

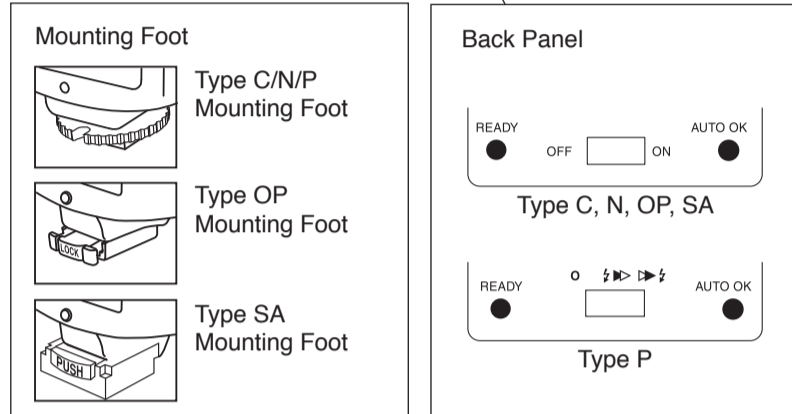
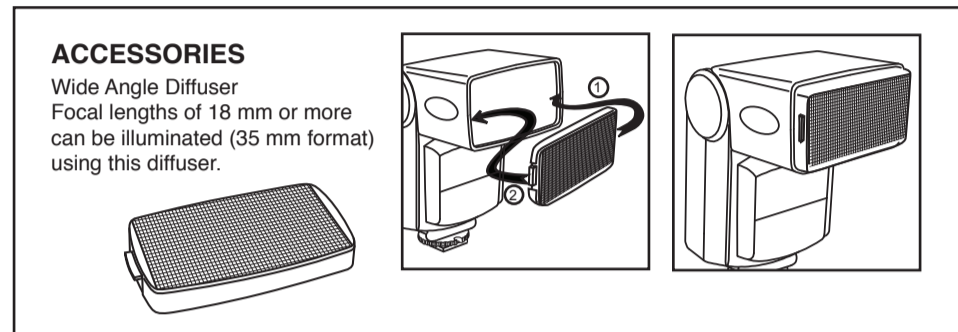
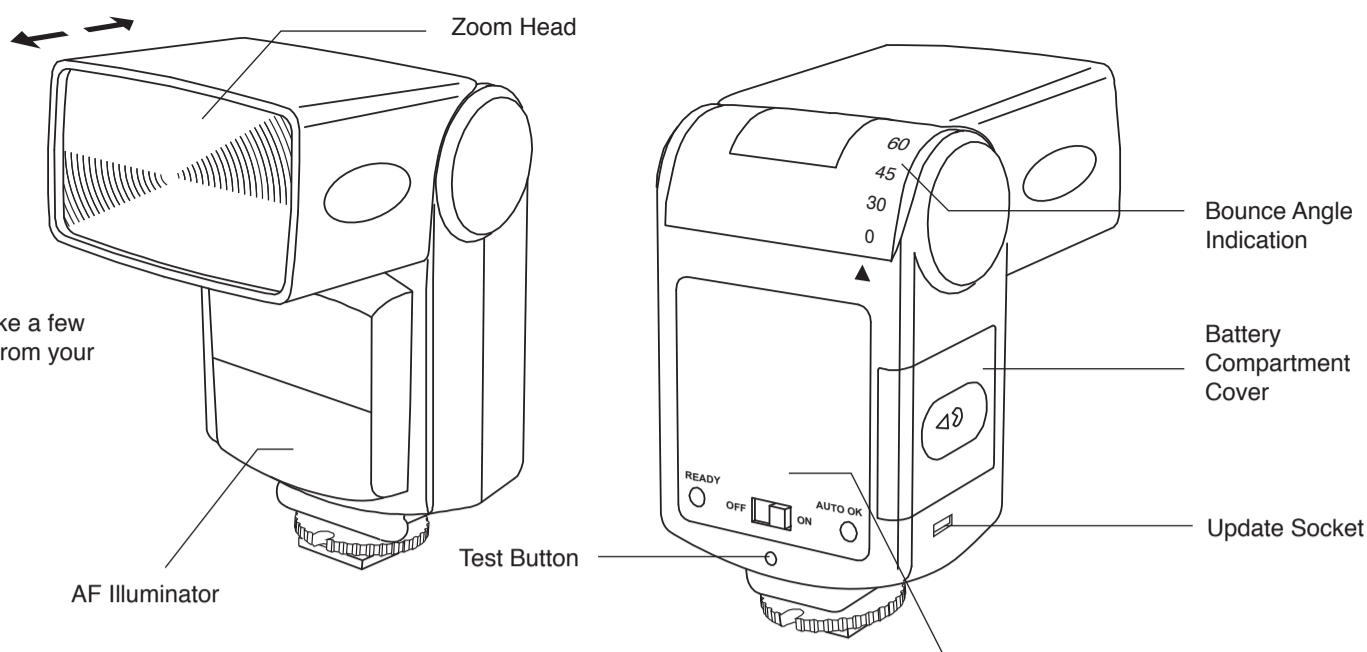
[pro]master®

FL120 TTL Bounce Flash
Electronic Flash

Thank-you for purchasing a ProMaster Electronic flash. Please take a few minutes to review these instructions so that you will get the most from your purchase.

CHARACTERISTICS

- AF Illuminator for low light focusing
- Automatic shutter speed setting
- Flash readiness indication
- Red-eye reduction (Type N, OP and P)
- Front and rear curtain synchronization
- Power saving function



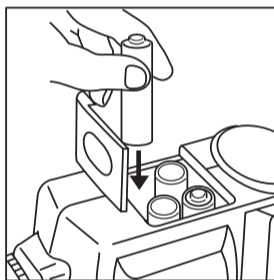
Specifications

Guide No. (ISO 100)	36(m) / 120 (ft) at 85mm position
Flash Head	28-35-50-85mm
Bounce Angle	0°, 30°, 45°, 60°, 90°
Power source	Four 1.5V AA size batteries (R6, LR6)
Flash duration	1/500-1/30000 sec.
Recycling time	0.3-7 sec.
Dimensions	Approx. 75 x 85 x 112mm
Weight w/o battery	Approx. 250g

Specifications and design are subject to change without notice.

INSERTING THE BATTERIES

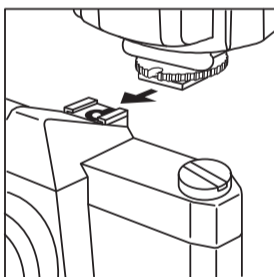
- Turn the ON/OFF switch to the OFF position.
- Slide open the battery compartment cover.
- Insert 4 AA batteries observing the correct polarity.
- Close the battery compartment cover.



Caution: When inserting the batteries, make sure to observe the correct polarity. Improperly inserted batteries may cause damage to the flash unit. When replacing batteries, be sure to replace all four cells with the same battery brand and capacity.

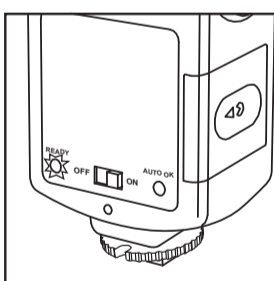
MOUNTING FLASH TO THE CAMERA

- For Type C, N & P flashes: Loosen the lock ring. Slide the flash into camera accessory shoe. Tighten the flash with the lock ring.
- For Type OP flash: Insert the mounting foot of the flashgun into camera accessory shoe and press "LOCK" to lock the flashgun in place.
- For Type SA flash: Insert the mounting foot of the flashgun into camera accessory shoe. Then the flashgun is locked in place.



REMOVING THE FLASH

- For Type C, N & P flashes: Loosen the lock ring and remove the flash off backwards.
- For Type OP flash: Press both sides of the Lock/Release button towards the directions as indicated then pull the flashgun off backward.
- For Type SA flash: Push the Shoe Release button and pull the flashgun off backward.



OPERATING THE FLASH AND TESTING

Slide the ON/OFF switch to the "ON" position. After a few seconds the Ready/Test lamp should glow, indicating that the flash is ready to shoot. Press the Ready/Test button to make sure that your flash works properly. When the flash discharges, wait until the ready lamp glows again.

Adjust your camera to the appropriate setting. Most cameras can be set to the program position (see your camera's manual for details on flash synchronization). When the flash is ready to fire, it will automatically set the camera's shutter speed. The flash readiness indicator will appear in the display on the camera. Different camera models indicate flash readiness in different ways (see your camera's instruction manual).

Point your camera at the subject and gently press the shutter button to take the photo. The OK lamp on the flash will light to indicate that the picture is exposed correctly.

AF / TTL OPERATION

AF - AUTO FOCUS

The AF illuminator helps the camera focus properly when the subject is in low light. If the camera is compatible with an external AF mode, slightly press the shutter button and the red AF illuminator will be automatically activated.

TTL

The flash performs pre-flashes for cameras to calculate the intensity of flash light output. The flash light output is controlled automatically by the camera.

RED-EYE REDUCTION (Type N, OP and P)

The red-eye reduction function reduces the red-eye phenomenon by emitting pre-flashes before the main flash. To setup this function, please refer to your camera's instruction manual.

FRONT AND REAR CURTAIN SYNCHRONIZATION

Some cameras offer the option of rear curtain synchronization (Rear mode) triggering the flash unit at the end of the exposure time. Rear curtain synchronization is particularly advantageous when using slow shutter speeds (slower than 1/30 sec.) or when shooting moving objects that have their own source of light. Rear curtain synchronization gives a more realistic impression of movement because the light streaks behind the light source instead of building up in front of it, as is the case when the flash is synchronized with the front shutter curtain. Depending on its operation mode, the camera uses shutter speeds slower than its sync speed.

For Type P flash: You can select the synchronization mode as either front curtain (⚡▶) or rear curtain (▶⚡) at the back of the flash. The flash will fire according to the mode selected to match with the camera's shutter.

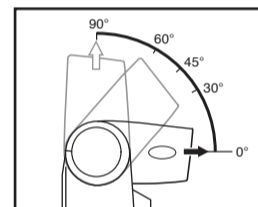
For Type C, N, OP, SA flash: The camera controls front or rear curtain synchronization, therefore no setting is required on the flash.

Note: Rear curtain synchronization is only possible on cameras with this feature. See your camera's instruction manual for details.

POWER SAVING FUNCTION

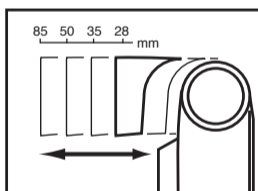
If there is no communication between the flash and the camera for approximately three minutes, the flash will automatically switch to the power saving mode in order to save battery power. The Ready Light will be off while in power saving mode.

To reactivate the flashgun, simply press your camera's shutter or turn the main switch off and on again. The flashgun does not completely power off in power saving mode, however, power consumption is drastically reduced. If you are not going to use your flashgun for an extended period of time, we recommend you to turn the flash off.



BOUNCE PHOTOGRAPHY

Using direct flash to illuminate a subject results in a more harsh light, sometimes yielding unattractive shadows. A softer light with more pleasing effects can be obtained by using bounce flash. The head of this flash can be set to an angle of 30°, 45°, 60°, or 90° so that the light from the flash can be reflected off the ceiling or walls. When shooting indoors, 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 flash, the following is recommended:

- (1) Select white or reflective surfaces to bounce the light off. Otherwise your pictures will have an unnatural color cast similar to that of the reflecting surface.
- (2) Set the camera's exposure mode to Aperture Priority Auto ("A") or Manual ("M").
- (3) Use a wider aperture than for a direct exposure, as 2 or 3 stops of light will be lost when using a bounce flash.

ZOOM HEAD

The zoom flash head covers the focal length of 28-35-50-85mm in four stops. To choose these positions, simply move the flash head as shown.

Note: Make sure the flash is set to a focal length equal to or wider than the camera lens focal length to assure proper coverage.

UPDATE SOCKET

The advanced features of this ProMaster flash allow it to be reprogrammed as necessary. For more details on the upgrade of the firmware, please contact your ProMaster dealer.

HINTS FOR MAINTENANCE AND BETTER FLASH PHOTOGRAPHY

- The flash unit does not function on camcorders.
- Misfiring sometimes occurs when the power switch is turned on and off continuously. If it happens, power off the flash unit for a few seconds before switching it on again. The flash unit will then work as normal.
- 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 don't intend to use the flash for a long period of time.
- The flash unit is not water-resistant. Rain and humid weather may cause irreparable damage to the flash.
- The flash unit is composed of very delicate electronic parts. It should be protected against shock, impact or other improper handling.
- The flash unit contains a high voltage condenser. Do not try to open the housing or repair the flash.
- Do not clean the surface of the flash unit with any petroleum solvent, detergent solution or other strong solvents. These solvents may cause damage to the flash.

WARNING

This flash unit may not function when the battery power is not sufficient or when user operates this unit in an inappropriate way. To reset, switch the flash unit OFF using its main power switch. If batteries are low, replace with fresh batteries. After a few seconds switch the flash to the ON position and it should resume normal operation.

ONE YEAR UNCONDITIONAL GUARANTEE

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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