

[pro]master®

FL190

[ *Electronic*  
**Flash** ]

*User Guide*





## INTRODUCTION

Thank you for your purchase of the ProMaster FL190 Electronic Flash for the Sony multi-interface shoe.

The ProMaster FL190 Electronic Flash is a feature-rich, high-output flash unit designed to use as your primary on-camera flash or as a master or slave unit in a wireless, multiple-flash system.

Before using your new ProMaster FL190 flash, please read this User Guide and your camera's instruction manual to familiarize yourself with the operation and features of your flash and the proper use with your camera.

## FEATURES

**Large Hi-Visibility LCD Panel** makes it easy to see and set the functions of your flash.

**Wireless Flash Modes** are compatible with the camera manufacturers' optical pulse wireless TTL systems and allow you to easily use the FL190 in a multiple flash setup.

**High Power Flash.** The FL190 features a guide number of 190'/58m at 100 iso.

**Automatic / Manual Power Zoom** provides flash coverage from 24 – 105mm (14mm when using built-in wide panel) either controlled by your camera in the automatic mode or set manually as you choose.

**Full Support for TTL Functions** including Exposure Compensation, Rear-curtain Sync, and Exposure Lock.  
(Subject to functions supported by your camera.)

**Fast Recycle Time** of only .1~5 seconds with AA batteries.

**External Power Pack Support.** The FL190 includes a socket for an external power pack for greater flash capacity and faster recycling.

**PC Sync Port** allows the use of wired PC cords to trigger the flash.

**Sound Prompt System** provides audible alerts for more convenience when shooting, especially in remote situations. (Default setting is OFF. Enable this function in the custom settings menu.)

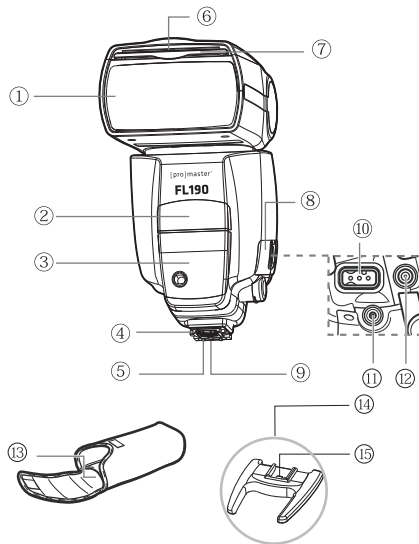
**Power Save Mode** conserves your battery power. Duration can be set in the Custom Settings Menu.

**Function Memory** automatically saves your last flash setup when you manually power off the flash or the flash goes to sleep in the power save mode.

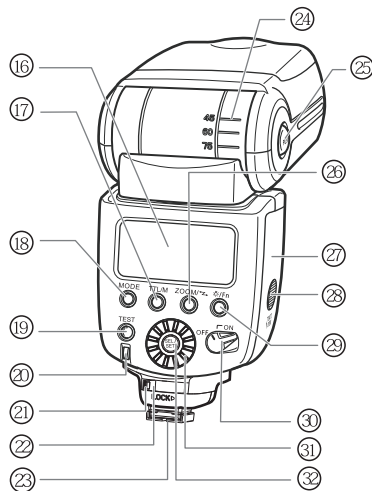
**Advanced options setting** allows you to set a variety of default modes for your flash to match your shooting preferences.

## PARTS IDENTIFICATION

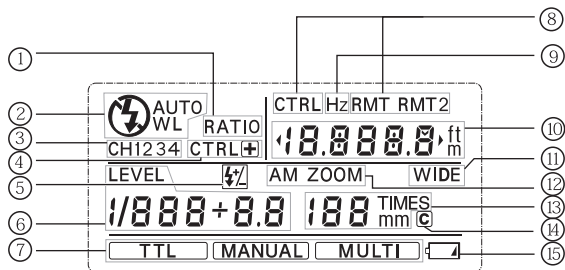
- 1 Flash head/wireless transmitter
- 2 Wireless sensor
- 3 AF assist lamp
- 4 Mounting foot
- 5 Locking pin
- 6 Catch light reflector panel (retracted)
- 7 Wide panel (retracted)
- 8 Contact cover
- 9 Flash foot contacts
- 10 External power source socket
- 11 PC Terminal
- 12 ¼-20 bracket mounting hole
- 13 Mini flash stand storage pocket
- 14 Mini flash stand
- 15 Mini flash stand shoe



- 16 LCD panel
- 17 TTL/M mode selection button
- 18 Flash mode selection button
- 19 Pilot lamp/test firing/wireless slave power on button
- 20 Flash exposure confirmation light
- 21 Mounting foot lock release button
- 22 Mounting foot lock lever
- 23 Dust-and water-resistant adapter
- 24 Bounce angle scale
- 25 Bounce lock release button
- 26 Zoom button
- 27 Battery compartment cover
- 28 Battery compartment lock
- 29 LCD Display Lighting Button/C.Fn Button
- 30 Power switch
- 31 Selection dial
- 32 Select/set button



## LCD PANEL



- |   |  |
|---|--|
| ① Ratio indicator                       | ⑩ Flash Range/Flash Range Warning (Proximal, Distal)/<br>Multi Flash Frequency/Flash Ratio indicator |
| ② Flash mode indicator                  | ⑪ Wide-angle diffuser  |
| ③ Wireless channel indicator            | ⑫ Zoom indicator   |
| ④ Wireless controller indicator         | ⑬ Zoom/Multi Flash repetition indicator  |
| ⑤ Flash compensation indicator          | ⑭ Custom indicator   |
| ⑥ Power level indicator                 | ⑮ Low Battery Power indicator  |
| ⑦ TTL/M/Multi flash indicator           |  |
| ⑧ Wireless Controller /Remote indicator |  |
| ⑨ Hz indicator                          |  |



## OPERATIONS

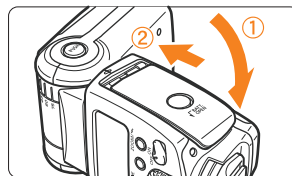
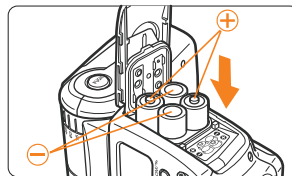
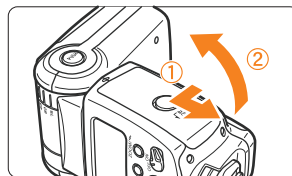
### Installing the Batteries

Use your thumb to press the battery compartment lock lever, then slide it as shown by the arrow ① to open the cover.

Install the batteries. Make sure the + and - battery contacts are properly oriented as shown by the diagram inside the battery compartment.

Close the battery compartment cover and slide it as shown by the arrow. When the cover clicks in place, it will be locked.

Be sure to use fresh AA batteries. For best performance, avoid mixing battery brands or types.

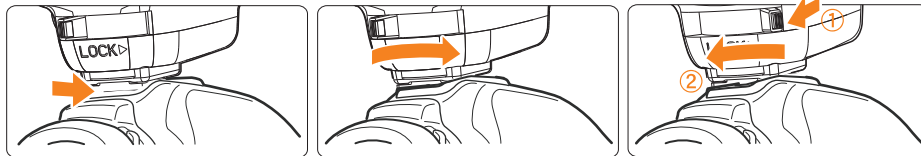


## Attaching to the Camera

To attach the flash to your camera, slip the flash's mounting foot all the way into the camera's hot shoe.

Secure the flash by sliding the lock lever on the mounting foot to the right. When the lock lever clicks into place, it will be locked.

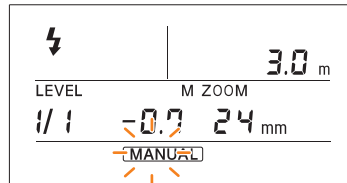
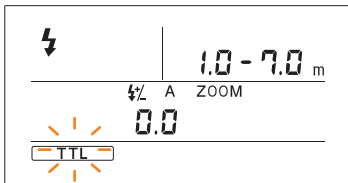
To detach the flash, press the lock-release button, slide the lock lever to the left and remove the flash from the camera hot shoe.



## Basic Functions

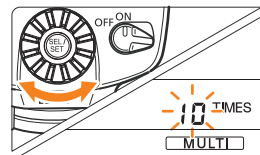
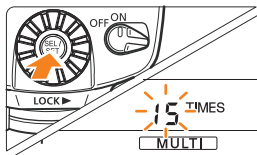
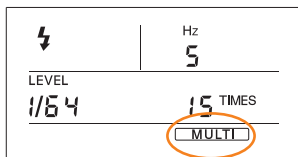
**Power-on and Power-off** the flash using the OFF/ON power switch. When the PILOT light turns red the flash is charged and ready for use. If the battery indicator is low the flash will automatically turn off as there is not sufficient battery capacity to power your flash. Replace the batteries with fresh AA batteries.

**M Mode** allows you to set the flash output from 1/128 power to 1/1 full power in 1/3 stop increments. In the M Mode, use a hand-held flash meter to determine the required flash output to obtain a correct flash exposure. To select the output, press the TTL/M button until **MANUAL** is displayed. Rotate the Selection Dial until the desired output is shown on the LCD. Adjust your camera appropriately and the flash will flash with the desired output when you press the shutter release.



**Multi Mode** is a stroboscopic flash mode where a rapid series of flashes is fired. It can be used to capture multiple images of a moving subject in a single photograph. To achieve this effect your camera's shutter must remain open. You can set the firing frequency (number of flashes per second expressed as Hz), the number of flashes, and the flash output. To set, press the TTL/M button until Multi is displayed on the LCD.

Press the select button and use the select dial to adjust flash output, the number of flashes and firing frequency. Once these are set, press the Select/Set button to confirm the setting. The output may be adjusted to 1/128-1/64-1/32-1/16-1/8-1/4, flash frequency may be set from 1~100.



Note: The operation of high frequency flash may be impacted by the state of your batteries not allowing the flash to recycle fast enough. If you experience problems, reduce the flash frequency or replace your batteries with a fresh set.

## **TTL Mode**

In the TTL mode your camera's metering system controls the flash output to give the optimum balanced exposure. The FL190 supports exposure compensation, and rear-curtain sync. You can adjust the flash output within the range of  $\pm 3$  EV in increments of  $1/3$  EV. Refer to your camera's instruction manual for proper operation of these features.

## **Test Flash**

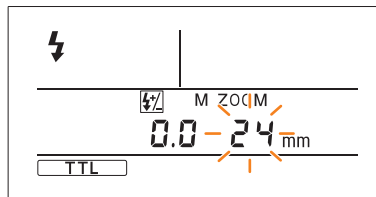
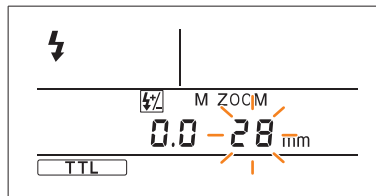
In any mode, you can press the PILOT button to fire the flash. When testing the flash, the flash will flash at the chosen output power setting.

## Setting the ZOOM Coverage

When attached to the camera and the flash head is in the 90° position, the position of the flash zoom head will be set automatically to match the zoom position of your lens.

To set the zoom position manually, press the ZOOM button until the ZOOM indicator reads M ZOOM. Continue pressing the ZOOM button to set the desired position.

Note: Using the built-in wide angle panel, the zoom coverage is automatically set to 24mm which will give you flash coverage for 14mm.



## Fn – Custom Function Settings

You can customize the features of the FL190 to suit your shooting preferences. You do this with Custom Functions Setting.

Custom Function No.	Function	Setting No.	Settings & Description
C02	Change the channel setting of wireless flash	Ch1	Choose Channel 1
		CH2	Choose Channel 2
		CH3	Choose Channel 3
		CH4	Choose Channel 4
C03	Choose the wireless control mode	CTRL1	[CTRL+] Only use HVL-F58AM, HVL-F60M, HVL-F43AM, HVL-F43M, HVL-F42AM or SL582S as off camera flash, choose this mode.
		CTRL2	[CTRL]use HVL-F56Am, HVL-F36AM or SL582S as off camera flash ,choose this mode
C04	Change the recording mode of manual flash and multi flash mode	M	TTL function of flash only could work but under M mode on camera .

		PASM	When choose [PASM], the flash will hold on manual mode ,even the camera recording mode changed to auto mode.
C05	Change the test firing mode	TEST1	Flash one time subject to given power
		TEST3	Flash three times subject to given speed
		TESTM	Flash four minutes subject to given speed
C06	Change the Enabled time of power saving mode	PS 0.5	Change to power saving mode after 30s
		PS 3	Change to power saving mode after 3 minutes
		PS 30	Change to power saving mode after 30 minutes
		PS - -	Cancel the power saving mode
C07	Change the Enabled time of power saving mode when use wireless flash	PS 60	Change to power saving mode after 60 minutes
		PS - -	Cancel the power saving mode
C08	Change the unit of flash acope	ft	Feet
		m	Meters
C09	Quick Flash	ON	ON
		OFF	OFF
C10	Sound control settings	Beep0	OFF
		Beep1	ON
C11	Flash recycle with external power source	Chra0	Flash and external power
		Chra1	External power source
C12	Clearly defined function setting	CLR 0	Have custom function
		CLR 1	Clear custom function



**To set Custom Functions**, press and hold the Fn button until the Custom Function setting menu appears on the LCD. Use the Select Dial until the Fn number corresponds to the Custom Function you would like to set. Press the Select/Set button. The setting number will flash. Rotate the Select Dial until the desired setting number appears. Press the Select/Set button to confirm your choice.

### **Sound Prompt**

If the Sound Prompt function is enabled, the FL190 will beep with a different sound pattern indicating its current status. The Sound Prompt factory default is off. The meaning of the sounds are in the following table:

<b>Sound</b>	<b>Meaning</b>	<b>Operation</b>
Beep Twice	The flash has been turned on and is ready for normal operation.	Normal
Beep Three Times	The flash is charging.	Wait for the charging to be complete.
Beep Three Times Twice	Possible under exposure	Adjust the exposure compensation or change the shooting conditions.
Beep Beep Beep	Possible over exposure	Adjust exposure setting or shooting condition.
Quick Continuous Beeps	Low battery power	Please replace the batteries.
Long Beep	The flash is fully charged and ready to fire.	Normal

## Wireless Flash

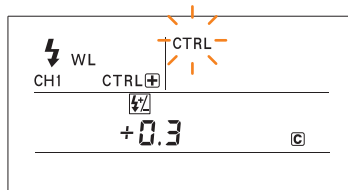
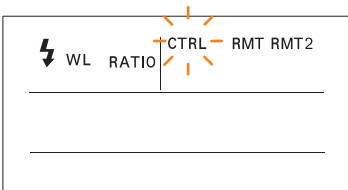
In the wireless flash mode, the FL190 will transmit an Optical Pulse signal to other slave flashes with the same system (FL 190 for Sony will control other FL190's for Sony or other Sony brand flashes which support wireless flash).

When set as a slave, the FL190 can receive signals from models of the same brand.

### Set the Flash to CTRL Mode

To set the FL190 to the CTRL mode, press the MODE button until the WL mode appears on the LCD. Press the Select/Set button and rotate the selection dial until CTRL flashes. Press the set button to select the mode. To set the power ratio rotate the Select Dial to choose the desired exposure.

The wireless flash channel defaults to channel 1. To choose another channel, use the custom function C02 menu.



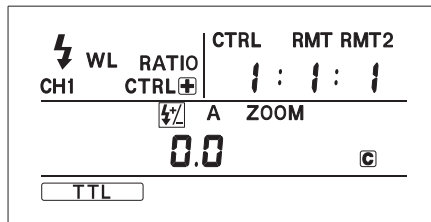
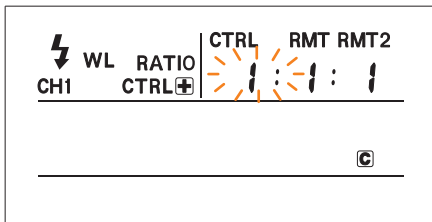
## **Set the Flash to RMT/RMT2 Mode**

To set the FL190 to the RMT/RMT2 slave mode, press the MODE button until the WL mode appears on the LCD. Press the Select/Set button and rotate the selection dial until RMT or RMT2 flashes. Press the set button to select the mode.

The wireless flash channel defaults to channel 1. To choose another channel, use the custom function C02 menu.

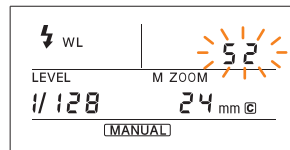
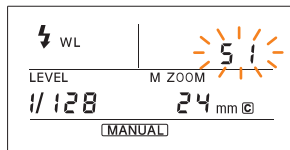
## Multi-Flash Wireless Lighting

To use multiple flashes set your camera, main flash and remote flash(s) to wireless lighting by pressing the mode button until WL is displayed on the LCD. On the CTRL flash, press the set button and rotate the selection dial until CTRL + Ratio flashes. Press the set button to confirm. Use the selection dial to choose the power ratio for each flash. If the ratio is set to [ - ], that flash will not fire. Press the TTL/M button to select either the TTL or manual mode.



## S1/S2 Mode

The S1/S2 modes allow you to use the FL190 as a manual slave. To select the mode, press MODE button until WL is displayed on the LCD. Select RMT or RMT2 mode, then press and hold the ZOOM button until the S1/S2 indicator begins flashing. Rotate the selection dial to choose OFF, S1, or S2 and press the set button to select.

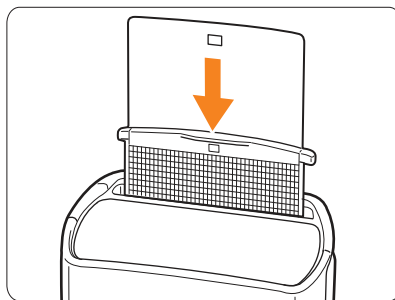
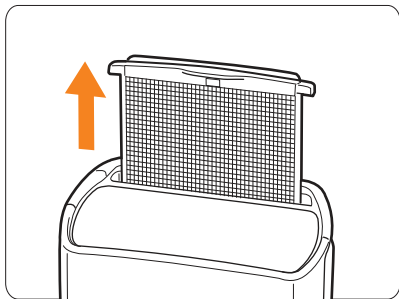


**S1 Mode:** When the flash is in S1 mode, it will fire in sync with the first flash from the master flash. To use this mode correctly, the master flash should be set to manual and without using any red-eye reduction mode.

**S2 Mode:** This is the “pre-flash cancel mode”. This mode will ignore the pre-flash used for focusing and red-eye reduction in the TTL flash mode using the cameras built in flash. Your particular camera may not support this function.

## Built-In Wide-Angle Diffuser

The built-in wide angle diffuser will extend the coverage angle of your flash as well as providing a softer more pleasing light.



Pull out the built-in wide angle diffuser & catchlight panel assembly. To use the wide angle diffuser, fold down to cover the flash lens and push the catchlight reflector back into the flash housing. To use the catchlight panel, pull out the assembly and push the diffusion panel back into the flash housing.

## **Creating a Catchlight**

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

## **Using an External Power Supply**

Your FL190 flash will allow you to use an external power source to get a faster recycle time and more exposures without the need to change batteries. The external power socket on the FL190 is compatible with a Canon type connector.

To use an external power source, fresh batteries must be installed in the flash. You can use Custom Function 12 (C.Fn-12) to select the external power source mode that best suits your shooting needs.

## **Settings Memory and Factory Reset**

When you power off the FL190, it will remember your last used settings. This is helpful when you are set up for a specific shooting situation and the flash goes into the auto power off mode or you turn the flash off during idle periods to conserve battery use. Don't forget to reset your flash to the normal setting when you are done with your shoot. Alternately, you can reset the FL190 to the factory default settings by opening the battery compartment door when the flash is ON. This will interrupt power to the flash and when the battery door is closed, the flash will be reset to the factory default settings.



## Flash Exposure Compensation

You can use the exposure compensation function of the camera to compensate flash output to get your desired results. You can also adjust the flash output  $\pm 3$  EV in 1/3 increments by rotating the Select Dial to set the desired adjustment.

## Rear Curtain Sync

You can use slow shutter speeds to produce motion effects using the rear-curtain sync function. (For rear curtain sync settings, refer to your camera instructions.)

**Note:** When flash is used as slave unit, the rear curtain sync function cannot be set on the flash.

Type:	On-Camera Electronic Flash
Guide No.:	190' / 58m (at 105mm focal length, 100 ISO)
Flash coverage:	24 - 105mm (14mm with wide panel) Auto/Manual Zoom
Exposure control system:	TTL, Manual flash, frequency flash
Locking Bounce Swivel	
Flash Head:	Bounce Position - 0°, 45°, 60°, 75°, 90° Swivel - 0° - 180° Left and Right
Flash Exposure Compensation:	Manual, FEB: ± 3 stops in 1/3-stop increments
Multi flash:	1 - 100 Hz
Rear-curtain Sync:	Yes
Flash Exposure Confirmation:	Yes
Recycling time:	Approx. 0.1 - 5 sec.
Wireless TTL Flash:	Optical pulse - 4 Channels
Custom Flash Modes:	12 user selectable settings
Power Source:	Four size-AA alkaline batteries or lithium batteries Optional HV power supply
Power Save Mode:	User selectable duration
Dimensions:	7 ½ x 2 15/16 x 1 15/16" / 190 x 75 x 49 mm
Weight:	13.1 oz. / 370 g

## Flash Index of different focal length range (ISO 100, in meters / feet)

Flash output	Flash coverage (mm)							
	14	24	28	35	50	70	80	105
1/1	15/49.2	28/91.9	30/98.4	36/118.1	42/137.8	50/164	53/173.9	58/190.3
1/2	10.6/34.8	19.8/65	21.2/69.6	25.5/83.7	29.7/97.4	35.4/116.1	37.5/123	41/134.5
1/4	7.5/24.6	14/45.9	15/49.2	18/59.1	21/68.9	25/82	26.5/86.9	29/95.1
1/2	5.3/17.4	9.9/32.5	10.6/34.8	12.7/41.7	14.8/48.6	17.7/58.1	18.7/61.4	20.5/67.3
1/16	3.8/12.5	7/23	7.5/24.6	9/29.5	10.5/34.4	12.5/41	13.3/43.6	14.5/47.6
1/32	2.7/8.9	4.9/16.1	5.3/17.4	6.4/21	7.4/24.3	8.8/28.9	9.4/30.8	10.3/33.8
1/64	1.9/6.2	3.5/11.5	3.8/12.5	4.5/14.8	5.3/17.4	6.3/20.7	6.6/21.7	7.3/24
1/128	1.3/4.3	2.5/8.2	2.7/8.9	3.2/10.5	3.7/12.1	4.4/14.4	4.7/15.4	5.1/16.7

## **TROUBLESHOOTING**

### **The flash does not fire.**

1. The batteries are installed in the wrong orientation. Install the batteries in the correct orientation.
2. The flash's batteries are exhausted: If the flash recycling time takes 30 seconds or longer, replace the batteries.
3. The flash is not attached securely to the camera. Attach the flash's mounting foot securely to the camera.
4. The electrical contacts of the flash and camera are dirty. Clean the contacts.

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

1. The slave's wireless mode is not set to <SLAVE>. Set it to <SLAVE>.
2. The slave unit(s) is not positioned properly. Place the slave unit within the master unit's transmission range. Point the slave unit's sensor toward the master unit.

### **The power turns off by itself.**

1. Auto power off (sleep) is in effect. Press the shutter button halfway or press the test fire button.

### **The edges or bottom of the picture looks dark.**

1. When you set the flash coverage manually, the setting has a higher number than the lens focal length, resulting in dark edges. Set the flash coverage that is a lower number than the lens focal length or set it to auto zoom.
2. If only the bottom of the picture looks dark, you were too close to the subject. If the subject is closer than 2 m/6.6 ft., tilt the flash head downward by 7° (bounce flash).

### **The flash exposure is underexposed or overexposed.**

1. There was a highly reflective object (glass window, etc.) in the picture. Use FE lock.
2. The subject looks very dark or very bright. Set flash exposure compensation. For a dark subject, set a decreased flash exposure. And for a bright subject, set an increased flash exposure.

### **IMPORTANT INFORMATION**

- Do not fire flashes from a short distance directly into the eyes of people or animals. This can cause damage to the retina and may even lead to blindness.
- Always use batteries of the same type, brand, and age. Always replace all 4 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.

- While Ni-MH or Lithium AA batteries may be used in your flash, using AA batteries other than alkaline type may cause improper battery contact due to the irregular shape of the battery contacts.
- Install the batteries in proper orientation as indicated in the battery chamber. Installing the batteries incorrectly could cause the batteries to overheat, leak, or explode.
- If you change the batteries after a period of sustained continuous firing of the flash, the batteries may become warm or hot. This is normal, however you should take care when handling the batteries.
- Always switch off the flash before changing the batteries.
- Do not attempt to open the flash because the electronic circuit contains high voltage.
- If the flashgun is badly damaged and internal components are exposed, remove the batteries from the flash. Contact customer service. Never try to repair the flashgun by yourself.
- This product is not water-resistant. Keep it away from rain, snow, and high humidity areas.

- Do not clean the flash with agents containing corrosive or flammable substances. Also, do not store or use the flash in flammable conditions.
- To avoid overheating and degrading the flash tube, do not fire more than 20 continuous flashes in rapid sequence. After 20 continuous flashes, allow a rest period of at least 10 minutes. If you fire more than 20 continuous flashes in rapid sequence and then fire more flashes in short intervals, the internal overheating prevention function may be activated and the recycling time will increase to about 8 to 20 seconds. If this occurs, allow a rest time of about 15 minutes and the flash recycling time will return to normal..
- If you use a commercially available sync cord to connect the camera to the flashe's PC terminal, be sure to set the flash zoom manually for proper coverage.
- In the Multi Mode (stroboscopic flash), the camera's shutter should remain open until the flash completes the number of flashes that have been set. The shutter speed to set on the camera is calculated by  $\text{Number of flashes} \div \text{Firing frequency} = \text{Shutter speed}$ . 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.





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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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