[pro]master®

100SL [Speedlight]

TTL Speedlight for Sony

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Precautions

1. Do not disassemble, open, or repair this speedlight by yourself.
2. 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.

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. Installing the batteries incorrectly could cause them to overheat, leak, or explode.
5. If you change the batteries after a period of sustained continuous firing of the speedlight, the batteries may become warm or hot. This is normal, however you should be careful when handling these batteries.
6. Always switch the speedlight off before changing batteries.
7. Do not fire the speedlight 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.
8. Avoid corrosive or flammable substances when cleaning this speedlight.
9. To prevent overheating and damage to the flash head, do not fire more than 25 continuous flashes in rapid sequence at full power (1/1 level). In this case the overheating mode will be activated and the flash will shut down. Allow it to return to normal operating temperature before using. This takes about 15 minutes.
10. Do not touch the speedlight with wet hands. This could cause an electrical shock.
11. Remove batteries from the unit before storing.

Foreword

Thank you for purchasing the [pro]master 100SL

The **ProMaster** 100SL Speedlight is a high performance flash unit with a guide number of 100 ft(ISO 100 at the 50mm zoom position). The 100SL can easily perform various types of flash operations, such as manual and TTL auto flash. It is also equipped with an LED light for videography and a wireless camera trigger for remote firing.

Here are some of the100SL' s features:

■ TTL mode

In this Sony TTL System, monitor pre-flashes are fired at all times, the subject is correctly exposed, and the exposure is less affected by challenging ambient light conditions.

■ Manual mode

By setting the aperture and the flash output level, you can manually control the exposure.

■ RPT mode

The 100SL fires repeatedly to create stroboscopic multiple-exposure effects in RPT mode. This operation is useful when shooting fast-moving subjects.

■ HSS High-Speed Sync

High-Speed flash synchronization occurs at the compatible camera's highest shutter speed. This is useful when you want to use a wider aperture to achieve shallow depth of field to blur the background or create a "stop-motion" effect in your photograph.

■ F1/F2 Mode

While in wireless manual slave mode, the F1 mode is used in a manual flash environment. The F2 mode is used in a TTL flash environment although the 100SL only functions as a manual wireless slave.

■ Rear-Curtain sync

Rear-Curtain flash sync creates a picture in which the blur of a moving subject appears behind the subject and not in front. In this mode, the flash fires just before the rear curtain starts to close.

■ Bounce flash

By tilting or rotating the flash head, you can bounce the light off a ceiling or wall to make use of reflected light .

■ Key lock

The speedlight's control buttons can be locked to prevent them from being pressed accidentally.

■ LCD panel backlight

The function sets the LCD panel backlight to on or off.

■ Standby function

This function automatically puts the 100SL in standby mode to conserve battery power after a period of inactive use.

■ Thermal Cut-out protection

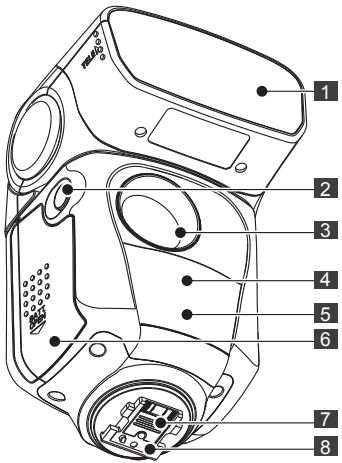
This function protects the 100SL from high operating temperatures. If the temperature of the unit rises to a certain level, the 100SL will switch to protective shutdown mode.

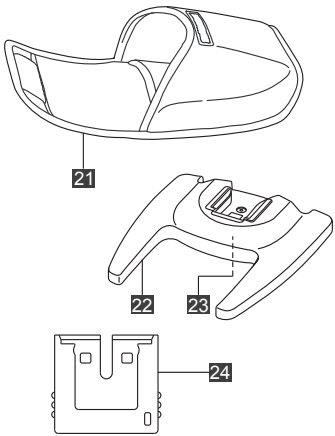
■ Sound monitor

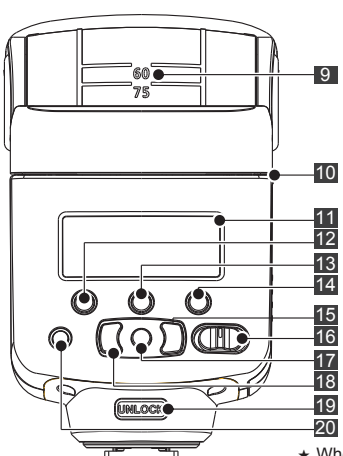
Receive audible feedback each time a button is pressed and when the 100SL reaches a full charge indicating it is ready to fire.. You can choose to turn off this feature in the Utility Menu.

- **Read this instruction manual while also referring to your camera's instruction manual.**
  Before using the Speedlight, read this instruction manual and your camera's instruction manual to familiarize yourself with the Speedlight's operations.

Parts Identification





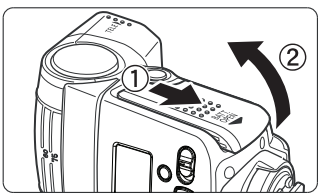


1 Flash head
2 Remote firing button
3 LED light
4 Wireless sensor
5 Remote sensor
6 Battery cover
7 Mounting foot
8 Locking pin
9 Tilting angle scale
10 Rotating angle scale
11 LCD display
12 Mode button
13 Set button
14 LED light button
15 Right button
16 Power switch
17 Confirm button
18 Left button
19 Lock-release button
20 Ready light / test button
21 Soft Case
22 Mini stand
23 Tripod mount
24 Mounting foot protection cap.

★ When not using the 100SL, place the mounting foot protection cap over the 100SL's foot.

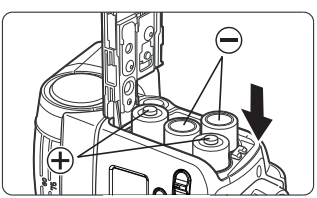
Basic Operation

Inserting The Batteries



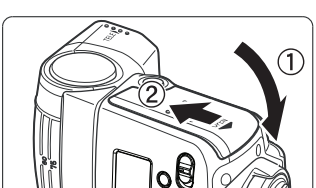
❶ Open the cover.

Slide it in the direction of the arrow and flip open.



❷ Install the batteries.

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

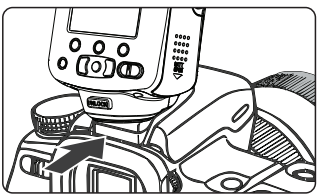


❸ Close the cover.

Close the battery compartment cover by flipping it down, pressing, and sliding it closed.

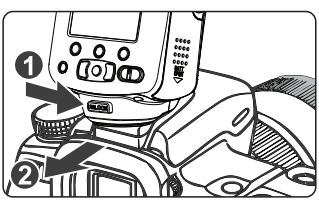
- Only use size AA alkaline or Ni-Mh batteries.
- If you change the batteries after firing many continuous flashes be aware that the batteries might be hot.
- Before changing the batteries, be sure to turn off the speedlight.

Attaching And Detaching The Speedlight



❶ Attaching the speedlight.

Mount the speedlight into the camera's hot shoe all the way.



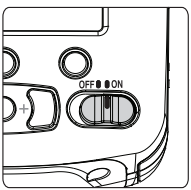
❷ Detaching the speedlight.

Push the 'UNLOCK' button and detach the speedlight by sliding it out of the camera's shoe.

- Before attaching or detaching the speedlight, be sure to turn off the speedlight.

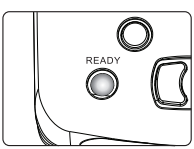
Basic Operation

Turning On The Power



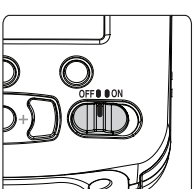
❶ Turn on the power.

Side the power switch to <ON>.



❷ Check that the speedlight is ready.

The charging indicator is red while the speedlight is powering up. It will turn green and beep twice when the speedlight is ready to fire.



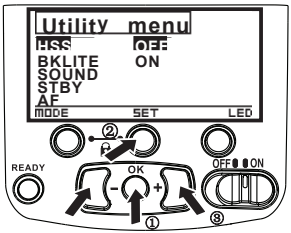
❸ Turn off the power.

Side the power switch to <OFF>.

- If the charging indicator remains red and the low power icon is displayed, replace the batteries with new ones.
- In order to conserve power, the speedlight will enter sleep mode after a specified time (this time can be adjusted in the Utility menu). The LCD will shut off. Press the camera's shutter button halfway or the <READY> button to wake it up.
- It will not enter sleep mode when in Remote or F1/F2 mode.

Custom Settings

You can customize the speedlight features to suit your shooting preferences with Custom settings.



1. Press the <OK> button for approx. two seconds to display the Utility menu containing custom settings.
2. Press the <SET> button to highlight a setting.
   - Pressthe<+> button to enter the highlighted setting. Continue pressing it to change that setting
   - Pressthe<OK> button to save the setting and return to the custom settings.

When finished, press and hold the <OK> button for approx. two seconds to exit the Utility Menu

HSS	HIGH SPEED SYNC.
OFF ON	Open high-speed sync. Close high-speed sync.
BKLITE	Backlight
OFF ON	OFF:Turn off ON:Turn on
SOUND	Audible confirmation
OFF ON	OFF:Turn off ON:Turn on
STBY	Standby function
NORMAL LONG SHORT OFF	NORMA: L3 Minutes LONG: 10 Minutes SHORT: 1 Minute OFF: Function canceled
AF	AF-assist illuminator
LED TUBE OFF	LED:Use LED TUBE: Use tube OFF: Cancel AF-assist illumination

FOCLEN	Focus display
PUL FOC	PUL: Show flash head position FOC: Show camera lens focal length
TEMP	Thermal Cut-out
OFF ON	OFF:Turn off ON: Turn on
RMTINDEX	Ready-lightsetting
OFF ON	OFF:Turn off ON: Turn on
RESET	Reset custom setting
RESET	Reset custom setting
VER	Version of firmware
VER160000	Version

Icons

AF	AF-assist illumination
	Thermal cut-out on
	Sound on
	Low battery power indicator
	Temperature warning indicators
H	High-speed sync. on
	Flash exposure
	Flash exposure bracketing
	Key lock

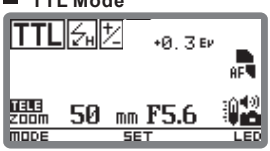
LCD Panel

On Camera Interface

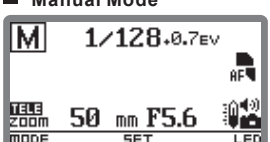
Press the 'MODE' button to select a flash mode

TTL ➡ M ➡ RPT

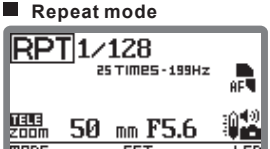
TTL Mode



Manual Mode



Repeat mode

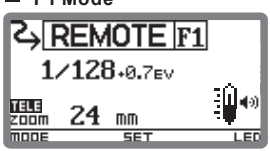


Remote Mode

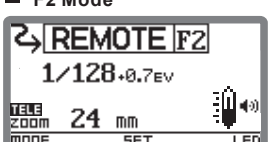
Press the <MODE> for approx. 2 sec. to enter Slave Mode

F1 ➡ F2

F1 Mode



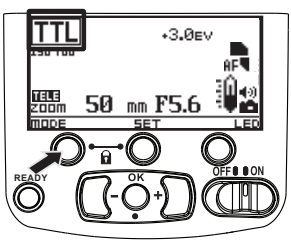
F2 Mode



Operation

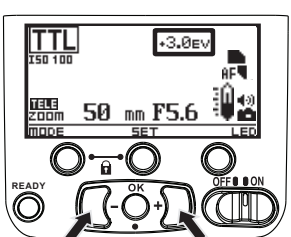
TTL Mode

In this mode information obtained by monitor pre-flashes and exposure control information are combined in-camera to automatically adjust flash output levels.



❶ Press the <MODE> button and set the flash mode to TTL .

- The default flash exposure compensation is 0.



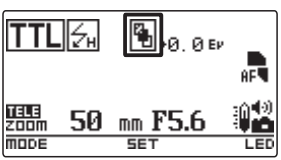
❷ Set the flash exposure compensation.

- Press the left/right buttons to decrease/increase the flash exposure compensation.
- The flash exposure compensation changes in 1/3 steps between -3.0 and +3.0.

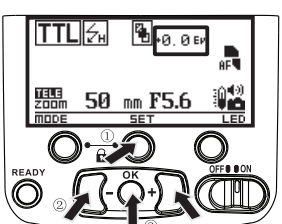
TTL Mode

Flash Exposure Bracketing

Flash exposure bracketing can take three flash shots while automatically changing the flash output for each shot up to ±3 stops in 1/3-stop increments (1/2-stop increments if the camera enables only 1/2-stop increments).



❶ Press the <SET> button to highlight the icon.



❷ Tuning the FEB amount.

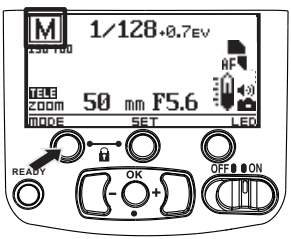
- Press the left/right buttons to decrease / increase the amount of flash compansation between each shot.(it can only be a positive number.)
- Press the <OK> button to confirm your setting.
  Now take 3 shots in s row. The first will be taken at normal flash exposure. The second shot will be overexposed by the amount of compensation you set. The 3rd will be underexposed by the same amount. Then FEB will cancel itself and the 100SL will return to normal operation.

- FEB mode will cancel itself after 3 shots. The speedlight will return to normal operation.
- Be sure the charging indicator light is green and the 100SL is ready before each shot.

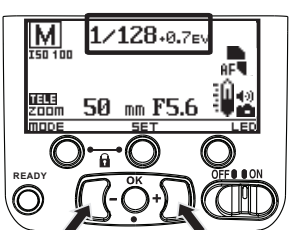
Operation

M Mode

You can set the 100SL to manual mode and choose a power level between 1/1 and 1/128.



❶ Press the <MODE> button and set the flash mode to M .



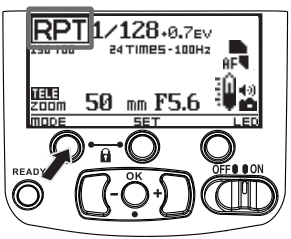
❷ Set the flash output level.

- Press the left/right buttons to decrease/increase the flash output level.
- The flash output level changes in 1/3 steps between 1/128 and 1/1.

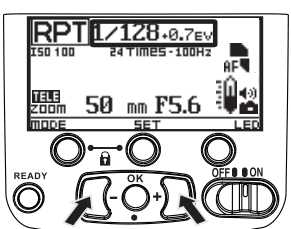
Flash Modes

Repeat Mode

In Repeat mode, the 100SL fires repeatedly during a single exposure, creating stroboscopic multiple-exposure effects. This operation is useful when shooting fast moving subjects.
You can set the firing frequency (number of flashes per second expressed as Hz), the number of flashes, and the flash output.

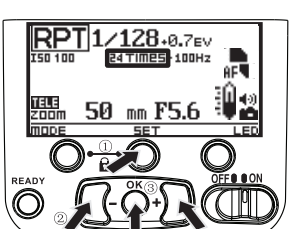


❶ Press the <MODE> button and set the flash mode to RPT .



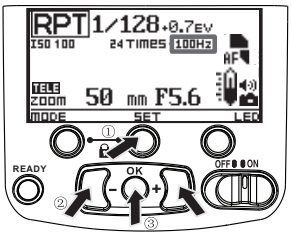
❷ Set the flash output level.

- Press the left/right buttons to decrease/ increase the flash output level.
- The flash output level changes between 1/128 and 1/8 power.



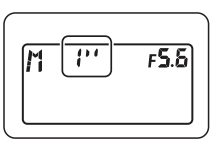
❸ Set the number of flashes (times).

- Press the <SET> button to highlight the number.
- Press the left/right buttons to decrease/ increase the number.
- Press the <OK> button to confirm.



❹ Set the firing frequency.

- Press the <SET> button to highlight the frequency.
- Press the left/right buttons to decrease/increase the number.
- Press the <OK> button to confirm.



❺ Set the shutter speed.

- Use the following equation to determine the shutter speed. Then set your camera to a shutter speed slower than the calculated number.
  Shutter speed = Number of flashes per frame / 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).

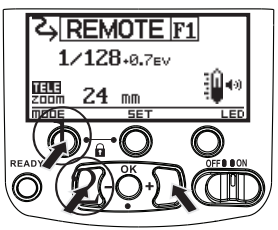
- Using a tripod, remote switch, and external power source is recommended.
- To avoid overheating and deteriorating the flash head, don't use stroboscopic flash more than 10 times in succession. After 10 times, allow the speedlight to rest for at least 15 min.
- The maximum flash firing number is a function of output level and frequency. See the appendix for more details.

Wireless Modes

Slave(Remote) Mode(F1/F2)

The F1 mode is used in a manual flash environment. The F2 mode is used in a TTL flash environment so as to ignore perflashes and properly fire in-sync. Howerver, the 100SL only functions as a manual flash without TTL exposure.

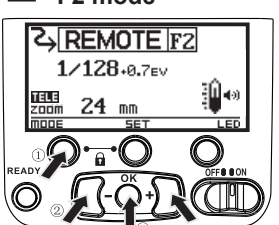
F1 mode



1. Press the <MODE> button for 2 seconds to choose slave mode starting with F1.
2. Set the flash output level.
   - Press the left/right buttons to decrease /increase the flash output level.
   - The flash output level changes in 1/3 steps between 1/128 and 1/1.
   - Press and hold the <MODE>button for 2 seconds to exit F1 Slave mode.

- When the flash is in F1 mode, it will fire in-sync. with the master flash, similar to a radio slave setup. To use this mode correctly, the master speedlight should be set as a manual flash and the TTL flash system with pre-flash and red-eye reduction modes should not be used.

F2 mode



1. First press the <MODE> button for 2 seconds to enter slave F1 mode. Then press the <MODE> button again to choose F2 mode.
2. Set the flash output level.
   - Press the left/right buttons to decrease /increase the flash output level.
   - The flash output level changes in 1/3 steps between 1/128 and 1/1.

   Press and hold the <MODE>button for 2 seconds to exit F2 Slave mode.

- When the speedlight is in F2 mode it will fire in-sync but requires power settings to be manually adjusted.

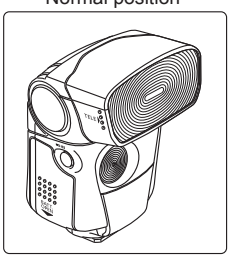
Advanced Applications

Adjusting The Flash Coverage

The flash head can be extended or retracted manually to match the lens focal length.

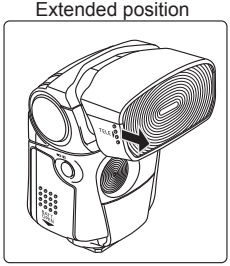
Flash head position

Normal position



Guide number 23/75(ISO 100 in M/ft)

Extended position

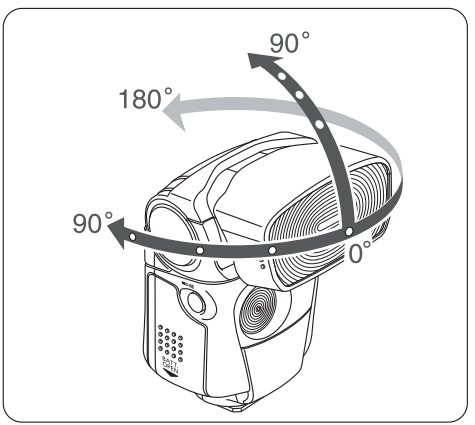


Guide number 30/100(ISO 100 in M/ft)

- Extend the flash head for greater flash output and longer flash range.
- Be sure the flash head is set properly to cover the focal length of your lens and avoid dark edges.

Advanced Applications

Bounce Flash Operation



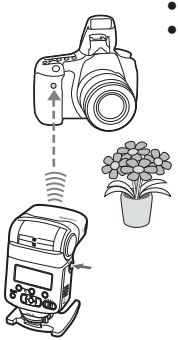
Tilt or rotate the 100SL's flash head to bounce the light off a ceiling or walls, providing more natural-looking pictures of people with softer shadows.

- If the wall or ceiling is too far away, the bounced flash might be too weak and can result in underexposure.
- Be sure to select a white/neutral surface to bounce the light off of. Otherwise your pictures will have an unnatural looking color cast similar to that of the reflecting surface.

Advanced Applications

Using the 100SL For Remote Camera Triggering

The 100SL can be used to wirelessly trigger cameras as a remote control. When using wireless flash this can be especially helpful by allowing you to fire the camera while aiming the flash.



Set the camera to remote control shooting mode.

- Please refer to your camera's instruction manual.
- It is recommended that you shade the eyepiece of the camera viewfinder so that light does not enter while remote firing.

- Point the 100SL transmitter (front panel) toward the camera, and press the remote release button on the side of the 100SL (located near the battery compartment).
- The100SL will flash in-sync. with the camera if it is set to a wireless slave mode. Otherwise it will trigger the camera without flashing.

Bulb (Long Exposure) Shooting

When you press the remote release button during bulb shooting, the shutter opens. Press the remote release button again to close the shutter.

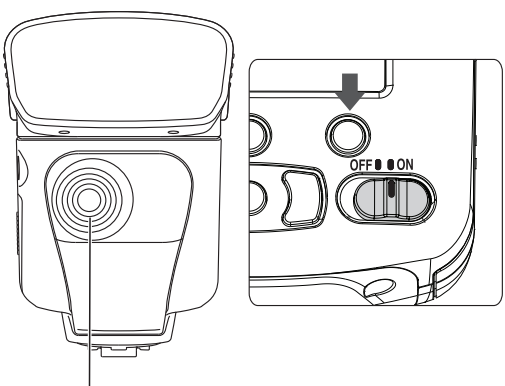
- Be careful not to cover the remote control transmitter or wireless sensor of the 100SL with your hand.
- The remote control function has an operating range of about 5m/ 16.4 ft. from the front of the camera.
- When the 100SL is not in <REMOTE> mode and you press the remote release button, a picture is taken two seconds later. However the 100SL will not flash in this case.

Advanced Applications

Using The LED Light

The LED light is ideal for shooting video.

- Press and hold the <LED> button for 2 seconds to turn on the LED light.
- The LED light can be used up to approximately 3.5 hours with new batteries.
- Press and hold the <LED>button for 2 seconds to turn the LED light off.

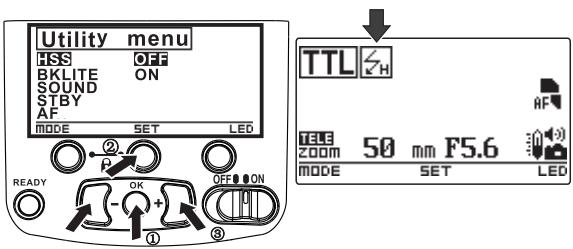


- When using the LED light to shoot portraits, please keep the speedlight at least 1m away from the subject to avoid hurting their eyes.
- When the remaining battery power is low, the LED light may not turn on even if the flash-ready lamp is lit. If the LED light does not turn on replace the batteries.
- The LED light will not turn on when the 100SL is set to Slave Mode.

Advanced Applications

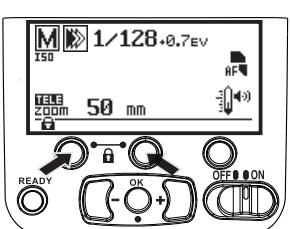
High-speed Sync (FP Flash)

Press <OK> button for 2 sec. to display the Utility menu containing custom setting.
Press <set> button to highlight 'HSS' .
Press <+> button to turn 'ON' HSS, and then press the <OK> button to save the setting. Now press the <OK> button 2 sec. to exit this menu. Then you will now notice the H icon on appears on the LCD display.



- With HSS flash, the faster the shutter speed, the shorter the effective flash range will be.
- RPT flash cannot be combined with HSS flash.

Key Lock



Pressing the MODE button and SET button simultaneously for 2 seconds locks the conrol buttons.

- The power ON-OFF switch will remain unlocked.
- A key icon is displayed on the LCD while the buttons are locked.

To cancel the key lock function, press the two buttons again for two seconds.

Troubleshooting Guide

The Speedlight Does Not Fire

Possible cause: The batteries are installed in the wrong orientation.
Solution: Install the batteries in the correct orientation.

Possible cause: The batteries are exhausted.
Solution: Replace the batteries.

Possible cause: The speedlight is not attached securely to the camera.
Solution: Attach the speedlight's mounting foot securely to the camera.

Possible cause: The electrical contacts of the speedlight and/or camera are dirty.
Solution: Carefully clean the contacts.

The Test Button (READY) Does Not Respond

Possible cause: The control buttons are locked.
Solution: Look at the LCD display. if the key icon appears, unlock the controls.

Possible cause: The LED light may be on.
Solution: Turn off the LED light. The flash cannot fire while the LED is on.

The Slave Unit Does Not Fire

Possible cause: The slave unit is not positioned properly.
Solution: Place the slave unit within the master unit's transmission range

Specifications

Type:	On-camera, TTL speedlight
Guide No.:	GN 30 / 100' (at 50mm focal length, ISO 100)
Flash coverage:	24mm or 50mm
Wireless mode:	● Manual zoom ● F1/F2 mode
Audible:	Can be turned on or off
Display type:	LCD Dot Matrix Screen with LED Backlight
Protection type:	Thermal Cut-out (can be turned on or off)
Power supply:	4xAA size batteries (Alkaline or Ni-Mh)
Flash duration range:	1/800~1/20000S
Recycle time:	approx 5s(AA alkaline cell use) approx 2s(AA Ni-Mh cell use)
Color temperature:	5600K
Flash control:	22 Levels light quantity output control (1/1 ~1/128,14 levels of fine tuning); TTL auto flash; Repeat flash
Power saving:	Customizable via the standby function
Vertical rotation angle:	0°~90°
Horizontal rotation angle:	Right 0°~90°/Left 0°~180°
Dimensions:	5 1/2" x 2 3/4" x 2" (140mm x 70mm x 50mm)
Net weight:	9 3/4oz / 275g (without batteries)

Appendix

Guide No. (at ISO 100, in meters)

Flash Output / Flash Coverage	1/1	1/2	1/4	1/8	1/16	1/32	1/64	1/128
24mm (flash head in normal position)	23	16	11.5	8	5.8	4	2.9	2
50mm (flash head in extended position)	30	21.2	15	10.6	7.5	5.3	3.8	2.7

Maximum number of repeating flash per frame

Referring to the table below, set the flash output level, the frequency, and and the number of repeating flashes separately for each picture.

Frequency	Flash output level				
	M1/8	M1/16	M1/32	M1/64	M1/128
1Hz	14	30	60	90	90
2Hz					
3Hz	14	30	60	90	90
4Hz	12	20	50	80	80
5Hz	10	20	40	70	70
6Hz	8	20	32	56	56
7Hz	6	20	28	44	44
8Hz	6	20	24	36	36
9Hz	5	10	22	32	32
10Hz	5	10	20	28	28
20Hz	4	8	12	24	24
30Hz					
40Hz					
50Hz					
60Hz					
70Hz					
80Hz					
90Hz					
100Hz					

One Year Unconditional Warranty

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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