[pro]master®

100SL [Speedlight]

TTL Speedlight for Fuji

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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 [Pro]Master 100SL Speedlight is a high performance flash unit for Fuji 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 flash, TTL auto flash, and HSS. It is also equipped with an LED light for videography and to function as a catchlight.

Here are some of the 100SL's features:

■ TTL mode

In this Fuji 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 of 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.

■ 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

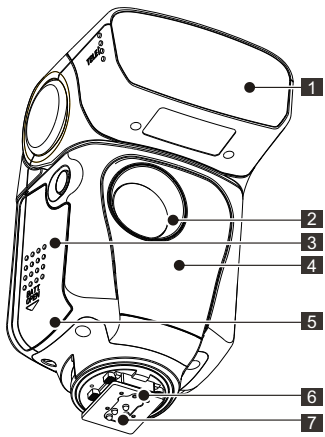
Receive audible feedback each time a button is pressed and when the 100SL reaches a full charge indicating it is ready to fire. You can choose to shut off this feature in the Utility Menu.

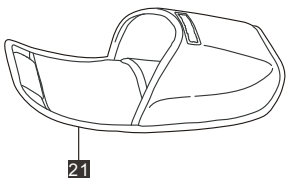
■ LED light

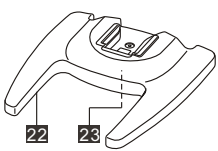
The LED light is ideal for shooting video. It can also function as an AF assist in dim lighting conditions and it can be used as a Catchlight in still photography (these functions are dependent on your camera's flash modes).

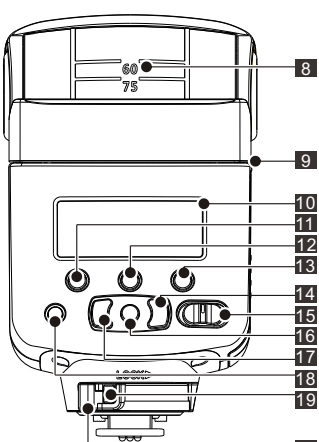
● **Read this instruction manual while also referring to your camera's instruction manual.**
Before using the Speedlight, read this instruction manual and your camera's instruction manual to familiarize yourself with the Speedlight's operations.

Parts Identification





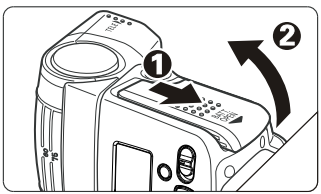




1	Flash head	13	LED light button
2	LED light	14	Right button
3	Micro USB	15	Power switch
4	Wireless sensor	16	Confirm button
5	Battery cover	17	Left button
6	Locking pin	18	Ready light / test button
7	Camera contacts		
8	Tilting angle scale	19	Lock-release button
9	Rotating angle scale	20	Mounting foot's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

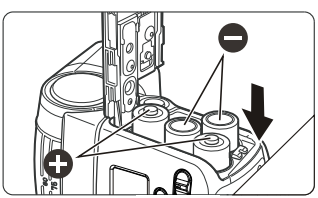
Basic Operation

Inserting The Batteries



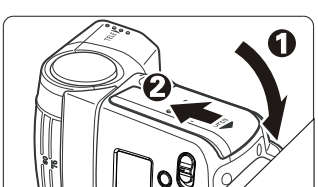
❶ Open the cover.

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.

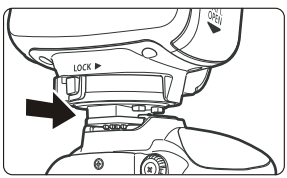


❸ Close the cover.

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

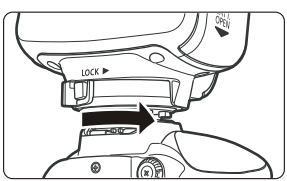
- Only use size AA alkaline or Ni-MH batteries.
- If you change the batteries after firing many continuous flashes be aware that the batteries might be hot.
- Before changing the batteries, be sure to turn off the speedlight.

Attaching And Detaching The Speedlight



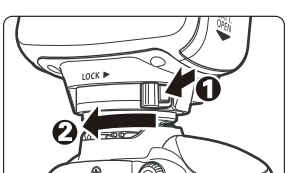
❶ Attaching the speedlight.

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



❷ Securing the speedlight.

On the mounting foot, slide the lock lever to the right until it locks in place.



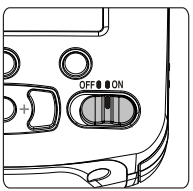
❸ Detaching the speedlight.

While pressing the lock-release button, slide the lock lever to the left 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.

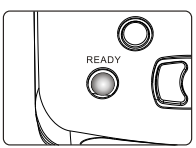
Basic Operation

Turning On The Power



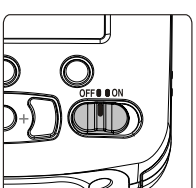
❶ Turn on the power.

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.

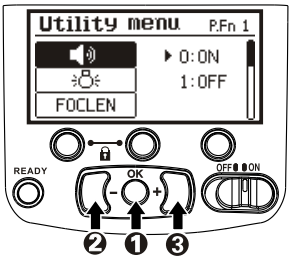


❸ Turn off the power.

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 F1 or F2 mode.

Custom Settings



If the temperature of the unit becomes too high, this icon in the LCD will appear full to show the temperature has risen to a dangerously high level. The icon has 4 levels with number 4 being the highest.There are 2 options in the Utility menu for handling high temperature.

① When [TEMP] is turned on and the temperature of the 100SL hits level 4, the icon will be flashing and the speedlight will not operate. Give it 15 minutes to cool down.

② When [TEMP] is turned off the, and the temperature hits level 4, the icon will be flashing, and speedlight will be extend its Recycle Time to try to avoid heat damage.

NO.	Specification	
P.Fn 01		Sound prompt
	▶ 0:ON	Turn on
	1:OFF	Turn off
	When turned ON, the Sound Prompt will work for the following:powering on the speedlight, pressing a button, low battery power, high temperature warning, flash firing, and flash ready	

NO.	Specification	
P.Fn 02		LCD backlight
	0:ON	Remains on
	1:OFF	Remains off
	▶ 2:12s	After operating 12 sec., backlight will turn off.

NO.	Specification	
P.Fn 03	FOCLEN	Focus display
	▶ 0:PUL	Displays the focal length of the speedlight's flash head
	1:FOC	Displays the focal length of the camera's lens

NO.	Specification	
P.Fn 04		Standby(aprox. 90 sec.)
	▶ 0:ON	Turn on standby mode
	1:OFF	Turn off standby mode

NO.	Specification	
P.Fn 05		Standby(in Slave mode)
	▶ 0:60min	Standby begins after 60 minutes
	1:10min	Standby begins after 10 minutes

NO.	Specification	
P.Fn 06	TEMP	Thermal Cut-out
	▶ 0:ON	Turn on
	1:OFF	Turn off
	⚠ Warning: If you turn off the Thermal Cut-out, you can damage the 100SL by overheating the unit.	

NO.	Specification	
P.Fn 07	CONTRAST	Display contrast
	HIGH	High-contrast
	▶ MID	Middle(Default)
	LOW	Low-contrast

NO.	Specification	
P.Fn 08	RESET	Reset custom setting
	▶ 0:NO	NO
	1:YES	Reset
	Reset will change the 100SL to factory settings.	

NO.	Specification	
P.Fn 09	VER	Version of firmware
	v x.x	Version NO.

Utility Menu Setting

Press the <OK> button for approx. two seconds to display the Utility Menu

↓

Press the <Left> button to highlight a setting (P.Fn01~P.Fn09)

↓

Press the <Right> button to enter the highlighted setting.

↓

Press the <Right> button again to change that setting

↓

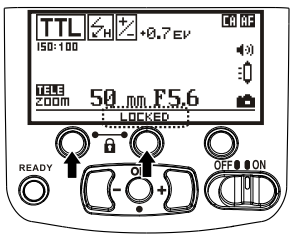
Press the <OK> button to save the setting

↓

Press the <OK> button for approx. two seconds to exit the Utility Menu

LCD Panel

Icons



	Front-Curtain sync
	Rear-Curtain sync
	High-speed sync.
LOCKED	Key lock
	Standby

	Flash exposure compensation
	Sound on
	Low battery power
	Communicating with a compatible camera.
	LED video light brightness setting

Temperature Icon Low → High	
	Catchlights (CA)
AF	LED AF-assist lamp
	LED video light turn on

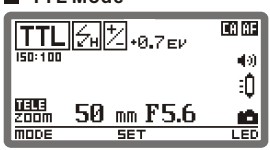
LCD Panel

On Camera Interface

Press the <MODE> button to change the flash mode

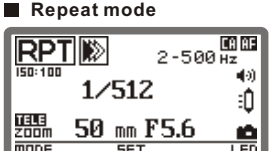
TTL ➡ M ➡ RPT

■ TTL Mode



■ Manual Mode

■ Repeat mode



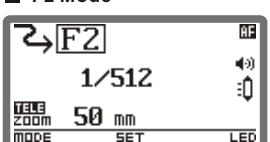
Slave Mode

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

F1 ➡ F2

■ F1 Mode

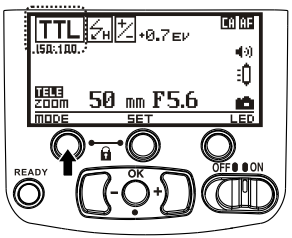
■ F2 Mode



Operation

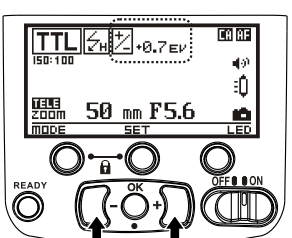
TTL Mode

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



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

- The default flash exposure compensation is 0.



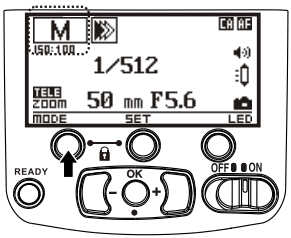
Set the flash exposure compensation.

- Press the left/right buttons to decrease/increase the flash exposure compensation.
- The flash exposure compensation changes in 1/3 steps between -5.0 and +5.0. However, the range of exposure compensation may be limited by the particular camera.

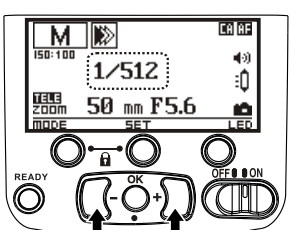
Operation

M Mode

You can set the 100SL to manual mode and choose a power level between 1/1and 1/512.



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



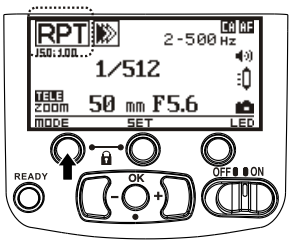
❷ Set the flash output level.

- Press the left/right buttons to decrease/increase the flash output level.
- The flash output level changes in 1/3 steps between 1/512 and 1/1.

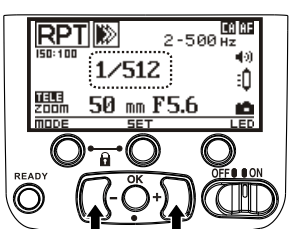
Operation

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.

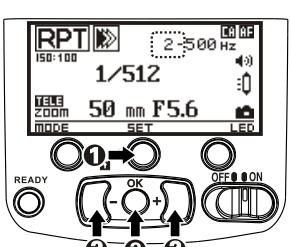


❶ Press the <MODE> button and set the flash mode to RPT .



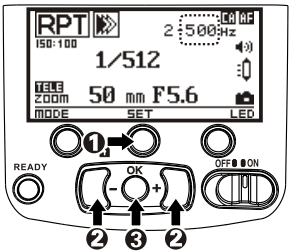
❷ Set the flash output level.

- Press the left/right buttons to decrease/ increase the flash output level.
- The flash output level changes between 1/512 and 1/4 power.



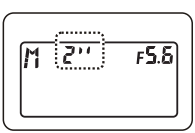
❸ Set the number of flashes (times).

- 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).

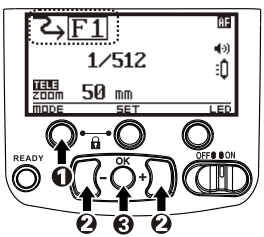
- Using a tripod, remote switch, and external power source is recommended.
- To avoid overheating and deteriorating the flash head, don't use stroboscopic flash more than 10 times in succession. After 10 times, allow the speedlight to rest for at least 15 min.
- The maximum flash firing number is a function 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 preflashes and properly fire in-sync. However, the 100SL only functions as a manual flash without TTL exposure.

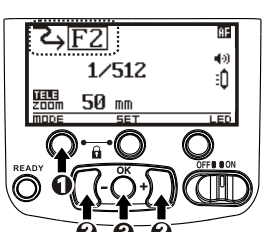
F1 mode



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 1/512 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 1/512 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.

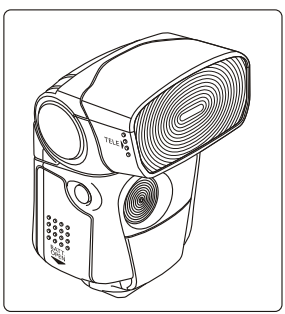
Advanced Applications

Adjusting The Flash Coverage

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

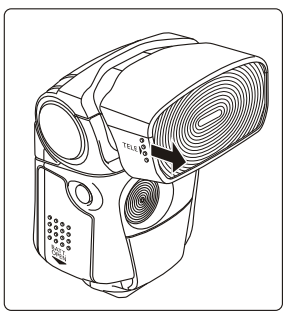
Flash head position

Normal position(24mm)



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

Extended position(50mm)

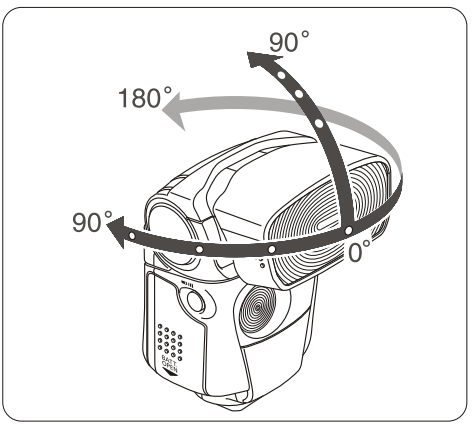


Guide number 30/100(ISO 100 in M/ft)

- 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.

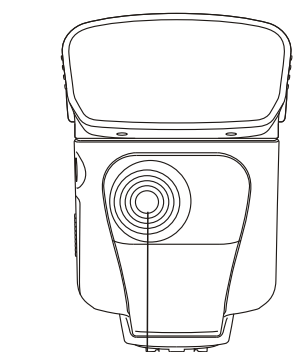
Advanced Applications

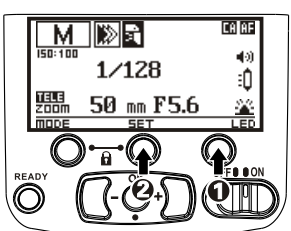
LED Video Light

The LED light is ideal for shooting video.

- Press and hold the <LED> button for 2 seconds to turn on the LED light. The Icon will be displayed.
  Press and hold the <LED> button for 2 seconds to turn the LED light off.

- Press <SET> button, the icon will be displayed. You can press the left /right button to change the brightness
  between 1/1 and 1/128, and press <OK> button to confirm.



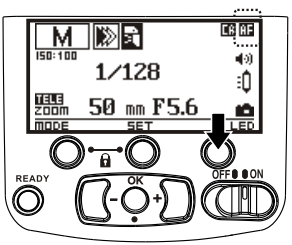


- When using the LED light to shoot portraits, please keep the speedlight at least 1M away from the subject to avoid hurting their eyes.
- When the remaining battery power is low, the LED light may not turn on even if the flash-ready lamp is lit. If the LED light does not turn on replace the batteries.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

Advanced Applications

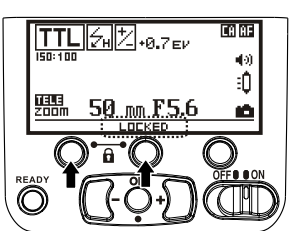
LED Video Light

- Short press the [LED] button so the AF icon is displayed, and the LED AF-assist function will turn on.
- Short press the [LED] button again so the AF icon is not displayed, then the LED AF-assist function will turn off.



The AF assist function helps your camera to properly auto focus in low light conditions. It uses the LED light on the 100SL to illuminate your subject thereby enabling the camera's AF to lock onto it.

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 and functional.
- 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.

Advanced Applications

LED Catchlights

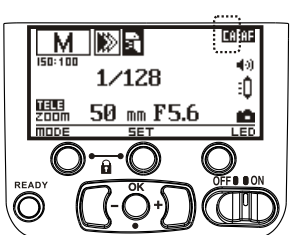
The 100SL's LED video light can be used a Catchlight during still photography. In this case the LED light will flash simultaneously to the main flash head. This creates a pleasing, round catchlight in your subject's eyes even if the main flash head is being bounced.

Turning the Catchlight on/off

- Short press the [LED] button so the CA icon is displayed, and the catchlight function will turn on.
- Short press the [LED] button again so the CA icon is not displayed. The catchlight function will turn off.

The Catchlight Brightness Setting

- With the catchlight function turned on, press the [SET] button so the icon is displayed. You can press the [left]/[right] button to set the brightness, and press the [OK] button to confirm. The level can be set between 1/128 and 1/1.



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

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	1/256	1/512
24mm (flash head in normal position)	23	16	11.5	8	5.8	4	2.9	2	1.4	1
50mm (flash head in extended position)	30	21.2	15	10.6	7.5	5.3	3.8	2.7	1.9	1.4

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							
	1/4	1/8	1/16	1/32	1/64	1/128	1/256	1/512
1Hz	6	12	30	60	90	100	100	100
2Hz	4	10	30	60	90	100	100	100
3Hz	3	8	30	60	90	100	100	100
4Hz	3	7	25	50	90	100	100	100
5Hz	3	6	20	50	90	100	100	100
6-7Hz	3	5	13	40	80	90	100	100
8-9Hz	3	5	12	30	70	80	100	100
10Hz	2	5	11	30	60	70	100	100
11Hz	2	5	11	25	50	70	90	100
12-14Hz	2	5	10	20	50	60	90	100
15-19Hz	2	5	9	20	45	60	90	100
20-50Hz	2	4	9	15	30	50	90	90
60-200Hz	2	4	8	15	30	45	80	90
250-500Hz	2	4	8	14	25	40	70	90

Specifications

Type:	On-camera, TTL speedlight
Guide No.:	GN 30 / 100' (at 50mm focal length, ISO 100)
Flash coverage:	Manual zoom (24mm or 50mm)
Wireless mode:	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:	4 x AA 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)
Firmware update:	Micro USB
High-speed sync:	1/8000
Color temperature:	5600K
Flash mode:	TTL auto flash, Manual flash, Repeat flash
Custom functions:	Custom setting on camera
LED mode:	LED video light, LED AF light, Catchlight (CA)
LED control:	approx. 80lux(1/1), 1/128 to 1/1
Power saving:	Customizable via the standby function
Vertical rotation angle:	0°~90°
Compatible:	Fuji X-T2,X-T1,X-Pro2 and other X series camera with hot shoe
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)

To ensure proper function check the firmware of your camera and be sure it is up to date with the latest version.

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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