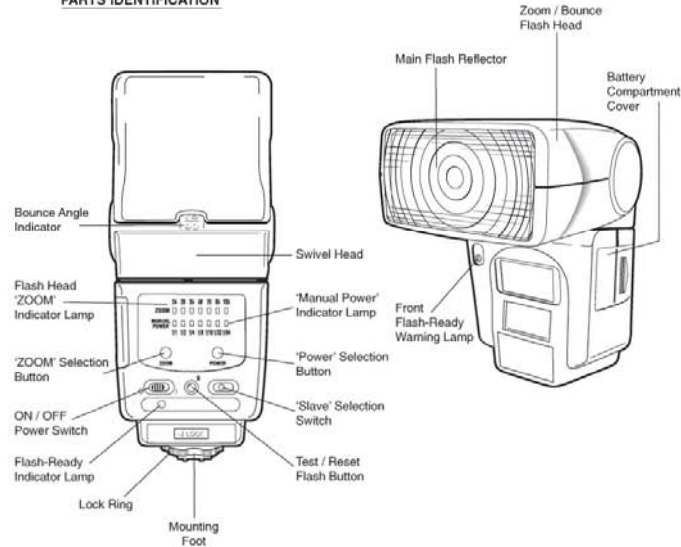


PARTS IDENTIFICATION



P.1

MOUNTING THE FLASH TO THE CAMERA

Loosen the lock ring, slide the flash into the camera's accessory shoe, then tighten the flash with the lock ring. When mounting the flash to your camera, always ensure that the flash unit is switched off.

ON / OFF POWER SWITCH AND TEST FLASH BUTTON

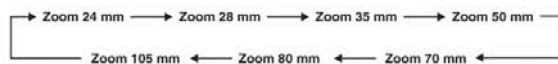
Slide the ON / OFF power switch to '1'. After a few seconds the 'Flash-Ready' indicator lamp glows, indicating the flash is ready to fire. Press the 'Test Flash' button to make sure that the flash unit works properly. If the flash discharges, wait until the 'Flash-Ready' indicator lamp glows again.

POWER RATIO



The LP160 provides 7 power ratios for different manual flash output power. They are 1/1 (full), 1/2, 1/4, 1/8, 1/16, 1/32 and 1/64. Each press of the 'POWER' selection button changes the flash power level in the above cycle. Press the 'POWER' selection button until your desired flash power level indicator lamp glows.

MOTORIZED ZOOM-HEAD

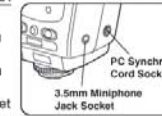


The LP160 provides 7 Zoom-Head positions for different flash coverage angles. They are for the focal length ranging from 24 mm to 105 mm (based on a 35 mm SLR camera). Each Press of the 'ZOOM' selection button changes the coverage angle in the above cycle. Press the 'ZOOM' selection button until your desired Zoom-Head position indicator lamp glows.

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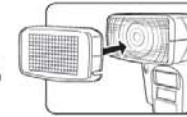
3.5 mm MINIPHONE JACK SOCKET AND PC SYNCHRO CORD SOCKET

On one side of the LP160 flash, you can find a 3.5 mm miniphone jack socket and a PC synchro cord socket. With the supplied synchro cord, you can connect the flash to an external device through the PC synchro cord socket. The external device can then control the firing of the flash. You can also connect the flash to your other triggering device by plugging an appropriate synchro cord or jack to either the 3.5 mm miniphone jack socket or the PC synchro cord socket.



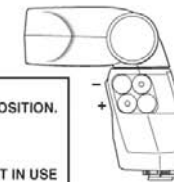
WIDE-ANGLE DIFFUSER

A wide-angle Diffuser accessory that can be positioned in front of the flash head is included in this flash unit's package. The flash can cover 17 mm wide-angle lens on a 35 mm SLR camera when the zoom flash is set at 24 mm position with the included Diffuser.



INSERTING BATTERIES

- Open the battery compartment cover.
- Insert four 1.5V AA batteries following the (+) (-) sign as indicated inside and replace the cover.



IMPORTANT:

- ENSURE THAT THE BATTERIES ARE INSERTED IN CORRECT POSITION.
- FOR BEST RESULTS, USE FRESH ALKALINE BATTERIES OR RECHARGEABLE NIMH BATTERIES.
- DO NOT MIX FRESH AND WEAK BATTERIES.
- TO PREVENT BATTERY LEAKAGE, REMOVE BATTERIES IF NOT IN USE FOR A LONG PERIOD OF TIME.

AUTO POWER-OFF

The power of the flash will be automatically turned off and the flash-ready indicator lamp will be extinguished if no operation is performed on the flash for about 30 minutes. The flash will be in stand-by mode. To re-activate the flash, simply press the flash's test button or switch the flash unit to OFF and then ON again. When on the 'Slave' mode, the flash can also be re-activated by firing a flash light to it.

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OPERATING THE FLASH

(i) To use the LP160 as the main flash unit of your camera.

Mount the flash onto your camera. Set the 'SLAVE' Selection Switch to 'Off' position. When the Ready Indicator lamp glows, the flash is ready to fire. The flash can be fired from your camera's hot-shoe or by using a synchro cord.



(ii) To use the LP160 as a Slave flash unit

Set the 'SLAVE' Selection Switch to 'S' or 'Si'. Please note that after the Slave flash has fired, the Zoom and Power indicator lamps on the rear of the flash unit will intermittently light up for few seconds.

'S' - At this Slave setting, the LP160 will fire instantly when it detects another flash fire. Use this setting when working manually, in non-TTL setups. Examples include using in combination with Studio lights, traditional 35mm flashes, and modern flashes set to Manual mode. For modern digital flashes and cameras, you will need to turn off any 'pre-flash' functionality to use this method. Check your device's instruction manual for more detail.

'Si' - At this Slave setting, the LP160 ignores the first flash it detects. Use this setting when working with TTL setups. Most modern digital camera flashes of both the built-in and external variety include TTL (Through the lens metering) technology. When used in TTL mode, these flashes actually fire twice - once to gather exposure information and a second time to create the exposure. Thus the need to ignore the initial 'pre-flash'. Some modern cameras do not allow you to turn off the pre-flash on the on-board flash which can make this a very convenient setting.

BOUNCE AND SWIVEL FLASH

The flash head of LP160 can be tilted to an angle of -7°, 45°, 60°, 75° or 90° and rotated horizontally 150° to the left or 180° to the right. You can tilt or rotate the flash head to bounce the light off the ceiling or walls. While shooting indoor, this technique can help to create more natural-looking pictures of people with softer shadows.

In order to have your pictures correctly exposed using bounce or swivel flash, the following is recommended to users:

- Select white or reflective surfaces to bounce the light off. Otherwise your pictures will come with an unnatural color cast similar to that of the reflecting surface.
- Use a wider aperture, as 2 or 3 stops of light can be lost when using bounce or swivel flash.

P.4

LumoPro®

LP160 Quad Sync Flash

INSTRUCTION MANUAL

CAUTIONS

- The flash unit does not function on camcorders.
- Do not leave or store the flash unit in temperatures exceeding 40°C. This might adversely affect the internal structure or performance of the flash unit. Particularly, do not leave the flash unit in the automobiles during summer.
- Remove the batteries if you do not intend to use be flash unit for a long period of time.
- The flash unit is not water-resistant. Rain and humid weather may cause irreparable damages to the flash.
- The flash unit is composed of very delicate electronic parts. It should be protected against shocks, impact damage and other improper handling.
- The flash unit contains a high voltage capacitor. Do not try to open the housing or attempt to be repaired by an unauthorized repair center.
- Do not clean the surface of flash unit by any petrol, detergent solution or strong solvents. These solvents may cause damages to the flash.

P.5

SPECIFICATIONS:

Guide Number (at 1/1 Full power and ISO100 at 10 ft):

Power Level	FLASH COVERAGE SETTING (ZOOM Position)							
	17mm (24mm+Diffuser)	24mm	28mm	35mm	50mm	70mm	80mm	105mm
1/1	46 ft	75 ft	85 ft	98 ft	112 ft	125 ft	130 ft	138 ft

Flash Coverage : (based on a 35mm SLR camera)

	17mm (24mm+Diffuser)	24mm	28mm	35mm	50mm	70mm	80mm	105mm
Vertical	75°	60°	53°	45°	34°	26°	23°	20°
Horizontal	92°	78°	70°	60°	46°	36°	31°	27°

Flash Head : Motorized Zoom 24-28-35-50-70-80-105 mm

Manual Power Ratio : 1/1, 1/2, 1/4, 1/8, 1/16, 1/32, 1/64

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Power Source	: Four 1.5V AA size batteries (Alkaline or rechargeable NiMH)
Recycling Time	: 0.3 - 10 sec (depends on Power Level and Batteries)
Bounce Angle	: -7°, 0°, 45°, 60°, 75°, 90°
Swivel Angle	: Right 0°, 30°, 60°, 90°, 120°, 150°, 180° Left 0°, 30°, 60°, 90°, 120°, 150°
Flash Duration	: 1/30,000 to 1/1,000 sec
Built-in Slave Function	: Switchable to Off , S (activates instantly), Si (ignores Digital Pre-flash)
Auto Power-off	: Auto off if no operation is performed on the flash for about 30 minutes
Wide-Angle Diffuser	: Detachable Diffuser
Flash 'Ready' Indicator	: Front / Rear 'Ready' Indicator Lamp
Synchro Ports	: Miniphone and PC
Hot-shoe	: Standard ISO size, Centre pin contact, Locking ring
Accessories	: Miniphone to PC Synchro cord, Wide-Angle Diffuser, Flash-Stand
Dimension of flash body	: approx. 76 (W) x 54½ (D) x 124 (H) mm
Dimension of flash head	: approx. 82 (W) x 93 (D) x 48½ (H) mm
Weight (without batteries)	: approx. 315 g

* Specifications and design are subject to change without notice.

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