

Sunpak PZ4000AF Flash

Compact and powerful flash for Canon,
Minolta and Nikon AF SLRs



by Jack and Sue Drafahl

One of the most valuable tools in a photographer's gadget bag today is the electronic flash. Photographers often feel that it is a critical ingredient in their effort to capture great images. Yet, the electronic flash is pretty much taken for granted because it works so well with today's high-tech cameras. Sunpak, a leader in the development of electronic flash systems, recently added a new contender to the flash world. The Sunpak Power Zoom 4000AF, or PZ4000AF for short, is small, powerful, and designed to work in the TTL mode with Nikon, Canon, and Minolta cameras.

When you first pick up the PZ4000AF, you will notice that Sunpak's new technology has made it smaller and lighter than similar flash units produced by the camera manufacturers. All the controls are on the back of the unit, and the liquid crystal window displays the data.

The first control you would use is the power switch. This three-position switch can be set to off, battery, or "HV" high-voltage battery. The normal battery position turns on 4 AA batteries, and charges the flash up to full power in about 7–8 seconds. A set of alkaline AA batteries can produce about 160 full-power flashes and 80 flashes with NiCds. The "HV" position is reserved for an optional battery pack such as the Sunpak TR-PAK 11a.

Right above the power switch is the mode switch. With this switch you can set the flash to TTL, full

manual, or $\frac{1}{16}$ power. In the TTL mode the flash takes full advantage of the automatic mode capabilities of the camera attached to it. The flash will assume the ISO setting of the camera, even if it has exposure compensation set. The fastest TTL flash duration is $\frac{1}{20,000}$ or down to $\frac{1}{500}$ when it dumps all its energy at full power. The manual and $\frac{1}{16}$ -power positions allow the photographer more creative control over the amount of light found in difficult lighting situations.

You'll remember that part of the name of this flash is Power Zoom. The zoom controls the beam angle of the flash with the help of a motorized flash head. As you zoom toward a longer focal length, the power zoom moves the flash tube and reflector. By either widening or narrowing the angle of the beam, this flash can cover the angle of lenses from 28mm to 80mm.

If you want the camera to control the power zoom, you can move the switch into the auto setting. The flash will now sense the focal length setting of the lens and change the angle of coverage to match. As the focal length of the power zoom is changed, the TTL flash range is displayed. For example, if the power zoom is set for 28mm and the camera is set to f/8 with ISO 100 film, the displayed flash range is 2.3–9.9 feet. If you move to 80mm with the power zoom, the displayed range extends to 16 feet. Now you don't have to carry books, charts or try to remember this information, because it is all on the liquid crystal display. Using the light switch, you can even light up this display at night.

The last control switches the flash from normal TTL operation to second-curtain synchronization.

The normal TTL sync fires the flash at the start of a long exposure, then the ambient-light image is recorded. Second-curtain sync fires the flash at the end of the exposure, after the ambient-light image has been recorded by the long exposure time. If you are shooting a moving subject, this difference is important: With normal sync, the ghost-image "speed streaks" caused by the moving subject's ambient-light image will appear ahead of the subject in the photo. With second-curtain sync, they will appear trailing the subject, as they should.

The flash head itself has click-stop tilt positions at 0, 45, 60, 75 and 90°. The 0° position would be used for direct flash, while one of the other positions would be used for bounce flash.

The ready light on the back of the flash indicates when the unit is charged to 80% of full power which is normal for most flashes. If you wait a few more seconds, the unit will be at 100% power. Because the TTL mode rarely uses more than 80% of full power, consistent exposures are possible even if you shoot from ready light to ready light. The optional high-voltage power pack enables reduced recycle times when using full manual power.

Sunpak's PZ4000AF flash also incorporates autofocus beam assist, which allows you to focus your camera in low-light situations. When the shutter button is pressed down halfway, a red beam of vertical lines is projected out of the base of the flash onto the subject. The autofocus system is then able to focus on these lines to achieve an accurate focus.

The base of the flash unit has a standard hot-shoe for the camera model it's designed for (Canon, Minolta or Nikon AF SLR) that allows the use of the flash on both TTL and manual camera systems. Because the hot-shoe configuration conforms to Nikon, Canon and Minolta standards, the Sunpak flash can also use various flash extension cords made by these manufacturers.

Accessories for the Sunpak PZ400AF include high-voltage power packs and a wide-angle diffuser for use with 24mm lenses. Because of its similarity to other flash units, many other flash filter accessories will also fit on the



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Left: Direct TTL flash with the PZ4000AF provided pleasing illumination for this kitty cat.

Above: The PZ4000AF was moved off-camera using the Nikon SC-17 TTL sync cord to provide fill in this sunlit shot. Both photos were made with a Nikon N90s camera.

SPECIFICATIONS

FLASH UNIT: Sunpak PZ4000AF
GUIDE NO.: 132 (ISO 100, in feet, at 80mm setting; 80, in feet, at 28mm)
ANGLE OF COVERAGE: 28-80mm (zoom)
RECYCLING TIME: 0.5-8 sec. (auto)
8 sec. (manual)
NO. OF FLASHES: 160-1300 (AA, TTL mode), 80-500 (NiCd, TTL mode), 160 (AA, full-power in manual), 80 (full power with NiCds)
FLASH DURATION: $\frac{1}{500}$ - $\frac{1}{10,000}$
DIMENSIONS: 4.9x2.8x4 in.
WEIGHT: 9.5 oz. modes (2 sec. to $\frac{1}{2000}$ in M) plus B
POWER SOURCE: 4 AA alkaline or rechargeable NiCd batteries
SUGGESTED RETAIL PRICE: \$249.95
DISTRIBUTOR: ToCAD America Inc., Sunpak Div., 300 Webro Rd., Parsippany, NJ 07054; 201/428-9800

front of the flash head.

We tested the Sunpak PZ4000AF flash in three specific areas: direct flash, flash-fill, and long-exposure flash-fill. Most of the direct flash tests were taken in dark areas where there was very little available light. Our results showed a consistency of images from one to the next, and no exposure compensation was necessary. The flash-fill tests were taken at a carnival and a flower garden with

harsh sunlight and heavy shadows. We tried several variations of exposures and found that if you do bracket your exposure, you would want to lean toward the underexposure side on the camera settings.

Our final tests with second-curtain sync and long exposures reminded us of Murphy's law—you need to bracket your exposure. The Sunpak strobe worked well in this situation, and in most cases the best exposure was with no compensation.

Over the years we have used a lot of different flash systems, and were

hesitant about using a flash with a different name than our camera. Technology with its computer-aided design has put almost all the manufacturers on the same efficiency level. Our tests with the Sunpak Power Zoom 4000AF showed us that it was interchangeable with our camera manufacturer's equivalent strobe. This gives all of us more freedom to pick and chose our flash systems to fit our photographic needs and budget. ■