



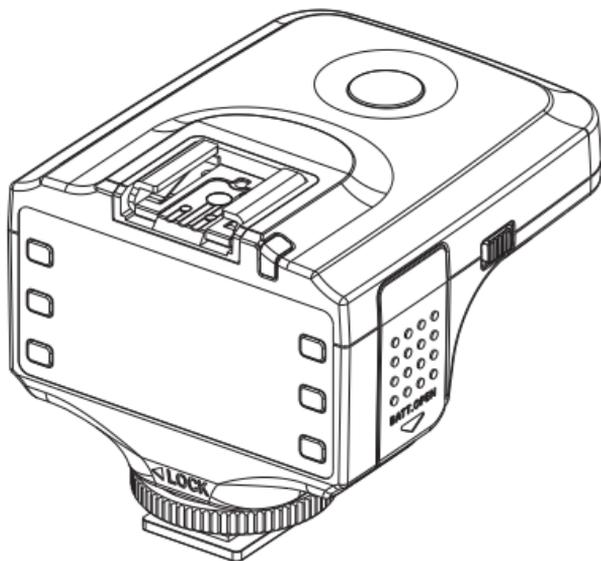
[pro]master®

ST1

*Wireless*

# *Transceiver*

*For Canon (ST1C)*





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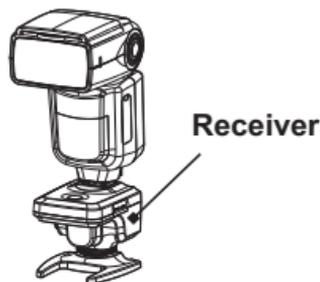
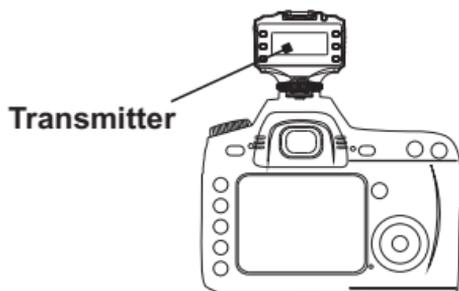
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# Precautions

1. Do not attempt to disassemble, open, or repair this transceiver by yourself.
2. Always use batteries of the same type, brand, and age. Always replace both batteries at the same time. Do not combine different types, brands, old, or new batteries. This could cause the batteries to overheat, leak, or explode.
3. This product is not water resistant. Keep it away from rain, snow, and high humidity areas.
4. Install the batteries in proper orientation as indicated in the battery chamber.
5. Remove any batteries from the unit before storing the unit for long periods.

**This product is a wireless transceiver, meaning it can act as either a transmitter or as a receiver. For the purpose of this instruction manual it will be called a transmitter (master unit) when installed on the hot shoe of a camera. It will be called a receiver (slave unit) when a flash is installed or connected to it for remote operation. Also, the words 'flash' and 'speedlight' may be used interchangeably.**



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## ■ Foreword

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Thank you for purchasing the [pro]master ST1 Transceiver. The ST1C is an excellent tool for advanced wireless flash photography using Canon cameras and speedlights. Its various flash-mode functions, include: Gr, E-TTL II, M, Multi, and it supports a maximum shutter sync speed of 1/8000S. It can also control up to five flash groups.

From the transmitter you can directly control the flash mode, output power, and focal length for each group. The ST1's remote distance can reach up to 100m while supporting 15 wireless channels and 1 auto channel.

### **Here are some of the ST1's features:**

- Dot matrix LCD display screen
- Supports wireless shutter release for camera
- Can individually set group A/B/C/D/E for flash exposure compensation or flash output within Gr mode
- Can individually set group A/B/C flash output within Manual mode
- Can individually set exposure compensation and ratio within TTL mode
- Can individually set flash output, frequency, and flash number within Multi mode
- Functions as a basic flash trigger (max sync speed is 1/250S) with a standard hot shoe
- Equipped with an AF focus assist beam (can be disabled)
- Shutter Sync: first curtain sync, FP high-speed sync. Maximum sync speed is 1/8000s
- Supports exposure compensation and flash value lock function
- Supports 15 wireless channels and 1 auto channel

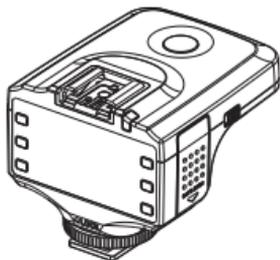
- 
- Firmware can be upgraded through the USB interface
  - PC sync port

- **Please read this manual while also referring to your camera and speedlight's instruction manuals.**

### **Included items:**

The ST1 comes with the following accessories.

- Transceiver
- Mini Stand
- Manual

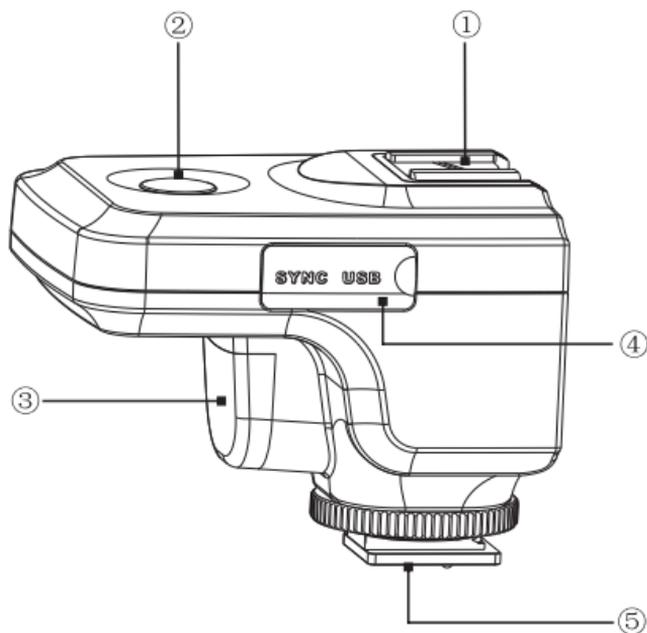


ST1C



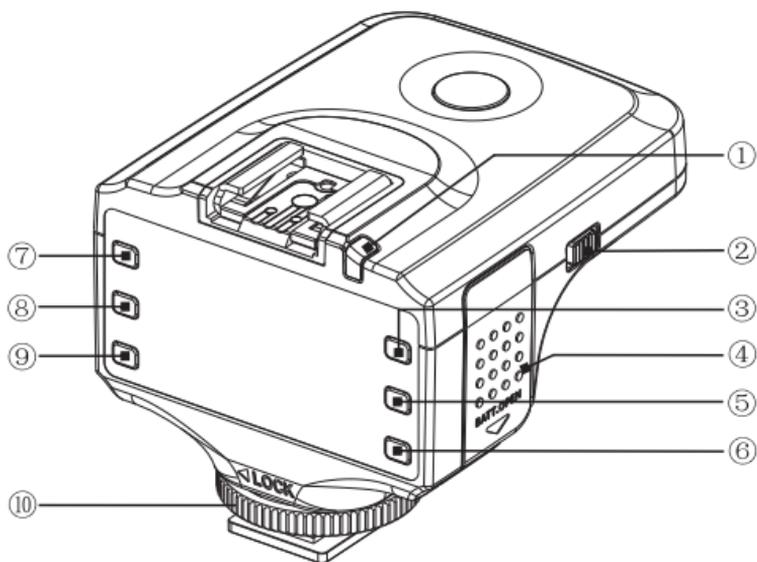
Mini Stand

## Parts Identification



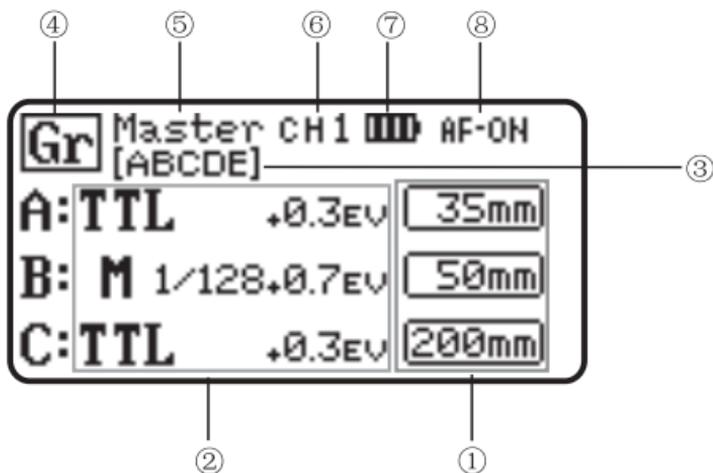
- ① Hot Shoe      ② Test Flash/Shutter Button  
③ AF Assist Beam Emitter      ④ PC sync port / USB Interface  
⑤ Hot foot

## Parts Identification



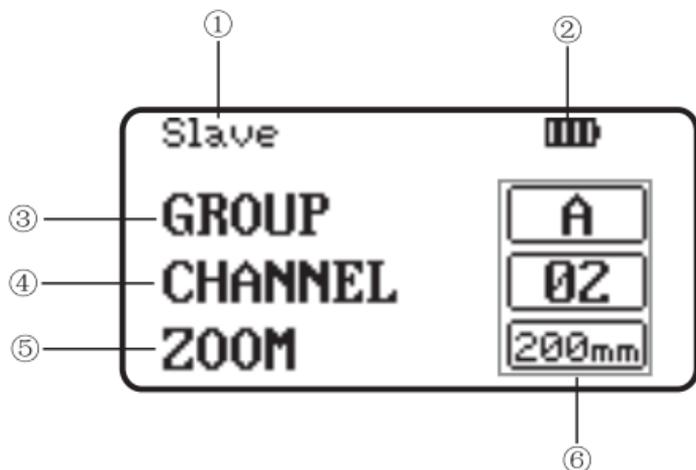
- ① Status Indicator    ② Power Switch    ③ Increase Button  
④ Battery Cover    ⑤ Decrease Button    ⑥ Confirm 'OK' Button  
⑦ Zoom/ Function Button    ⑧ Select/ Sync Button  
⑨ Mode Button/ Master or Slave Switch  
⑩ Locking Ring

## Transmitter Display



- ① Focal Length Area
- ② Group Function Mode / Exposure Compensation Display Area
- ③ Number of groups Display Area
- ④ Flash mode    ⑤ Transceiver Mode
- ⑥ Channel Icon
- ⑦ Power Icon
- ⑧ AF Assist Beam Emitter State

## Receiver Display



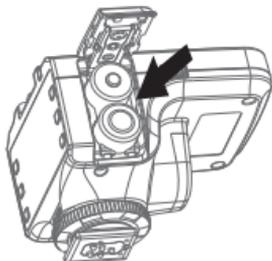
- ① Transceiver Mode
- ② Power Icon
- ③ Group Icon
- ④ Channel Icon
- ⑤ Zoom Icon
- ⑥ Focal Length Value

# Basic Operation

## Inserting the batteries

### 1 Opening the cover.

Slide it down as shown by the arrow to open.



### 2 Installing the batteries.

Make sure the + and - battery contacts are properly oriented as shown in the battery compartment.

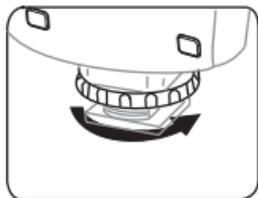
### 3 Closing the cover.

Close the battery compartment cover and slide it up as shown by the arrow.



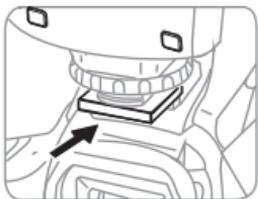
# Basic Operation

## Attaching to the camera



### 1 Preparing to attach the transceiver.

Loosen the locking ring by turning it in the direction of the arrow.



### 2 Attaching the transceiver.

Mount the transceiver into the camera's hot shoe by sliding it in all the way.



### 3 Securing the transceiver.

Turn the locking ring in the direction of the arrow to tighten.



### 4 Detaching the transceiver.

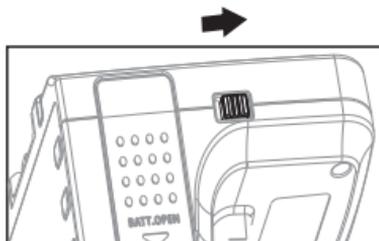
Loosen the locking ring. Then remove the transceiver from the camera's hot shoe by sliding it out.

# Basic Operation

## Turning on the power

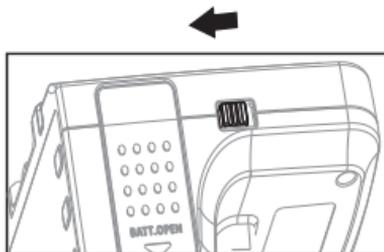
### 1 Turn on the power.

Turn the power switch to <ON>.



### 2 Turn off the power.

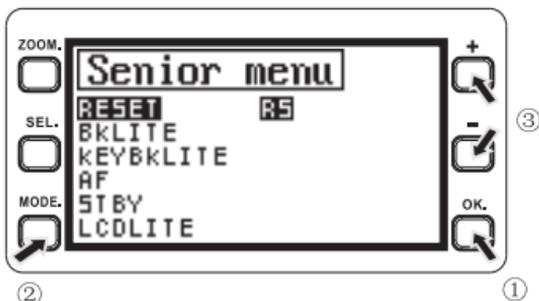
Turn the power switch to <OFF>.



- In order to save power, the Transmitter will enter a sleep state after a specified time (this time can be adjusted as a custom setting). The LCD will not display. Press the shutter button halfway or press the test button to wake it up.
- As a Receiver it will not enter a sleep state.

# Custom Setting

You can customize the transmitter features to suit your shooting preferences with custom settings by using the Senior menu.



<b>RESET</b>	Reset custom setting
<b>RS</b>	RS: Reset
<b>BKLITE</b>	LCD backlight
<b>OFF</b> <b>ON</b>	<b>OFF:</b> Turn off <b>ON:</b> Turn on
<b>KEYBKLITE</b>	Button Backlight
<b>OFF</b> <b>ON</b>	<b>OFF:</b> Turn off <b>ON:</b> Turn on
<b>AF</b>	AF-assist illuminator
<b>OFF</b> <b>ON</b>	<b>OFF:</b> Turn off <b>ON:</b> Turn on
<b>STBY</b>	Standby function
<b>15MIN</b> <b>30MIN</b> <b>45MIN</b> <b>OFF</b>	15MIN: 15minutes 30MIN: 30minutes 45MIN: 45minutes OFF: Function canceled

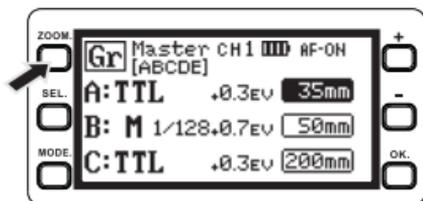
\*Standby controls the length of time before the ST1 enters sleep mode.

<b>LCDLITE</b>	LCD contrast
<b>5</b> <b>4</b> <b>3</b> <b>2</b> <b>1</b> <b>0</b>	5 represents the maximum contrast; 0 represents the minimum contrast
<b>VER</b>	Version of firmware
	Version

- Press the  button for approx. 2 seconds to display the custom setting menu.
- Press the  button to highlight a setting you wish to adjust.
  - Press the  button to access a particular setting.
  - Use the  and  buttons to adjust a setting.
- Press the  button for approx 2 seconds return to exit the Custom settings menu.

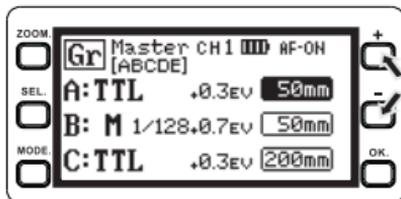
# Transmitter operation

## Focal length setting

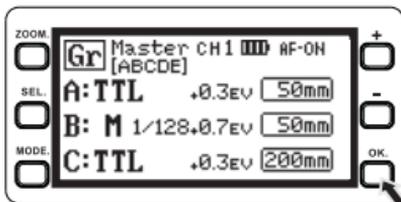


Press  button to highlight zoom A.

You can continue pressing the button to highlight B, C, D, or E group and control the zoom setting for that group.



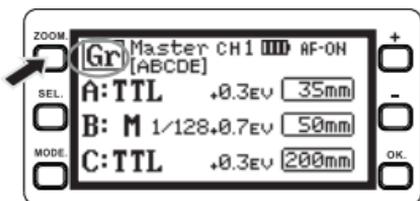
Press  button to manually increase the zoom setting  
Press  button to manually decrease the zoom setting  
Choose "00mm" to automatically match the zoom setting of the lens.



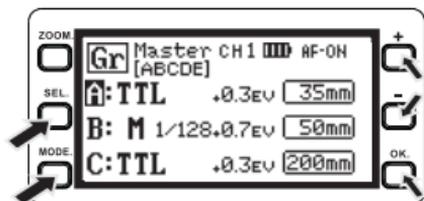
Press  button to confirm.

# Transmitter operation

## Group 'Gr' Mode Setting



Press and hold the <sup>ZOOM.</sup>  button to choose Gr mode. (Each time you press and hold the zoom button for approx. 1 second the mode will toggle between Gr, TTL, M, and Multi.)



Press the <sup>SEL.</sup>  button to select a group (A, B, C, D, or E).

Press the <sup>MODE.</sup>  button to set a mode for the highlighted group.

Press the <sup>+</sup>  or <sup>-</sup>  button to change the flash exposure compensation value FEC for the group.

Press the <sup>OK</sup>  button to confirm your selection.

# Transmitter operation

## Manual Mode Setting



Press and hold the  button for approx. 1 second to toggle to Manual mode.



Press the  button to select the group icon.

Press the  or  button to change the group.

Press  button to confirm your selection..

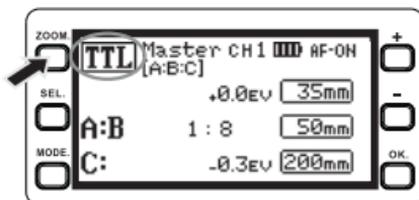


Press the  or  button choose a flash output level for your selected group.

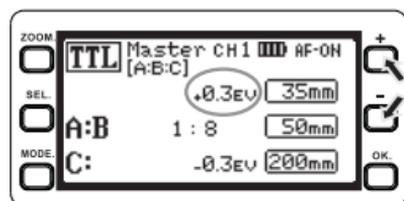
- ① The following three firing group modes are available:  
<ALL>, <A:B>, <A:B:C>

# Transmitter operation

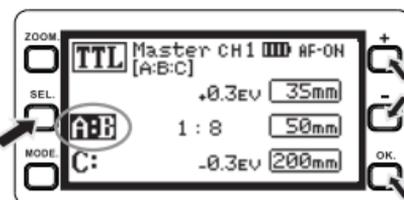
## TTL Mode Setting



Press and hold the  button 1 second at a time to toggle to TTL mode.



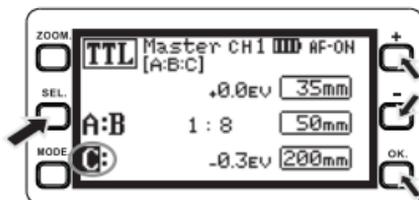
Press the  or  button to choose an overall exposure compensation value.



Press the  button to highlight a group icon.

Press the  or  button to change the ratio or exposure compensation.

Press  button to confirm.



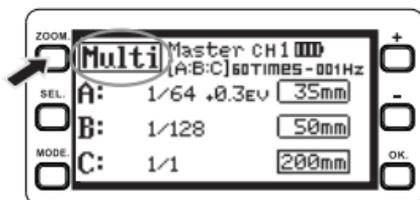
Press the  button to select exposure compensation of group C in A:B:C mode.

Press the  or  button to choose a value.

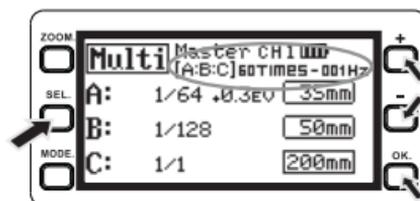
Press the  button to confirm.

# Transmitter operation

## Multi Mode Setting



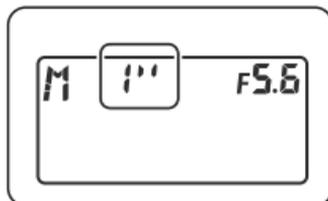
Press and hold the  button 1 second at a time to choose Multi mode.



Press the  button to toggle among group number, times, and frequency (Hz).

Press the  or  button to choose values for each.

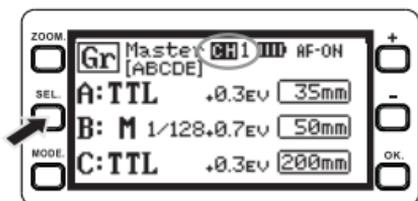
Press  button to confirm your selection(s).



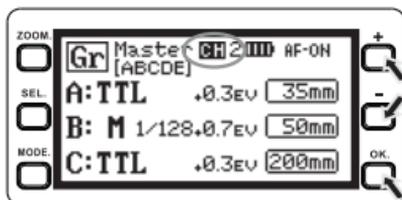
- Use the following equation to determine the shutter speed. Then set your camera to a shutter speed slower than the calculated number. 
$$\text{Shutter speed} = \frac{\text{Number of flashes per frame}}{\text{Frequency of flash (Hz)}}$$
 For example, if the number of flashes per frame is 10 and the frequency is 5Hz, divide 10 by 5 to get a shutter speed of 2 seconds or slower (set a shutter speed of slower than 2 seconds).
- B(bulb) may be used for the shutter speed.

# Transmitter operation

## Transmitter channel setting



Press  button and hold it for approx. 1 second to highlight channel in any mode.

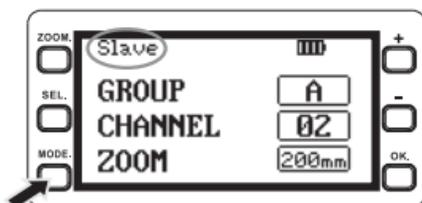


Press  or  button to choose a channel.  
Press the  button to confirm your selection.

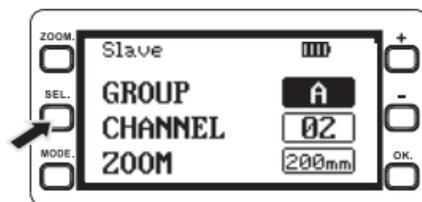
- ① If another photographer is using a similar type of wireless flash system close by, your receivers may accidentally fire in sync with that photographer's transmitter. Use a different channel number to avoid this.
- ② Be sure to set the transmitter and receivers to the same channel.

# Receiver operation

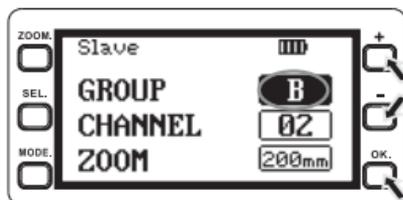
## Receiver group setting



Press the <sup>MODE.</sup> button for 2 sec. to choose receiver (slave) mode.



Press <sup>SEL.</sup> button to highlight group.

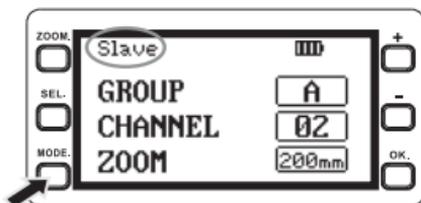


Press <sup>+</sup> or <sup>-</sup> button to choose a group.

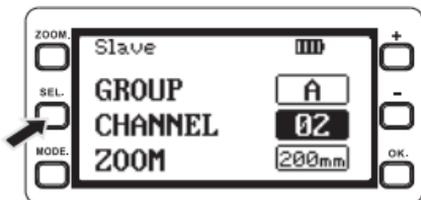
Press <sup>OK.</sup> button to confirm the selection.

# Receiver operation

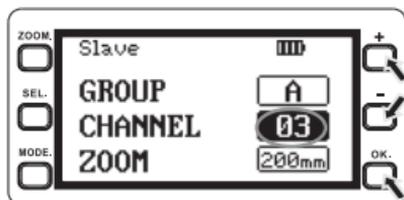
## Receiver channel setting



Press the **MODE** button for 2 sec. to choose receiver (slave) mode if you are not already in this mode.



Press **SEL.** button to highlight channel.



Press **+** or **-** button to choose a channel.

Press the **OK** button to confirm the selected channel.

# Flash triggering

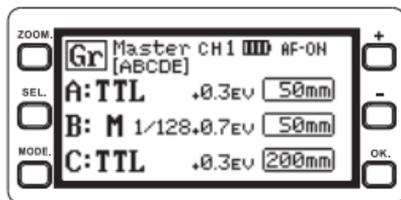
Before flash triggering, make sure the transmitter and receiver are on the same channel, and a flash is placed on each receiver's hotshoe.

## Testing

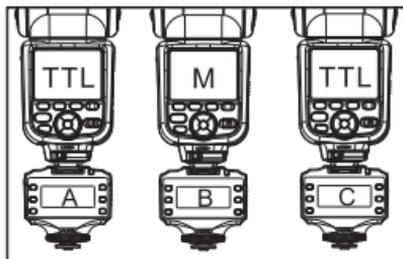
Turn on the transmitter, receivers and flashes. Press the transmitter's test button. All groups which have been selected will flash at once. Receivers set to a different channel will not flash.

## Flash triggering

Each flash set to the same channel as your transmitter and falling within the transmitter's chosen group will fire according to the mode and power level set for that group.



**Transmitter**

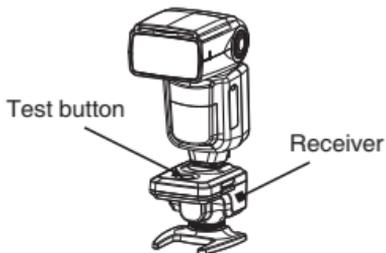
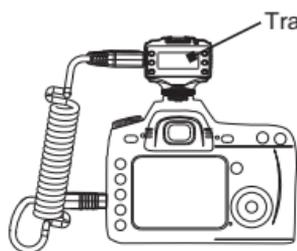


**Receiver**

## Shutter release function

The ST1 can also be used as a wireless, remote shutter release for your camera.

- ①. Install the transmitter on the camera's hot shoe, and use a shutter connecting cable to connect the transceiver's PC sync port to the camera.



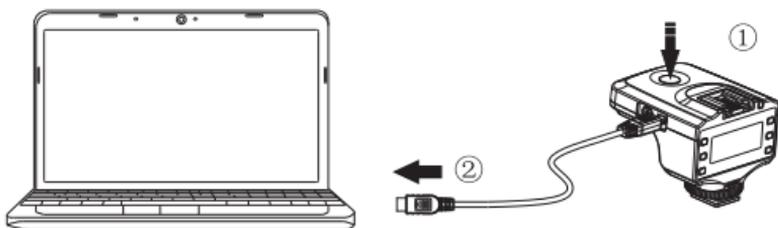
- ②. Press the test button of another ST1 transceiver to focus and shoot. If a speedlight is installed on the transceiver it will fire in sync.

● Shutter release cables are sold separately.

## Firmware Updates

The ST1 has a USB service port located next to its PC sync port.

While the ST1 is designed to work with cameras presently available in the market, it may require firmware updates as new cameras and speedlights are released, or as cameras are updated with new firmware. Refer to [www.promaster.com](http://www.promaster.com) for the most recent firmware.



### To update the ST1's firmware:

- ① Turn off the power. Hold down the test button.
- ② Connect to a computer using a USB-MINI cable.
- ③ Use the PC terminal software to update the firmware.

- Before updating the firmware, remember to turn off the power.
- USB-MINI cable sold separately.

## **Power does not turn on.**

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- Replace the batteries if they are low or out of power.
- Check that the batteries are installed in the correct orientation.

## **The slave speedlight does not fire.**

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- Make sure all transceivers are powered on and the speedlight is on and in a ready state.
- Check that the transmitter and receiver are set to the same channels and groups.
- Check the electrical contacts of the transmitter and camera and all speedlights. Reposition them or clean the contacts if necessary.

# Troubleshooting Guide

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## **The picture is underexposed or overexposed.**

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- Be cautious of highly reflective objects (glass window, etc.) which can trick the camera's exposure meter.
- If the subject is very dark or very bright, you may need to use flash exposure compensation.
- When high-speed sync is set, the effective flash range is shorter. Position the slave unit closer to the subject.
- When using autoflash shooting with three firing groups A, B and C, do not fire with firing group C pointed toward the main subject.
- Overexposure may occur when TTL and manual flashes are used at the same time. In this case a manual flash makes a suitable backlight and should be adjusted properly.

## **The picture is very blurred.**

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- When the shooting mode is set to <AV> and the scene is dark, slow sync may be enabled automatically (the shutter speed becomes slower). Use a tripod, or set the shooting mode to <P> or fully automatic mode.

# Specifications

System type: Digital FSK 2.4GHz wireless controller

Range: 100M

Channels: 15 channels and 1 auto channel

Flash modes: Gr / TTL / Manual / Multi / DT

Sync modes: front-curtain sync, FP sync

Groups: 5 Groups (A/B/C/D/E) within Gr mode

3 Groups (A/B/C) within other modes

Shutter: Supports camera control camera  
single shooting

Maximum sync speed: 1/8000S

AF assist beam emitter: supported

Speedlight auto zoom: supported

USB firmware upgrade: supported

Battery type: AAX2

Stand-by time: 120h

Dimensions: 77.8mm(L)×65mm(W)× 62mm(H)

Weight: 98g

● Design and specifications subject to change without notice.



# *One Year Unconditional Warranty*

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If for any reason, this ProMaster product fails within ONE YEAR of the date of purchase, return this product to your ProMaster dealer and it will be exchanged for you at no charge. ProMaster products are guaranteed for ONE FULL YEAR against defects in workmanship and materials. If at any time after one year, your ProMaster product fails under normal use, we invite you to return it to ProMaster for evaluation.

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**FOR  
CANON**

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**Code 4667**

