



SUNPAK

POWER ZOOM

5000AF

NE

OWNER'S MANUAL
GEBRAUCHSANWEISUNG
MANUAL D'INSTRUCTIONS
I S T R U Z I O N I
MANUAL DE USUARIO

English Deutsch Français Italiano Español

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 IF 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 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.

CAUTION

- DO NOT EXPOSE TO SPLASHES OR DROPS OF WATER.
- BATTERIES SHALL NOT BE EXPOSED TO EXCESSIVE HEAT SUCH AS SUNSHINE, FIRE OR THE LIKE.
- DRY BATTERIES SHALL NOT BE SUBJECTED TO CHARGING.

SAVE THESE INSTRUCTIONS

Welcome to the world-wide family of Sunpak owners. Your Sunpak PZ5000AF 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 PZ5000AF are so unique, please take a few minutes to read this owner's manual carefully with your PZ5000AF 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. This instruction manual is described in A, B and C depending on the group of camera used. Please refer to the following chart.

	C	A	M	E	R	A	GROUP
F5, F100, F90, N90S, F80, N80, F70D, N70							A
F4, F-801S, F-801, Pronea6i, Pronea600i,							B
F60D, N60, F50D, N50, F-601, N6006, F-501, F-401X, F-401S, F-401, F-301							C

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Features and Function of PZ5000AF

- *The power zoom reflector automatically adjusts itself to provide optimal flash coverage for the focal length of the lens. (28 - 135 mm)
- *When using the group A cameras, "3D-Multi Area BL Mode" and "Multi Area BL Mode" are available for precise TTL function.
- *TTL Mode will provide precise, optimal flash automatically.
- *By using "Auto Sensor Mode", you will have increased creative ability.
- *The large LCD panel setting and indications are easy to see and the back light of the LCD panel will light for about 20 seconds to help doing operation in the dark.
- *Auto focus infrared flash helps you to focus correctly in the dark or in low-lighting conditions.
- *The PZ5000AF light output is adjustable in 1/3stop increments from 1/64 to full.
- *"MULT" flash Mode provides stroboscopic effect.
- *Second Curtain Synchronization can be used for moving objects.
- *The PZ5000AF's Slave Function will work with other flash units with synchronous auxiliary light systems or with multi flash interface cables.
- *The PZ5000AF is equipped with "Automatic shut-down" function to save battery life, by turning off the power automatically when not in use.
- *Various external power sources are available that can be used with the PZ5000AF for different purposes.
- *The PZ5000AF Bounce Flash Head is adjustable vertically +90, -5 degrees and horizontally 270 degrees. If adjusted downward 5 degrees (max), it gives optimum flash when taking close-up photos.

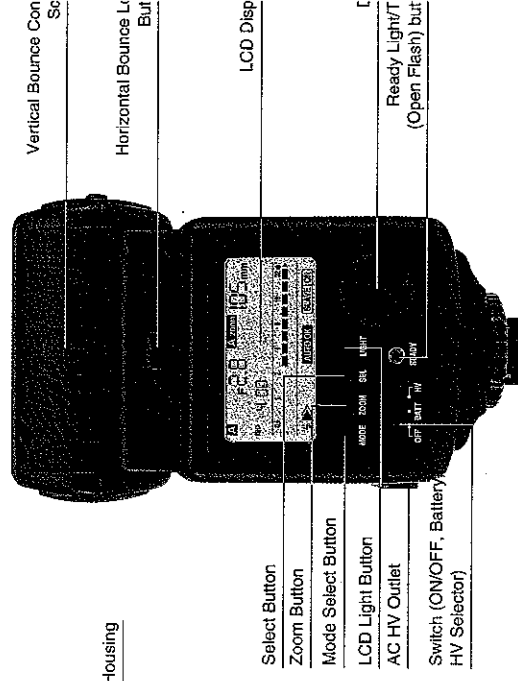
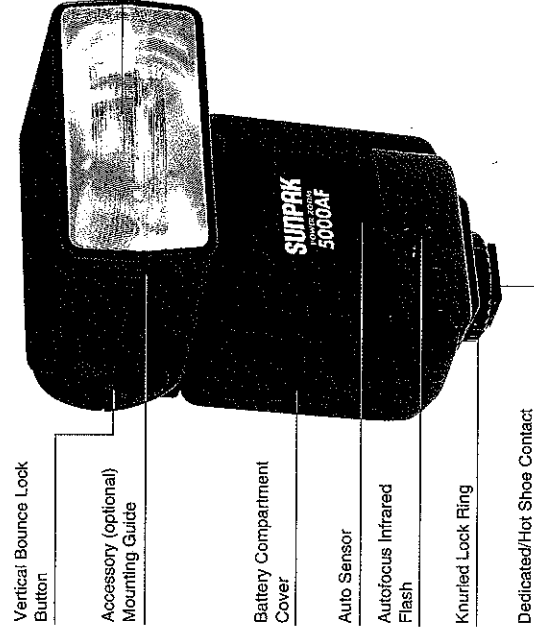
Note:

*When using the PZ5000AF with a camera other than NIKON AF series, all the functions have to be set manually. Please refer to Page 22 and 23 for details of the settings.

*In case of malfunction or error indication is appeared on the LCD display, please turn the power off and then turn it ON again pressing the MODE button simultaneously.

*Depending on the type of the lens used, the distance indicator may not be displayed.

Description of Parts



LCD Display

Flash Functions

ISO/Flash/Hz

1st/2nd Curtain
Synchronization

Auto OK

➡ 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 may not be correct due to the wider angle lens being used.

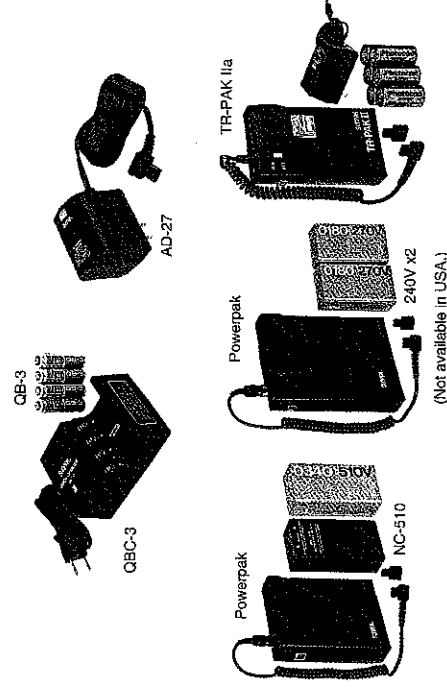
POWER SOURCES

Your Sunpak PZ5000AF may be used with six 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. The Sunpak Powerpak for 510 Volt High Voltage Batteries (optional)
5. The Sunpak 510 Volt rechargeable battery NC-510 for use with Sunpak Powerpak (optional)
6. TR-PAK II (optional)

*Do not use Lithium Batteries.

NOTE: Please dispose the used batteries properly.



full capacity if it is used immediately after Ready Light is lit. Wait 5 to 10 seconds to achieve maximum light value.

b. When using "Multi Mode", use new batteries for full charge.

* If it takes more than 30 seconds for the "Ready Light" to light, when it is detached to a camera and after firing once in Full Mode, replace with new batteries.

* Before mounting the flash unit to the camera, please do not short circuit the flash's hot shoe terminals (when the power switch is in "ON" position), as it may fire suddenly and/or damage the flash unit.

*NOTE: When using your PZ5000AF with external power sources, always keep batteries inside the unit. Your PZ5000AF will not work without these batteries.

Using the Multi-Voltage AC Adapter or the Sunpak Powerpaks.

AC Adapter, Model AD-27

1. Connect the AD-27's plug into the PZ5000AF's AC HV Outlet and to the AC outlet.
2. Set the Switch to the "HV" position, it starts charging and the "Ready Light" will be illuminated when the charging is completed.
3. To turn the power off, set the Switch to the "OFF" position or remove the plug from AC outlet.

*CAUTION: FOR PZ5000AF, DO NOT USE AN AC ADAPTER OTHER THAN THE SUNPAK AD-27.

Using the Sunpak Powerpak and TR-PAK IIa

1. Attach the supplied plug adapter to the end of Powerpak cord and plug it into the PZ5000AF's AC HV Outlet.
2. Set the Switch to the "HV" position, and turn the Powerpak ON, then it starts charging and the "Ready Light" will be illuminated when the charging is completed.
3. To turn the power off, set the Switch to the "OFF" position. Be sure to turn the Powerpak OFF, or the Powerpak will be discharged.

To Install Batteries

Selecting AA Alkaline or AA Nickel-Cadmium Batteries

1. Before the insertion of the batteries, please confirm the power switch is in "OFF" position, and slide the battery compartment cover down as shown to open it.

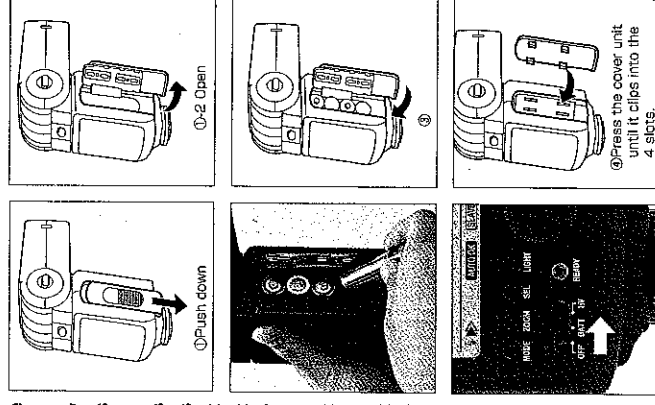
2. Insert four AA size batteries (Alkaline or Nickel-Cadmium) as shown. The battery compartment has a guide showing the correct positioning of the batteries for proper polarity (+, - contacts).

3. Press the cover unit until it snaps into place. If the switch is set to the "BATT" position, it starts charging and the "Ready Light" will be illuminated when the charging is completed.

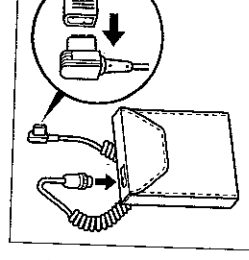
4. To turn the power off, slide the switch to the "OFF" position. The "Ready Light" will go off and it will not flash.

* The battery compartment cover may come off by force. In such a case, reset the cover unit into place following diagram 4, shown on this page.

* Flash is ready when Ready Light is lit, however, flash will not be at



*NOTE: WHEN USING MULTI-VOLTAGE AC ADAPTER OR SUNPAK POWERPAK FOR 510-VOLT BATTERIES OR TR PAK IIa, ALWAYS SET THE SWITCH TO "HV" POSITION.



Mounting the PZ5000AF to the Camera

*CAUTION: When mounting or detaching the PZ5000AF from the camera, always make sure the ON/OFF Switch is at "OFF" position or the camera may be damaged.

1. Slip the unit onto the camera's hot shoe. Turn the knurled lock ring clockwise to insure secure mounting to your camera's shoe.
2. When the PZ5000AF is used with NIKON AF series cameras, the shutter speed is set automatically. Please set the shutter speed to "Sync.", when used with other manual cameras.

Automatic shut-down

In order to save the battery life, the PZ5000AF automatically is switched to power saving standby mode after about 5 minutes. The LCD panel and the ready light will go blank.

To reactivate the flash, simply slide the switch to the "OFF" position and then back to "BATT", or lightly depress the shutter release. The flash ready indicator will return after a short time.

* When using a group A or B camera, press the camera's shutter release button slightly, or turn the power off and then on again.

* When using a group C camera, turn the power off and then on again.

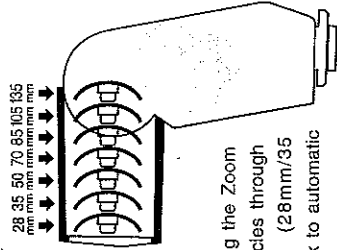
Power Zoom Reflector

The PZ5000AF is equipped with a motor power reflector. The automatic power zoom reflector is controlled by the camera and automatically adjusts itself to provide optimal flash coverage for the focal length of the lens. Seven focal lengths are used: 28mm/35mm/50mm/70mm/85mm/105mm/135mm.

The focal lengths can be set manually by pressing the Zoom Button. Repeatedly pressing the Zoom Button cycles through the available focal lengths (28mm/35mm/50mm/70mm/85mm/105mm/135mm) and back to automatic zoom selection "A. ZOOM".

*NOTE: A focal length less than 28mm is not available.

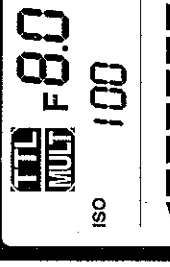
Auto Power Zoom function is only available with a group A and B camera when they are equipped with NIKKOR. When using a group C and cameras other than NIKON AF, set the Zoom Mode to "M. ZOOM".



Multi-Area BL Mode

When using a group A camera, "Multi Area BL Mode" function is available.

When the PZ5000AF is attached to the camera and the "TTL MULT" is selected by pressing the Mode Select Button, the camera will automatically select the correct shutter speed, aperture setting and film speed instantly and displays TTL effective flash range. The PZ5000AF is compatible with the following film speed; ISO 6 - ISO 6400. TTL effective flash range is displayed in the bar graph when the shutter of the camera is lightly pressed or after the Ready Light is ON. When the range is less than 0.5 m or over 32 m, "▶" is displayed.



*Multi Area BL Mode is a function that controls the amount of flash to take a background while maintaining the best aperture of the object.

TTL Mode Setting

3D Multi BL Mode (Group A camera) ... The most advanced BL mode to have the optimal flash. The pre-flash result and distance information from the D lens controls the amount of flash volume. This function is available only when a group A camera is equipped with D type lens.

Multi BL Mode (Group A camera) ... This also perform a pre-flash, and controls the amount of flash by TTL measurement. This function is available when using an AF lens other than D type lens.

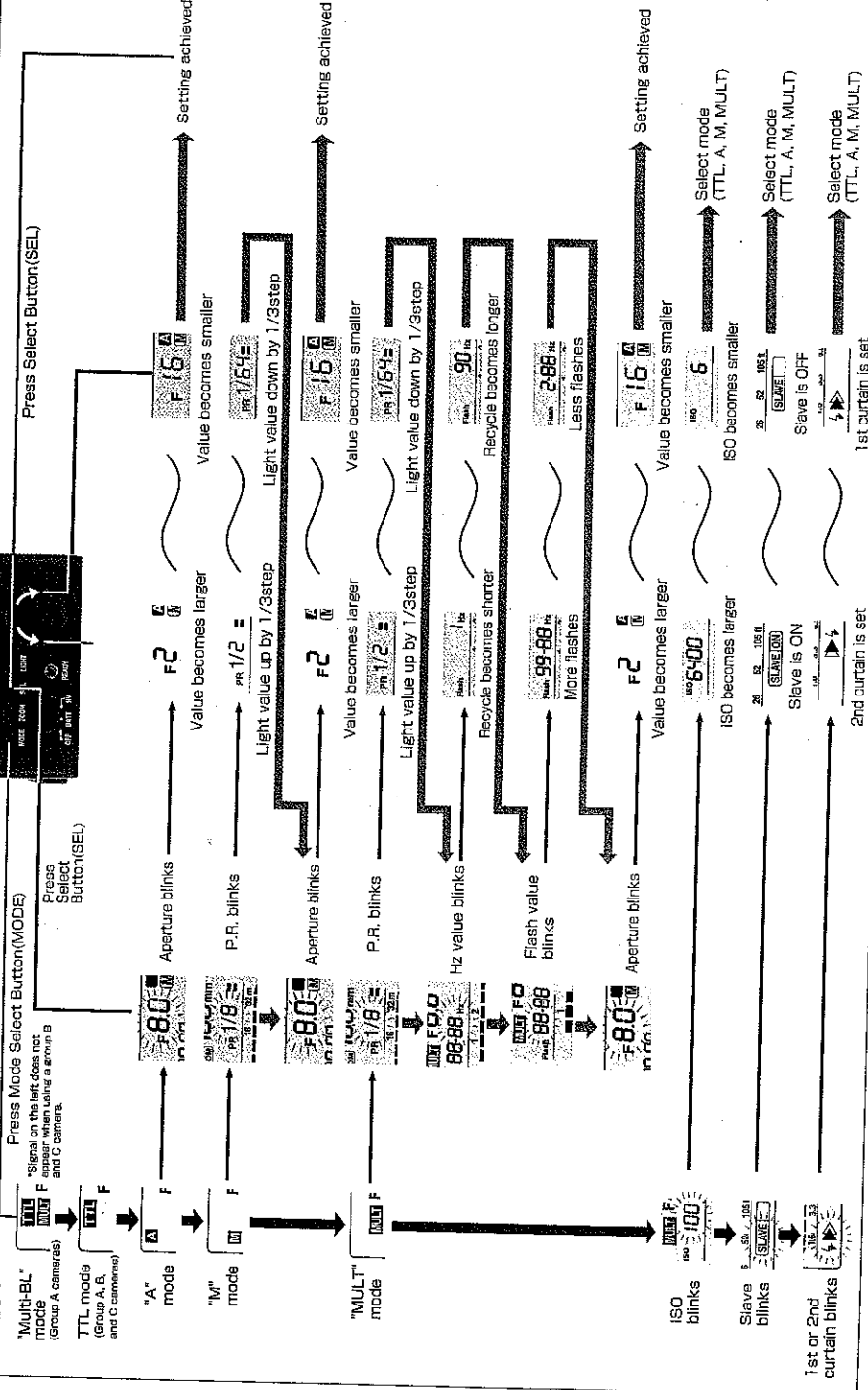
TTL Mode (All of NIKON AF cameras).... This gives the optimal aperture to an object all the time. The brightness of the background is not, so that the object sometimes becomes too bright.

7

Mode Select Button

Following is the chart on how to select the functions and set its value using the Mode Select Button(MODE), Select Button(SEL) and the Dial.

Chart 1



8

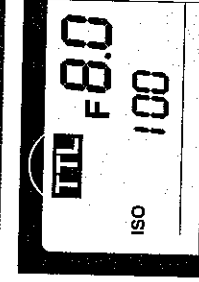
Setting for NIKON AF cameras and other manual cameras (Table 1)

ABC

Functions		Multi-BL	TTL	A	M	MULT
Set by mode button		—	—	ISO, F-stop	ISO, F-stop, P.R.	ISO, F-stop, P.R.
NIKON AF cameras		P, A, S, M	P, A, S, M	A, M	A, M	M
AE cameras other than NIKON AF		—	—	set aperture manually/Set shutter speed automatically	set aperture manually/Set shutter speed automatically	—
Manual Camera		—	—	set all functions manually	set all functions manually	set all functions manually
Film speed (ISO)	NIKON AF series	Automatically set by camera's data	Automatically set by camera's data ^{*1}	Automatically set by camera's data ^{*2}	Automatically set by camera's data ^{*2}	Automatically set by camera's data ^{*2}
	Other NIKON cameras	—	—	Set ISO manually	Set ISO manually	Set ISO manually
Aperture (F)	NIKON AF series	Automatically set by camera's data	Automatically set by camera's data ^{*1}	Set F-stop manually	Automatically set by camera's data ^{*2}	Automatically set by camera's data ^{*2}
	Other NIKON cameras	—	—	Set F-stop manually	Set F-stop manually	Set F-stop manually
Power ratio (P.R.)	All NIKON cameras	—	—	—	Set proper value	Set proper value
No. of flashes, Hz	All NIKON cameras	—	—	—	—	Set proper value
Distance chart		Bar Indication	Bar Indication (Only A & B cameras)	Bar Indication	Distance	Distance

* "—" : No setting required. * When changing cameras, turn off the power of the flash unit and then turn it on after attaching to another camera. *When the PZ5000AF is used with cameras other than NIKON AF series cameras, and some malfunctions occur, please use a shoe adapter such as Basic Grip and set the shutter speed to "Flash Sync." *Depending on the types of lens or camera, F indicator may appear different from Camera's F. *1: No indications when using a group C camera. *2: Use manual setting when using a group C camera.

TTL Mode



When the PZ5000AF is attached to the camera and "TTL" is selected by pressing the Mode Select Button, the camera will automatically select the correct shutter speed, aperture setting and film speed instantly and displays TTL effective flash range. (When attached to a group A or B camera.) The PZ5000AF is compatible with the following film speed; ISO 6 - ISO 6400. TTL effective flash range is displayed in the bar indicator when the shutter of the camera is lightly pressed or after the Ready Light is ON. When the range is over 32 m, "▶" is displayed accordingly.

TTL Mode with NIKON AF cameras, Aperture Setting and Shutter Speed (Table 2)

NIKON AF series SLR cameras					
Camera Mode Setting	"P" mode, (Program AE)	"A" mode (Aperture Preference AE)	"S" mode (Shutter Preference AE)	"M" mode (Manual)	
Aperture Setting	Automatically set by ambient light	Manual set (F/STOP)	Automatically set by ambient light	Manual set (F/STOP)	set
Shutter Speed ^{*1}	Automatically set by ambient light	Automatically set by ambient light	Manual set	Manual set	Manual set
Finder Indication	⚡ is displayed				

* "Multi BL Mode" and "TTL Mode" is available only with NIKON AF series cameras.

* All mode means "Multi BL", "TTL", "A", "S", "M" and "MULT" mode of the PZ5000AF.

*1: The shutter speed is set less than X-sync time sec. X-sync time sec is varied depend on each camera. Please refer to the instruction manual of the camera used.

ABC

Auto OK

When the subject is within the Auto Effective Range and there is enough light, the "Auto OK" symbol in the LCD display will blink for about 2 seconds after the flash has been fired.

If the symbol goes out, then there was not enough light. In that case, either move closer to the object or select a larger aperture.

● Even if the subject is within the Auto Effective Range, the "Auto OK" symbol may not blink due to the color of the object (dark color with low reflection rate).

● If fired right after the "Ready Light" is ON, the effective range may be shorter. (Please wait 3 to 5 seconds after the "Ready Light" is ON to have maximum power.)

Test Flash

If Test Button is pressed after the Ready Light is ON, it fires for test flash. "Auto OK" not used for TTL test.

Autofocus Infrared Flash

When used in the dark or in low-light conditions, the PZ5000AF emits an infrared auxiliary light when the camera's shutter release button is lightly pressed. The camera's autofocus system uses this light to focus correctly.

When the PZ5000AF is attached to the camera and the "A" is displayed by pressing the Mode Select Button, Auto sensor Mode is available. This function can be used for cameras with or without TTL.

1. Set the film speed for the film used;
Press the Mode Select Button and stop when "ISO" in the LCD panel blinks, then turn the Dial to set the film speed.

***Note: When a group A or B camera is used, the camera will set the correct film speed automatically.**

2. Press the Mode Select Button again and return to "A".
3. Press the Select Button (SEL) until "F" in the LCD panel blinks, then turn the Dial to set the aperture rate. 16 steps (F2 - F16) is available.

*Please refer to the table 1 on page 23 for other settings.

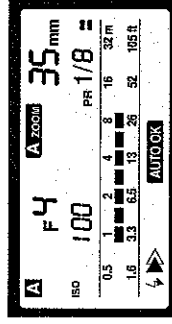
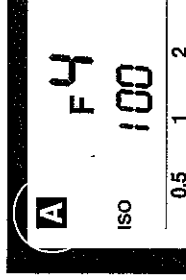
4. Use the same aperture rate for the camera as well.

*(Example of setting)

The example is shown on the right.

When the ISO 100 film and 35 mm zoom are used, the range will be from 1 - 9 m at F4.

When setting the aperture, smaller number should be selected for the subject at long distance and larger number for the near sight.



PZ5000AF provides 19 steps of light output from Full to 1/64 (1/3EV step). In the case of following, press the Mode Select Button till "M" is displayed on the LCD panel for Manual Mode. See table 1 on page 23 for settings.

1. Daylight synchronization (Flash is used outdoors to lighten shadows or when a subject is photographed against daylight)

2. When various focus lengths will be used.

3. When motor drive or autowinder will be used.

4. When a number of flashes are needed.

Note: An arrow in the LCD display indicates that the maximum flash range (32m) has been exceeded.

Aperture Setting, Shutter Speed, Range Calculation for Manual Mode (Table 3)

NIKON AF series SLR cameras			
Mode	Camera	A, S, M mode	
	Flash	M(Full)~M(1/64)	
Aperture	Camera	S - auto set, M, A - manual set	
Range		Distance displayed (See page 9, Table 1)	
Finder indication		⚡ is displayed	

$$\text{Range} = \text{Zoom Guide number} \times \sqrt{\frac{\text{film speed}}{\text{ISO 100}}} \div \text{Stop}$$

"MULT" Flash Mode

The SUNPAK PZ5000AF provides the special feature of stroboscopic effect by using the "MULT" mode. It can flash a number of times within a single second (Flash Frequency = Hz), and 1 - 90 Hz is available. Press the Mode Select Button and stop when "MULT" is displayed in the LCD panel, then press the Select Button (SEL) to display "Flash". Turn the Dial to set the required Flash Frequency. The number of flashes may varies between 2 - 99 depend on the light value and frequency. Please refer to the table on the right and "M" mode instructions.

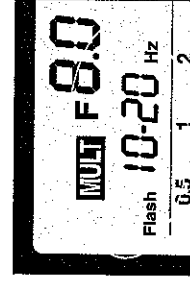
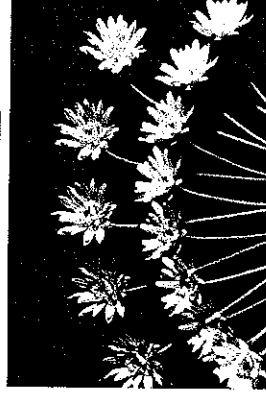


Table 4

Light value	Frequency	Number
1/64	1 ~ 3	1 ~ 99
	4 ~ 5	1 ~ 90
	6 ~ 7	1 ~ 80
	8 ~ 9	1 ~ 70
	10 ~ 11	1 ~ 60
	12 ~ 15	1 ~ 50
	16 ~ 25	1 ~ 40
	30 ~ 90	1 ~ 30
	1 ~ 2	1 ~ 70
	3 ~ 5	1 ~ 60
1/32	6 ~ 7	1 ~ 50
	8 ~ 10	1 ~ 40
	11 ~ 13	1 ~ 30
	14 ~ 17	1 ~ 20
	18 ~ 25	1 ~ 18
	30 ~ 90	1 ~ 16
	1	1 ~ 40
	2 ~ 3	1 ~ 30
	4	1 ~ 25
	5 ~ 6	1 ~ 20
1/16	7	1 ~ 18
	8	1 ~ 16
	9	1 ~ 14
	10 ~ 13	1 ~ 12
	14 ~ 90	1 ~ 10



MULT MODE photo: no. of flashes - 10, 15-Hz, P.R. 1/64, aperture-12.8

Adjustable Bounce Flash Head

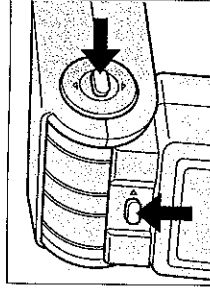
The SUNPAK PZ5000AF offers a unique flash head assembly which allows you to position the light in a number of directions, even in TTL mode. For more pleasing and creative lighting effects, such as, to soften the shadow of the subjects, the Bounce Flash Head of the PZ5000AF is adjustable vertically up 90 degree and down 5 degree, horizontally left 180 degree and right 90 degree. 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 and direction, press and unlock the Bounce Lock Button (Vertical and/or Horizontal) and gently rotate forward or back and right or left.

*NOTE: Do not attempt to force the Head beyond the settings available as damage to the flash will occur.

2. Lightly press the shutter release button of a camera and check if the correct aperture and shutter speed is selected.

*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 25 %, 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.



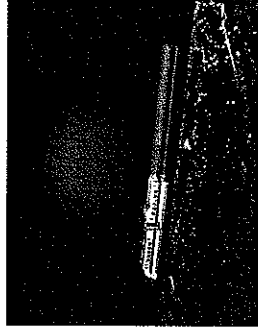
Second Curtain synchronization

ABC

When the PZ5000AF is used with the NIKON AF series camera, the flash can be synchronized to the First or Second Curtain. For a moving subject, using the second curtain synchronization with a slower shutter speed will give you creative lighting effects.



Synchronized to the first curtain: Light refraction creates unnatural look.



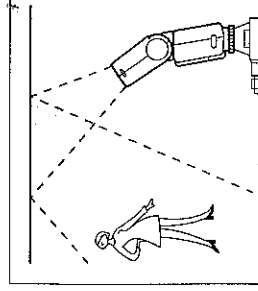
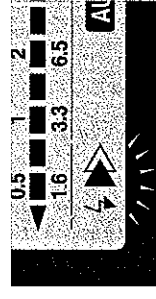
Synchronized to the second curtain: Path of motion can be effected.

1. Press the Mode Select Button and stop when the "First Curtain Synch." is blinked in the LCD panel.
2. Turn the Dial to the right to change to the "Second Curtain Synch.".

Turn the Dial to the left to return to the "First Curtain Synch.".

Please refer to a instruction of the camera for the camera setting.

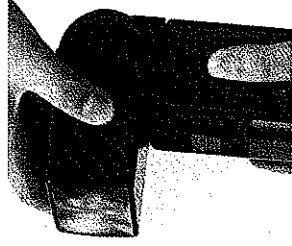
*Note: Lower shutter speed will give more creative effect, and a use of tripod is recommended.



*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.

*When the PZ5000AF is set to any bounce lighting position, distance is not displayed.

*PZ5000AF can rotate downward for 5 degree to give enough light to the lower part of a subject when taking close-up photo. It is recommended to use this feature within 0.5 - 2m/1.7 - 6.6ft range.



Slave Function

ABC

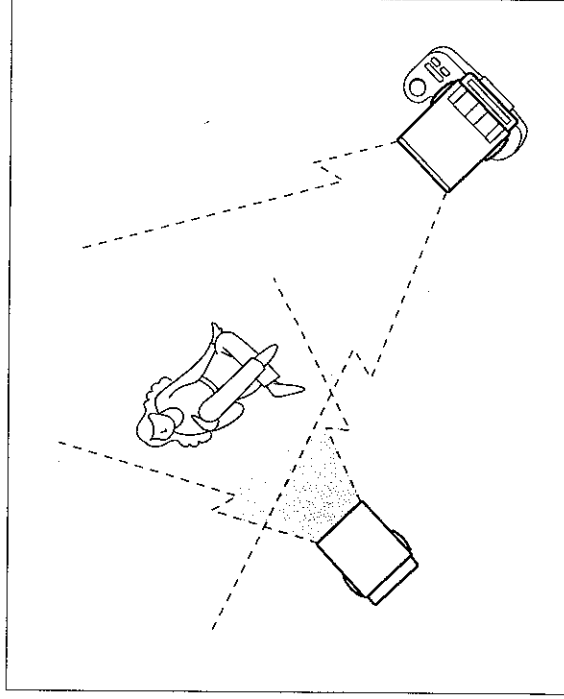
The SUNPAK PZ5000AF is equipped with a Slave Function. Using an additional PZ5000AF, synchronous auxiliary light from another direction will give you more soft and natural lighting effects.

1. Press the Mode Select Button and stop when the word "Slave" is blinking in the LCD panel.
2. Turn the Dial on the right to ON.

*The Slave function can be used in "A", "M" and "MULTI" mode.

*The aperture setting of the lens may be required under the certain circumstances (flash mode, location, number of flash units used and ambient conditions).

*Autosave" will not function while "Slave Function" is activated.



Continuous Use

ABC

Do not use flash continuously more than the number of times stipulated in the table below in order to prevent produced damage. Once maximum continuous use has been reached, allow flash to rest for at least 10 minutes before reuse.

Mode	Maximum Use
TTL, A, M(1/1~1/2), Mult	15
M(1/4~1/8)	20
M(1/8~1/64)	40

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 does not fire, check batteries and contacts carefully first.

Technical Specifications

Guide number (ISO 100 / m)

feet/meter

Zoom setting	feet/meter									
	P.R.	26	35	50	70	85	105	135		
Manual flash	1/1	99/20	119/26	139/42	149/45	165/50	172/52	180/54		
	1/2	70/21	84/25	98/30	105/32	117/35	122/37	127/38		
	1/42	50/15	60/18	70/21	75/23	83/25	88/26	90/27		
	1/8	35/11	42/13	49/15	53/16	58/18	61/18	64/19		
	1/16	25/8	30/9	35/11	37/11	41/13	43/13	45/14		
	1/32	18/5	21/6	25/7	26/8	29/9	30/9	32/10		
	1/64	12/4	15/5	17/5	19/6	21/6	22/7	23/7		

Power Zoom

Automatic setting / Signal from camera
Manual setting / Pressing the Zoom Button

AF Illuminator Range

1 - 5 m (Lens F2/50mm)
3.3 - 16.4ft (Lens F2/50mm)

Operating temperature

0°C - 40°C

Working range

feet/meter

Zoom position	28mm	35mm	50mm	70mm	85mm	105mm	135mm
F/2	50/15	60/18	70/21	75/23	83/25	86/26	90/27
F/4	25/8	30/9	35/11	37/11	41/13	43/13	45/14
F/8	12/4	15/5	17/5	19/6	21/6	22/7	23/7
F/16	6/2	7/2	9/3	9/3	10/3	11/3	11/3

Dimensions

138(H) x 87(W) x 107(L) mm

Weight

approx. 370 g (without batteries)

Number of flashes & Recycling time

	Number of flashes	Recycling time
AA alkaline batteries	Approx. 100~700	Approx. 13~0.3 sec.
AA Ni-Cd batteries	Approx. 45~300	Approx. 7~0.3 sec.
AC Adapter AD-27	—	Approx. 19~0.3 sec.
NC-510	Approx. 80~450	Approx. 3~0.3 sec.
510 Volt High Voltage Batteries	Approx. 400~3,000	Approx. 2~0.3 sec.
TR-PAK II	Approx. 300~1,200	Approx. 2~0.3 sec.

● Number of flashes: Measured with new batteries which are within 3 months from production, flashed every 30 seconds continuously and charged to light the Ready Light within 30 seconds after the flash.

● Recycling time: The time to light the Ready Light under the above conditions.

*Note: The design and specifications of this product are subject to change without prior notice.