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Nikon SB-16B Speedlight Instruction Manual

Model: SB-16B

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1. PRODUCT OVERVIEW

The Nikon SB-16B Speedlight is a hot-shoe clip-on flash unit designed to provide versatile lighting for photography. It features multiple operating modes, including Manual, TTL (for compatible film cameras), Motor Drive (MD), and Non-TTL Auto (A1/A2). The flash head offers tilt and swivel capabilities for bounce flash, and includes a secondary flash for fill light.



Figure 1: Nikon SB-16B Speedlight flash unit. This image displays the main flash head, the secondary flash, and the control panel on the side of the unit. The Nikon branding is visible.

2. SETUP

2.1 Battery Installation

The SB-16B Speedlight requires four AA batteries for operation. Ensure the batteries are inserted with the correct polarity as indicated inside the battery compartment. Always use fresh batteries for optimal performance.

2.2 Mounting the Speedlight

1. Ensure your camera is powered off.
2. Slide the SB-16B's hot-shoe mount onto your camera's hot-shoe until it clicks into place or is securely fastened by the locking mechanism.
3. Power on your camera and the Speedlight.

3. OPERATING MODES AND FEATURES

3.1 Manual Mode

In Manual mode, the flash fires at full power. This mode requires manual adjustment of camera aperture and ISO settings to achieve correct exposure.

3.2 TTL Mode

TTL (Through-The-Lens) mode is designed for use with compatible Nikon film cameras. In this mode, the camera's metering system controls the flash output for automatic exposure. **Note:** The SB-16B does **not** support TTL operation with digital SLR cameras.

3.3 MD (Motor Drive) Mode

The MD mode is intended for use with cameras employing a motor drive, allowing the flash to keep up with rapid firing. In this mode, the flash fires at approximately 1/16th power. The secondary flash does not fire in MD mode.

3.4 Non-TTL Auto Modes (A1 and A2)

These modes utilize a sensor on the front of the flash to determine correct exposure. To use A1 or A2 mode:

1. Set the flash and your camera to the same ISO sensitivity.
2. Select the appropriate aperture (f-stop) on your camera based on the chosen A1 or A2 mode and ISO. For example, at ISO 100, you might select f/8 for A1 mode and f/4 for A2 mode. Refer to the flash's "computer" dial for specific aperture recommendations based on ISO.

3.5 Zoom Settings

The SB-16B features four zoom settings: 28mm, 35mm, 50mm, and 85mm. These settings adjust the flash coverage to match the focal length of your lens. For DX-sized sensor cameras, divide these numbers by 1.5 to determine the effective focal length coverage. A Nikon SW-7 wide-angle adapter can be used for wider lenses (e.g., 24mm on FX/35mm bodies or 16mm on DX).

3.6 Bounce and Swivel Capabilities

- The flash head can tilt upwards 90 degrees, allowing for bounce flash off ceilings.
- It can swivel 90 degrees to the right and 180 degrees to the left, enabling bounce flash off walls.

3.7 Secondary Flash

The SB-16B includes a secondary flash that always fires forward, providing fill light. This secondary flash operates in all modes except MD mode. When using bounce flash, be aware that if the subject is very close (approximately 8 feet or less), the secondary flash may overpower the bounced light, resulting in a direct flash appearance.

3.8 Computer Dial

The round dial on the back of the flash unit, often referred to as a "computer" dial, assists in determining flash range based on selected ISO and aperture settings. It does not change flash settings but provides guidance for exposure calculations.

4. MAINTENANCE

- **Cleaning:** Use a soft, dry cloth to clean the exterior of the flash unit. For the flash lens, use a lens cleaning cloth and solution if necessary.
- **Battery Care:** Remove batteries if the flash will not be used for an extended period to prevent corrosion. Regularly check the battery compartment for any signs of corrosion and clean if necessary.
- **Storage:** Store the Speedlight in a dry, cool place, away from direct sunlight and extreme temperatures.

5. TROUBLESHOOTING

- **Flash Not Firing:**
 - Check battery installation and ensure batteries are fresh.
 - Verify the flash is securely mounted to the camera's hot-shoe.
 - Ensure the camera and flash are powered on.
- **Overpowered Fill Light (Secondary Flash):**
 - If the secondary flash overpowers bounced light when the subject is close, consider increasing the distance to the subject or diffusing the secondary flash. A neutral density gel can be mounted over the secondary flash to reduce its output.
- **Incorrect Exposure in Auto Modes:**
 - Ensure the ISO setting on the flash matches the camera's ISO.
 - Confirm the correct aperture is selected on the camera for the chosen A1 or A2 mode.
- **TTL Not Working with Digital Camera:**
 - The SB-16B is not compatible with digital SLR cameras for TTL operation. Use Manual or Non-TTL Auto modes instead.

6. SPECIFICATIONS

Feature	Detail
Brand	Nikon
Model Number	SB-16B
Product Dimensions	7.7 x 2.2 x 3.3 inches
Item Weight	9.6 ounces

Compatible Mountings	Nikon SB (Hotshoe)
Flash Sync Speed	1/250 (typical, camera dependent)
Included Components	User Manual, Case, Batteries (may vary by seller)
Date First Available	June 17, 2003

7. WARRANTY AND SUPPORT

For information regarding warranty coverage, please refer to the documentation provided at the time of purchase or contact Nikon customer support directly. Support resources, including service centers and additional manuals, may be available on the official Nikon website.

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