

**PROMASTER<sup>®</sup>**

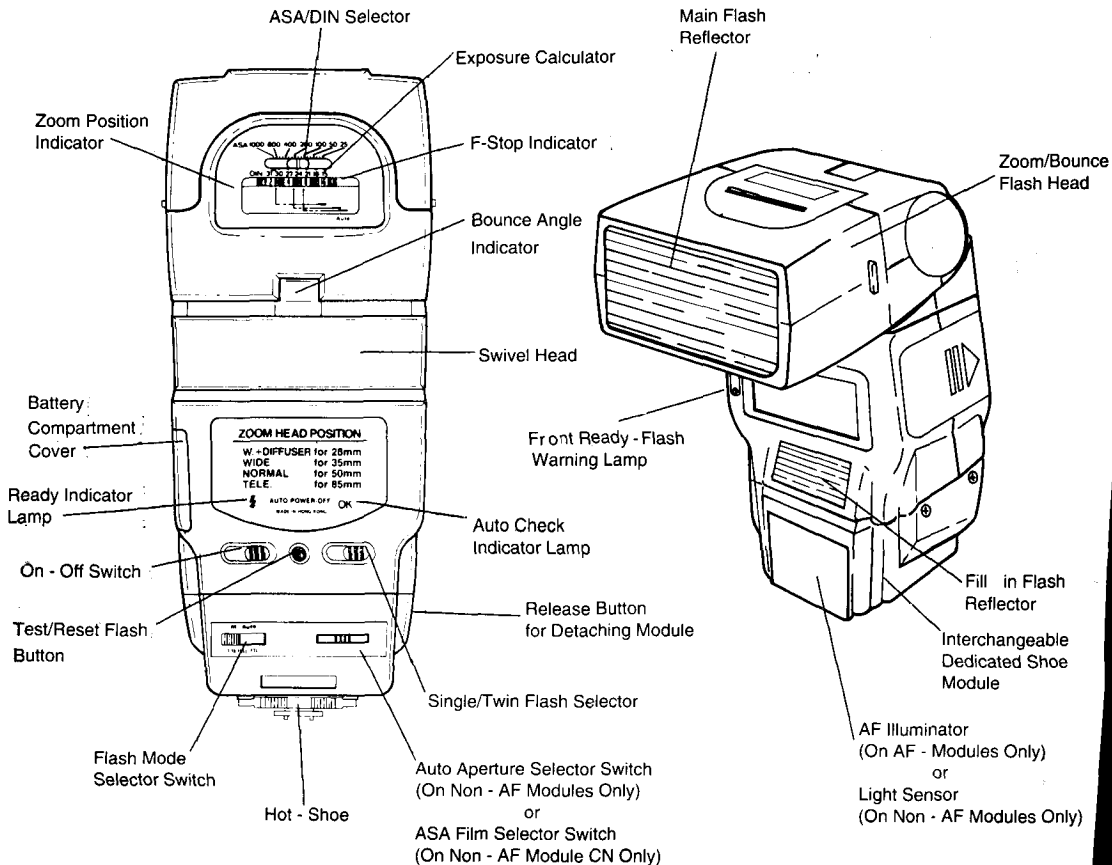
**FTD 5950**

**OPERATING INSTRUCTIONS**

**ELECTRONIC FLASH**

**• TWIN FLASH • BOUNCE • SWIVEL • ZOOM**

# PARTS IDENTIFICATION



## FLASH DEDICATION

This flash unit requires Interchangeable Dedicated Module to fit the following dedicated mating cameras for dedicated flash operation.

- Please see Module Instructions for details of operation of this flash unit.

### AF MODULES:-

- AF MODULE CN is for CANON EOS 650, 620, 750, 850, 630, 10, REBEL, ELAN, etc
- AF MODULE ML is for MINOLTA MAXXUM 7000, 9000, 5000
- AF MODULE MLI is for MINOLTA MAXXUM 7000i, 3000i, 5000i, 8000i, 7xi, 3xi, etc
- AF MODULE NK is for NIKON N2020, N4004, N8008, N6006, etc
- AF MODULE YS is for YASHICA 230AF, 200AF, etc
- AF MODULE PX is for PENTAX SFi/SFX, SF1N, SF10/SF7, etc

### NON-AF MODULES:-

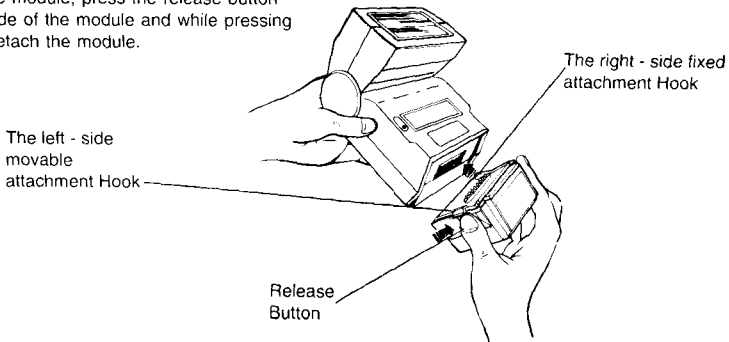
- MODULE CN is for CANON A-1, AE-1, AE-1 Program, New F-1, AV-1, AL-1, AT-1, T50, T70
- MODULE ML is for MINOLTA XD Series, XG Series, X700, X570, X370
- MODULE PX is for PENTAX ME-Super, ME-F, MV, MG, LX, Super A Program, Program Plus, A3000, P3N
- MODULE NK is for NIKON FE, EM, FE2, FA, FG, FM2, FG20, N2000
- MODULE RC is for RICOH XR-Series, KR-Series, XR-P, XR-M/XR-X
- MODULE YS is for YASHICA FX-Series
- MODULE OM is for OLYMPUS OM1, OM2, OM2N, OM10, OM4, OMF, OMG, OM2S, OM-PC,
- MODULE ST is for STANDARD SLR cameras

- As different models of cameras operate differently for flash photography, you should read the instructions Manual of your camera for details of flash operation.

- Before attaching the Module onto the Flash Unit, always make sure that the Module and the Flash Unit contact points are all clean. The stain or dirt on surface of the contact points on the Module side or on the Flash Unit side may cause malfunction. You may use soft cloth to clean the contact points on both sides.

## ATTACHING AND DETACHING THE DEDICATED MODULE

1. To attach the module, position the right-side fixed attachment hook onto the flash unit and then push the left-side of the module upward until the left-side movable attachment hook clicks into position.
2. To detach the module, press the release button on the left-side of the module and while pressing the button, detach the module.



- IMPORTANT NOTES:
- WHEN ATTACHING THE MODULE ONTO THE FLASH UNIT OR DETACHING THE MODULE FROM THE FLASH UNIT, ALWAYS MAKE SURE THAT THE POWER OF THE FLASH UNIT HAS BEEN SWITCHED OFF.
  - DO NOT ATTACH THE FLASH UNIT TO THE MODULE WHILE THE MODULE IS MOUNTED ON THE CAMERA.
  - WHEN MOUNTING THE FLASH UNIT WHICH HAS BEEN ATTACHED TO THE MODULE ONTO THE CAMERA, ALWAYS MAKE SURE THAT THE POWER OF THE FLASH UNIT HAS BEEN SWITCHED OFF.
  - USE THE DEDICATED MODULE ONLY WITH THE DESIGNATED MATING CAMERA. USING IT WITH NON-MATING DEDICATED CAMERA MAY CAUSE DAMAGE TO THE CAMERA, THE FLASH UNIT, THE MODULE OR ALL.

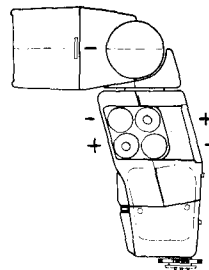
**It is important to follow the above instructions. Otherwise, it may cause damage to the flash unit, the module, the camera or all.**

## BATTERY OPERATION

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

### IMPORTANT:

- THE BATTERIES SHOULD BE INSERTED IN CORRECT POSITION
- FOR BEST RESULTS, USE ALKALINE BATTERIES
- USE FRESH BATTERIES REGULARLY



## AF ILLUMINATOR FOR AUTOFOCUSING

When the camera's operating button is pressed halfway, the AF illuminator is automatically activated when required, with low-contrast subjects in low light. This illumination enables the camera's autofocus system to determine focus status and adjust the lens.

The AF illuminator enables autofocusing with subjects up to about 16 feet away. This distance is for autofocusing only, when focusing manually, flash photography is possible up to about 93 feet, when using ASA 100 and F1.4 aperture (please refer TTL Auto Flash range table).

Note: The working range for the AF illuminator is based on standard test method with a 50 mm lens.

If longer focal lengths are used, the camera may not focus lens accurately. In this case or whenever focus signals blink, set focus mode of the camera switch to M and focus lens manually.

## AUTO CHECK LAMP

On TTL Auto flash mode or Normal Auto flash mode, if exposure was sufficient, the auto check lamp on the flash unit glows at the same moment when the shutter button of the camera is pressed.

On Normal Auto flash mode, before actually taking the photos, you can check whether the shooting distance is within the automatic range by pressing test flash button on the flash unit.

## AUTO POWER-OFF

A battery-saving automatic power-off circuitry is incorporated in this flash unit. The battery power of the flash unit will be automatically turned off within approximately 5 minutes and the ready indicator LED lamp extinguishes itself. With AF module on some dedicated mating cameras, the flash can be re-activated for firing by touching the shutter-release button of the camera. With other modules, the flash can be re-activated for firing by pressing once the Reset flash button on the flash unit or by switching the flash unit OFF and then ON again.

## TTL AUTO FLASH OPERATION

This flash unit provides automatic Through-The-Lens (TTL) control of the flash exposure when used with dedicated cameras which have TTL Auto Flash Metering feature.

This auto mode permits you to use any lens aperture within the flash unit's operating range to enable you to have greater control over depth of field. The larger the aperture (the smaller the f-number) you select, the greater the maximum shooting distance (the less the depth of field but the shorter the recycling time between shots). On the other hand, the smaller the aperture (the greater the f-number) you select, the less the maximum shooting distance (the greater the depth of field but the longer the recycling time).

Therefore, in selecting an aperture, all three factors - maximum shooting distance, depth of field and flash recycling time should be taken into consideration.

(\* Please note that when demonstrating TTL Auto Flash function there must be film inside the camera)

## TTL AUTO FLASH RANGE: (For single main flash only)

ASA FILM IN USE				ZOOM FLASH HEAD POSITION			
100	200	400	1000	W+DIFFUSER	WIDE	NORMAL	TELE
1.4	2	2.8	4	7 - 57 Ft	7 - 75 Ft	10 - 84 Ft	12 - 93 Ft
2	2.8	4	5.6	6 - 40 Ft	6 - 53 Ft	8 - 59 Ft	10 - 65 Ft
2.8	4	5.6	8	5 - 29 Ft	5 - 38 Ft	7 - 42 Ft	9 - 47 Ft
4	5.6	8	11	4 - 20 Ft	4 - 26 Ft	5 - 30 Ft	6 - 33 Ft
5.6	8	11	16	3 - 14 Ft	3 - 19 Ft	3 - 21 Ft	5 - 23 Ft
8	11	16	22	3 - 10 Ft	3 - 13 Ft	3 - 15 Ft	5 - 16 Ft
11	16	22		3 - 7 Ft	3 - 10 Ft	3 - 11 Ft	4 - 12 Ft
16	22			3 - 5 Ft	3 - 6 Ft	3 - 7 Ft	4 - 8 Ft
22				3 - 4 Ft	3 - 5 Ft	3 - 5 Ft	4 - 6 Ft

The TTL Automatic Mode of this flash unit balances the exposure between the main subject illuminated by the flash and the background in ambient light, whenever possible. Thus, this TTL mode can be used under conditions ranging from total darkness to fill-in flash.

## **NORMAL AUTO FLASH OPERATION**

This flash unit which has been attached to the non-AF module has three auto flash operation settings designated by the colours, BLUE - F2, YELLOW - F4, \*GREEN - F5.6 on the Module for shooting up to 65 feet, 33 feet and 23 feet respectively when using ASA 100 film.

\* Non-AF Module CN does not have this setting.

## **USING THE EXPOSURE CALCULATOR**

(a) At Normal Auto Operation for Standard SLR Cameras.

- (1) Set INDEX line of the ASA/DIN film selector switch to the ASA/DIN speed of the film in use.
- (2) Read along the auto line (blue or yellow or green according to your auto range setting selected) and find the corresponding f-number for auto operation. Set this aperture on your camera.

(b) At TTL Auto Operation for Dedicated TTL Cameras

- (1) Set INDEX line of the ASA/DIN film Selector Switch to the ASA/DIN speed of the film in use.
- (2) Focus on your subject and note the flash to subject distance.
- (3) Locate the lens aperture you wish to use for TTL Auto Operation and read the distance opposite this selected aperture to check whether the flash to subject distance is within auto range. If it is, set the aperture on your camera.

(c) At Manual Flash Operation

- (1) Set INDEX line of the ASA/DIN Selector Switch to the ASA/DIN speed of the film in use.
- (2) Focus on your subject and note the flash to subject distance. Locate this distance on the distance scale.
- (3) Read the aperture opposite this distance and set the f-number on your camera.

## **LOWER POWER MANUAL FLASH**

At Manual Flash Operation, you can set the flash unit's Mode Selector Switch to '1/16' power position, which will give you faster recycling time and more number of flashes. It is useful for close-up works and the shooting with motor-drive film winder (up to 2 frames per second). Guide number at this lower power setting is 1/4 of the full power guide number (please see Guide Number Table).

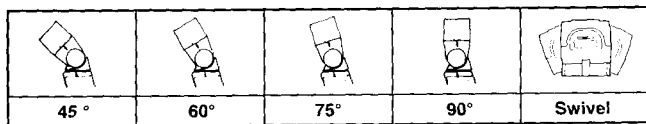
## BOUNCE PHOTOGRAPHY

The convenience of automatic operation can be applied to bounce lighting which involves "Bouncing" the light off a ceiling or other reflective surfaces to obtain soft illumination.

The auto mode can be used for bounce lighting (it is recommended to operate your flash in auto mode for bounce flash).

After determining the position of your subject, adjust the bounce angle. (The flash head is variable from 0°, 45°, 60°, 75° and 90° as desired) if necessary you can tilt the swivel flash head in horizontal direction by 180° to the right and 150° to the left.

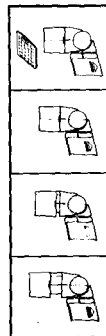
When using bounce lighting, it is advisable to use a high speed film (ASA400)



## ZOOM OPERATION

The lighting angle mechanism built into this flash unit allows selection of 3 preset lighting angles by just pulling or pushing the zoom flash head. The guide number changes in relation to the angle. Determine the best angle for flashing in relation to the focal length of the lens used.

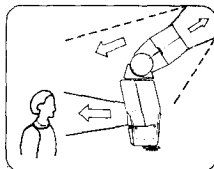
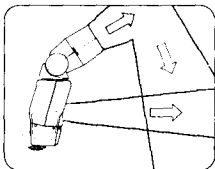
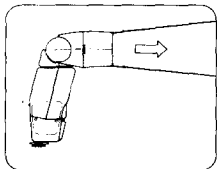
Zoom Position Indicator	Lighting Angle (with 35mm lens camera)	Guide Number	
		ASA100/Ft	ASA400/Ft
W+Diffuser (28)	28mm lens cover (vertical 53°) (horizontal 70°)	80	160
W (35)	35mm lens cover (vertical 45°) (horizontal 60°)	105	210
N (50)	50mm lens cover (vertical 34°) (horizontal 46°)	118	236
T (85)	85mm lens cover (vertical 23°) (horizontal 31°)	130	260



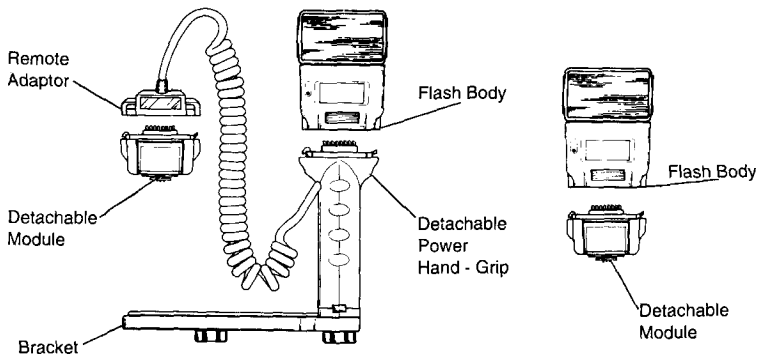
## DUAL FLASH LIGHTS

You can enjoy dual flash lights with the sub-reflector. Slide the sub-reflector switch to "☞☞" position. Dual flash lights - from the main and sub-reflectors will give you a variety of flash techniques as illustrated, if you do not want to use the sub-reflector, slide the sub-reflector switch to "☞" position.

It is recommended to operate double flashes for bounce flash operation. Single flash is desirable for direct straight flash.



### Modular Flash System



**As a Handle - Mount Flash Unit**

**As a Camera - Mount Flash Unit**

## SPECIFICATIONS

Power Source : 4 (1.5 V) "AA" Alkaline Batteries in flash Body  
 OR  
 4 (1.5 V) "C" Alkaline Batteries in Hand-Grip.

Recycling Time : Automatic : 0.3-10 sec  
 Manual : 6-10 sec

Battery Life : Approx. 100-700 flashes  
 (Depends on the type of batteries and flash distance)

Flash Duration : Automatic : 1/30,000 to 1/1,000 sec  
 Manual : 1/1,000 sec

Sensor Measuring Angle : 20°

Angle of illumination:

Zoom Flash Head Position	Focal Length		
	Coverage	Horizontal	Vertical
Wide + Diffuser	28mm	70°	53°
Wide	35mm	60°	45°
Normal	50mm	46°	34°
Tele	85mm	31°	23°

## OUTPUT: 3,200 BCPS

Guide Number Table ( in Feet ) for Main Flash Only :-

<b>Zoom Head position</b>	<b>ASA 25</b>	<b>ASA 50/64</b>	<b>ASA 100</b>	<b>ASA 200</b>	<b>ASA 400</b>	<b>ASA 1000</b>
Wide + Diffuser	40	56	80	112	160	250
Wide	52	74	105	148	210	330
Normal	59	83	118	166	236	372
Tele	65	92	130	184	260	410

The Guide Number when at 1/16 power is 1/4 of the above.

Guide Number Table ( in Feet ) for Dual Flashes:-

<b>Zoom Head position</b>	<b>ASA 25</b>	<b>ASA 50/64</b>	<b>ASA 100</b>	<b>ASA 200</b>	<b>ASA 400</b>	<b>ASA 1000</b>
Wide + Diffuser	36	50	73	100	146	228
Wide	49	69	99	138	198	310
Normal	52	74	105	148	210	328
Tele	57	81	115	162	230	360

The Guide Number when at 1/16 power is 1/4 of the above.

Auto Aperture Settings: F2, F4, \*F5.6 when at ASA 100

Auto Operation Range: (Approx.)

AUTO RANGE SELECTOR POSITION	AUTO APERTURE SETTING	ZOOM FLASH HEAD POSITION			
		W + Diffuser	Wide	Normal	Tele
ASA100 BLUE	F2	6 - 40 Ft	6 - 53 Ft	8 - 59 Ft	10 - 65 Ft
ASA100 YELLOW	F4	4 - 20 Ft	4 - 26 Ft	5 - 30 Ft	6 - 33 Ft
ASA100*GREEN	*F5.6	3 - 14 Ft	3 - 19 Ft	3 - 21 Ft	5 - 23 Ft

\*Non-AF Module CN does not have this setting

### AF ILLUMINATOR:

The illuminator is automatically activated for autofocus when required, with low-contrast subjects in low light. The range is up to about 16 feet, based on standard test method with 50 mm lens.

Colour Temperature	: Same as sunlight during day
Bounce Angle	: 0° - 90° (Click Stop: 0°, 45°, 60°, 75° and 90°)
Swivel Angle	: 0° - 180° (Click Stop: Left 0°, 30°, 60°, 90°, 120°, 150° Right 0°, 30°, 60°, 90°, 120°, 150°, 180°)
Weight (Without Module)	: 313 Gm (approx.)
Size (Without Module)	: 81 (W)mm x 52 (D)mm x 157 (H)mm

The specifications are subject to change without notice.