Manual exposure) 25
M (Manual flash) 40, 77, 105
Manual external flash metering 46
Manual flash..... 40, 77, 105
Master flash firing..... 66, 94
Master unit 14, 57, 89
Master unit setting 63, 92
Maximum number of continuous flashes..... 44
Memory function..... 67, 95
Metered manual flash..... 41
Modeling flash 47, 82
MULTI (flash mode)..... 42

N
Nomenclature..... 10
Normal flash 18, 137
Number of flashes 18

O
Optical transmission wireless flash photography 89
Fully automatic, one slave unit .. 96
Fully automatic, three groups (A:B C) 103
Fully automatic, two groups (A:B)..... 101
Manual flash 105

P
P (Program AE)..... 24
P.Fn 110, 112, 118
PC terminal 10
Personal Functions (P.Fn)..... 110, 112, 118
Power switch 21

Q

Quick flash 18, 21, 119

R

Radio transmission wireless flash photography 57
Fully automatic, one slave unit ...68
Fully automatic, three groups (A:B C).....75
Fully automatic, two groups (A:B) 73
Group firing.....79
Manual flash 77
Recharging.....21
Remote release.....83

S

Safety precautions 8
Scanning.....65
Second-curtain sync 32
Shooting distance 40
Short distance flash photography ...34
Shutter speed.....25
Shutter sync settings.....54
Slave unit 15, 57, 89
Charge confirmation.....69, 71, 81, 97, 117
Slave unit setting 63, 92
Stand.....16
☆ (Star) mark.....4
Stroboscopic flash.....42, 72, 100
Sync speed 25, 54, 61
System map.....122

T

Temperature increase 124
Test flash.....21, 70, 82, 98
Transmission channel 63, 93
Transmission distance..... 58, 60, 90
Transmitter 84, 122
TTL autoflash 114, 138
Tv (Shutter-priority AE)..... 25
Type-A camera 2
Type-B camera 138

W

Warning 61, 124
Wide panel 39
Wireless button..... 11, 63, 85, 92, 107
Wireless operation range 58, 90
Wireless radio ID 63, 64
Wireless settings 63, 92
Wireless shooting 57, 89

Z

Zoom 38

Canon

The descriptions in this Instruction Manual are current as of January 2016. 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.

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