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# **SUNPAK®**

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## **POWER ZOOM 4000AF (NE)**

**OWNER'S MANUAL  
HANDBUCH  
INSTRUCTIONS  
MANUAL DE USUARIO**



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## **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 APPLIANCE IS USED BY OR NEAR CHILDREN. DO NOT LEAVE THIS APPLIANCE UNATTENDED WHILE IN USE.**
- 3. DO NOT OPERATE APPLIANCE IT HAS BEEN DROPPED OR DAMAGED UNTIL IT HAS BEEN EXAMINED BY A QUALIFIED SERVICEMAN.**
- 4. TO PROTECT AGAINST ELECTRICAL SHOCK HAZARDS, DO NOT IMMERSE THIS APPLIANCE IN WATER OR OTHER LIQUIDS.**
- 5. TO AVOID ELECTRIC SHOCK HAZARD, DO NOT DISASSEMBLE THIS APPLIANCE. TAKE IT TO A QUALIFIED SERVICEMAN WHEN SOME SERVICE OR REPAIR WORK IS REQUIRED. INCORRECT REASSEMBLY CAN CAUSE ELECTRIC SHOCK HAZARD WHEN THE APPLIANCE IS USED SUBSEQUENTLY.**
- 6. DO NOT OPERATE APPLIANCE WITH A DAMAGED CORD.**
- 7. DO NOT LET CORD HANG OVER EDGE OF TABLE OR COUNTER OR TOUCH HOT SURFACES.**
- 8. IF AN EXTENSION CORD IS NECESSARY, CARE SHOULD BE TAKEN TO ARRANGE THE CORD SO THAT IT WILL NOT BE TRIPPED OVER OR PULLED.**
- 9. ALWAYS UNPLUG APPLIANCES FROM ELECTRICAL OUTLET WHEN NOT IN USE. NEVER YANK CORD TO PULL PLUG FROM OUTLET. GRASP PLUG AND PULL TO DISCONNECT.**

**SAVE THESE INSTRUCTIONS**

## INTRODUCTION

WELCOME to the world-wide family of Sunpak owners. Your Sunpak PZ4000-AF is one of the most advanced electronic flash units in the world. It is the product of extensive research and development and has been designed to give you many enjoyable years of service. Because many of the features of your new PZ-4000AF are so unique, please take a few minutes to read this owner's manual carefully with your PZ4000AF in front of you. The more you know about your new electronic flash, the better you can use it for maximum creativity in your pictures.

**All pictures, illustrations and charts will be available from page 53 Figures bracketted at the end of each instruction sentence are coupled with the numbers supplied on the pictures, illustrations and charts.**

The cameras are divided into two groups, A and B, and please check your camera with the list below before using.

Camera	Group
F 90 Series F 70 Series F 4 Series F 801	<b>A</b>
F 601 F 501 F 50D	<b>B</b>

[Classification of cameras]

## Description of Parts (Page 53)

1. Flashtube Housing
2. Battery Compartment Cover
3. Secondary Infrared Flash
4. Knurled Lock Ring
5. Dedicated/Hot Shoe Contact
6. LCD Display
7. Zoom Button
8. LCD Light Button
9. "SYNC" Switch
10. Auto/Manual Select Switch
11. Battery/AC, HV Selector (On/Off) Switch
12. Ready Light/Test (Open Flash) Button
13. Ready Light
14. AC/510 V Outlet
15. Vertical Bounce Control Scale

## Power Sources

Your Sunpak PZ4000AF may be used with five different power sources:

1. Four AA alkaline batteries (not included)
2. Four AA rechargeable nickel-cadmium batteries (optional)
3. The Sunpak Multi-Voltage AC Adapter AD-27 (optional) ④
4. The Sunpak Powerpak for 510-Volt High Voltage Batteries (optional) ⑤
5. The Sunpak 510 V rechargeable battery NC510 for use with Sunpak Powerpak (optional) ⑥
6. TR-PAK IIa (optional) ⑦

## To Install Batteries

### Selecting Alkaline or Nickel-Cadmium Batteries

The major advantage of alkaline batteries is that they provide more flashes per set. While nickel-cadmium batteries will provide fewer flashes per set, they will recycle your PZ4000AF slightly faster and can be recharged hundreds of times for more economical operation over the long run.

1. Slide the battery compartment cover toward the front of the unit. Now gently fold up the cover in the direction shown ⑧
2. Insert four AA size batteries (alkaline or nickel-cadmium) as shown. The battery compartment has a guide showing the correct positioning of the batteries for proper polarity (+, — contacts). ⑨
3. Press the cover until it snaps into place.

**CAUTION:** When using your PZ4000AF with external power sources, always keep batteries inside the unit. Your PZ4000AF will not interface with the camera without these batteries.

If it takes at least 30 seconds for the READY lamp on the flash unit to light, replace the batteries with new ones.

### Using the Multi-Voltage AC Adapter or the Sunpak Powerpak for 510-Volt Batteries (Both Optional)

#### AD-27A

For AC operation, be sure to check that the voltage selector on your AC Adapter is set to the appropriate voltage. Your AC Adapter has been factory set for 120 V. For use in other countries where 100 V, 220 V and 240 V are standard, you may adjust the setting as illustrated. Remove the small Phillips head screw located next to voltage window and rotate the selector switch with a screw driver to the proper voltage setting. After the voltage setting has been made, the screw must be re-installed to prevent accidental movement of the selector switch.

#### AD-27E

For AC operation, be sure to check that the voltage selector on your AC Adapter is set to the appropriate voltage. Your AC Adapter has been factory set for 220 V. For use in other countries where 117 V, 127 V and 240 V are standard, you may adjust the setting as illustrated. Remove the small Phillips head screw located next to voltage window and rotate the selector switch with a screw driver to the proper voltage setting. After the voltage setting has been made, the screw must be re-installed to prevent accidental movement of the selector switch.

**When using Multi-Voltage AC Adapter or Sunpak Powerpak for 510-Volt Batteries, always set Battery/HV Selector Switch to HV position.**

Plug into the AC/High Voltage socket on the flash and into a standard wall outlet

as illustrated. The AC Adapter will supply virtually unlimited flashes and is ideal for indoor use. ⑩

When you use the optional accessory Sunpak Powerpak for 510-Volt Battery, first attach the supplied plug adapter to the end of Powerpak cord and plug it into the PZ4000AF in the same manner as you would with the Multi-Voltage AC Adapter. The Sunpak Powerpak for 510-Volt Battery allows extremely rapid recycle times and the greatest number of flashes.

**CAUTION:** Even when your PZ4000AF is used with external power sources, always store batteries inside the battery compartment for dedicated function. Your PZ4000AF is not interfaced to the camera without internal batteries.

**Note:** If the Multi-Voltage AC Adapter is incorrectly set, the adapter will not function properly and may damage your PZ4000AF.

- For PZ4000AF:

Do not use an AC Adapter other than the Sunpak AD-27.

## Mounting the Flash to the Camera

**CAUTION:** When mounting or detaching the PZ4000AF from the camera, always make sure the On/Off Switch is at "OFF" position or the camera may be damaged.

- Slip the unit onto the camera's hot shoe. Turn the knurled lock ring clockwise to insure secure mounting to your

camera's shoe.

## Automatic shut-down

In order to increase battery life, the PZ4000AF automatically switches to a power saving standby mode after about 5 minutes. The LCD panel and the flash ready symbol will go blank. To reactivate the flash, when using a camera of group A, simply slide the switch to the "OFF" position and then back to "ON (BATT, HV)" or lightly depress the shutter release. The flash ready indicator will return after a short time. When using a camera of group B, slide the power switch to the "OFF" position and then back "ON (BATT, HV)" position.

## Test flash

You can test the flash by pressing the manual release button **1** on the flash unit.

## Power zoom

The PZ4000AF is equipped with a motor-zoom reflector.

The automatic motor zoom reflector is controlled by the camera and automatically adapts itself to provide optimal flash coverage for the focal length of the lens. Four focal lengths are used: 28 mm/35 mm/50 mm/80 mm.

The focusing range less than 28 mm is not available.

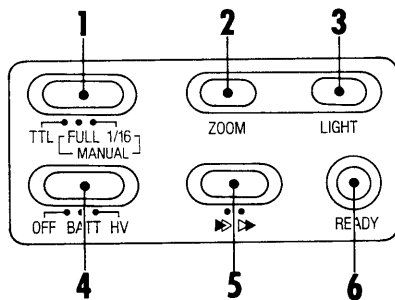
Only the cameras of group A are dedicated, and for the cameras of group B, please use the flash with "MANUAL" mode.



## CAUTION

### Using External Power Source (TR-PAK II(a), Powerpak)

When using the flash unit with TTL and Manual Full continuously, stop after only **10** exposures the owner must wait **5** minutes and using a flash with a ML (MANUAL 1/16) only **36** exposures the owner must wait **5** minutes before they can continue to use flash, maximum flash exposure rate 2 per second.



### Using Only Batteries in the Battery Compartment

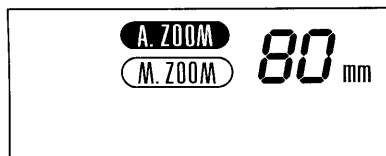
When using the flash unit with TTL and Manual Full continuously, stop after only **36** exposures the owner must wait **10** minutes and using a flash with a ML (MANUAL 1/16) only **36** exposures the owner must wait **5** minutes before they can continue to use flash, maximum flash exposure rate 2 per second.

You can switch to the manual focal length selector (M. Zoom) of the flash reflector by pressing the "Zoom" button **2** on the flash unit. Repeatedly pressing the "Zoom" button cycles through the available focal lengths (28 mm//50 mm/80 mm) and back to automatic zoom selection (A. Zoom).

If a focal length of less than 28 mm is selected, the LCD panel will display the message "F-mm". This indicates that the exposure is not correct.

If a focal length greater than 80 mm is used, the power zoom will always set itself to 80 mm in automatic mode. As the angle of the flash coverage is always wider than the angle covered by the photograph with this size of lens, incorrect exposure will not be a problem.

The relevant setting will be indicated on the LCD display.



### The LCD Display

The LCD panel provides information on the following:

- The selected automatic flash functions.
- Automatic or manual zoom reflector setting.

- The focal length setting.
- Flash range in feet or meters.

The LCD shows all the necessary data when the flash unit is switched on.

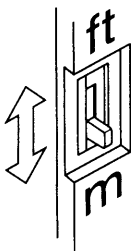
### Distance display

The built-in computer calculates the distance range (TTL) or the distance value (M; ML) for the current camera aperture and guide number. The guide number is dependent on the zoom setting (28 mm/35 mm/50 mm/80 mm), and the film speed (from 20 – 1000 ISO), which is automatically set from the DX code or manually set on the camera when necessary.

(only the cameras of group A shows on a display.)

### Flash Range Display Changing in Meter or in Feet

To change the flash range from meter to feet, slide switch located in the battery compartment, upward for feet, downward for meter.



The unit is compatible with the following film speeds:

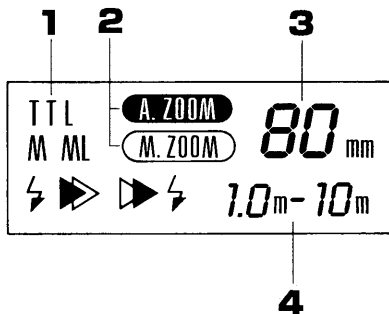
20 ISO ~ 1000 ISO

If any other film speed is used, **no** dis-

tance display will be shown on the LCD panel.

The distance display shows distances up to 33 m/108 feet. For longer distances, an arrow is shown →.

(only the cameras of group A shows on a display.)



- 1 The flash functions
- 2 Automatic or manual zoom reflector setting
- 3 The focal length setting
- 4 Flash range in feet (meters)

### Flash operation with Nikon AF series autofocus SLR cameras.

#### "P" and "Symbolmark" mode

Set the camera's command dial to "P", and "Symbolmark". When the flash is ready, the camera will automatically select the correct shutter speed and aperture setting. The camera will display both settings in the viewfinder. You do not need to set anything and flash range is

indicated in meters or feet on the flash's LCD panel ① when the camera's shutter release button is lightly pressed.

## "S" shutter priority mode

Set the camera's command dial to "S".

Set the required flash X-sync time. The aperture will be set automatically by the camera.

### Note:

If a shutter speed faster than X-sync time is selected, the camera will automatically switch to a shutter speed of X-sync time when the flash is ready. You can select slower shutter speeds at any time.

## "T" aperture priority mode

Set the camera's command dial to "T". The aperture setting can be used to precisely control the depth of field. Small apertures give more depth of field, wide aperture settings give less depth of field. Wider aperture settings offer the benefit of shorter flash recycling times and of a greater flash range.

When the flash is ready, the camera automatically selects a shutter speed. The flash range in meters or feet is displayed on the LCD.

## Camera in "M" mode

Set the camera's command dial to "M". You will then have to set the shutter speed and the aperture manually.

If a shutter speed faster than X-sync time sec is selected, the camera will automatically switch to a shutter speed of X-sync

time sec when the flash is ready. You can select slower shutter speeds at any time. The flash range will be displayed on the LCD panel in meters or in feet when the camera's shutter release is lightly pressed.

## Autofocus illuminator (1)

When used in the dark or in low-light conditions, the PZ4000AF emits an infrared auxiliary light 1 when the camera's shutter release button is lightly pressed. The camera's autofocus system uses this light to focus correctly.

### Note:

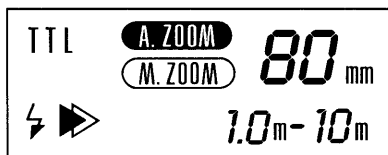
If 'UE' appears on the flash unit's LCD panel, correct flash exposure is not possible.

**An arrow in the LCD display indicates that the maximum flash range (33 meters/108 feet) has been exceeded.**

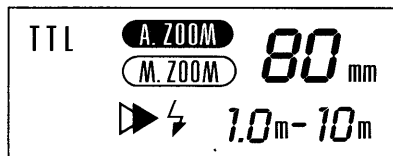
## Second curtain synchronization

The flash can be synchronized to the second curtain by sliding the "Sync" switch 1 to the right.

The curtain synchronization function that you have selected is indicated on the LCD display.



First curtain sync.



Second curtain sync.

The LCD has a backlight, which can be turned on by pressing the "Light" button 1. The LCD backlight goes off after about 10 seconds, or when the "light" button is pressed again.

#### Note:

The following applies for all flash settings' with autofocus cameras:

To activate the flash unit, set the power switch to the "BATT" and mode switch to the TTL and wait for the flash ready indicator to light up on the flash unit or in the camera's viewfinder. When using an autofocus SLR camera, the main subject must be positioned in the focusing element of the viewfinder.

Auto shut off, and so when you shut the back light off, please press the back light button.

### TTL Mode

When the flash unit fires with full power at TTL mode, "Ready lamp" in the viewfinder will blink as Under Exposure warning. In that case, either move closer to the subject or open the aperture for longer effective range.

- Even if the subject is within the effective range, Under Exposure warning

may appear when the subject is dark color and reflection rate is low.

TTL

### Operating Adjustable Bounce Flash Head

The SUNPAK PZ4000AF offers a unique flash head assembly which allows you to position the light in a number of directions, even in TTL mode.

For more pleasing and creative lighting effects, the Bounce Flash Head of the PZ4000AF is adjustable from 0° – 90°, with indicated settings to determine the exact angle of the bounce used. Noting down a reference angle used previously, provides a convenient way to repeat a lighting effect.

1. To adjust the Bounce Flash Head to the desired angle, grip along the sides with thumb and forefinger and gently rotate forward or back. DO NOT ATTEMPT TO FORCE THE HEAD BEYOND THE SETTINGS AVAILABLE AS DAMAGE TO THE FLASH WILL OCCUR. ⑮
2. It is important to note that the effectiveness of the bounce flash feature is dependent upon distance and the condition of the reflecting surface used. The angle of the flash must also be set properly to achieve the best possible lighting effect. Normally, when the

flash is bounced against a surface, it will usually lose 2 – 3 apertures of light (f-stops), even when the surface is white. Therefore, when a bounce flash photo is taken in TTL mode, it is recommended that a larger aperture be selected.

- As exposure in bounce lighting is a factor based upon distance, first from the flash to the reflected surface, then to the subject and finally back to the camera, the relationship between the aperture setting used and the adjustable distance range changes accordingly, depending upon the distances involved and quality of the reflective surface selected.
- The use of a white surface as much as possible for bounce lighting effects, will result in the best overall reflective light level. Please note that in color photography, when a colored surface is used for bounce lighting, it will reflect its color on the subject. ⑩
- When the SUNPAK PZ4000AF is set to any bounce lighting position, distance is not displayed.

- 
- Please do not turn off the PZ4000AF while releasing the shutter.
  - When the PZ4000AF does not work, please set the switch on the camera to "OFF" and then resume the operation.
  - Depending on the type of the lens used, the distance indicator may not work.
- 

## Optional Accessories for the SUNPAK Power Zoom 4000AF

For maximum creativity and ease of operation, many optional accessories are available for your PZ4000AF. Just like today's system cameras, you can customize your PZ4000AF to suit your exact photographic requirements.

1. **Sunpak QBC-3 Nicad 3-Hour Charger (Cat. No. 651-731)**
2. **Sunpak Multi-Voltage AC Adapter (Cat. No. 651-740)**
3. **Sunpak Powerpak for 510 V Battery (Cat. No. 651-723)**
4. **Sunpak NC510 Rechargeable Battery for Sunpak Powerpak (Cat. No. 651-727)**
5. **Sunpak QBC-5 Charger (Cat. No. 651-809)**

## Care of Your Power Zoom 4000AF

Your Sunpak electronic flash has been engineered to require almost no "maintenance". Still to insure best performance year-in and year-out, follow these basic pointers:

1. **Remove Batteries:** If you do not intend to use your flash unit for a period of several weeks or more, remove the batteries and store them separately.
2. **Maintenance:** If your PZ4000AF's reflector window becomes dirty, use one drop of lens cleaner on a lens cleaning tissue. A small amount of lens cleaner and lens tissue or a slightly moist cloth can be used to clean the rest of the unit.

Finally, it's a good idea to remove the batteries once in a while and wipe them with a handkerchief. The cleaner the battery surface, the easier it is for the energy to pass through your flash-gun's electrical system.

**BE SURE TO THOROUGHLY DRY THE UNIT IMMEDIATELY AFTER CLEANING.**

- 3. Service:** In the unlikely event that your Sunpak electronic flash requires service, return it to your dealer or the

address shown on Sunpak world wide network. Do not, under any conditions, attempt to disassemble and/or adjust it by yourself: electronic flash operates on high voltage, and should not be taken apart. Keep in mind that flash failure is more likely to result from weak batteries than any other single cause: if the flash doesn't fire, check batteries and contacts carefully first.

## Technical specifications

Guide number at		M (Full)		ML ( <sup>1</sup> / <sub>16</sub> power)	
ISO 100		(m)	(ft)	(m)	(ft)
Zoom setting	28 mm	24	80	6	20
	35 mm	28	92	7	23
	50 mm	34	112	8.5	28
	80 mm	40	132	10	34
Aperture range for					
TTL mode		Any aperture size available with lens			
Working range for					
aperture		28mm	35mm	50mm	80mm
at ISO 100	F/4	0,7 – 6,0m	0,7 – 7,0m	0,7 – 8,5m	0,7 – 10,0m
Full power	F/8	0,7 – 3,0m	0,7 – 3,5m	0,7 – 4,3m	0,7 – 5,0m
	F/4	2.3 – 19ft	2.3 – 23ft	2.8 – 28ft	3.3 – 33ft
	F/8	2.3 – 9.9ft	2.3 – 11ft	2.3 – 13ft	2.3 – 16ft
Power Zoom		— Motor zoom 28 – 35 – 50 – 80 mm focal length			
		— Fully automatic through camera			
		— Manual by pressing button			

Range		
AF Illuminator	Approx. 3.3 ft — 16.5 ft/1 — 5 m (Lens F2/50 mm)	
Flash speed	1/500 to 1/20000 second	
Colour temperature:	Most suitable for daylight color film	
Energy source:	4 × 1,5V alkali manganese batteries (size AA) or rechargeable NiCads	
Number of flashes:	Alkali manganese	NiCads
In manual mode	160	80
TTL mode	160 to 1300	80 to 500
Flash recycling time:	Alkali manganese	NiCads
In manual mode	approx. 8 sec	approx. 7 sec
TTL mode	0,5 to 8 sec	0,5 to 7 sec
Operating temperature	0° C ~ 40° C	
Dimensions	124 × 72 × 102 mm	
	4.9 × 2.8 × 4.0 inches	
Weight	approx. 270 g (approx. 9.5 oz)	





