

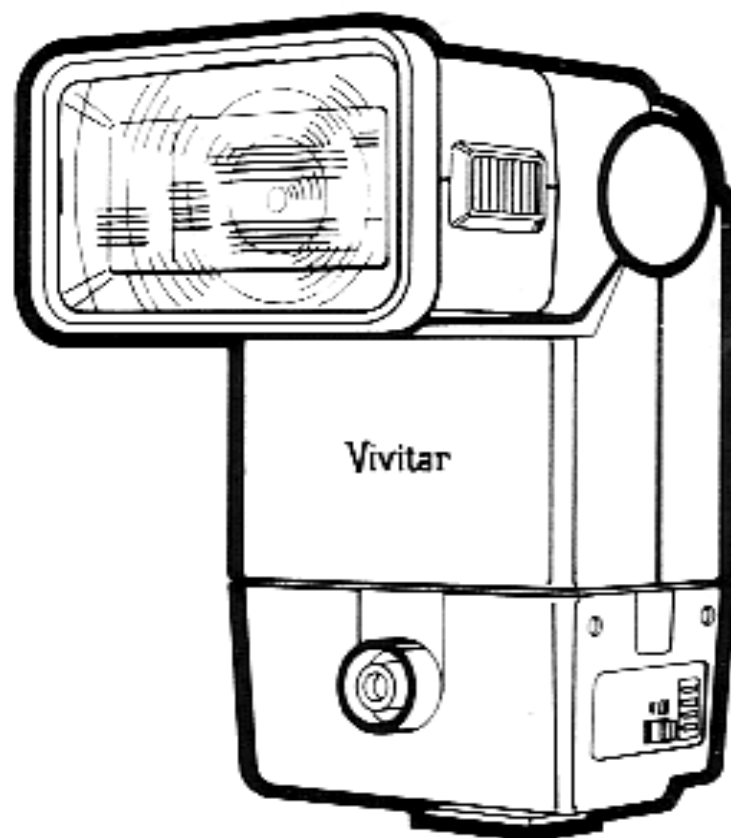
# Vivitar®

**Dedicated Electronic Flash**

**Flash électronique à couplage  
d'automatismes**

**Systemintegriertes Elektronenblitzgerät**

**Flash electrónico con acoplamiento de  
automatismos**



**Instruction Manual / Mode d'emploi**

**Gebrauchsanweisung / Manual de instrucciones**

# IMPORTANT SAFEGUARDS

When using your photographic equipment, basic safety precautions should always be followed, including the following:

1. Read and understand all instructions.
2. Close supervision is necessary when any equipment is used by or near children. Do not leave equipment unattended while in use.
3. Care must be taken as burns can occur from touching hot parts.
4. Do not operate equipment with a damaged cord or if the equipment has been dropped or damaged — until it has been examined by a qualified serviceman.
5. Do not let cord hang over edge of table or counter or touch hot surfaces.
6. If an extension cord is necessary, a cord with a suitable current rating should

be used. Cords rated for less amperage than the equipment may overheat. Care should be taken to arrange the cord so that it will not be tripped over or pulled.

7. Always unplug equipment from electrical outlet when not in use. Never yank cord to pull plug from outlet. Grasp plug and pull to disconnect.

8. Let equipment cool completely before putting away. Loop cord loosely around equipment when storing.

9. To protect against electric shock hazards, do not immerse this equipment in water or other liquids.

10. To avoid electric shock hazard, do not disassemble this equipment, but take it to a qualified serviceman when some service or repair work is required. Incorrect reassembly can cause electric shock hazard when the equipment is used subsequently.

**SAVE THESE  
INSTRUCTIONS**

# CONTROLS, INDICATORS, AND FEATURES

1. Eyelight Panel (standard on 3500 only)
2. Zoom/Bounce Flash Head
3. Module Release Button
4. Dedicated Module
5. PC Connection (Standard Module only)
6. Audible Signal On/Off Switch
7. Sensor
8. Slide Rule Calculator
9. Zoom Position Indicator
10. Autowinder Exposure Index Mark
11. ASA/DIN Selector Switch
12. Index Line
13. Auto Range Brackets and f-Stop Indicators
14. 28mm Panel Auto Range Indicator
15. Bounce Position Indicator
16. Battery Compartment Cover
17. Flash Ready Light/Open Flash Button
18. External Power Connection (remove cover)
19. Film Speed Selector (DM/C, DM/N2 only)
20. Module Mode Selector Switch  
(3 Auto f-Stops, Manual, Autowinder\* Modes)
21. Mounting Foot with Lock Wheel
22. Sufficient Light Indicator
23. Flash On/Off Switch
24. Nikon Model EM Position
25. TTL Flash Position

\*Not applicable for Canon, Nikon 2

## HOW TO USE IT

To prepare the unit for operation, familiarize yourself with the controls and indicators. Follow these simple steps, turn back to Page 3, fold out the illustration section and place your own unit beside it. Locate all the controls, indicators, and other features that are called out, so you will be able to find them easily when they are referred to in the instructions. Then proceed as follows:

### **1. Attach Dedicated Module**

To attach the Dedicated Module, hold it in the left hand and hold the body in the right hand. Hook the end over the lug on the lower right-hand edge of the body and then bring the two parts together until the Dedicated Module Release Latch (3) on the left side engages and locks the two parts together. (See illustration "A.")

### **2. Install Batteries**

Open the Battery Compartment Door (16) by sliding it in the direction of the arrow. Insert two AA alkaline or NiCad batteries or a Vivitar NC-5 NiCad Battery Pack according to the position markings shown in the compartment.

### **3. Energize the Unit**

Slide the ON/OFF Power Switch (23) to the right, 'on' position (red shows). Wait for the Ready Light (17) to come on.

### **4. Set the Film Speed**

Set ASA/DIN Selector Switch index mark (12) on flash head to match film in camera.

### **5. Set Desired F-Stop and Flash Range**

Select desired auto range and f-stop on the flash head Slide Rule Calculator (8).

Example: 100 ASA/21 DIN, Normal zoom position (N), range 3.2 ft (1 m) to 10 ft (3 m) at f8. Orange

Auto Range Mode.

Slide Module Mode Selector Switch (20) to red, blue or orange dot to match range selected on flash head calculator dial.

### **6. Note the Beeper Switch and Flash-Ready Light**

The Beeper ON/OFF Switch (6) controls the audible beeper signal. When the switch is set to ON, the beeper signal will sound when the flash is ready to fire. The beeper signal consists of short evenly spaced beeps. Setting the switch to OFF silences the beeper; however, flash ready will still be indicated by the Flash Ready Light (17) on the back of the unit and in the camera viewfinder of those dedicated cameras that have this feature.

### **7. Test Open Flash Button and Sufficient Light Indication**

Use the Open Flash Button (17) and the Sufficient Light Indication to test the flash operation and the auto ranges. The sufficient light indication functions only in the auto mode. If enough light reaches the subject for a correct exposure, and if the beeper is on, a long, steady beeeeep will be heard. To test these functions, set an auto range covering a medium distance and point the unit toward a fairly close, light-colored wall; press the flash ready light. The unit will fire, but the flash ready light and the beeper should come on again almost immediately, indicating that the thyristor control has allowed only a small part of the flash charge to be expended. The Sufficient Light Indicator (22) will also come on to confirm that the subject is within the auto range. Repeat this test with subjects at various distances, noting that the sufficient light indication comes on as long as the subject is within the auto range; (however, very dark non-reflective objects may not show sufficient light at the limits of the range). Notice also that recycle time increases with

subject distance, because more light is required, which uses more of the charge in the flash capacitor. By testing with the open flash button, you can determine in advance that the object will receive enough light for proper exposure without wasting film. This test is particularly useful with bounce flash.

### **8. Bounce Flash**

By "bouncing" flash off reflective surfaces such as ceilings or walls, subjects can be more softly lighted, creating varied effects. To maximize flash range in bounce positions, the zoom head should be in the telephoto position. Avoid colored reflective surfaces when using color film, since bounced light will be influenced by such colors, affecting results accordingly. To determine correct operating range under "bounce" conditions, use the sufficient light indication previously explained, with flash in auto mode.

### **9. Test the Manual Mode**

Set the flash mode to "M/TTL" and fire the flash. Notice that the recycle time is at the maximum and remains the same at all distances. At the "M" setting, maximum light is produced, using all of the charge in the flash capacitor. To obtain correct exposure at the "M" setting, use the following procedure:

1. Set Index Line (12) on the film speed selector switch on the flash slide rule calculator dial to the ASA/DIN speed of the film you're using.
2. Set mode on dedicated flash module to "M/TTL" (manual position).
3. Focus on your subject and note the flash-to-subject distance. Locate this distance on the flash slide rule calculator dial distance scale.
4. Set your lens to the f-stop indicated by the aperture scale on the flash slide rule calculator (8), directly above your flash-to-subject distance.

5. When the flash is charged and ready, the visual and audible ready indicators will function as discussed previously.
6. Note:
  - a) There is no sufficient light indication in the manual mode.
  - b) When you're using the 28mm Wide Angle Panel, you must open your lens one full stop wider than the f-stop recommended on the flash aperture scale for the given camera-to-subject distance.

### **10. Eyelight Panel (standard with Model 3500 only)**

The Eyelight Panel (1) has two functions. When photographing people, it adds a pleasing highlight to your subject's eyes and fills in shadows when using your flash in the bounce position. Place the retaining clip of the panel on the top of the flash head, and raise the panel so that it faces your subject. This will reflect a small portion of the bounced light directly on your subject. With direct flash usage and the panel in the down position covering the flash head lens, the eyelight panel provides extra wide angle 28mm flash coverage. Zoom head must be in the "W" (wide) position. Open camera lens one full stop wider than indicated by the calculator dial, when used in manual flash operation mode.

### **11. Macro Flash Sensor Operation (Optional Accessory)**

Follow the general mounting instructions of the MFS-1 as shown in the MFS-1 instruction sheet with the following exceptions:

1. If you want to retain your dedicated interface connections with your camera, do not attach the flash swivel shoe.
2. Follow the general instructions given in this instruction book. Note the following exceptions for your camera:
  - a) Close down aperture 4 stops from the auto f-stop



- chosen in instruction step 5.
- b) Canon camera lenses must be set manually and the 4 f-stop compensation applies as well. Do not set the lens in the "A" position.
  - c) For TTL cameras, use Auto modes on module (not "TTL" position) and set f-stop per 2a) above.
  - d) For Nikon EM, use Auto modes on module (not "EM" position) and set f-stop per 2a) above.
3. If you decide to use the swivel shoe with the flash "on camera", you must set your flash shutter speed manually, and you will not receive dedicated viewfinder information. You can still utilize automatic flash operation as discussed previously in step 5.
  4. To utilize full dedicated macro flash interface with the flash off camera, attach the Dedicated Sensor Cord accessory DSC-1 to the module and connect it to the flash unit. You can now use the swivel shoe and still retain full camera/flash dedication.
  5. Please refer to the following MFS-1 Automatic Exposure Chart for details.

## **AUTOMATIC EXPOSURE CHART**

### **Camera Lens Setting and Corresponding Ranges**

<b>ASA</b>	<b>25</b>	<b>50</b>	<b>100</b>	<b>200</b>	<b>400</b>	<b>800</b>	<b>Automatic Range</b>
Red Mode F-Stop	4	5.6	8	11	16	22	8 in - 8 ft 20 cm - 2.5 m
Blue Mode F-Stop	8	11	16	22	32	—	8 in - 4 ft 20 cm - 1.25 m
Orange Mode F-Stop	16	22	32	—	—	—	8 in - 2 ft 20 cm - 0.62 m

## **12. Vari-Power/Slave (Optional Accessory)**

Any number of remote slave/flash units may be set up and automatically fired in synchronization by the flash connected to your camera. The Vari-Power module allows you to use your flash unit independently of the camera body. The flash unit can be set to operate as a full power manual slave unit, or at any of the reduced power settings: 1/2, 1/4, 1/8 or 1/16. In addition, the Vari-Power/Slave may be used as a Vari-Power unit on camera or off with the slave in the OFF position.

## **13. High-Voltage Input Receptacle**

Three optional accessory power supplies are available. They are the High Voltage Power Pack (HVP-1), the Power Pistol Grip (PPG-1), and the Vivitar SB-4 Adapter. All of them plug into the High-Voltage Input Receptacle (18). The HVP-1 accepts a 510-volt battery which provides very fast recycle time and many more flashes than the self-contained batteries alone. The PPG-1 accepts four AA size alkaline or NiCad batteries, which decreases recycle time by as much as 50 percent and approximately doubles the number of flashes. The SB-4 Adapter allows the flash unit to operate from a 110 or 220-volt AC outlet, which is a convenience and a saving when many flash shots are being made in a home or studio. Fresh alkaline or NiCad batteries must always be left in place even when the accessory power supplies are being used, since they provide the low voltage and low current required to operate the microprocessor circuits.

## **14. Dedicated Module Instructions**

Detailed instructions for operating the Dedicated Module with your camera are contained in the dedicated function manual enclosed.

## **15. To Take a Picture**

Once you have gone through the familiarization procedure described above, you will understand the workings of the flash system well enough to begin to utilize its great potential. However, the following checklist is provided as a convenient reference for the picture-taking procedure.

- a) Load camera with film and note the film speed.
- b) Mount flash on camera and turn lock ring down to right against shoe firmly. Caution: Do not overtighten!
- c) Set camera to X-sync speed (unless the dedicated module does that automatically).
- d) Set ON/OFF switch to ON to energize flash unit.
- e) Set film speed on flash calculator and module (DM/C, DM/N2 only).
- f) Set Zoom Position Indicator (9) to correspond to camera lens coverage.
- g) Choose one of three f-stops that provides a suitable auto range for your subject; set this auto range on the Module Mode Selector Switch (20) and the corresponding f-stop on your camera lens.
- h) Focus and compose the picture.
  - i) Note flash-ready signal and shoot.

## SPECIFICATIONS

### *Guide Number*

Flash Head Zoom Position	ASA 100	DIN 21
	(ft)	(m)
Extra-wide with Eyelight Panel (3500 only)	45	14
Wide	66	20
Normal	80	24
Tele	94	28

### *Angle of Illumination*

Zoom Flash Head Position	Focal Length Coverage	Horizontal	Vertical
		Extra-wide with Eylight Panel (3500 only)	28mm
Wide	35mm	60°	45°
Normal	50mm	46°	34°
Tele	85mm	31°	23°

### *Number of Flashes and Recycle Time*

Power Source	Number of Flashes		Recycle Time	
	<i>Auto- matic</i>	<i>Manual</i>	<i>Auto- matic</i>	<i>Manual</i>
2 AA Alkaline	800	140	0.5 sec	9 sec
2 AA NiCad	300	60	0.5 sec	7 sec
SB-4 (AC)	Unlimited	Unlimited	0.5 sec	4 sec
HVP-1	3000	1800	0.5 sec	1 sec

### *Automatic f-Stop Settings and Corresponding Ranges*

	Film Speed		Automatic Flash Ranges	
	ASA	ASA	Zoom Flash Head Position	
	100	400	Normal	Wide
Red Mode f-stop	f2	f4	2.5-12 m (8.3-40')	2-10 m (6.6-33')
Blue Mode f-stop	f4	f8	1.2-6 m (4-20')	1-5 m (3.3-16.5')
Orange Mode f-stop	f8	f16	1-3 m (3.3-10')	0.7-2.5 m (2-8')
			Tele	Extra-Wide
Red Mode f-stop	f2	f4	3-14 m (10-47')	1.5-7 m (5-23')
Blue Mode f-stop	f4	f8	1.5-7 m (5-23')	0.7-3.5 m (2.3-11.5')
Orange Mode f-stop	f8	f16	1.3-3.5 m (4-11')	0.5-1.75 m (1.5-5.5')

### *Autowinder Setting (except Canon Module)*

Autowinder mode (2 frames/sec) can also function as a varipower setting (1/8th power)

### *Flash Duration*

Manual: 1/2,000 second

Automatic: 1/2,000-1/30,000 second

### *Sensor Measuring Angle*

18° ± 3°

### ***External Power Source Jack***

Accepts optional HVP-1, SB-4, PPG-1

(Limit sequential firing after ready signal to under 25 flashes)

### ***PC Cord Socket***

On Standard Module DM/S only

### ***Accessories Included***

Eyelight Panel/28mm Extra-Wide Angle Panel (3500 only)

PC-1 Cord (with Standard Module only)

### ***Dedicated Modules Available***

DM/S (Standard), DM/C (Canon), DM/M-TTL (Minolta),

DM/N (Nikon), DM/N-2 (Nikon)\*, DM/O (Olympus), DM/P

(Pentax), DM/Y-C (Yashica/Contax)

\*F-3 Adapter required for use on Nikon F-3

### ***Optional Accessories***

External Power Sources HVP-1, SB-4, PPG-1

Filter Adapter FA-3, Filter Kits FK-2, WFK-2

Macro Flash Sensor MFS-1

Charge 12/20 Charger and NC-5 2-cell NiCad Battery Pack

Dedicated Sensor Cord DSC-1

Pistol Grip components

Remote Flash Trigger with Rotating Hot Shoe SL-2

Bounce Diffuser BD-3 (3500 only)

Specifications subject to change without notice

