

Godox 神牛

迅丽TTL机顶闪光灯

Thinklite TTL Camera Flash

TT685C

For Canon



INSTRUCTION MANUAL

说明手册

中英文双语 / Chinese English Bilingual

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Made In China

FC CE RoHS



在使用本产品之前：

请先仔细阅读本手册，以确保您能安全使用。请保存好本手册以备将来查询参考。

Before using this product:

Please read this user manual carefully in order to ensure your safety and the proper operation of this product. Keep for future reference.

### 感谢您购买神牛产品。

该型号机顶闪光灯适用于佳能EOS系列相机，兼容E-TTL II自动闪光。使用E-TTL闪光灯，您将获得更简单的拍摄体验，在光线变化复杂的情况下，可以自动获得准确的闪光曝光，拍摄轻松自如。产品特点突出表现在以下几方面：



- **GN60 (m ISO 100, @200mm), 22级调光(1/1~1/128)**
- **兼容佳能E-TTL II**  
支持E-TTL自动闪光，可作为无线多灯闪光系统的主控或从属单元，拍摄更简单快捷
- **点阵液晶屏**  
显示直观，操作更加简易
- **内置2.4G无线传输**  
收发一体，超远距离，创意无限
- **无线功率遥控触发**  
选购FT-16S遥控器，可对离机闪光灯进行无线功率调节等参数设置，同时触发引闪
- **功能齐全，无限享用**  
支持手动和频闪闪光模式，高速同步/第二帘快门同步/闪光曝光补偿等E-TTL II功能
- **光学研究，输出稳定**  
高速连闪，每次输出亮度和色温连续一致( $5600 \pm 200K$ )，光线均匀分布
- **固件升级，兼容无忧**  
跟随原厂相机步伐，可对软件进行再升级

- ⚠ 请保持干燥。
- ⚠ 请勿私自拆卸产品，如产品出现故障须由本公司或授权的维修人员进行检查维修。
- ⚠ 请勿让儿童接触本产品。
- ⚠ 禁止拆卸、撞击、挤压或投入火中，若出现严重鼓胀，请勿继续使用。请勿放置在超过50度的高温环境中。
- ⚠ 请勿将闪光灯头正对人眼闪光(特别是婴儿的眼睛)，否则可能会在短时间内造成视力障碍。
- ⚠ 请勿在化学品、可燃性气体或其他特殊物质附近使用闪光灯，这些物质在特殊情况下可能对闪光灯发出的瞬间强光敏感，有可能导致火灾或电磁干扰。在这些场合下，请注意相关警告标识。
- ⚠ 本产品不能防水，在雨天及潮湿环境下请注意防水。
- ⚠ 若发生任何故障，请立即关闭闪光灯电源。



## 迅丽TTL机顶闪光灯 Thinklite TTL Camera Flash

本说明书中使用的约定

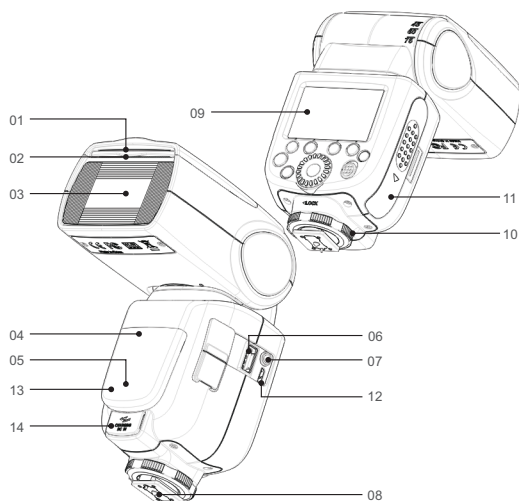
- 此使用说明书中的操作步骤假定相机和闪光灯的电源开关已开启。
- 参考页码由(第\*\*页)表示。
- 此使用说明书中使用以下警告符号：  
 该“小心”符号表示避免出现拍摄问题的警告。  
 该“注意”符号提供补充信息。

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	LCD液晶显示屏
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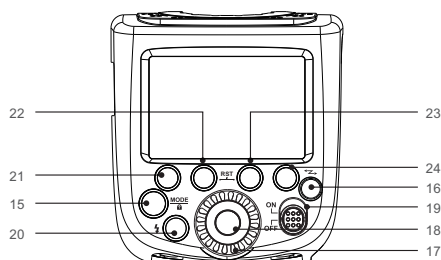
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## 部件名称



### • 机身

- |             |               |
|-------------|---------------|
| 01. 眼神光板    | 08. 热靴        |
| 02. 内置广角散光板 | 09. 点阵液晶显示屏   |
| 03. 闪光灯头    | 10. 固定旋钮      |
| 04. 无线传感器   | 11. 电池仓       |
| 05. 辅助对焦灯   | 12. USB端口     |
| 06. 无线控制插座  | 13. 从属单元状态指示灯 |
| 07. 同步插孔    | 14. 外部电源插槽    |



### • 控制面板

- |                          |                    |
|--------------------------|--------------------|
| 15. <MODE> 闪光模式选择按钮/锁定按钮 | 20. <⚡> 试闪按钮/回电指示灯 |
| 16. <←→> 无线按钮            | 21. 功能按钮1          |
| 17. 调节旋钮                 | 22. 功能按钮2          |
| 18. <SET> 设置按钮           | 23. 功能按钮3          |
| 19. ON/OFF 电源开关          | 24. 功能按钮4          |

## • LCD液晶显示屏

### (1) E-TTL自动闪光

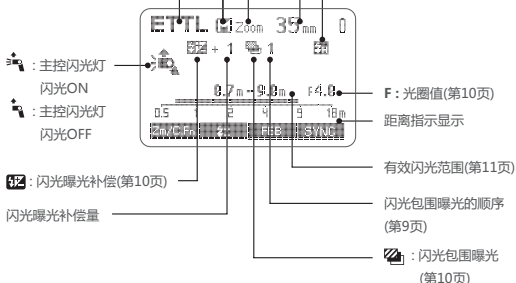
Zoom : 变焦显示(第32页)

- A** : 自动  
**M** : 手动(第13页)

ETTL : E-TTL II/E-TTL  
 自动闪光

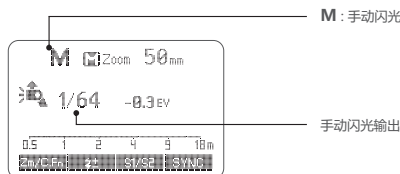
焦距(闪光覆盖/第32页)

- Hi** : 高速同步  
 (第12页)  
**⏮** : 后帘同步  
 (第12页)

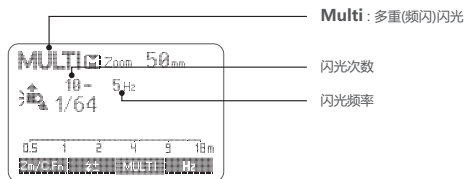


- 显示屏将只显示当前应用的设置。
- 在功能按钮1至功能按钮4上方显示的功能(如 < SYNC > 和 < ± >)根据设置的状态发生变化。
- 当操作按钮或拨盘时,液晶显示屏点亮。

### (2) M手动闪光



### (3) Multi频闪光





#### (4)无线电传输拍摄/光学传输无线拍摄

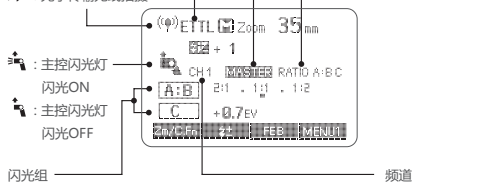
##### ● 主控单元

闪光模式

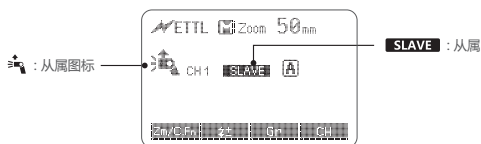
Gr: 组闪光(无线电传输)

☞: 无线电传输无线拍摄

⚡: 光学传输无线拍摄

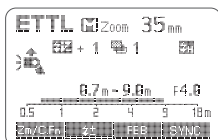


##### ● 从属单元

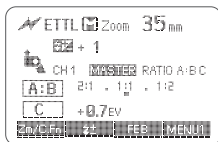


#### ● 五种模式下的不同LCD屏显示

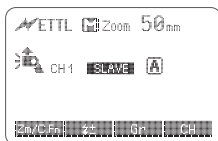
##### ● 机顶模式



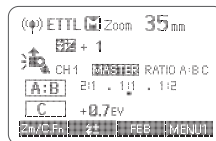
##### ● 光学传输: 作为主控



##### ● 光学传输: 作为从属



##### ● 2.4G无线传输: 作为主控



##### ● 2.4G无线传输: 作为从属



#### ● 标配物品

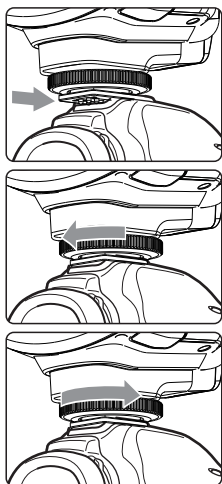
- 1、灯体
- 2、微型底座
- 3、保护包
- 4、说明书

#### ● 可选购附件

可搭配本公司以下摄影附件使用，以获得最佳的拍摄效果和使用体验：X1C TTL引闪器、FT-16S功率遥控器、迷你柔光箱、反光板、蜂巢、色片、束光布等。



## 装卸闪光灯



- 1 安装闪光灯。
  - 滑动闪光灯固定座使其完全插入相机的热靴插座。
- 2 拧紧闪光灯。
  - 旋转固定座上的锁定旋钮，直到锁定闪光灯。
- 3 取下闪光灯。
  - 旋转固定座上的锁定旋钮，直到闪光灯解除锁定。

## 电源管理

\* ON/OFF电源开关控制该产品的打开和关闭，长时间不使用时请关闭电源。本产品设计有电源自动关闭功能。作为主控单元在长时间（约90秒）无人操作时，闪光灯会自动关闭，半按快门按钮或机身任意键唤醒；作为从属单元在60分钟（或者选择30分钟）无任何操作时，闪光灯会进入休眠状态，此时可按机身任意键唤醒。

**C.Fn** 离机使用时，建议通过自定义功能使“自动关闭电源”无效。（C.Fn-APO 第33页）

**C.Fn** “从属单元自动关闭电源计时器”出厂默认设置为60分钟，也可自定义选择30分钟。（C.Fn-SvAPOT 第33页）

## 闪光模式：E-TTL自动闪光模式

该闪光灯有**E-TTL**自动闪光，**M**手动闪光，**Multi**频闪光三种模式。在**ETTL**模式下，相机的测光系统会侦查从主体反射回来的闪光照明，从而自动调节闪光输出量，使主体和背景得到均衡曝光。支持曝光补偿、曝光包围、高速同步、第二帘快门同步、曝光锁定、光圈预览造影闪光、佳能相机菜单访问等功能。

\* 按下 < **MODE** > 模式选择按钮，三种闪光模式将会依次出现在液晶屏上。

### E-TTL模式

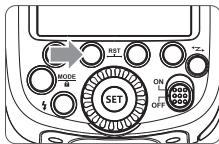
通过按 < **MODE** > 模式选择按钮，将闪光灯设置为 < **ETTL** >，可以使闪光灯进入ETTL模式。

- 半按相机快门按钮进行对焦，光圈值和有效闪光范围将会显示在显示屏上。
- 在快门释放前的瞬间进行一次预闪，闪光灯接收相机信息进行主闪光。

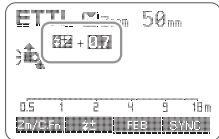
### 闪光曝光补偿

该闪光灯可以在±3档间以1/3档为增量调节闪光曝光补偿。由于环境的需求而需要微调TTL系统时，这个功能非常有用。

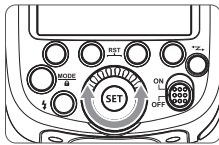
设置闪光曝光补偿：



- 1 按下功能按钮 < **□** >，令屏幕显示 < **□** > 图标，并且闪光曝光补偿量被突出显示



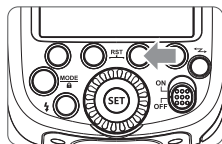
- 2 设置闪光曝光补偿量。
  - 转动调节旋钮设置曝光补偿量。
  - “0.3”表示1/3档，“0.7”表示2/3档。
  - 要取消闪光曝光补偿，将闪光曝光补偿量设为“+0”。



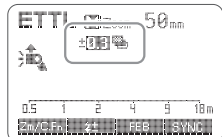
- 3 按下 < **SET** > 设置按钮，确定闪光曝光补偿。

### FEB(闪光包围曝光)

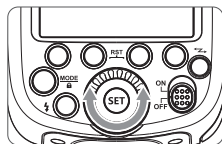
每次拍摄都在±3档间以1/3档为增量自动更改闪光输出，称之为FEB(闪光包围曝光)。使用该功能，相机将记录三张不同闪光输出(正确曝光、曝光不足、曝光过度)的照片。在拍摄移动主体，或是拍摄场景中灯光效果较复杂情况下，使用该功能可获得合适的曝光。



1 按下功能按钮3<FEB>，令屏幕显示<FEB>图标，并且FEB水平显示被突出显示。



2 设置闪光包围曝光量。  
• 转动调节旋钮设置包围曝光量。  
• “0.3”表示1/3档，“0.7”表示2/3档。



3 按下<SET>设置按钮，确定FEB(闪光包围曝光)。屏幕显示跳转到闪光曝光补偿和闪光包围曝光数值显示。

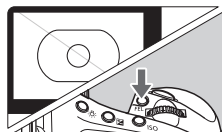
- 3次拍摄全部完成后，闪光包围曝光将被自动取消。
- 对于闪光包围曝光，将相机的驱动模式设为“单拍”，并在拍摄前确保闪光灯准备就绪。
- 还可以结合闪光包围曝光和闪光曝光补偿以及闪光曝光锁定一起使用。

**C.Fn** 您可以防止进行3次拍摄后闪光包围曝光被自动取消。(C.Fn-FEB ACL 第33页)

**C.Fn** 闪光包围曝光拍摄顺序可以在自定义功能界面进行修改。(C.Fn-FEB 第33页)

## FEL: 闪光曝光锁定

使用FEL(闪光曝光)锁定，您可以为场景的任何部分锁定正确的闪光曝光设置。液晶显示屏上显示<ETTL>时，按下相机的<FEL>按钮。如果相机没有<FEL>按钮，按下<\*>按钮。



1 对被摄体对焦。

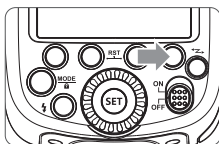
2 按下<FEL>按钮。

- 将取景器中央对准被摄体，然后按下<FEL>按钮。
- 闪光灯将会进行预闪，并将被摄体所需的闪光输出保留在内存中。
- “FEL”将在取景器中显示0.5秒。
- 每次按下<FEL>按钮时，闪光灯将进行预闪并锁定新的闪光曝光设置。

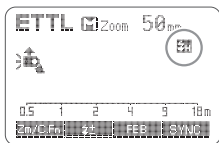
- 如果被摄体太远，将导致曝光不足，<F>图标将在取景器中闪烁。请靠近被摄体然后再次尝试闪光曝光锁定。
- 如果液晶显示屏上不显示<ETTL>，将不能设置闪光曝光锁定。
- 如果被摄体太小，闪光曝光锁定效果可能不太好。

## 高速同步

使用高速同步(FP闪光)，您可以在所有的快门速度下同步使用闪光灯。高速同步闪光在使用光圈优先对人像进行填充闪光时特别方便。



1 按下功能按钮4<SYNC>，令屏幕显示<H>图标。

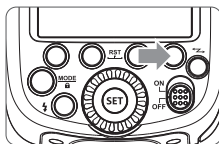


2 检查取景器中，<H>图标是否显示。

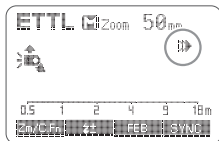
- 如果设置快门速度等于或慢于相机的最大闪光同步速度，取景器中将不显示<H>。
- 使用高速同步，快门速度越高，有效的闪光范围就越小。
- 要恢复普通闪光，再次按下<SYNC>按钮。<H>图标会消失。
- 无法设置频闪闪光。
- 连续高速同步闪光15次后，闪光灯热保护功能可能会被激活。

## 第二帘快门同步

使用慢速快门，您可以在被摄体后创建一条光线轨迹。在快门关闭的瞬间闪光灯闪光。

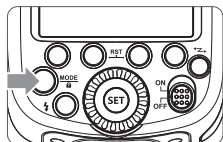


按下功能按钮4<SYNC>，令屏幕显示<D>图标。

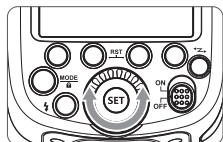
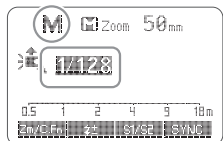


## 闪光模式：M 手动闪光

您可以在1/128功率至1/1全功率间以1/3档为增量设置闪光输出。  
为获得正确的闪光曝光，请使用手持的闪光测光表确定所需的闪光输出。



1 按 <MODE> 模式选择按钮，屏幕显示 <M>。



2 转动调节旋钮设置闪光输出功率。  
3 按下 <SET> 设置按钮，确定闪光曝光补偿。

### 显示闪光输出

拍摄过程中更改闪光输出时，下表将清楚地显示光圈值是如何更改的，如1/2-0.3→1/2+0.3。您可以在增加或减少闪光输出时查看光圈值的更改规律。

例如，将闪光输出量减少至1/2、1/2-0.3或1/2-0.7，然后再将其增加至大于1/2、1/2+0.3、1/2+0.7时，将显示1/1。

减少闪光输出指数→

1/1	1/1-0.3	1/1-0.7	1/2	1/2-0.3	1/2-0.7	1/4	.....
	1/2+0.7	1/2+0.3		1/4+0.7	1/4+0.3		.....

←增加闪光输出指数

### S1光控单元设置

在M手动闪光模式下，可以使用S1功能，闪光灯可作为副灯使用，创造多种照明效果，适用于手动闪光环境。它会与主闪光灯的第一次闪光同步触发闪光，效果与使用无线引闪器一致。

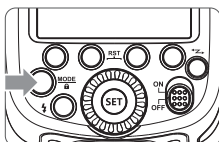
### S2光控单元设置

在M手动闪光模式下，可以使用S2功能，闪光灯可作为副灯使用，适用于TTL闪光环境。具有防预闪功能，使用带一次预闪功能的相机能用光控实现同步拍摄。它会与主闪光灯的第二次闪光同步触发闪光，即2次光控引闪。

- 只有在M模式下才支持S1/S2光控引闪模式。

## 闪光模式：Multi 频闪闪光

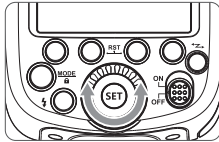
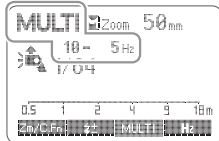
使用频闪闪光，可以发出一系列快速的闪光。它可以在一张照片上拍摄移动物体的多个图像。您可以设置闪光频率(每秒的闪光次数，以Hz表示)、闪光次数和闪光输出。



1 按 <MODE> 闪光模式选择按钮，屏幕显示 <MULTI>

2 设置闪光频率和闪光次数。

- 按功能按钮3 <MULTI> 选择闪光次数，旋转调节旋钮设定数字。
- 按功能按钮4 <Hz> 选择闪光频率，旋转调节旋钮设定数字。



3 转动调节旋钮设置闪光输出功率。  
按下 <SET> 设置按钮确定，所有设置都将显示出来。

### 计算快门速度

在频闪闪光过程中，到闪光停止为止快门应保持开启状态。使用下面的公式计算快门速度，然后用相机进行设置。

$$\text{闪光次数/闪光频率} = \text{快门速度}$$

例如，如果闪光次数是10，闪光频率是5Hz，快门速度则至少为2秒。

- 为防止闪光灯过热并损坏，请勿执行连续10次以上的频闪闪光连拍。闪光10次后，请让闪光灯至少冷却15分钟。如果您试图执行连续10次以上的频闪闪光连拍，为防止闪光灯过热，闪光可能自动停止。如果发生了这种情况，请让闪光灯至少冷却15分钟。

- 反光很强的被摄体在暗背景前使用频闪闪光更加有效。
  - 推荐使用三脚架和遥控开关。
  - 闪光输出为1/1和1/2时不能设置频闪闪光。
  - 频闪闪光时也可以使用“bulb”。
  - 如果闪光次数显示为--，则闪光灯会连续闪光，直到快门或电池耗尽。如下表所示，闪光次数将受到限制。

### 最大频闪闪光次数

闪光输出 \ Hz	1	2	3	4	5	6-7	8-9
1/4	7	6	5	4	4	3	3
1/8	14	14	12	10	8	6	5
1/16	30	30	30	20	20	20	10
1/32	60	60	60	50	50	40	30
1/64	90	90	90	80	80	70	60
1/128	100	100	100	100	100	90	80

闪光输出 Hz	10	11	12-14	15-19	20-50	60-199
1/4	2	2	2	2	2	2
1/8	4	4	4	4	4	4
1/16	8	8	8	8	8	8
1/32	20	20	20	18	16	12
1/64	50	40	40	35	30	20
1/128	70	70	60	50	40	40

如果闪光次数显示为--，则不论闪光频率是多少，最大的闪光次数如下表所示。

闪光输出	1/4	1/8	1/16	1/32	1/64	1/128
闪光次数	2	4	8	12	20	40

## 无线闪光拍摄：无线电(2.4G)传输

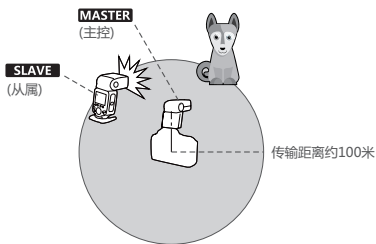
- ▲ 当相机的拍摄模式设为全自动模式或程序影像控制区模式时，无法利用本章中的操作。将相机的拍摄模式设为P/Tv/Av/M/B(创意拍摄区模式)。

- 安装在相机上的**TT685C**称为主控单元，受无线控制的**TT685C**称为从属单元。
  - 还可以用闪光灯信号发射器**X1T-C**(另购)无线控制设为从属单元的**TT685C**。有关设定主控单元功能的详细说明，请参考信号发射器的使用说明书。

使具有无线电传输无线拍摄功能的闪光灯(主控/从属)，可按照与普通E-TTL II自动闪光拍摄同样的方法，轻松利用高级无线多重闪光照明进行拍摄。基本相对位置和操作范围如图所示，只要将主控单元设定为<ETTL>就可以进行无线E-TTL II自动闪光拍摄。

### 定位和操作范围(无线闪光拍摄的示例)

- 使用一个从属单元进行自动闪光拍摄

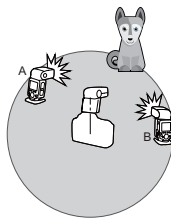


- 使用附带的微型支架定位从属单元。
  - 开始拍摄前请进行测试闪光和试拍。
  - 受从属单元的位置、周围环境、天气状况等影响，传输距离可能更短。

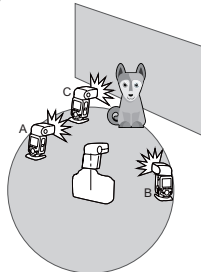
## 无线多重闪光拍摄

可以将从属单元分割为两个或三个组并在改变闪光光比(倍率)的同时进行E-TTL II自动闪光拍摄。此外，可以为各闪光组(最多5个组)设定并用不同的闪光模式拍摄。

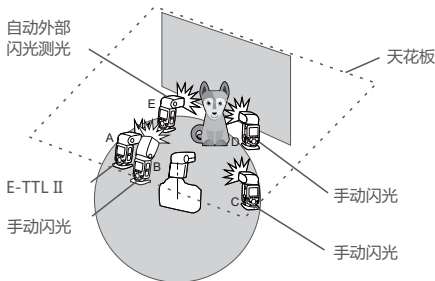
- 用两个从属组进行自动闪光拍摄。



- 用三个从属组进行自动闪光拍摄。



- 用为各组设定的不同闪光模式进行拍摄。

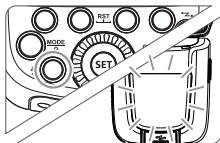


\* 所示的闪光模式设置仅为示例

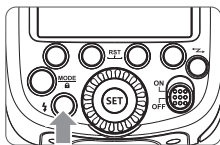
## ▲ 神牛2.4G无线漏闪原因及解决办法

1. 外部环境2.4G信号干扰(如无线基站、2.4Gwifi路由、蓝牙设备等)
  - 请调节闪光器的频道CH设置(建议+10)，找到无干扰的频道来工作，或者在工作时关闭其他2.4G设备。
2. 请确认闪光灯是否已经回电或者回电速度已经跟上连拍速度(闪光灯就绪指示灯已经亮起)，并且没有处于过热保护或者其他异常状态中
  - 请下调闪光灯的档位，如是TTL模式可以尝试改为M模式(TTL模式下需要预闪一次)。
3. 是否引闪器和闪光灯距离太近(距离<0.5m)
  - 请在引闪器上打开“近距离无线模式”：
    - X1系列：按住引闪按钮不放，然后开机，直至指示灯闪2次。
    - Xpro系列：设置C.Fn-DIST为0-30m。
4. 是否引闪器和接收端设备在低电状态
  - 请更换电池(引闪器电池建议使用1.5V一次性碱性电池)。



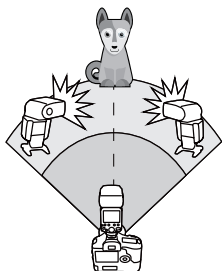


- 6** 检查闪光灯是否准备就绪。
- 检查主控闪光灯就绪指示灯点亮。
  - 当从属闪光灯就绪时，自动对焦辅助光发光区域以1秒间隔闪烁。



- 7** 检查操作。
- 按下主控闪光灯的试闪按钮 。
  - 从属单元闪光。如果从属单元不闪光，检查是否将其放置在操作范围内。

#### 使用多个从属单元的自动闪光拍摄



当需要更大的闪光输出或想要更加轻松地地进行照明时，可以增加从属单元的数量并将其作为单个闪光灯闪光。

要添加从属单元，使用与“使用一个从属单元的自动闪光拍摄”相同的步骤，可以设定任何闪光组(A/B/C)。

当增加了从属单元的数量或主控闪光灯闪光设为ON时，执行自动控制以使所有闪光灯以相同的闪光输出闪光并确保总闪光输出能够达到到标准曝光。

- 可以按相机上的景深预览按钮进行造型闪光。
- 如果从属单元的自动关闭电源生效，按主控单元的测试闪光按钮打开从属单元。请注意在相机的测光定时工作期间，无法进行测试闪光。
- 可以改变到从属单元的自动关闭电源生效为止的时间(C.Fn-Sv APOT/第33页)。
- 可以进行设置以使自动对焦辅助发射器在从属单元回电完毕时不闪烁(C.Fn-AF/第33页)。

#### 使用全自动无线闪光

在主控单元上设定的闪光曝光补偿和其他设置也会在从属单元中自动设定。不需要操作从属单元。可按照与普通闪光拍摄相同的方法使用以下设置进行无线闪光拍摄。

- 闪光曝光补偿( /第10页)
- 闪光包围曝光( /第10页)
- 闪光曝光锁定(第11页)
- 高速同步( /第12页)
- 手动闪光(第13页)
- 频闪闪光(第14页)

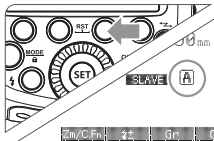
#### 关于主控单元

可以使用两个或两个以上主控单元。通过准备多台装有主控单元的相机，可以在保持相同照明(从属单元)期间更换相机进行拍摄。

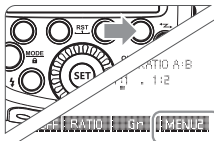
## 6、ETTL: 使用闪光光比的无线多重闪光拍摄

### 用两个从属组进行自动闪光拍摄

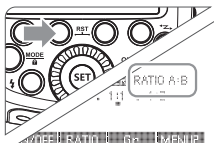
可以将从属单元分成两个闪光组A和B并调整拍摄用照明平衡(闪光光比)。自动控制曝光以使闪光组A和B的总闪光输出达到标准曝光。



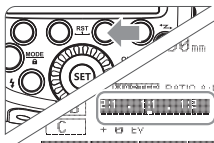
- 1** 设定从属单元的闪光组。
- 将闪光灯设为从属单元。
  - 按下功能按钮3 < Gr > 并选择 <A> 或 <B>。
  - 将一个单元设为 <A>，将另一个单元设为 <B>。



- 2** 设定 < MENU 2 > 显示。
- 步骤2至4在主控单元上设定。
  - 按下主控单元上的功能按钮4以显示 < MENU 2 >。



- 3** 设为 < RATIO A:B >。
- 按下功能按钮2 < RATIO > 令屏幕显示 < RATIO A:B >

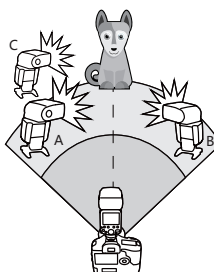


- 4** 设定闪光光比。
- 按下功能按钮3 < Gr >
  - 旋转调节旋钮设定闪光光比并按 < SET > 设置按钮确定。

- 5** 拍摄照片。
- 从属单元以设定的闪光光比闪光。

### 用三个从属组进行自动闪光拍摄

可将闪光组C添加到闪光组A和B。C有助于消除被摄体阴影的照明。基本设定方法与“用两个从属组进行自动闪光拍摄”相同。



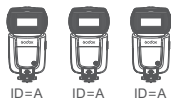
- 1** 设定从属组别 < C >。
- 按照前一页步骤1相同的方法设定闪光灯闪光组 < C > 的从属单元。
- 2** 设为 < RATIO A:B:C >。
- 按照前一页步骤2和步骤3的相同方法将主控单元设为 < RATIO A:B:C >。
- 3** 根据需要设置闪光曝光补偿
- 按照前一页步骤1相同的方法设定闪光灯闪光组 < C > 的从属单元。

- 按下功能按钮2 < RATIO >，旋转调节旋钮设置闪光曝光补偿量并按 < SET > 键确定。



## 从属单元控制

从属单元组A



如果将具有三个从属单元的闪光组设为<A>，这三个从属单元将被作为从属单元组A的一个闪光灯来控制。

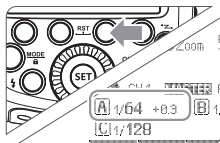
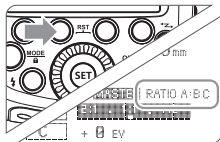
- 要让三个闪光组A、B和C同时闪光，设定<RATIO A:B:C>。在<RATIO A:B>设置下，闪光组C不闪光。
- 如果在闪光组C直接朝向主被摄体的状态下拍摄，可能会导致曝光过度。
- 在某些支持E-TTL自动闪光的EOS胶卷相机上，不能以闪光光比设置进行多重闪光无线拍摄。

- 当换算为档数时，闪光光比8:1至1:1至1:1.8相当于3:1至1:1至1:3(1/2档增量)。
- 闪光光比设置的详细说明如下。

8:1   4:1   2:1   1:1   1:2   1:4   1:8  
5.6:1   2.8:1   1.4:1   1:1.4   1:2.8   1:5.6

## 7、M:手动无线闪光拍摄

使用手动闪光的无线(多重闪光)拍摄，可以为每个从属单元(闪光组)设定不同的闪光输出进行拍摄。在主控单元上设定所有参数。

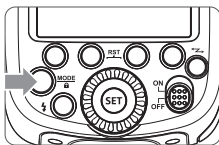


- 1 将闪光模式设为<M>。
- 2 设定闪光组数量。
  - 显示<MENU1>期间，按功能按钮2<RATIO>并设定要闪光的组。
  - 每次按该按钮，设置变化如下：  
ALL(RATIO OFF)→  
A/B(RATIO A:B)→  
A/B/C(RATIO A:B:C)。
- 3 设置闪光输出
  - 按下功能按钮3<Gr>，旋转调节旋钮为闪光组设定闪光输出，并按<SET>设置按钮确定。
- 4 拍摄照片
  - 各组以设定的闪光光比闪光。

- 当设定ALL<RATIO OFF>时，将从属单元的闪光组设为A、B或C。
- 要让多个从属单元以相同的闪光输出闪光时，在步骤2中选择ALL<RATIO OFF>。

## 设定<M>闪光模式

可以直接操作从属单元以手动设定手动闪光或频闪闪光。

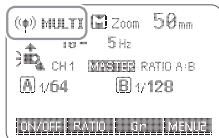


1 设定从属单元。(第17页)

2 设定<M>闪光模式。

- 按下<MODE>模式选择按钮令屏幕显示<M>。
- 设定手动闪光输出。(第13页)

## 8、Multi:手动无线闪光拍摄



1 设定<MULTI>频闪模式。

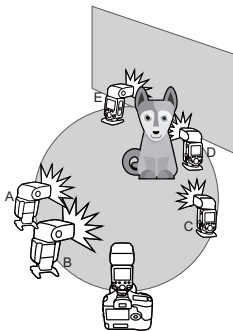
- 按下<MODE>模式选择按钮令屏幕显示<MULTI>。
- 设定频闪闪光设置。(第14页)

## 9、Gr:为各组设定不同的闪光模式进行拍摄

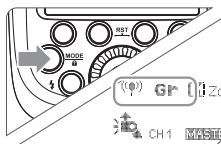
当使用从2012年开始发售的EOS数码相机(如EOS-1D X)时(EOS 1200D除外)，可以为各闪光组(最多5个组(A/B/C/D/E))设定不同的闪光模式进行拍摄。

可以设定的闪光模式为①E-TTL II自动闪光和②手动闪光。当闪光模式为①时，作为单个组控制曝光以获得主被摄体的标准曝光。

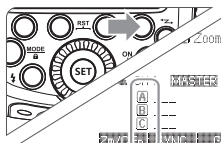
此功能面相对照明非常熟知和有经验的高级用户。



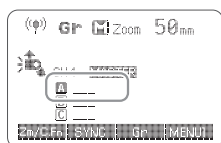




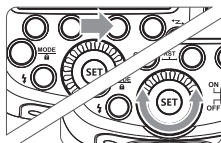
- # 1
- 将闪光模式设为 <Gr>。
- 按主控单元上的 <MODE> 按钮并将闪光模式设为 <Gr>。



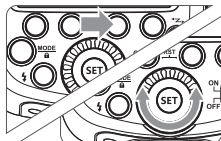
- # 2
- 设定从属单元的闪光组。
- 逐一操作和设定从属单元。
  - 显示 <MENU1> 期间,按功能按钮3 <Gr> 并选择 <A>、<B>、<C>、<D>或 <E>。
  - 为所有从属单元设定闪光组 (A/B/C/D/E)。



- # 3
- 设定闪光模式。
- 按通过操作主控单元设定各闪光组的闪光模式。
  - 显示 <MENU1> 期间,按功能按钮3 <Gr> 并转动拨盘以选择闪光组。
  - 按功能按钮2 <MODE> 并 从 <ETTL>、<M>和 <---(OFF)> 中选择所选组的闪光模式。
  - 按重复步骤3设定所有组的闪光模式。



- # 4
- 设定闪光输出或闪光曝光补偿量
- 在选择了闪光组期间,按功能按钮3 <Gr>。
  - 转动拨盘,根据闪光模式设定闪光功能并按 <SET> 按钮确定。
  - 当使用 <M> 模式时,设定闪光输出。当使用 <ETTL> 模式时,根据需要进行闪光曝光补偿量。
  - 重复步骤4设定所有组的闪光功能。
  - 按功能按钮4 <Gr> 以返回拍摄就绪状态。



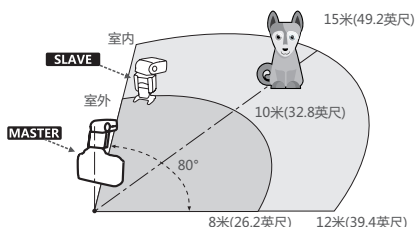
- # 5
- 拍摄照片
- 各从属单元以各自设定的闪光模式闪光。

## 无线闪光拍摄：光学传输

该产品支持无线闪光功能，具有主控闪光和从属闪光功能。作为主控单元，可以引闪580EXII、600EX-RT等闪光灯。作为从属单元，可接收580EXII、600EX-RT闪光灯无线信号、7D/60D/600D内闪指令，从而实现无线闪光。

- 通过此款产品，支持创建两个或三个从属单元组，并实现E-TTL II自动闪光。您可以通过E-TTL II自动闪光轻松获取多种照明效果。
- 使用主控单元设置的任何闪光曝光补偿量、高速同步（FP闪光）、闪光曝光锁定、闪光包围曝光量、手动闪光和频闪闪光设置都会被自动传输到从属单元。因此，在拍摄时无需操作从属单元。只需将主控单元设置为ETTL模式，令屏幕显示<ETTL>。
- 将此产品设置为主控单元时，可以在ETTL/M/Multi三种闪光模式下工作。

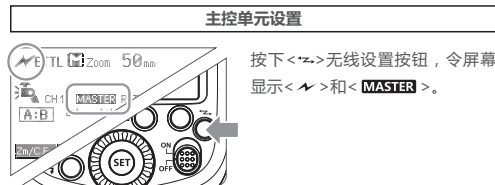
### 主控单元/从属单元设置位置和范围



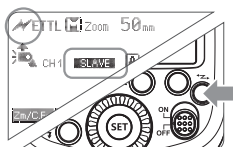
- 即使有多个从属单元，主控单元也可通过无线控制所有的闪光灯。
- 本说明手册中，“主控单元”指安装在相机上的闪光灯，“从属单元”指通过无线控制的闪光灯。

## 1、无线设置

您可以在普通闪光和无线闪光之间切换。对于普通闪光，请务必将无线设置为“关”。



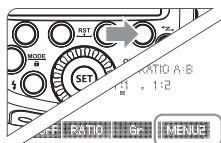
## 从属单元设置



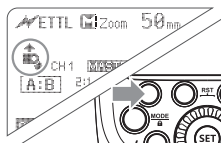
按下<SLAVE>无线设置按钮，令屏幕显示<SLAVE>和<SLAVE>。

## 2、主控单元禁用

在禁用主控单元闪光模式下，只有从属单元的闪光灯闪光。



1 按下功能按钮4以显示<MENU>。

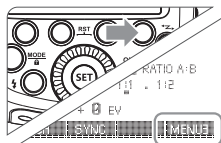


2 按功能按钮1<ON/OFF>，控制主控单元的打开与关闭。  
<ON/OFF>：主控闪光灯闪光ON  
<ON/OFF>：主控闪光灯闪光OFF

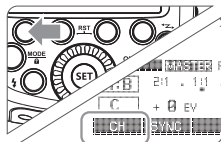
● 即使使用禁用主控单元的闪光灯闪光，它仍然会进行预闪以传输无线信号。

## 3、设置通讯频道

如果在拍摄现场不止一个无线闪光系统，您可以通过更改通讯频道来防止信号干扰。保证主控单元和从属单元设置为相同的频道编号即可。



1 按下功能按钮4以显示<MENU>。



2 按下功能按钮1<CH>，旋转调节旋钮从1至4中选择频道。

3 按下<SET>设置按钮确定。

## 4、ETTL: 全自动无线闪光拍摄

### 使用一个从属单元的自动闪光拍摄



1 设置主控单元。

- 将安装在相机上的T685C设为主控单元。(第24页)
- TT685C作为主控单元，可以引闪580EXII、600EX-RT等闪光灯。



2 设置从属单元。

- 将被无线控制TT685C设为从属单元。(第25页)
- TT685C作为从属单元，可以接收580EXII、600EX-RT等闪光灯无线信号、7D/60D/600D等内闪指令，从而实现无线闪光。

3 检查传输频道。

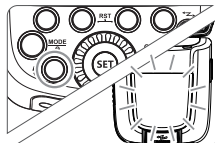
- 将主控单元和从属单元的频道设为一。(第25页)

4 定位相机和闪光灯。

- 将其定位在(第24页)所示的范围内。

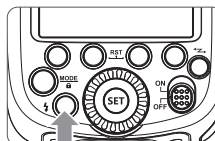
5 将闪光模式设为<ETTL>。

- 按下主控单元上的<MODE>按钮，令屏幕显示<ETTL>。
- 在经由主控单元控制的拍摄期间，从属单元自动设为<ETTL>。
- 为了让主控单元也闪光，将主控闪光灯闪光设为ON。(第25页)



6 检查闪光灯是否准备就绪。

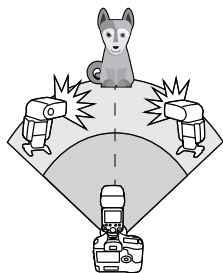
- 检查主控闪光灯就绪指示灯点亮。
- 当从属闪光灯就绪时，自动对焦辅助光发光区域以1秒间隔闪烁。



7 检查操作。

- 按下主控闪光灯的试闪按钮<SLAVE>。
- 从属单元闪光。如果从属单元不闪光，检查是否将其放置在操作范围内。

## 使用多个从属单元的自动闪光拍摄



当需要更大的闪光输出或想要更加轻松地进行照明时，可以增加从属单元的数量并将其作为单个闪光灯闪光。

要添加从属单元，使用与“使用一个从属单元的自动闪光拍摄”相同的步骤，可以设定任何闪光组(A/B/C)。

当增加了从属单元的数量或主控闪光灯闪光设为ON时，执行自动控制以使所有闪光灯以相同的闪光输出闪光并确保总闪光输出能够达到标准曝光。

⚠ 如果从属单元附近有荧光灯或电脑显示器，这些光源的存在可能会导致从属单元发生故障，并导致其意外闪光。

- 可以按相机上的景深预览按钮进行造型闪光。
- 如果从属单元的自动关闭电源生效，按主控单元的测试闪光按钮打开从属单元。请注意在相机的测光定时工作期间，无法进行测试闪光。
- 可以改变到从属单元的自动关闭电源生效为止的时间(C.Fn-Sv APOT/第33页)。
- 可以进行设置以使自动对焦辅助发射器在从属单元回电完毕时不闪烁(C.Fn-AF/第33页)。

## 使用全自动无线闪光

在主控单元上设定的闪光曝光补偿和其他设置也会在从属单元中自动设定。不需要操作从属单元。可按照与普通闪光拍摄相同的方法使用以下设置进行无线闪光拍摄。

- 闪光曝光补偿(  $\pm$  /第10页)
- 高速同步( **SYNC** /第12页)
- 闪光包围曝光( **FEB** /第10页)
- 手动闪光(第13页)
- 闪光曝光锁定(第11页)
- 频闪闪光(第14页)

当按功能按钮4时显示<  $\pm$  >、< **SYNC** >和< **FEB** >。

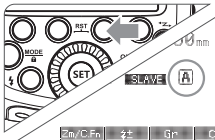
## 关于主控单元

可以使用两个或两个以上主控单元。通过准备多台装有主控单元的相机，可以在保持相同照明(从属单元)期间更换相机进行拍摄。

## 5、ETTL: 使用闪光光比的无线多重闪光拍摄

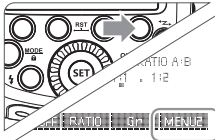
### 用两个从属组进行自动闪光拍摄

可以将从属单元分成两个闪光组A和B并调整拍摄用照明平衡(闪光光比)。自动控制曝光以使闪光组A和B的总闪光输出达到标准曝光。



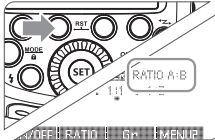
### 1 设定从属单元的闪光组。

- 将闪光灯设为从属单元。
- 按下功能按钮3 < **Gr** > 并选择<A>或<B>。
- 将一个单元设为<A>，将另一个单元设为<B>。



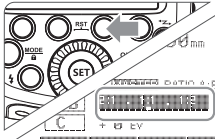
### 2 设定< MENU 2 >显示。

- 步骤2至4在主控单元上设定。
- 按下主控单元上的功能按钮4以显示< **MENU 2** >。



### 3 设为< RATIO A:B >。

- 按下功能按钮2 < **RATIO** > 令屏幕显示< RATIO A:B >



### 4 设定闪光光比。

- 按下功能按钮3 < **Gr** >
- 旋转调节旋钮设定闪光光比并按< **SET** >设置按钮确定。

### 5 拍摄照片。

- 从属单元以设定的闪光光比闪光。

### 用三个从属组进行自动闪光拍摄

可将闪光组C添加到闪光组A和B。C有助于消除被摄体阴影的照明。基本设定方法与“用两个从属组进行自动闪光拍摄”相同。

### 1 设定从属组别<C>。

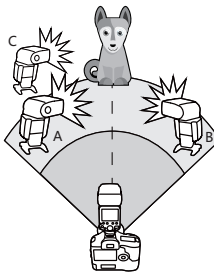
- 按照前一页步骤1相同的方法设定闪光灯闪光组<C>的从属单元。

### 2 设为< RATIO A:B C >。

- 按照前一页步骤2和步骤3的相同方法将主控单元设为< RATIO A:B C >。

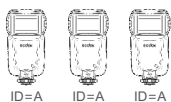
### 3 根据需要设置闪光曝光补偿

- 按照前一页步骤1相同的方法设定闪光灯闪光组<C>的从属单元。
- 按下功能按钮2 <  $\pm$  >，旋转调节旋钮设置闪光曝光补偿量并按< **SET** >键确定。



## 从属单元控制

从属单元组A



如果将具有三个从属单元的闪光组设为<A>，这三个从属单元将被作为从属单元组A的一个闪光灯来控制。

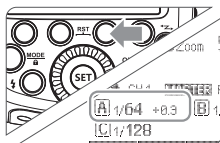
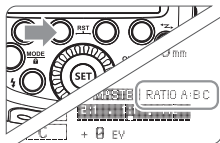
- ▲ 要让三个闪光组A、B和C同时闪光，设定<RATIO A:B:C>。在<RATIO A:B>设置下，闪光组C不闪光。
- 如果在闪光组C直接朝向主被摄体的状态下拍摄，可能会导致曝光过度。
- 在某些支持E-TTL自动闪光的EOS胶卷相机上，不能以闪光光比设置进行多重闪光无线拍摄。

- 当换算为档数时，闪光光比8:1至1:1至1:8相当于3:1至1:1至1:3(1/2档增量)。
- 闪光光比设置的详细说明如下。

8:1   4:1   2:1   1:1   1:2   1:4   1:8  
5.6:1   2.8:1   1.4:1   1:1.4   1:2.8   1:5.6

## 6、M:手动无线闪光拍摄

使用手动闪光的无线(多重闪光)拍摄，可以为每个从属单元(闪光组)设定不同的闪光输出进行拍摄。在主控单元上设定所有参数。

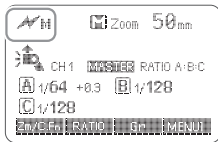
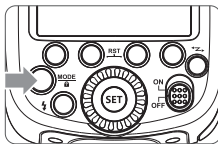


- 1 将闪光模式设为<M>。
- 2 设定闪光组数量。
  - 显示<MENU1>期间，按功能按钮2<RATIO>并设定要闪光的组。
  - 每次按该按钮，设置变化如下：  
ALL(RATIO OFF)→  
A/B(RATIO A:B)→  
A/B/C(RATIO A:B:C)。
- 3 设置闪光输出
  - 按下功能按钮3<Gr>，旋转调节旋钮为闪光组设定闪光输出，并按<SET>设置按钮确定。
- 4 拍摄照片
  - 各组以设定的闪光光比闪光。

- 当设定ALL<RATIO OFF>时，将从属单元的闪光组设为A、B或C。
- 要让多个从属单元以相同的闪光输出闪光时，在步骤2中选择ALL<RATIO OFF>。

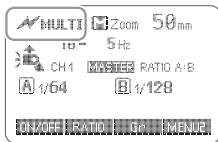
## 设定<M>闪光模式

可以直接操作从属单元以手动设定手动闪光或频闪光。



- 1 设定从属单元。(第25页)
- 2 设定<M>闪光模式。
  - 按下<MODE>模式选择按钮令屏幕显示<M>。
  - 设定手动闪光输出。(第13页)

## 7、Multi:手动无线闪光拍摄

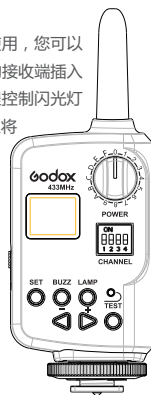


- 1 设定<MULTI>频闪模式。
  - 按下<MODE>模式选择按钮令屏幕显示<MULTI>
  - 设定频闪光设置。(第14页)

## 其他应用

### 外置无线控制功能

闪光灯内置无线控制插座，配合特定遥控器使用，您可以实现对闪光灯的无线控制。将FT系列遥控器的接收端插入无线控制插座，手持遥控器发射端，即可远程控制闪光灯的功率开关和大小、闪光灯触发等。您也可以将发射端置于相机热靴上，通过相机快门来进行同步引闪。



- 更多遥控器的使用方法，请查阅FT系列遥控器的说明书。

### 同步插孔触发

同步插孔规格为Φ3.5mm，此处可插入同步线或者触发器触发插头对闪光灯进行同步引闪。

### 造型闪光

如果相机有景深预视按钮，按下该按钮将会进行1秒钟的连续闪光，这种现象称之为造型闪光。您可以通过造型闪光查看被摄体上的光影效果及照明平衡，不管是无线拍摄还是普通闪光拍摄，都可以进行造型闪光。

- ▲ 请勿连续触发10次以上造型闪光。如果连续进行10次造型闪光，请让闪光灯至少冷却10分钟，以防止闪光灯过热或损坏。
- EOS 300和B型相机不支持造型闪光。

## 自动辅助对焦灯

在低亮度或低对比度的拍摄情况下，闪光灯内置的自动辅助对焦灯将开启，使自动对焦更容易。当对焦困难时，红色辅助对焦灯亮起；当对焦准确，辅助对焦灯自动熄灭。

如想关闭自动辅助对焦功能，在C.Fn设置“AF”至“OFF”。

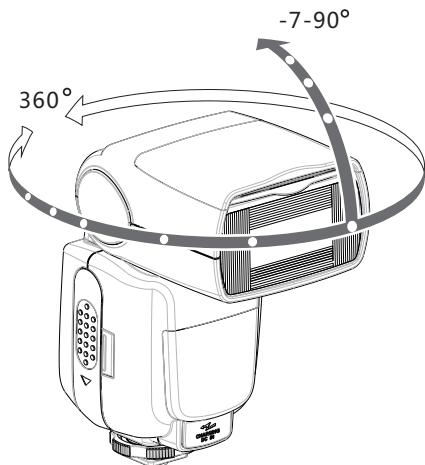
- 用户在使用时，如发现辅助对焦灯未亮起，是因为相机已经处于准确对焦状态。

位置	有效范围
中央	0.6~10米 / 2.0~32.8英尺
边缘	0.6~5米 / 2.0~16.4英尺

## 反射闪光

通过将闪光灯头指向墙壁或天花板，闪光在照亮被摄体前被墙面反射。这可以减轻被摄物体背后的阴影，获得更自然的摄影效果。称之为反射闪光。

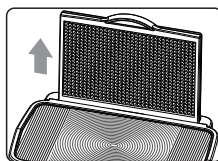
旋转闪光灯头来设置反射方向。



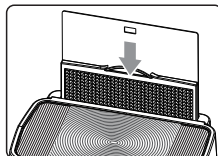
- 如果墙壁或天花板太远，反射闪光可能太弱并导致曝光不足。
- 墙壁或天花板应该是平坦的、白色的以利于高效的反射。如果反射表面不是白色的，照片将出现偏色。

## 创建眼神光

使用眼神光板，您可以在被摄体的眼睛中创建眼神光以使面部表情更加生动。



1 将闪光灯头向上旋转90°。



2 拉出广角散光板，同时弹出眼神光板。



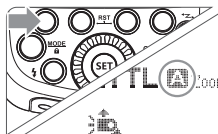
3 推入广角散光板。  
 ● 仅推入广角散光板。  
 ● 按照反射闪光中相同的步骤进行。

- ▲ 请将闪光灯头向前指然后向上旋转90度。如果左右旋转闪光灯头就不会产生眼神光。

- 要获得最好的眼神光效果，被摄体不能处于相机1.5米/4.9英尺以内。

## ZOOM：设置闪光覆盖范围并使用广角散光板

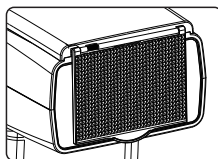
该闪光灯有两种变焦方式：自动变焦和手动变焦。可以设置闪光覆盖范围以匹配20~200毫米的镜头焦距。自动变焦时，焦距会随相机变焦镜头的改变而变化，以提供最佳闪光效果。同样，使用内置的广角散光板，闪光覆盖范围可以扩展为14毫米广角镜头。



手动变焦时，按下<ZOOM/C.FN>变焦/无线设置按钮。

- 转动调节旋钮更改闪光覆盖范围。
- 在显示<A>状态下，将自动设置闪光覆盖范围。

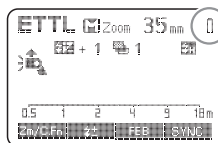
- 如果手动设置闪光覆盖范围，确保其覆盖镜头焦距，这样照片就不会出现阴影边缘。



使用广角散光板

拉出广角散光板并将其置于闪光灯头上。闪光覆盖范围将扩展至14毫米。

- 同时弹出眼神光板。请推回眼神光板。
- <ZOOM/C.FN>按钮不起作用



电池电量低时，电池符号< >会闪烁，此时请更换电池。

## C.Fn：设置自定义功能

请对照以下图表本机应用栏，使用自定义功能来完成设置。

自定义 功能符号	功能	设置符号	设置和说明	对应相机 C.Fn编号
m/ft	距离指示显示	m	米	C.Fn-00
		ft	英寸	
APO	自动关闭电源	ON	启动	C.Fn-01
		OFF	关闭	
FEB ACL	闪光包围曝光	ON	启动	C.Fn-03
	自动取消	OFF	关闭	
FEB	闪光包围曝光顺序	0 → → +		C.Fn-04
		→ 0 → +		
AF	自动对焦辅助闪光	ON	启动	C.Fn-08
		OFF	关闭	
Sv APOT	从属单元自动	60min	60分钟	C.Fn-10
	关闭电源计时器	30min	30分钟	
BEEP	蜂鸣器	ON	启动	C.Fn-20
		OFF	关闭	
LIGHT	背光点亮时间	12sec	12秒后自动熄灭	C.Fn-22
		OFF	一直熄灭	
		ON	一直点亮	
LCD	液晶屏对比度	0~9	10个级别	
ID	无线ID	OFF	关闭	
		01-99	选择01-99任意一个数字打开	
Sv LED	无线LED提示灯	OFF	关闭	
		ON	打开	

1. 长按 < **Zm/C.Fn** > 背光/自定义按钮2秒或更长，直到显示C.Fn菜单。右上角“Ver x.x”表示软件版本号。
2. 选择自定义功能符号。  
旋转调节旋钮设置自定义功能符号。
3. 更改设置。
  - 按 < **SET** > 设置按钮，自定义功能编号闪烁。
  - 旋转调节旋钮设置想要的编号，按 < **SET** > 按钮确定。
  - 设置自定义功能后按下 < **MODE** > 模式选择按钮，相机可以进行拍摄。
4. 在C.Fn状态下，长按“Clear”按钮2秒直至出现“OK”，表示重置C.Fn的参数。

## 用相机菜单控制闪光灯

将闪光灯安装在EOS相机上，可以通过相机控制闪光灯。具体请参照相机使用说明。

- 设置闪光灯说明  
根据闪光模式的不同，可设置不同的功能。
  1. 闪光模式
  2. 快门同步
  3. FEB
  4. 闪光曝光补偿
  5. 闪光灯闪光
  6. 清除闪光灯设置
- 闪光灯自定义功能  
C.Fn-00, C.Fn-01, C.Fn-03, C.Fn-04, C.Fn-08, C.Fn-10, C.Fn-20, C.Fn-22, 共8个。

### 清除所有闪光灯自定义功能

闪光功能自定义画面



闪光C.Fn设置画面




\* 画面为EOS-1D Mark III的画面。

- 如果已经使用闪光灯设置了闪光曝光补偿，则无法用相机设置闪光曝光补偿，要用相机进行设置时，首先将闪光灯的闪光曝光补偿设置为“0”。
- 如果用相机和闪光灯设置闪光曝光补偿以外的闪光灯自定义功能和闪光灯功能设置，最后所进行的设置将生效。

# 保护功能

## 1. 热保护

- 为防止闪光灯头过热并损坏，请勿在1/1功率时进行超过30次的快速连续闪光。30次连续闪光后，要让闪光灯至少冷却10分钟。
- 如您在进行超过30次连续闪光后马上继续进行更多次闪光，内部的防过热功能可能会被激活，使充电时间变为10秒以上。如果发生这种现象，请让闪光灯冷却约10分钟，闪光灯便会恢复正常。
- 热保护启动后，显示屏上  的符号会显示。

激活热保护功能的连续闪光次数：

功率	次数
1/1	30
1/2 +0.7	40
1/2 +0.3	50
1/2	60
1/4(+0.3,+0.7)	100
1/8(+0.3,+0.7)	200
1/16(+0.3,+0.7)	300
1/32(+0.3,+0.7)	500
1/64(+0.3,+0.7)	1000
1/128(+0.3,+0.7)	

高速同步模式下，激活热保护功能的连续闪光次数：

功率	次数
1/1	15
1/2(+0.3,+0.7);	20
1/4(+0.3,+0.7)	30
1/8(+0.3,+0.7);	
1/16(+0.3,+0.7)	40
1/32(+0.3,+0.7);	
1/64(+0.3,+0.7);	50
1/128(+0.3,+0.7);	

## 2. 其他保护

- 为了保证设备安全的工作，系统时刻进行预防保护，以下提示符号供您参考：

LCD显示	警告内容
E1	闪光灯回电系统出现问题，无法回电引闪，请重新开机，如无法解决请维修
E2	设备内温度过高，请停止引闪10分钟
E3	闪光灯管两端电压过高，请维修
E9	固件升级有误，请进行正确固件升级

# 规格参数


型号	TT685C		
• 类型			
兼容相机	Canon EOS相机(E-TTL II自动闪光)		
闪光指数	60(m ISO 100)		
(1/1档位；200mm焦距)	190(feet ISO 100)		
闪光覆盖范围	20 – 200毫米 (使用广角散光板为14毫米)		
	•自动变焦(自动设置适合镜头焦距和图像尺寸的闪光覆盖范围)		
	•手动变焦		
	•闪光灯头旋转/倾斜，水平0~360°，垂直-7°~90°(反射闪光)		
闪光持续时间	1/300秒 - 1/20000秒		
• 曝光控制			
曝光控制系统	E-TTL II自动闪光、手动闪光		
闪光曝光补偿(FEC)	手动，闪光包围曝光：在±3档间以1/3档为增量调节(可以组合使用手动闪光曝光补偿和闪光包围曝光)		
闪光曝光锁定(FEL)	使用<FEL>按钮或<* >按钮		
同步方式	高速同步(最高1/8000秒)，前帘同步，后帘同步		
频闪闪光	具备(次数：100次；199Hz)		
• 无线闪光(光学传输和无线电2.4G传输)			
无线功能	主控单元，从属单元，关闭		
可控制从属单元组	光学：A，B，C		
	2.4G：A，B，C，D，E		
传输范围(约)	光学	室内：12 – 15米/39.4~49.2英尺	
		室外：8~10米/26.2~32.8英尺	
		接收角度：水平±40°，垂直±30°	
	2.4G	100m	
频道	光学	4组：1，2，3，4	
	2.4G	32组：1~32	
从属单元状态指示灯	两红灯同时亮起		
造型闪光	使用相机的景深预览按钮进行闪光		
• 自动对焦辅助光			
有效范围(约)	中央：0.6 -10米 / 边缘：0.6-5米		
• 电源			
AA型电池	镍氢电池(推荐)或LR6类型碱性电池*4节		
回电时间	约0.1-2.6秒(松下Eneloop镍氢电池)，闪光灯准备就绪，LED红色指示灯亮起		
全功率闪光次数	约230次(2500mA镍氢电池)		
节能	闪光灯在无人操作90秒左右将会自动关闭电源。 设置为从属单元时60分钟进入休眠状态。		
• 同步触发方式	热靴，3.5mm同步线，无线控制插座		
• 色温	5600±200		
• 尺寸			
体积	64*76*190 mm		
净重(不含电池)	410g		
重量(含电池)	530g		







## 故障排除指南

如果遇到问题，请参阅此故障排除指南。

### 闪光灯不充电。

- 电池安装方向错误。  
→ 以正确的方向安装电池。
- 闪光灯的内置电池耗尽。  
→ 如果闪光灯LCD屏幕上 <  > 显示并闪烁，表明需要更换电池。

### 闪光灯不闪光。

- 闪光灯没有牢固地安装在相机上。  
→ 将闪光灯的固定座牢固地安装在相机上。
- 闪光灯和相机的电子触点变脏。  
→ 请清洁触点。
- <  > 图标或 <  > 图标未出现在相机取景器中。  
→ 请等待闪光灯充电完成，闪光灯准备就绪指示灯亮起。  
→ 如果闪光灯准备就绪指示灯已经亮起，相机取景器中的 <  > 图标或 <  > 图标仍未亮起，请检查热靴连接，确保闪光灯可靠地装配在相机热靴上。  
→ 若等待较长时间，闪光灯准备就绪指示灯一直没有亮起，请检查电池是否有电。如果电量低（闪光灯屏幕上电池电压不足图标闪烁），请更换电池。

### 电源自动关闭。

- 当灯作为主控单元时，90秒无操作后，自动电源关闭功能生效。  
→ 半按快门按钮或机身任意按键唤醒。
- 作为从属单元在60分钟(或者选择30分钟)无任何操作时，闪光灯会进入休眠状态。  
→ 可按机身任意按键唤醒。

### 自动变焦不工作。

- 闪光灯没有牢固地安装在相机上。  
→ 将闪光灯的固定座牢固地安装在相机上。

### 闪光曝光不足或过度。

- 照片中存在反光强烈的物体(玻璃窗户等)。  
→ 使用闪光曝光锁定(FEL)。
- 使用高速同步。  
→ 使用高速同步，有效的闪光范围会更小。确保被摄体位于显示的有效闪光范围内。
- 闪光灯使用手动曝光模式。  
→ 改为ETTL模式或修改闪光输出功率设置。

### 相片出现暗角或者被摄物体只有局部能照亮。

- 相机镜头焦距超出闪光灯的覆盖范围。  
→ 请检查闪光灯当前的覆盖焦距。本产品的灯头变焦范围是中画幅系统的20-200mm，您可以尝试拉出广角闪光板，以扩大闪光范围。

## 固件升级

本机通过USB插座可进行固件升级。软件最新公告及说明将会发布在官方网站上。

 注：本品出厂不配USB升级线，请另行购买。普通的USB线可使用，本产品USB口为Micro USB 接口。

## 兼容相机列表

本机可兼容以下佳能EOS系列的相机型号：

1DX	5D Mark III	5D Mark II	6D	7D	60D	50D	40D	30D
650D	600D	550D	500D	450D	400D Digital	1100D	1000D	

 注：

1. 此表格仅列举目前已测试的相机型号，未涵盖所有佳能EOS系列相机。其他相机型号，用户可自行测试。
2. 本公司保留未来修改此表格内容的权利。

## 维护保养

- 闪光灯在工作时，如发现异常，应立即关掉电源，查明原因。
- 灯体应避免震动，平时注意表面除尘。
- 灯体稍有发热为正常现象，无特别需要时，勿连续引闪。
- 闪光灯的所有维修概由本厂指定可供原厂配件之维修部负责。
- 1年保修，消耗品如灯管等，不在1年保修范围。
- 经发现，擅自检修此闪光灯的，将取消闪光灯之一年保修期，维修需要收取相关费用。
- 如果本品出现故障或者被水淋湿，在专业人员维修后方可继续使用。
- 如有技术更改，恕不另行通知。











## Foreword

### Thank you for purchasing this product.

This TT685C camera flash applies to Canon EOS series cameras and is compatible with E-TTL II autoflash. With this E-TTL II compatible flash, your shooting will become simpler. You can easily achieve a correct flash exposure even in complex light-changing environments. This camera flash features:

- GN60 (m ISO 100, @200mm). 22 steps from 1/1 to 1/128.
- Fully support Canon E-TTL II camera flash. Workable as Master or Slave unit in a wireless flash group.
- Use dot-matrix LCD panel to make clear and convenient operations.
- With built-in 2.4GHz wireless remote system to support transmitting and receiving.
- Provided multiple functions, include HSS (up to 1/8000s), FEC, FEB, etc.
- Use optional FT-16S to adjust flash parameters & trigger the flash.
- Stable consistency and color temperature with good even lighting.
- Support with firmware upgrade.

## Warning

-  Always keep this product dry. Do not use in rain or in damp conditions.
-  Do not disassemble. Should repairs become necessary, this product must be sent to an authorized maintenance center.
-  Keep out of reach of children.
-  Stop using this product if it breaks open due to extrusion, falling or strong hit. Otherwise, electric shock may occur if you touch the electronic parts inside it.
-  Do not fire the flash directly into the eyes (especially those of babies) within short distances. Otherwise visual impairment may occur.
-  Do not use the flash unit in the presence of flammable gases, chemicals and other similar materials. In certain circumstance, these materials may be sensitive to the strong light emitting from this flash unit and fire or electromagnetic interference may result.
-  Do not leave or store the flash unit if the ambient temperature reads over 50°C. Otherwise the electronic parts may be damaged.
-  Turn off the flash unit immediately in the event of malfunction.



## Thinklite TTL Camera Flash

### Conventions used in this Manual

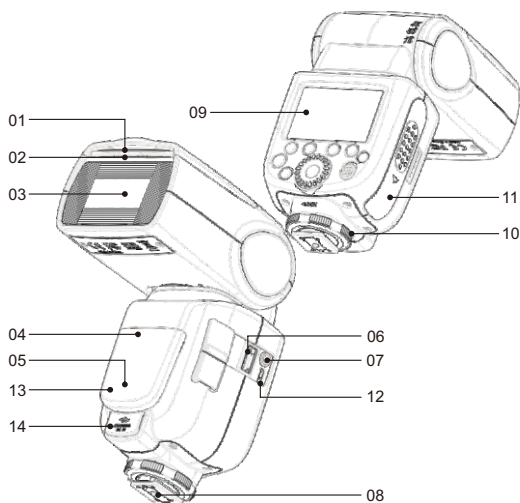
- This manual is based on the assumption that both the camera and camera flash's power switches are powered on.
- Reference page numbers are indicated by "p.\*\*".
- The following alert symbols are used in this manual:
  - ▲ The Caution symbol gives supplemental information.
  - 📌 The Note symbol indicates a warning to prevent shooting problem.

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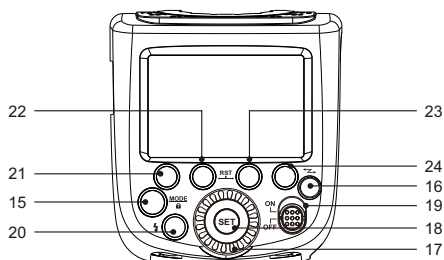
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## Name of Parts



### • Body

- |                           |                                  |
|---------------------------|----------------------------------|
| 01. Catchlight Panel      | 08. Hotshoe                      |
| 02. Built-in Wide Panel   | 09. Dot-matrix LCD Panel         |
| 03. Flash Head            | 10. Lock Ring                    |
| 04. Optic Control Sensor  | 11. Battery Compartment          |
| 05. Focus Assist Beam     | 12. USB Port                     |
| 06. Wireless Control Port | 13. Slave Flash Ready Indicator  |
| 07. Sync Cord Jack        | 14. External Power Supply Socket |

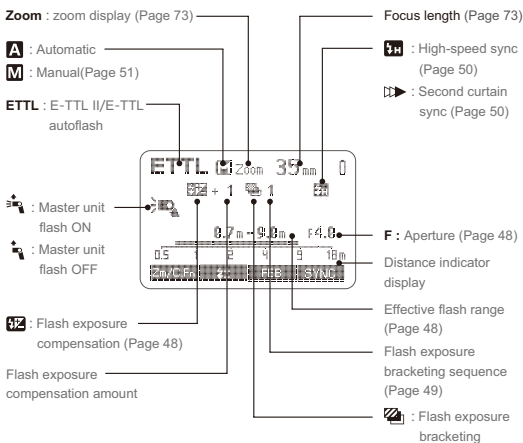


### • Control Panel

- |  |   |
|--|---|
| 15. <MODE> Mode Selection Button / Lock button | 20. <⚡> Test Button / Flash Ready Indicator |
| 16. <Z> Wireless Selection Button              | 21. Function Button 1                       |
| 17. Select Dial                                | 22. Function Button 2                       |
| 18. <SET> Set Button                           | 23. Function Button 3                       |
| 19. ON/OFF Power Switch                        | 24. Function Button 4                       |

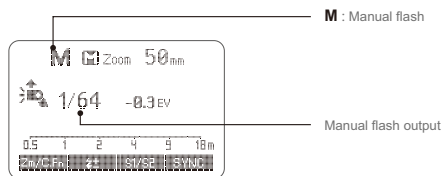
## • LCD Panel

### (1)E-TTL Autoflash

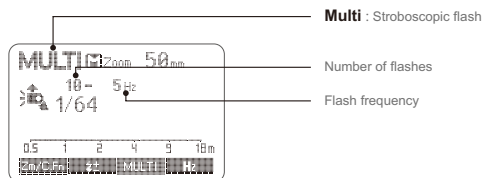


- The display will only show the settings currently applied.
- The functions displayed above function buttons 1 to 4, such as **SYNC** and **±**, change according to settings' status.
- When a button or dial is operated, the LCD panel illuminated.

### (2)M Manual Flash



### (3)Multi Flash



#### (4) Radio Transmission Shooting/Optic Transmission Shooting

##### • Master Unit

Flash mode

Gr : Group flash (radio transmission)

Ⓜ : Radio transmission  
wireless shooting

Ⓜ : Optic transmission  
wireless shooting

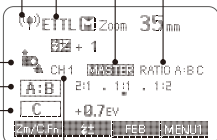
Ⓜ : Master unit  
flash ON

Ⓜ : Master unit  
flash OFF

Firing group

MASTER : Master

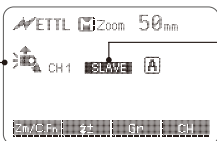
RATIO : Flash ratio



Channel

##### • Slave Unit

Ⓜ : Slave icon



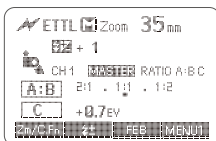
SLAVE : Slave

#### • LCD Panel in Five Modes

##### • Attached to the Camera



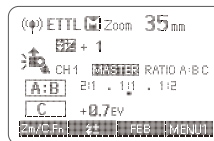
##### • Optical Transmission: As a Master Unit



##### • Optical Transmission: As a Slave Unit



##### • 2.4G Radio Transmission: As a Master Unit



##### • 2.4G Radio Transmission: As a Slave Unit



#### • What's in the Box of TT685C?

1. Flash unit
2. Mini stand
3. Protection case
4. Instruction manual

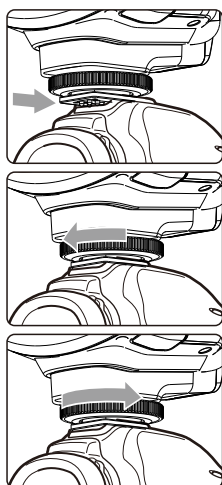
#### • Separately Sold Accessories

The product can be used in combination with the following accessories sold separately, so as to achieve best photography effects:

X1C TTL wireless flash trigger, FT-16S power & trigger control, Mini softbox, White & Silver reflector, Honeycomb, Color gels, Snoot, etc.



## Attaching to a Camera



- 1 Attach the Camera Flash.
  - Slip the camera flash's mounting foot into the camera's hotshoe all the way.
- 2 Secure the Camera Flash.
  - Rotate the lock ring on the mounting foot until it locks up.
- 3 Detach the Camera Flash.
  - Rotate the lock ring on the mounting foot until it is loosened.

## Power Management

Use ON/OFF Power Switch to power the flash unit on or off. Turn off if it will not be used for an extended period of time. Setting as a master flash, it will turn the power off automatically after a certain period (approx. 90 seconds) of idle use. Pressing the camera shutter halfway or pressing any flash button will wake up the flash unit. Setting as a slave flash, it will enter sleep mode after a certain period (adjustable, 60 minutes by default) of idle use. Pressing any flash button will wake it up.

- 1 **C.Fn** Disabling Auto Power Off function is recommended when the flash is used off camera. (C.Fn-APO, Page 74)
- C.Fn** Slave Auto Power Off Timer is set to 60 minutes by default. Another option "30 minutes" is available. (C.Fn-Sv APOT, Page 74)

## Flash Mode—E-TTL Autoflash

This flash has three flash modes: **E-TTL**, **Manual (M)**, and **Multi** (Stroboscopic). In **E-TTL** mode, the camera and the flash will work together to calculate the correct exposure for the subject and the background. In this mode, multiple TTL functions are available: FEC, FEB, FEL, HSS, second curtain sync, modeling flash, control with the camera's menu screen.

\* Press **< MODE >** Mode Selection Button and three flash modes will display on the LCD panel one by one with each pressing.

### ETTL Mode

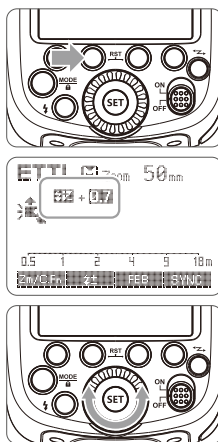
Press **< MODE >** Mode Selection Button to enter E-TTL mode. The LCD panel will display.

- Press the camera release button halfway to focus. The aperture and effective flash range will be displayed in the viewfinder.
- When the shutter button is fully pressed, the flash will fire a pre-flash that the camera will use to calculate exposure and flash output the instant before the photo is taken.

### FEC: Flash Exposure Compensation

With FEC function, this flash can adjust from -3 to +3 in 1/3rd stops. It is useful in situations where minor adjusting of the TTL system is needed based on the environment.

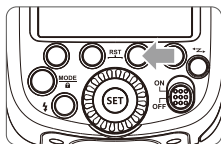
**Setting FEC:**




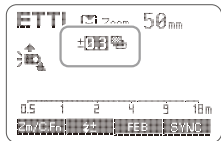
- 1 Press **Function Button 2** **< +/- >**. The icon **< +/- >** and flash exposure compensation amount will be highlighted on the LCD panel.
- 2 Set the flash exposure compensation amount.
  - Turn the Select Dial to set the amount.
  - "0.3" means 1/3 step, "0.7" means 2/3 step.
  - To cancel the flash exposure compensation, set the amount to "+0".
- 3 Press **< SET >** button again to confirm the setting.

### FEB: Flash Exposure Bracketing

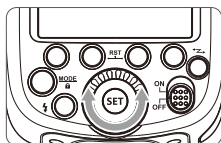
You can take three flash shots while automatically changing the flash output for each shot from -3 to +3 in 1/3rd stops. The camera will record three images with different exposures: one exposed according to camera calculations, one over-exposed and another under-exposed. Over and under exposure amount is user adjustable. This function helps get correct exposure especially in shooting moving objects or when environmental lights are complex.



- 1 Press function button 3 < **FEB** >. The icon <  > and the exposure bracketing amount will be highlighted on the LCD panel.



- 2 Set the flash exposure compensation amount.
  - Turn the Select Dial to set the amount.
  - "0.3" means 1/3 step, "0.7" means 2/3 step.

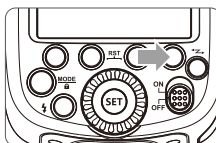



- 3 Press < **SET** > button again to confirm the setting. Then your **FEC** and **FEB** settings are displayed on the LCD panel.

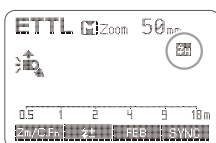
- FEB will be cancelled after three photos are taken.
  - For best results, set the camera drive mode to "single" and ensure the flash is ready before shooting.
  - FEB can be used with FEC and FEL.
- C.Fn** You can prevent the FEB from being cancelled automatically after three photos are taken. (C.Fn-FEB ACL, Page 74)
- C.Fn** The FEB shooting sequence can be changed. (C.Fn-FEB, Page 74)


## High-Speed Sync



High Speed Sync (FP flash) enables the flash to synchronize with all camera shutter speeds. This is convenient when you want to use aperture priority for fill-flash portraits.



- 1 Press Function Button 2 < **SYNC** > so that <  > is displayed.

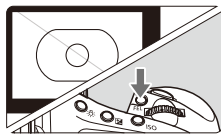


- 2 Check that <  > is displayed in the viewfinder.


- If you set a shutter speed that is the same as or slower than the camera's maximum flash sync speed, <  > will not be displayed in the viewfinder.
- With high-speed sync, the faster the shutter speed, the shorter the effective flash range.
- To return to normal flash, press < **SYNC** > button again. Then <  > will disappear.
- Multi flash mode cannot be set in high-speed sync mode.
- Over-temperature protection may be activated after 15 consecutive high-speed sync flashes.

## FEL: Flash Exposure Lock

FEL can lock the correct flash exposure setting for any part of the scene. With < **ETTL** > displayed on the LCD panel, press the camera's < **FEL** > button. If the camera does not have the < **FEL** > button, press the < \* > button.

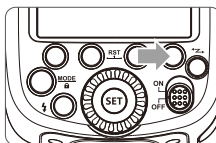


- 1 Focus the subject.
- 2 Press the < **FEL** > button.
  - Aim the subject at the center of the viewfinder and press < **FEL** > button.
  - The camera flash will fire a preflash and the required flash output for the subject is retained in memory.
  - Each time the < **FEL** > button is pressed, a preflash will be fired and a new flash exposure setting will be locked.

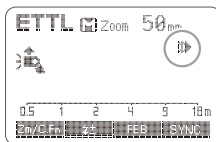
- If the subject is too far away and underexposure, the <  > icon will blink in the viewfinder. Move closer to the subject and try the FE lock again.
- If < **ETTL** > is not displayed on the LCD panel, FE lock cannot be set.
- If the subject is too small, FE lock might not be very effective.

## Second-Curtain Sync

With a slow shutter speed, you can create a light train following the subject. The flash fires right before the shutter closes.

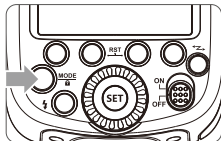


- Press function button 4 < **SECOND CURTAIN SYNC** > button so that <  > is displayed on the LCD panel.

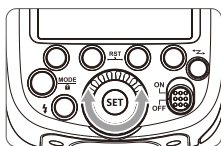
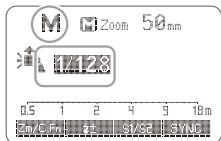


## M: Manual Flash

The flash output is adjustable from 1/1 full power to 1/128th power in 1/3rd stop increments. To obtain a correct flash exposure, use a hand-held flash meter to determine the required flash output.



1 Press **<MODE>** button so that **M** is displayed.



2 Turn the Select Dial to choose a desired flash output amount.

3 Press **<SET>** button again to confirm the setting.

### Flash Output Range

The following table makes it easier to see how the stop changes in terms of f/stop when you increase or decrease the flash output. For example, when you decrease the flash output to 1/2, 1/2-0.3, or 1/2-0.7, and then increase the flash output to more than 1/2, 1/2+0.3, 1/2+0.7, and 1/1 will be displayed.

Figures displayed when reducing flash output level→

1/1	1/1-0.3	1/1-0.7	1/2	1/2-0.3	1/2-0.7	1/4	.....
	1/2+0.7	1/2+0.3		1/4+0.7	1/4+0.3		.....

← Figures displayed when increasing flash output level

### Optic S1 Secondary Unit Setting

In M manual flash mode, press **<S1/S2>** button so that this flash can function as an optic S1 secondary flash with optic sensor. With this function, the flash will fire synchronously when the main flash fires, the same effect as that by the use of radio triggers. This helps create multiple lighting effects.

### Optic S2 Secondary Unit Setting

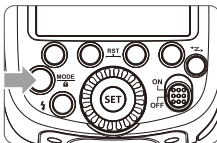
Press **<S1/S2>** button so that this flash can also function as an optic S2 secondary flash with optic sensor in M manual flash mode. This is useful when cameras have pre-flash function. With this function, the flash will ignore a single "pre-flash" from the main flash and will only fire in response to the second, actual flash from the main unit.

- S1 and S2 optic triggering is only available in M manual flash mode.

## Multi: Stroboscopic Flash

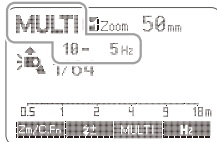
With stroboscopic flash, a rapid series of flashes is fired. It can be used to capture a multiple images of a moving subject in a single photograph.

You can set the firing frequency (number of flashes per sec. expressed as Hz), the number of flashes, and the flash output.



1 Press **<MODE>** button so that **MULTI** is displayed.

2 Turn the Select Dial to choose a desired flash output.



3 Set the flash frequency and flash times.

- Press **<MULTI>** button to select the item (blinks).
- Turn the Select Dial to set the number and press **<Hz>** button again to confirm. The next item to be set will blink.
- After you finish the setting, press **<SET>** button and all the settings will be displayed.

### Calculating the Shutter Speed

During stroboscopic flash, the shutter remains open until the firing stops. Use the formula below to calculate the shutter speed and set it with the camera.

$$\text{Number of Flashes / Flash Frequency} = \text{Shutter Speed}$$

For example, if the number of flashes is 10 and the firing frequency is 5 Hz, the shutter speed should be at least 2 seconds.

- ▲ To avoid overheating and deteriorating the flash head, do not use stroboscopic flash more than 10 times in succession. After 10 times, allow the camera flash to rest for at least 15 minutes. If you try to use the stroboscopic flash more than 10 times in succession, the firing might stop automatically to protect the flash head. If this happens, allow at least 15 minutes' rest for the camera flash.

- Stroboscopic flash is most effective with a highly reflective subject against a dark background.
- Using a tripod and a remote control is recommended.
- A flash output of 1/1 and 1/2 cannot be set for stroboscopic flash.
- Stroboscopic flash can be used with "buLb".
- If the number of flashes is displayed as "--", the firing will continue until the shutter closes or the battery is exhausted. The number of flashes will be limited as shown by the following table.

## Maximum Stroboscopic Flashes:

Flash output \ Hz	1	2	3	4	5	6-7	8-9
1/4	7	6	5	4	4	3	3
1/8	14	14	12	10	8	6	5
1/16	30	30	30	20	20	20	10
1/32	60	60	60	50	50	40	30
1/64	90	90	90	80	80	70	60
1/128	100	100	100	100	100	90	80

Flash output \ Hz	10	11	12-14	15-19	20-50	60-199
1/4	2	2	2	2	2	2
1/8	4	4	4	4	4	4
1/16	8	8	8	8	8	8
1/32	20	20	20	18	16	12
1/64	50	40	40	35	30	20
1/128	70	70	60	50	40	40

If the number of flashes is displayed as "--", the maximum number of flashes will be as shown in the following table regardless of the flash frequency.

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

## Wireless Flash Shooting: Radio (2.4G) Transmission

- ⚠ When the camera's shooting mode is set to a fully automatic mode or an Image Zone mode, the operations in this chapter are not available. Set the camera's shooting mode to P/Tv/Av/M/B (Creative Zone Mode).

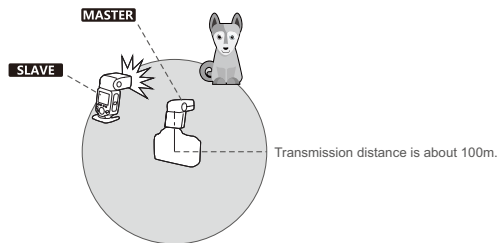
- 📡 The TT685C attach to the camera is called the master unit, and a TT685C that is wirelessly controlled is called the slave unit.
- You can also wirelessly control the TT685C set as the slave unit with the transmitter X1T-C (sold separately). For details on setting the master unit functions, see the transmitter's instructions.

Using a flash (master/slave) with a radio transmission wireless shooting function make it easy to shoot with advanced wireless multiple flash lighting, in the same way as E-TTL II autofocus shooting.

The basic relative position and operation range are as shown in the picture. You can then perform wireless E-TTL II autofocus shooting just by setting the master unit to <ETTL>.

## Positioning and Operation Range (Example of wireless flash shooting)

### • Autoflash Shooting with One Slave Unit

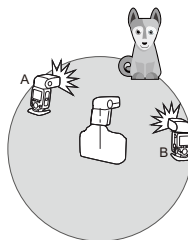


- 📡 Use the supplied mini stand to position the slave unit.
- Before shooting, perform a test flash and test shooting.
- The transmission distance might be shorter depending on the conditions such as positioning of slave units, the surrounding environment and whether conditions.

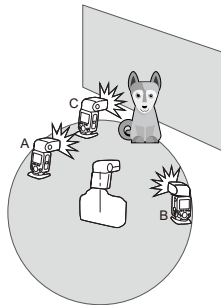
## Wireless Multiple Flash Shooting

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

### • Auto Shooting with Two Slave Groups

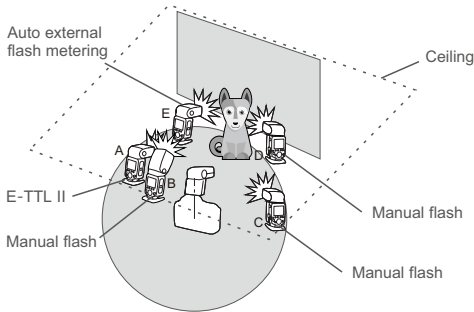


### • Auto Shooting with Three Slave Groups





## ● Shooting with a Different Flash Mode set for Each Group



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

Wireless shooting using radio transmission has advantages over wireless shooting using optic 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	Optic Transmission
Distance	100m	15m
Channel	1~32	1~4
A/B/C Power	OFF, 1/128~1/1	1/128~1/1
To be Disturbed	Hard	Easy
Group	A/B/C/D/E	A/B/C

● There are four flash modes in this wireless radio transmission: TTL, M, Multi and Gr. Choose one of those modes by pressing the MODE Button.



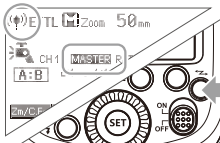
### The Reason & Solution of Not Triggering in Godox 2.4G Wireless

- Disturbed by the 2.4G signal in outer environment (e.g. wireless base station, 2.4G wifi router, Bluetooth, etc.)**  
→ To adjust the channel CH setting on the flash trigger (add 10+ channels) and use the channel which is not disturbed. Or turn off the other 2.4G equipment in working.
- Please make sure that whether the flash has finished its recycle or caught up with the continuous shooting speed or not (the flash ready indicator is lighten) and the flash is not under the state of over-heat protection or other abnormal situation.**  
→ Please downgrade the flash power output. If the flash is in TTL mode, please try to change it to M mode (a preflash is needed in TTL mode).
- Whether the distance between the flash trigger and the flash is too close or not**  
→ Please turn on the "close distance wireless mode" on the flash trigger (< 0.5m):  
X1 series: press the test button and hold on, then turning it on until the flash ready indicator blinks for 2 times.  
XPro series: Set the C.Fn-DIST to 0-30m.
- Whether the flash trigger and the receiver end equipment are in the low battery states or not**  
→ Please replace the battery (the flash trigger is recommended to use 1.5V disposable alkaline battery).

## 1. Wireless Settings

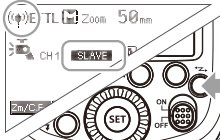
You can switch between normal flash and wireless flash. For normal flash shooting, be sure to set the wireless setting to OFF.

### Master Unit Setting



Press < > button so that < > or < **MASTER** > are displayed on the LCD panel.

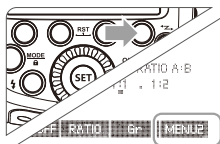
### Slave Unit Setting



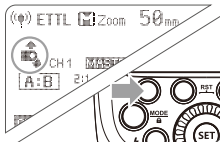
Press < > button so that < > or < **SLAVE** > are displayed on the LCD panel.

## 2. Master Unit's Flash OFF

When the master unit is set to OFF, only the slave units will fire a flash.



1 Press Function **Button 4** so that < **MENU2** > is displayed on the LCD panel.



2 Press Function **Button 1** < **ON/OFF** > to control the ON/OFF of the master unit.

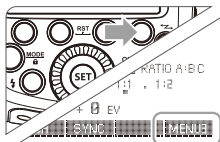
< > : The master unit flash firing is ON.

< > : The master unit flash firing is OFF.

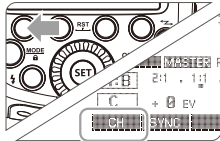
- Even if the master unit flash firing is disabled, it still fires a preflash to transmit wireless signals.

### 3. Setting the Communication Channel

If there are other wireless flash systems nearby, you can change the channel IDs to prevent signal interference. The channel IDs of the master unit and the slave unit(s) must be set to the same.



- 1 Press Function Button 4 so that < **MENUS** > is displayed on the LCD panel.



- 2 Press Function Button 1 so that < **CH** > is displayed on the LCD panel. Turn the Select Dial to choose a channel ID from 1 to 4.

- 3 Press the < **SET** > button to confirm.

### 4. Wireless ID Settings

Change the wireless channels and wireless ID to avoid interference for it can only be triggered after the wireless IDs and channels of the master unit and the slave unit are set to the same.

Press the < **MENU** > button to enter C.Fn ID. Press the < **SET** > button to choose OFF channel expansion shutdown, and choose any figure from 01 to 99.

### 5. E TTL: Fully Automatic Wireless Flash Shooting

#### Using Automatic Wireless Flash with a Single Slave Unit



#### 1 Master Unit Setting

- Attach a TT685C camera flash on the camera and set it as the master unit.
- X1T-C can also be used as master unit. X1T-C can control TT685C's ZOOM value when the ZOOM is adjusted to auto (A) mode.



#### 2 Slave Unit Setting

- Set the other camera flash as the wireless slave Unit.

#### 3 Check the communication channel.

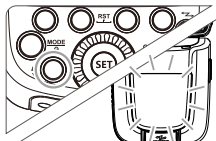
- If the master unit and slave unit(s) are set to a different channel, set them to the same channel. (Page 57)

#### 4 Position the camera and flashes.

- Position the camera and flashes as the picture shows. (Page 54)

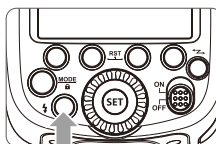
#### 5 Set the master unit's flash mode to < **ETTL** >.

- Set the master unit's flash mode to < **ETTL** >.
- For shooting, < **ETTL** > will automatically be set for the slave unit.
- Set the master unit flash firing as **ON** to fire a flash.



#### 6 Check that the flash is ready.

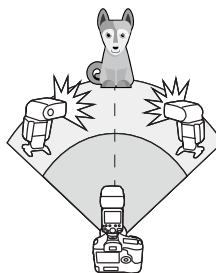
- Check that the master flash ready indicator is lightened.
- When the slave flash ready indicator is ready, the AF-assist beam lighting area will blink at 1 second intervals.



#### 7 Check the flash operation.

- Press the master unit's Test Button < **⚡** >.
- Then, the slave unit will fire. If not, adjust the slave unit's angle toward the master unit and distance from the master unit.

#### Using Automatic Wireless Flash with Multiple Slave Units



When stronger flash output or more convenient lighting operation is needed, increase the number of slave units and set it as a single slave unit.

To add slave units, use the same steps as setting "automatic wireless flash with a single slave unit". Any flash group can be set (A/B/C).

When the number of slave units is increased and the master unit flash firing is ON, automatic control is implemented to make all groups of flashes fire the same flash output and ensure the total flash output up is to standard exposure.

- Press the depth-of-field preview button on the camera to fire a modeling flash.
- If the slave unit's auto power off function is workable, press the master unit's test button to power it on. Please note that test firing is unavailable during the camera's regular metering time.
- The effective time of slave auto power off is changeable. (C.Fn-Sv APOT Page 74)
- By making some settings, the auto AF-assist transmitter will not blink after the slave unit's flash ready indicator is lightened. (C.Fn-AF Page 74)

## Using Fully Automatic Wireless Flash

The FEC and other settings that set on the master unit will also be appeared on the slave unit automatically. The slave unit does not need any operation. Use the following settings to make wireless flashes according to the same methods with normal flash shooting.

- Flash Exposure Compensation ( **±** Page 48)
- Flash Exposure Bracketing ( **FEB** Page 48)
- Flash Exposure Lock (Page 49)
- High-Speed Sync ( **SYNC** Page 50)
- Manual Flash (Page 51)
- Stroboscopic Flash (Page 52)

## About Master Unit

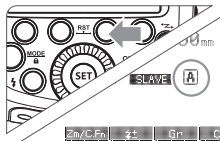
Use two or more master units. By preparing several cameras that with master units flash attached, cameras can be changed in shooting while keeping the same lighting source (slave unit).

## 6. ETTL: Use the Wireless Shooting of Flash Ratio

### Auto Flash Shooting with Two Slave Unit

Divide the slave units into A and B groups and balance their shooting illumination (flash ratio).

Auto control exposure to make the total output of A and B flash groups up to standard exposure.



### 1 Setting the flash groups of slave unit.

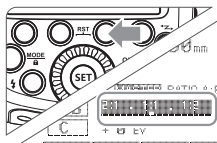
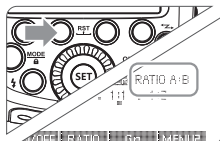
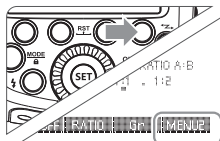
- Set the flash as slave unit.
- Press Function Button 3 < **Gr** > and choose <A> or <B>.
- Set one slave unit as <A>, the other as <B>.

### 2 Setting < MENU 2 >.

- Step 2 to Step 4 are set on the master unit.
- Press the Function Button 4 on the master unit so that < MENU 2 > is displayed.

### 3 Setting <RATIO A:B>.

- Press Function Button 2 < **RATIO** > so that <RATIO A:B> is displayed.



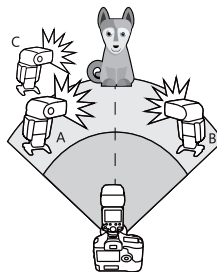
## 4 Setting flash ratio.

- Press Function Button 3 < **Gr** >.
- Turn the Select Dial to set the amount of flash ratio and press <SET> button to confirm.

## 5 Taking the picture.

- The slave units will flash according to the flash ratio.

## Auto Flash Shooting with Three Slave Unit



## 1 Setting the slave group <C>.

- Use the same method of step 1 (Page 59) to set the slave unit of flash group <C>.

## 2 Setting <RATIO A:B C>.

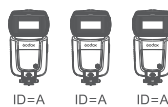
- Use the same method of step 1 and step 3 (Page 59) to set the master unit as <RATIO A:B C>.

## 3 Setting flash exposure compensation.

- Use the same method of step 1 (Page 59) to set the slave unit of flash group <C>.
- Press Function Button 2 < **±** >. Turn the Select Dial to set the amount of flash exposure compensation and press <SET> button to confirm.

## About Slave Group Control

### Slave Group A



If three slave units are all set to <A> in terms of slave ID, these slave units will be controlled as if they were one camera flash in slave group A.

- When setting < RATIO A:B C >, group A, B and C will fire a flash synchronously; when setting < RATIO A:B >, group C will not fire a flash.
- If shooting under the situation that group C is toward the main shooting subject, over exposure might occurred.
- In some EOS film cameras that support E-TTL autofocus, you cannot perform multiple flash wireless shooting with a flash ratio setting.

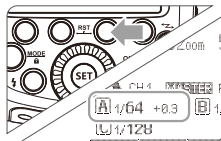
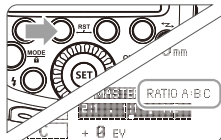
- The flash ratio of 8:1 to 1:1 to 1:8 is equivalent to 3:1 to 1:1 to 1:3 (1/2 step increment).

- The details of the flash ratio settings are as follows.

8:1   4:1   2:1   1:1   1:2   1:4   1:8  
5.6:1   2.8:1   1.4:1   1:1.4   1:2.8   1:5.6

## 7. M: Wireless Flash Shooting with Manual Flash

This describes wireless (multiple shooting) using manual flash. You can shoot with a different flash output setting for each slave unit (firing group). Set all parameters on the master unit.



- 1 Setting the flash mode to <M>.
- 2 Setting the number of flash groups.

- When <MENU1> is displayed, press the Function Button 2 <RATIO> to set the groups to fire.
- The setting changes as follows each time you press the button:  
ALL(RATIO OFF)→  
A/B(RATIO A:B)→  
A/B/C(RATIO A:B:C)

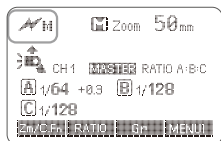
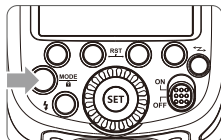
- 3 Setting flash output.
- Press Function Button 3 <Gr>. Turn the Select Dial to set the flash output of the groups. Press <SET> button to confirm.

- 4 Taking the picture.
- Each group fires at the set flash ratio.

- When ALL <RATIO OFF> is set, set A, B or C as the firing group for the slave units.
- To fire multiple slave units with the same flash output, select ALL <RATIO OFF> in step 2.

### Setting <M> Flash Mode

You can directly operate the slave unit to manually set the manual flash or stroboscopic flash.



- 1 Setting the slave unit. (Page 56)
  - 2 Setting flash mode to <M>.
- Press <MODE> button so that <M> is displayed.
  - Set the manual flash output. (Page 51)

## 8. Multi: Wireless Flash Shooting with Manual Flash



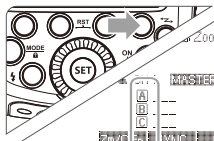
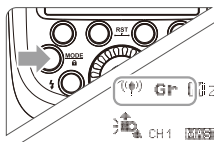
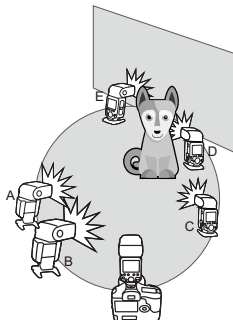
### Setting <MULTI> stroboscopic flash.

- Press <MODE> button so that <MULTI> is displayed.
- Setting the stroboscopic flash. (Page 52)

## 9. Gr: Shooting with a Different Flash Mode for Each Group

When using an EOS digital camera released since 2012, such as the EOS-1DX (except for EOS 1200D), you can shoot with a different flash mode set for each firing group, with up to 5 groups (A/B/C/D/E).

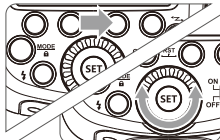
The flash mode that can be set are ①E-TTL II autoflash and ②Manual flash. When the flash mode is ①, exposure is controlled to result in standard exposure for the main subject as a single group. This function is for advanced users who are very knowledgeable and experienced in lighting.



- 1 Set the flash mode to <Gr>.
- Press the <MODE> Button and set the flash mode to <Gr>.

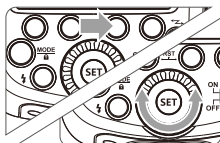
- 2 Set the firing group of the slave units

- Operate and set the slave units one by one.
- While <MENU1> is displayed, press Function Button 3 <Gr> and select <A>, <B>, <C>, <D> or <E>.
- Set the firing group (A/B/C/D/E) for all the slave units.



### 3 Set the flash mode

- Set the flash mode of each firing group by operating the master unit.
- While <MENU> is displayed, press Function Button 3 <Gr> and turn the Select Dial to choose the group.
- Press Function Button 2 <MODE> and select the flash mode of the selected group from <ETTL>, <M> and <--- (OFF)>.
- Repeat step 3 to set the flash mode of all groups.



### 4 Set the flash output and flash exposure compensation amount.

- While a firing group is selected, press Function Button 3 <1/2>.
- Turn the Select Dial to set the flash function corresponding to flash mode, and press <SET> Button to confirm.
- When using the <M> mode, set the flash output. When using the <ETTL> mode, set the flash exposure compensation amount as required.
- Repeat step 4 to set the flash function of all groups.
- Press Function Button 4 <1/2> to return to the shooting-ready state.

### 5 Take the picture

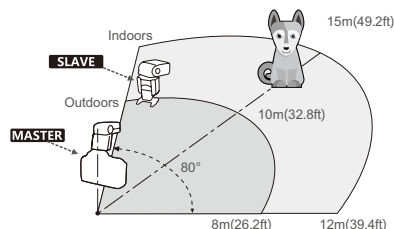
- Each slave unit fires in the respective flash modes set.

## Wireless Flash Shooting: Optic Transmission

This product supports wireless flash application and functions as either a master or a slave unit. As a master unit, it can control Canon speedlites e.g. 580EXII, 600EX-RT via wireless. As a slave unit, it can receive wireless signals of Canon speedlites e.g. 580EXII, 600EX-RT and commanders of Canon cameras e.g. 7D/60D/600D.

- You can set up two to three slave groups for E-TTL II autofocus shooting. With E-TTL II autofocus, you can easily create various lighting effects.
- Any flash settings (of flash exposure compensation, high-speed sync, FE lock, FEB, manual flash, Multi flash) on the master unit will be automatically sent to the slave units. So the only thing you need to do is to set the master unit to ETTL mode without any operation for the slave units at all during the shooting.
- This flash can work in E-TTL autofocus, M manual flash, and Multi stroboscopic flash modes when set as a master unit.

### Positioning and Operation Range

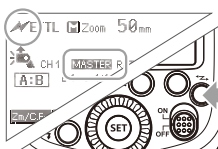


- Even with multiple slave units, the master unit can control all of them via wireless.
- In this user manual, "master unit" refers to the camera flash on a camera and "slave unit" will be controlled by the master unit.

## 1. Wireless Settings

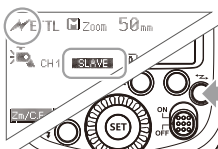
You can switch between normal flash and wireless flash. For normal flash shooting, be sure to set the wireless setting to OFF.

### Master Unit Setting



Press <Fn> button so that <Fn> or <MASTER> are displayed on the LCD panel.

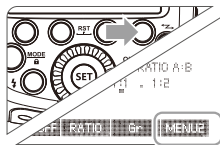
### Slave Unit Setting



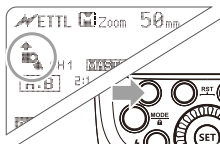
Press <Fn> button so that <Fn> or <SLAVE> are displayed on the LCD panel.

## 2. Master Unit's Flash OFF

When the master unit is set to OFF, only the slave units will fire a flash.



- 1 Press Function **Button 4** so that **<MENU2>** is displayed on the LCD panel.

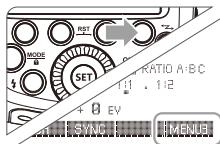


- 2 Press Function **Button 1** **<ON/OFF>** to control the ON/OFF of the master unit.  
**<ON>** : The master unit flash firing is ON.  
**<OFF>** : The master unit flash firing is OFF.

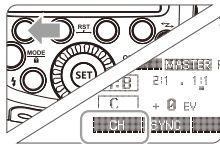
Even if the master unit flash firing is disabled, it still fires a preflash to transmit wireless signals.

## 3. Setting the Communication Channel

If there are other wireless flash systems nearby, you can change the channel IDs to prevent signal interference. The channel IDs of the master unit and the slave unit(s) must be set to the same.



- 1 Press Function **Button 4** so that **<MENU>** is displayed on the LCD panel.

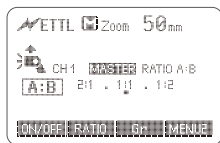


- 2 Press Function **Button 1** so that **<CH>** is displayed on the LCD panel. Turn the Select Dial to choose a channel ID from 1 to 4.

- 3 Press the **<SET>** button to confirm.

## 4. E TTL: Fully Automatic Wireless Flash Shooting

Using Automatic Wireless Flash with a Single Slave Unit



- 1 **Master Unit Setting**
  - Attach a TT685C camera flash on the camera and set it as the master unit.
  - As a master unit, TT685C can control Canon speedlites e.g. 580EXII, 600EX-RT via wireless.



## 2 Slave Unit Setting

- Set the other camera flash as the wireless slave Unit.
- As a slave unit, TT685C can receive wireless signals of Canon speedlites e.g. 580EXII, 600EX-RT and commanders of Canon cameras e.g. 7D/60D/600D.

## 3 Check the communication channel.

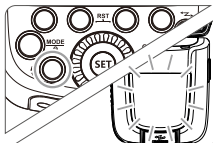
- If the master unit and slave unit(s) are set to a different channel, set them to the same channel. (Page 65)

## 4 Position the camera and flashes.

- Position the camera and flashes as the picture shows. (Page 64)

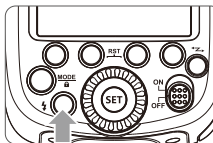
## 5 Set the master unit's flash mode to <E TTL>.

- Set the master unit's flash mode to **<E TTL>**.
- For shooting, **<E TTL>** will automatically be set for the slave unit.
- Set the master unit flash firing as **ON** to fire a flash.



## 6 Check that the flash is ready.

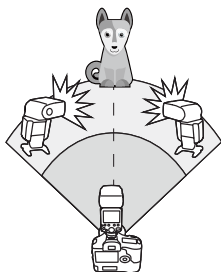
- Check that the master flash ready indicator is lightened.
- When the slave flash ready indicator is ready, the AF-assist beam lighting area will blink at 1 second intervals.



## 7 Check the flash operation.

- Press the master unit's Test Button **< >**.
- Then, the slave unit will fire. If not, adjust the slave unit's angle toward the master unit and distance from the master unit.

## Using Automatic Wireless Flash with Multiple Slave Units



When stronger flash output or more convenient lighting operation is needed, increase the number of slave units and set it as a single slave unit.

To add slave units, use the same steps as setting "automatic wireless flash with a single slave unit". Any flash group can be set (A/B/C).

When the number of slave units is increased and the master unit flash firing is ON, automatic control is implemented to make all groups of flashes fire the same flash output and ensure the total flash output up to standard exposure.

**⚠** The slave unit might be out of order or fire an unwanted flash due to the nearby fluorescent lamp or computer screen.

- 10** • Press the depth-of-field preview button on the camera to fire a modeling flash.
- If the slave unit's auto power off function is workable, press the master unit's test button to power it on. Please note that test firing is unavailable during the camera's regular metering time.
- The effective time of slave auto power off is changeable. (C.Fn-Sv APOT Page 74)
- By making some settings, the auto AF-assist transmitter will not blink after the slave unit's flash ready indicator is lightened. (C.Fn-AF Page 74)

## Using Fully Automatic Wireless Flash

The FEC and other settings that set on the master unit will also be appeared on the slave unit automatically. The slave unit does not need any operation. Use the following settings to make wireless flashes according to the same methods with normal flash shooting.

- Flash Exposure Compensation ( **±** Page 48)
- Flash Exposure Bracketing ( **FEB** Page 48)
- Flash Exposure Lock (Page 49)
- High-Speed Sync ( **SYNC** Page 50)
- Manual Flash (Page 51)
- Stroboscopic Flash (Page 52)

- 10** Press Function Button 4 so that < **±** >, < **SYNC** > and < **FEB** > are displayed.

## About Master Unit

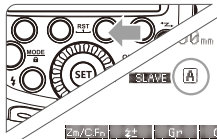
Use two or more master units. By preparing several cameras that with master units flash attached, cameras can be changed in shooting while keeping the same lighting source (slave unit).

## 5. ETTL: Use the Wireless Shooting of Flash Ratio

### Auto Flash Shooting with Two Slave Unit

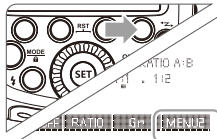
Divide the slave units into A and B groups and balance their shooting illumination (flash ratio).

Auto control exposure to make the total output of A and B flash groups up to standard exposure.



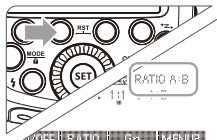
### 1 Setting the flash groups of slave unit.

- Set the flash as slave unit.
- Press Function **Button 3** < **Gr** > and choose <A> or <B>.
- Set one slave unit as <A>, the other as <B>.



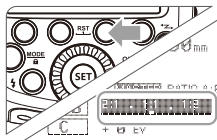
### 2 Setting < MENU 2 >.

- Step 2 to Step 4 are set on the master unit.
- Press the Function **Button 4** on the master unit so that < **MENU 2** > is displayed.



### 3 Setting <RATIO A:B>.

- Press Function **Button 2** < **RATIO** > so that <RATIO A:B> is displayed.



### 4 Setting flash ratio.

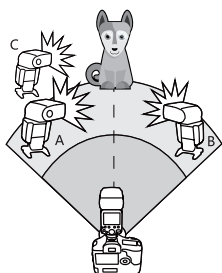
- Press Function **Button 3** < **Gr** >.
- Turn the Select Dial to set the amount of flash ratio and press <SET> button to confirm.

### 5 Taking the picture.

- The slave units will flash according to the flash ratio.



## Auto Flash Shooting with Three Slave Unit



- 1 **Setting the slave group <C>.**
  - Use the same method of step 1 (Page 68) to set the slave unit of flash group<C>.
- 2 **Setting <RATIO A:B C>.**
  - Use the same method of step 1 and step 3 (Page 68) to set the master unit as <RATIO A:B C>.
- 3 **Setting flash exposure compensation.**
  - Use the same method of step 1 (Page 68) to set the slave unit of flash group<C>.
  - Press Function Button 2 <  $\pm$  >. Turn the Select Dial to set the amount of flash exposure compensation and press<SET> button to confirm.

## About Slave Group Control

Slave Group A



If three slave units are all set to <A> in terms of slave ID, these slave units will be controlled as if they were one camera flash in slave group A.

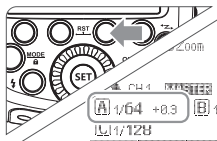
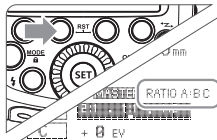
- ▲ • When setting < RATIO A:B C >, group A, B and C will fire a flash synchronously; when setting< RATIO A:B >, group C will not fire a flash.
- If shooting under the situation that group C is toward the main shooting subject, over exposure might occurred.
- In some EOS film cameras that support E-TTL autofocus, 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 1:3 (1/2 step increment).
- The details of the flash ratio settings are as follows.

8:1	4:1	2:1	1:1	1:2	1:4	1:8
5.6:1	2.8:1	1.4:1	1:1.4	1:2.8	1:5.6	

## 6. M: Wireless Flash Shooting with Manual Flash

This describes wireless (multiple shooting) using manual flash. You can shoot with a different flash output setting for each slave unit (firing group). Set all parameters on the master unit.

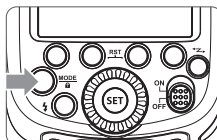


- 1 **Setting the flash mode to <M>.**
- 2 **Setting the number of flash groups.**
  - When < MENU > is displayed, press the Function Button 2 < RATIO > to set the groups to fire.
  - The setting changes as follows each time you press the button:  
ALL(RATIO OFF)→  
A/B(RATIO A:B)→  
A/B/C(RATIO A:B:C)
- 3 **Setting flash output.**
  - Press Function Button 3 < Gr >. Turn the Select Dial to set the flash output of the groups. Press <SET> button to confirm.
- 4 **Taking the picture.**
  - Each group fires at the set flash ratio.

- When ALL < RATIO OFF > is set, set A, B or C as the firing group for the slave units.
- To fire multiple slave units with the same flash output, select ALL < RATIO OFF > in step 2.

## Setting <M> Flash Mode

You can directly operate the slave unit to manually set the manual flash or stroboscopic flash.



- 1 **Setting the slave unit.**
- 2 **Setting flash mode to <M>.**
  - Press <MODE> button so that <M> is displayed.
  - Set the manual flash output. (Page 51)

## 7. Multi: Wireless Flash Shooting with Manual Flash

### Setting <MULTI> stroboscopic flash.



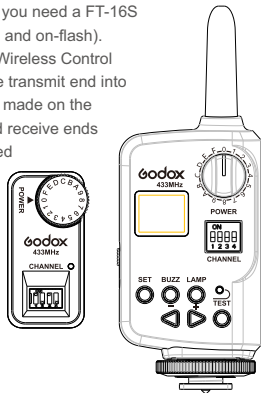
- Press <MODE> button so that <MULTI> is displayed.
- Setting the stroboscopic flash. (Page 52)



## Other Applications

### Wireless Control Function

The flash unit is built in with a Wireless Control Port so that you can wirelessly adjust the power level of the flash and the flash triggering. To control the flash wirelessly, you need a FT-16S remote control set (on-camera and on-flash). Insert its receive end into the Wireless Control Port on the flash and insert the transmit end into the camera hot shoe. Settings made on the hotshoe-mounted transmit and receive ends will be wirelessly communicated to the flash. Then you can press the camera shutter release button to trigger the flash. You can also hold the transmit end at hand to control your off-camera flash.



**For full instructions on the use of FT series remote control, see its user manual.**

### Sync Triggering

The Sync Cord Jack is a  $\Phi 3.5\text{mm}$  plug. Insert a trigger plug here and the flash will be fired synchronously with the camera shutter.

### Modeling Flash

If the camera has a depth-of-field preview button, pressing it will fire the flash continuously for 1 second. This is called modeling flash. It enables you to see the shadow effects on the subject and the lighting balance. You can fire the modeling flash during wireless or normal flash shooting.

- To avoid overheating and deteriorating the flash head, do not fire the modeling flash for more than 10 consecutive times. If you fire the modeling flash 10 consecutive times, allow at least 10 minutes' break for the camera flash.
- The modeling flash cannot be fired with the EOS 300 and Type-B cameras.

### Auto Focus Assist Beam

In poorly-lit or low-contrast shooting environments, the built-in auto focus assist beam will automatically light up to make it easier for autofocus. The beam will light up only when autofocus is difficult and get out as soon as the autofocus becomes correct. If you want to turn off the auto focus assist beam, set the "AF" to "OFF" on the C.Fn settings.

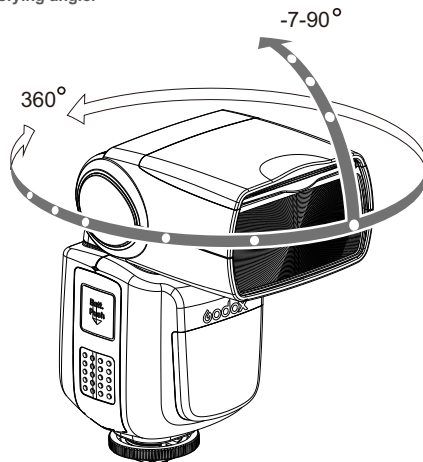
- If you find the auto focus assist beam does not light up, this is because the camera has got a correct autofocus.

Position	Effective Range
Center	0.6~10m / 2.0~32.8 feet
Periphery	0.6~5m / 2.0~16.4 feet

### Bounce Flash

By pointing the flash head toward a wall or ceiling, the flash will bounce off the surface before illuminating the subject. This can soften shadows behind the subject for a more natural-looking shot. This is called bounce flash.

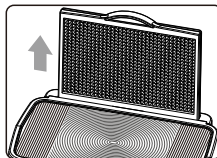
**To set the bounce direction, hold the flash head and turn it to a satisfying angle.**



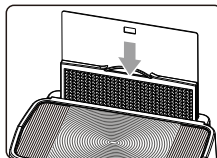
- If the wall or ceiling is too far away, the bounced flash might be too weak and result in underexposure.
- The wall or ceiling should be a plain, white color for high reflectance. If the bounce surface is not white, a color cast may appear in the picture.

### Creating a Catchlight

With the catchlight panel, you can create a catchlight in the subject's eyes to add life to the facial expression.



- 1 Point the flash head upward by 90°.
- 2 Pull out the wide panel. The catchlight panel will come out at the same time.

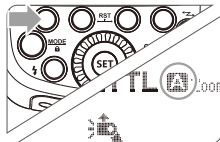


- 3 Push the wide panel back in.
  - Push in only the wide panel.
  - Follow the same procedures as for bounce flash.

- Point the flash head straight ahead and then upward by 90°. The catchlight will not appear if you swing the flash head left or right.
- For best catchlight effect, stay 1.5m/4.9ft away from the subject.

## ZOOM: Setting the Flash Coverage and Using the Wide Panel

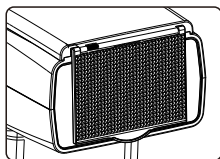
The flash coverage can be set automatically or manually. It can be set to match the lens focal length from 20 mm to 200mm. Also, with the built-in wide panel, the flash coverage can be expanded for 14mm wide-angle lenses.



In Manual Zoom mode, press the **<ZOOM/C.FN>** button.

- Turn the Select Dial to change the flash coverage.
- If **<A>** is displayed, the flash coverage will be set automatically.

If you set the flash coverage manually, make sure it covers the lens focal length so that the picture will not have a dark periphery.



### Using the Wide Panel

Pull out the wide panel and place it over the flash head as shown. The flash coverage will then be extended to 14 mm.

- The catchlight panel will come out at the same time. Push the catchlight panel back in.
- The **<ZOOM/C.FN>** button will not work.



### Low Battery Warning

If the battery power is low, **<B>** will appear and blink on the LCD panel. Please replace the battery immediately.

## C.Fn: Setting Custom Functions

The following table lists the available and unavailable custom functions of this flash.

C.Fn Custom Functions				
Custom Function Signs	Function	Setting No.	Settings & Description	Custom Functions No.
m/ft	Distance indicator	m	m	C.Fn-00
		ft	feet	
APO	Auto power off	ON	ON	C.Fn-01
		OFF	OFF	
FEB ACL	FEB auto cancel	ON	ON	C.Fn-03
		OFF	OFF	
FEB	FEB order	0 → → → +		C.Fn-04
		→ 0 → +		
AF	AF-assist beam	ON	ON	C.Fn-08
		OFF	OFF	
Sv APOT	Slave auto power off timer	60min	60min	C.Fn-10
		30min	30min	
BEEP	Beeper	ON	ON	C.Fn-20
		OFF	OFF	
LIGHT	Backlighting time	12sec	Off in 12 sec.	C.Fn-22
		OFF	Always off	
		ON	Always lighting	
LCD	LCD contrast ratio	0-9	10 levels	
ID	Wireless ID	OFF	Off	
		01-99	Choose any figure from 01-99	
Sv LED	Wireless LED Lamp	OFF	Off	
		ON	on	

1. Press **<Zm/C.Fn>** Backlight/Custom Setting Button for 2 seconds or longer until C.Fn menu is displayed. The "Ver x.x" in the top-right corner refers to the software version.
2. Select the Custom Function No.
  - Turn the Select Dial to select the Custom Function No.
3. Change the Setting.
  - Press **<SET>** button and the Setting No. blinks.
  - Turn the Select Dial to set the desired number. Pressing **<SET>** button will confirm the settings.
  - After you set the Custom Function and press **<MODE>** button, the camera will be ready to shoot.
4. In the C.Fn states, long press the "Clear" button for 2 seconds until "OK" is displayed on the panel, which means the values in C.Fn can be reset.

## Control with the Camera's Menu Screen

If the camera flash is attached to an EOS camera which has a speedlite control function, the flash can be controlled using the camera's menu screen. For the menu operation procedure, refer to your camera's instruction manual.

### ● Setting Camera Flash Functions

The following flash functions are settable according to different flash modes.

1. Flash mode
2. Shutter sync (1st/2nd curtain, high speed sync)
3. FEB
4. Flash exposure compensation
5. Flash firing
6. Clear camera flash's settings

### ● Custom Functions of Camera Flash

C.Fn-00, C.Fn-01, C.Fn-03, C.Fn-04, C.Fn-08, C.Fn-10, C.Fn-20, and C.Fn-22.

### Clear All Flash Custom Functions

Flash function settings screen

Flash function settings	
Flash mode	E-TTL II
Shutter syne.	1st curtain
FEB	-3.2, 1.0, 1.2, 3
Flash exp. comp	-3.2, 1.0, 1.2, 3
E-TTL II	Evaluative
Flash firing	Enable
Clear Speedlite Settings	

Flash C.Fn settings screen


Flash C.Fn settings	
Auto power off	1
0: Enabled	
1: Disabled	
0 1 2 3 4 5 6 7 8 9 10 11 12 13	
0 0 0 0 0 0 0 0 0 0 0 0 0 0	

\* Screens from the EOS-1D Mark III.

- If flash exposure compensation has already been set with the camera flash, flash exposure compensation cannot be set with the camera. To set it with the camera, the camera flash's flash exposure compensation must be set to zero.
- If any Flash Custom Functions and flash settings other than flash exposure compensation have been set by both the camera and the flash, the latest settings will take effect.

## Protection Function

### 1. Over-Temperature Protection

- To avoid overheating and deteriorating the flash head, do not fire more than 30 continuous flashes in fast succession at 1/1 full power. After 30 continuous flashes, allow a rest time of at least 10 minutes.
- If you fire more than 30 continuous flashes and then fire more flashes in short intervals, the inner over-temperature protection function may be activated and make the recycling time over 10 seconds. If this occurs, allow a rest time of about 10 minutes, and the flash unit will then return to normal.
- When the over-temperature protection is started,  is shown on the LCD display.

#### Number of flashes that will activate over-temperature protection:

Power Output Level	Number of Flashes
1/1	30
1/2 +0.7	40
1/2 +0.3	50
1/2	60
1/4(+0.3,+0.7)	100
1/8(+0.3,+0.7)	200
1/16(+0.3,+0.7)	300
1/32(+0.3,+0.7)	500
1/64(+0.3,+0.7)	1000
1/128(+0.3,+0.7)	

#### Number of flashes that will activate over-temperature protection in high-speed sync triggering mode:

Power Output	Times
1/1	15
1/2(+0.3,+0.7);	20
1/4(+0.3,+0.7)	30
1/8(+0.3,+0.7);	40
1/16(+0.3,+0.7)	
1/32(+0.3,+0.7);	
1/64(+0.3,+0.7);	50
1/128(+0.3,+0.7);	

### 2. Other Protections

The system provides real-time protection to secure the device and your safety. The following lists prompts for your reference:

Prompts on LCD Panel	Meaning
E1	A failure occurs on the recycling system so that the flash cannot fire. Please restart the flash unit. If the problem still exists, please send this product to a maintenance center.
E2	The system gets excessive heat. Please allow a rest time of 10 minutes.
E3	The voltage on two outlets of the flash tube is too high. Please send this product to a maintenance center.
E9	There are some errors occurred during the upgrading process. Please using the correct firmware upgrade method.


## Technical Data

Model	TT685C
<b>• Type</b>	
Compatible Cameras	Canon EOS cameras (E-TTL II autofocus)
Guide No. (1/1 output @ 200mm)	60 (m ISO 100) 190 (feet ISO 100)
Flash Coverage	20 to 200mm (14mm with wide panel) • Auto zoom (Flash coverage set automatically to match the lens focal length and image size) • Manual zoom • Swinging/tilting flash head (bounce flash): 0 to 360° horizontally and -7° to 90° vertically
Flash Duration	1/300 to 1/20000 seconds
<b>• Exposure Control</b>	
Exposure control system	E-TTL II autofocus and manual flash
Flash exposure compensation (FEC)	Manual, FEB: ±3 stops in 1/3 stop increments (Manual FEC and FEB can be combined.)
FE lock	With <FEL> button or <* > button
Sync mode	High-speed sync (up to 1/8000 seconds), first-curtain sync, and second-curtain sync
Multi flash	Provided (up to 100 times, 199Hz)
<b>• Wireless Flash</b>	
Wireless flash function	Master, Slave, Off
Controllable slave groups	Optic: 3 (A, B and C) 2.4G: 5 (A, B, C, D and E)
Transmission range (approx.)	Optic Indoors: 12 to 15 m / 39.4 to 49.2 ft. Outdoors: 8 to 10 m / 26.2 to 32.8 ft. Master unit reception angle: ±40° horizontally, ±30° vertically
	2.4G 100m
Channels	Optic 4 (1, 2, 3, and 4)
	2.4G 32 (1~32)
Slave-ready indicator	Two red indicators blink
Modeling flash	Fired with camera's depth-of-field preview button
<b>• Auto Focus Assist Beam</b>	
Effective range (approx.)	Center: 0.6~10m / 2.0~32.8 feet
	Periphery: 0.6~5m / 2.0~16.4 feet
<b>• Power Supply</b>	
AA batteries	Ni-MH batteries (recommended) or 4*LR6 alkaline batteries
Recycle time	Approx. 0.1-2.6 seconds (eneloop Ni-MH batteries of Panasonic). Red LED indicator will light up when the flash is ready.
Full power flashes	Approx. 230 (2500mA Ni-MH batteries)
Power saving	Power off automatically after approx. 90 seconds of idle operation. (60 minutes if set as slave)
<b>• Sync Triggering Mode</b>	Hotshoe, 3.5mm sync line, Wireless control port
<b>• Color Temperature</b>	5600±200k
<b>• Dimensions</b>	
W x H x D	64*76*190 mm
Weight without battery	410g
Weight with battery	530g
2.4G Wireless Frequency Range	2413.0MHz-2464.5MHz
Max. Transmitting Power of 2.4G Wireless	5dbm






## Troubleshooting

If there is a problem, refer to this Troubleshooting Guide.

### The Camera Flash cannot be charged.

- The battery is installed in the wrong direction.  
→Install the battery in the correct direction.
- The camera flash's internal battery is exhausted.  
→If  appears and blinks on the LCD panel, replace the battery immediately.

### The Camera Flash does not fire.

- The camera flash is not attached securely to the camera.  
→Attach the camera's mounting foot securely to the camera.
- The electrical contacts of the Camera Flash and camera are dirty.  
→Clean the contacts.
- <  > or <  > is not displayed in the view finder of camera.  
→Wait until the flash is fully recycled and the flash ready indicator lights up.  
→If the flash ready indicator lights up, but <  > or <  > is not displayed in the view finder, check whether this flash unit is securely attached to the camera hotshoe.  
→If the flash ready indicator does not light up after a long wait, check whether the battery power is enough. If the battery power is low, <  > will appear and blink on the LCD panel. Please replace the battery immediately.

### The power turns off by itself.

- After 90 seconds of idle operation, auto power off took effect if the flash is set as master.  
→Press the shutter button halfway or press any flash button to wake up.
- After 60 minutes (or 30 minutes) of idle operation, the flash unit will enter sleep mode if it is set as slave.  
→Press any flash button to wake up.

### Auto zoom does not work.

- The camera flash is not attached securely to the camera.  
→Attach the camera flash's mounting foot to the camera.

### The flash exposure is underexposed or overexposed.


- There was a highly reflective object (e.g. glass window) in the picture.  
→Use FE lock (FEL).
- You used high-speed sync.  
→With high-speed sync, the effective flash range will be shorter. Make sure the subject is within the effective flash range displayed.
- You used Manual Flash mode.  
→Set the flash mode to **ETTL** or modify the flash output.

### Photos have dark corners or only parts of the target subject are illuminated.

- The focal length of lens exceeds the flash coverage.  
→Check the flash coverage you set. This flash unit has the flash coverage between 20 and 200mm, which fits medium-format cameras. Pull the wide panel out to extend the flash coverage.

## Firmware Upgrade


This flash supports firmware upgrade through the USB port. Update information will be released on our official website.

-  USB connection line is not included in this product. The USB port is a standard Micro USB socket. Common USB connection line is applicable.

## Compatible Camera Models

This flash unit can be used on the following  
**Canon EOS series camera models:**

1DX	5D Mark III	5D Mark II	6D	7D	60D	50D	40D	30D
650D	600D	550D	500D	450D	400D Digital	1100D	1000D	

-  This table only lists the tested camera models, not all Canon EOS series cameras. For the compatibility of other camera models, a self-test is recommended.  
Rights to modify this table are retained.

## Maintenance

- Shut down the device immediately should abnormal operation be detected.
- Avoid sudden impacts and the product should be dedusted regularly.
- It is normal for the flash tube to be warm when in use. Avoid continuous flashes if unnecessary.
- Maintenance of the flash must be performed by our authorized maintenance department which can provide original accessories.
- This product, except consumables e.g. flash tube, is supported with a one-year warranty.
- Unauthorized service will void the warranty.
- If the product had failures or was wetted, do not use it until it is repaired by professionals.
- Changes made to the specifications or designs may not be reflected in this manual.

## Statement

- A.** 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.
- B. Warning:** Changes or modifications to this unit not expressly approved by the part responsible for compliance could void the user's authority to operate the equipment.
- C. 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.