

Nikon Speedlight

SB-14

INSTRUCTION MANUAL

NOMENCLATURE

① Wide-Flash Adapter SW-5

② Flash head

③ Shooting mode selector

④ Sensor Unit SU-2

⑤ Sensor socket

⑥ Sync/multiple flash sockets

⑦ Sync Cord SC-11

⑧ Bracket mounting adapter

⑨ Bracket mounting pin

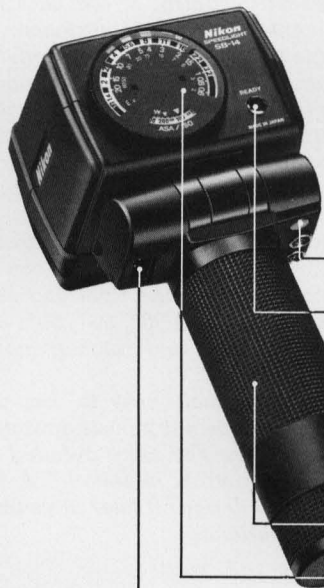
⑩ Tripod/light stand socket

⑪ Attachment screw slots

⑫ Bracket SK-5

⑬ Tripod socket





f/stop indicators with wide-flash adapter
(thin color-coded lines) ⑭

f/stop indicators
(thick color-coded lines) ⑮

f/stop scale ⑯

Distance scale ⑰

ASA/ISO film speed index ⑱

ASA/ISO film speed scale ⑲

ASA/ISO film speed index
(with wide-flash adapter) ⑳

Open-flash button ㉑

Ready-light ㉒

Bracket attachment dot ㉓

Attachment screw ㉔

Release/locking wheel ㉕

Handle ㉖

Exposure calculator dial ㉗

External power terminal ㉘

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FOREWORD

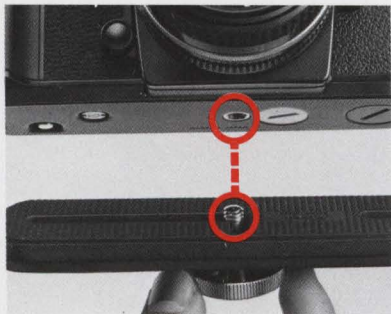
The Nikon Speedlight SB-14 is a compact and light-weight electronic flash unit having a host of useful features.

With coverage matching that of a 28mm wideangle lens, this unit uses a silicon-controlled rectifier and series circuitry to provide automatic control of the flash exposure to match the camera-to-subject distance. In addition, the SB-14 is able to conserve its excess energy for the next shot when shooting subjects at close range, thus reducing recycling time and increasing the number of flashes per battery set. When the optional TTL Sensor Cord SC-12 is used in conjunction with the Nikon F3 or F3 High-Eyepoint camera, the SB-14 provides automatic through-the-lens control of flash exposure.

Moreover, the SB-14 allows complete creative control of bounce flash with its movable flash head which can be tilted back 120° and rotated 120° to the right and 120° to the left; click-stops are provided at 30°, 60°, 90°, and 120° intervals for both the tilting and rotating movements.

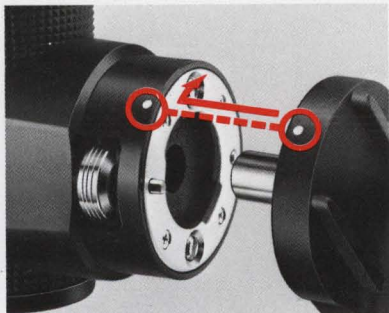
Even though the SB-14 is extremely easy to use, you should familiarize yourself with the unit's basic operation as presented in the first section. For more detailed information, please refer to "Controls in Detail." A few minutes wisely invested now will pay off later in years of rewarding photographic experiences.

BASIC OPERATION



1. Attach the bracket ⑫ to the camera.

Screw the bracket's attachment screw ⑭ into the camera's tripod socket to secure the two units together tightly. (For details, refer to page 10.)



2. Attach the bracket to the flash unit.

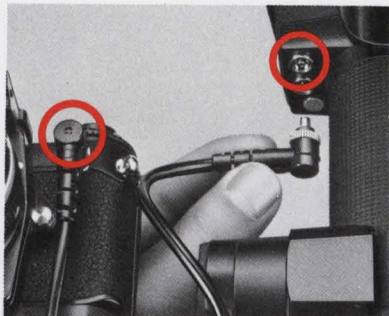
Insert the bracket mounting pin ⑨ into the hole in the bracket mounting adapter ⑧ with the two white dots ⑬ aligned; rotate the camera forward until it click-locks into place.



3. Plug in the sensor ④.

With the "Nikon" name facing toward the flash head ②, align the protruding portion of the Sensor Unit SU-2 with the notched portion inside the SB-14's sensor socket ⑤; then push the sensor into the socket until it click-locks into place.

BASIC OPERATION — continued



4. Attach the sync cord ⑦.

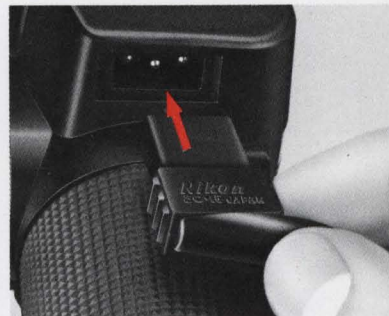
Screw one end of the Sync Cord SC-11 into either of the flash unit's sync/multiple flash sockets ⑥ and screw the other end into the camera's sync terminal.

Note: Some cameras do not have the threaded sync terminal.



5. Check the position of the flash head.

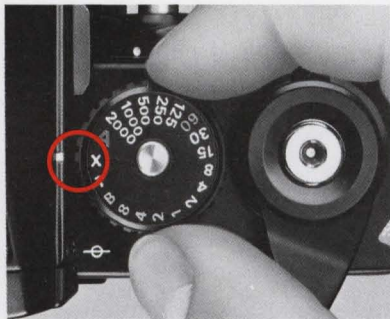
Make sure that the flash head is in the normal shooting position.



6. Connect the power supply.

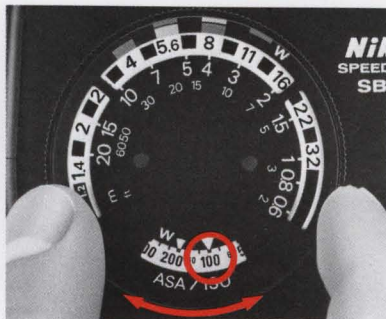
Plug the cord from the power supply into the flash unit's external power terminal ⑧.

Note: The SB-14 is powered by only an external power supply.



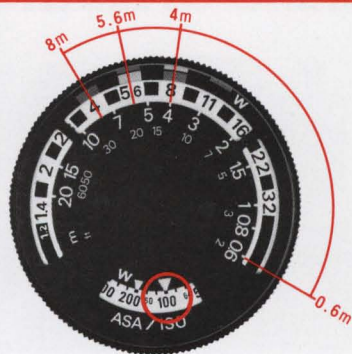
7. Set the camera's shutter speed for proper synchronization.

Set the shutter speed dial to the proper synchronization speed for electronic flash (e.g., set the F3 to the "X" setting). For details, refer to the chart on page 11.



8. Set the exposure calculator dial ⁽²⁷⁾.

Turn the dial until the ASA/ISO film speed index ⁽¹⁸⁾ is opposite the number for the speed of the film in use. The three thick color-coded lines ⁽¹⁵⁾ above the f/stop scale ⁽¹⁶⁾ indicate the three usable f/stops for automatic operation and the distance scales ⁽¹⁷⁾ below the usable f/stop scales give you the range of flash-to-subject distance. For example, if you're using ASA/ISO 100 film, the usable f/stops are f/4, below the orange line, f/5.6, below the yellow, and f/8, below the blue. The range of flash-to-subject distance for each f/stop is 0.6m to 8m (2 to 26 ft.), 0.6m to 5.6m (2 to



18 ft.), and 0.6m to 4m (2 to 13 ft.), respectively. (For more information on selecting the f/stop, refer to "Exposure Calculator Dial" on page 12.)

BASIC OPERATION — continued



- 9. Set the lens' aperture ring to an appropriate f/number.**

In the example, f/4 is selected.



- 10. Set the shooting mode selector ③.**

Turn the ring on the front of the sensor unit until the white index is opposite the color corresponding to that of the f/stop selected. (Orange is selected in this example). This sets the flash unit for automatic operation.



- 11. Turn on the power supply.**



12. Watch the ready-light

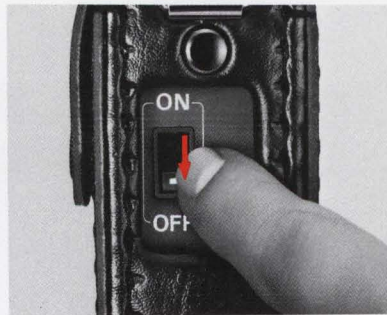
22.

As soon as the LED ready-light comes on, the flash unit is ready to fire.



13. Take the picture.

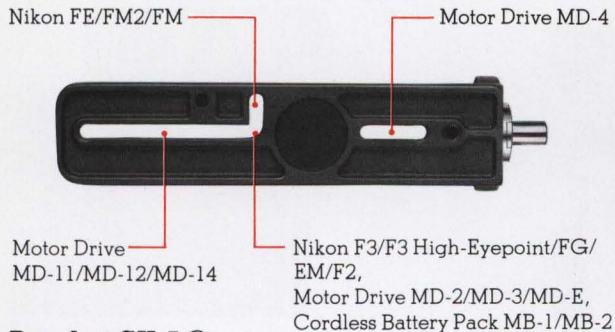
When the shutter is tripped, the flash unit fires and the picture is taken. Soon, the ready-light will light up to tell you the flash unit is recycled and ready to fire again.



14. Turn off the power supply.

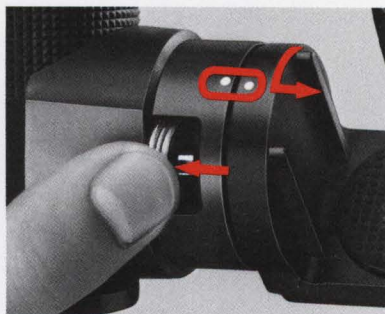
To conserve battery power between shooting sessions, slide the power switch of the power supply to the OFF position.

CONTROLS IN DETAIL



Bracket SK-5 ⑫

The Speedlight SB-14's bracket can be attached to various camera and/or motor drive combinations. To change the attachment screw from one slot ⑪ to another, slide it to the threaded end of the slot and unscrew it; then screw it back into the threaded end of the other slot. Once screwed in, the attachment screw can be moved freely to any position along the slot. The diagram indicates the recommended position of the attachment screw for Nikon SLR cameras and motor drives.



Bracket Mounting Adapter ⑧

To detach the flash unit for off-camera flash operation, push the release/locking wheel ⑫ to the left and while holding it, tip the flash forward until the two white dots are aligned; then pull the flash unit away from the bracket.

Note: To detach the bracket mounting adapter from the flash unit's handle ⑮, use a standard screwdriver to loosen the two screws on the face of the adapter.

Shutter Speed Dial

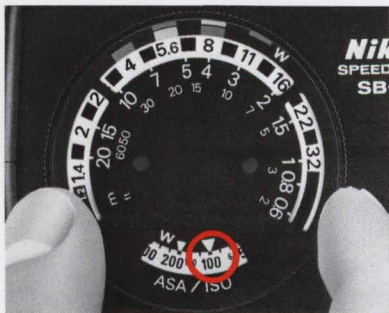
To get proper synchronization, set the camera's shutter speed dial as shown in the chart below. (For details, refer to your camera's instruction manual.)

Synchronization chart

Camera type	Shutter speed (sec.)
Nikon F3/ F3 High-Eyepoint	X (1/80), 1/60 or slower
Nikon FE	M90 (1/90), 1/125 or slower
Nikon FM2	X200 (1/200), 1/125 or slower
Nikon FM, EL2, Nikkormat FT3	1/125 or slower
Nikon FG*	P, A, M90 (1/90), 1/60 or slower
Nikon EM*	AUTO or M90 (1/90)
Nikon F2 series	1/80 (red line located between 1/60 and 1/125) or slower

*The Nikon FG and EM do not have a sync terminal. To use the SB-14, you must attach the Sensor Remote Cord SC-13.

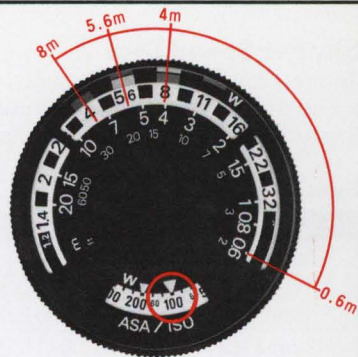
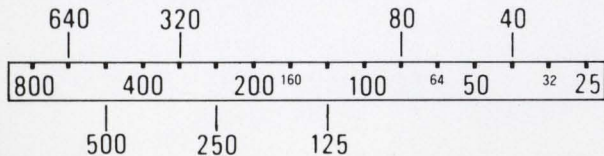
CONTROLS IN DETAIL — continued



Exposure Calculator Dial (27)

The exposure calculator dial on the back of the SB-14 helps you to select the usable range of f/stops for the speed of the film in use and the flash-to-subject distance. To set the ASA/ISO film speed, turn the dial until the number corresponding to the film speed is opposite the ASA/ISO film speed index. Set the film speed to the "W" index mark (20) when the Wide-Flash Adapter SW-5 (1) is attached to the flash unit.

Note: Dots between the numbers on the film speed scale (19) represent intermediate settings. (See illustration.)



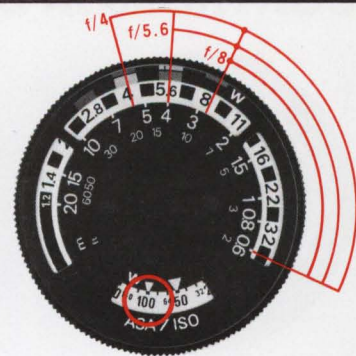
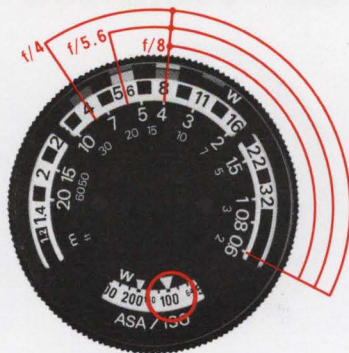
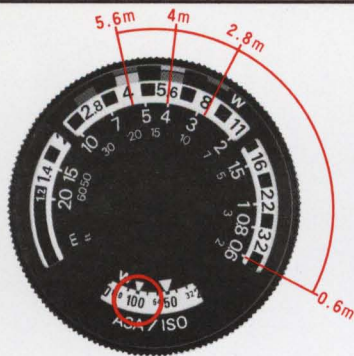
For Automatic Operation

With the Sensor Unit SU-2 attached to the Speedlight SB-14, you can shoot on Automatic. Three usable f/stops are indicated by the thick color-coded lines after you set the ASA/ISO film speed on the dial.

For example, if you are using ASA/ISO 100 film, you can select either f/4, f/5.6 or f/8. In selecting the f/stop, the flash-to-subject distance, recycling time, and depth of field are important factors.

• Flash-to-subject distance

The thick color-coded lines indicate the range of flash-to-subject distances for automatic shooting as well as the usable f/stops. Each distance range is constant regardless of the film speed set on the dial. The orange line indicates a range from 0.6m to 8m (2 to 26 ft.), the yellow from 0.6m to 5.6m (2 to 18 ft.), and the blue from 0.6m to 4m (2 to 13 ft.). So, for example, with ASA/ISO 100 film and



a subject more than 5.6m (18 ft.) away, the only usable f/stop is f/4.

On the other hand, the thin color-coded lines ⑭ with "W" indicate the distance ranges when the wide-flash adapter is used: from 0.6m to 5.6m (2 to 18 ft.), 0.6m to 4m (2 to 13 ft.), and 0.6m to 2.8m (2 to 9 ft.), respectively. In this case, with ASA/ISO 100 film, if the subject is more than 4m (13 ft.) away, only f/4 can be used.

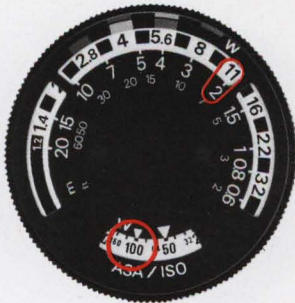
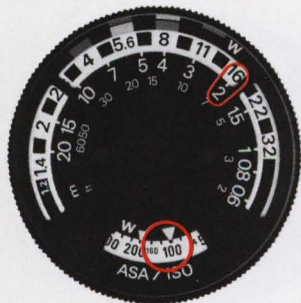
Note: With a subject more than 8m (26 ft.) away — or more than 5.6m (18 ft.) away when using the wide-flash adapter — shoot on manual.

• Recycling time and depth of field

If the subject distance remains the same, the wider the aperture you select, the faster the recycling time of the flash unit and the greater the maximum shooting distance, but the less the depth of field. With ASA/ISO 100 and a

subject up to 4m (13 ft.) away, you can select any one of the three f/stops indicated, f/4, f/5.6 or f/8, taking into consideration the recycling time or depth of field you desire. With the wide-flash adapter attached and a subject up to 2.8m (9 ft.) away, the usable f/stops are also f/4, f/5.6 and f/8.

CONTROLS IN DETAIL — continued



For Manual Operation

Set the ASA/ISO dial and simply read off the f/number which appears directly above the flash-to-subject distance; then set this aperture on your lens.

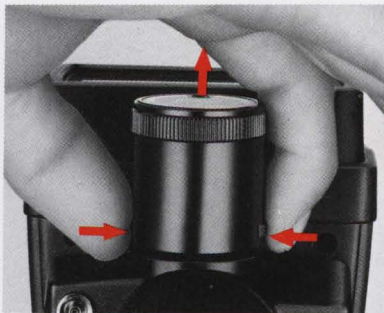
For example, with ASA/ISO 100 and a subject 2m (approx. 7 ft.) away, the usable f/stop is f/16 without wide-flash adapter, or f/11 with the wide-flash adapter attached.

Without referring to the exposure calculator dial, you can also determine the f/stop by using the following equation:

$$f/\text{stop} = \frac{\text{guide number}}{\text{flash-to-subject distance}}$$

With ASA/ISO 100 film and meters, the SB-14's guide number is 32. If the subject is 8m away, divide 32 by 8 to get f/4.

Caution: For manual operation, be sure to set the shooting mode selector of the Sensor Unit SU-2 at the "M" position.



Sensor Unit SU-2 ④

The Sensor Unit SU-2 controls the operation of the SB-14. It has five settings to choose from.

At the Three Auto Positions

To shoot on Auto, lift up and turn the knurled ring on the outside of the sensor to one of the three positions (orange, yellow, or blue) which are color-coded for use with the exposure calculator dial. At these settings, the SB-14 is able to vary its light output automatically to match the flash-to-subject distance.

At the S (Slave) Position

At this setting, the SB-14 emits a modulated burst of light which can trigger a second electronic flash. The remote flash unit is connected to the receiver portion of the optional Modulite Remote Control Unit ML-1 (which is set to channel 2), while the Speedlight SB-14 acts as the transmitter.

Note: Although the SB-14 operates with maximum light output at the S position, be sure to set the camera's shutter speed dial at slower than the ordinary synchronization speed. For example, if the camera's synchronization speed is 1/125 sec., set the shutter speed at 1/60 sec. or slower.

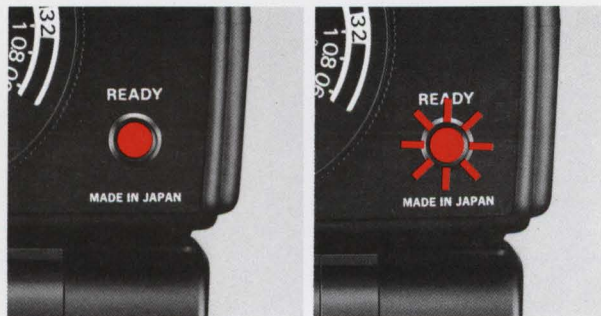
At the M (Manual) Position

Set the SU-2 to the M setting and the SB-14 operates manually at its maximum light output regardless of the flash-to-subject distance. In this case, you have to calculate the exposure manually by referring to the exposure calculator dial.

Detaching the Sensor Unit

To detach the SU-2, push in the two protrusions at the base of the sensor and pull it out.

CONTROLS IN DETAIL — continued

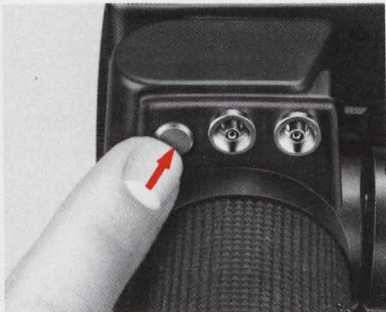


Ready-Light ②

Built into the back of the SB-14's flash head is a ready-light which comes on as soon as the flash unit is recycled and ready to fire. As an additional feature, the ready-light blinks if the flash fires at its maximum output indicating that the light might be insufficient for correct exposure on Automatic. The warning blinks last for approximately two seconds. In this case, reset the lens aperture to the proper f /stop.

Note:

- 1) With a subject near the far limit of the usable shooting range, it is recommended to wait a few seconds after the ready-light comes on before taking the shot.
- 2) When the batteries are nearly exhausted, the light output of the flash unit decreases.



Open-Flash Button ⑳

The red open-flash button is used to fire the flash unit manually without having to trip the camera's shutter. In this manner, you can create multiple-exposure "stroboscopic" effects or paint the scene with light by firing the flash repeatedly with the camera set to "B." However, with the SB-14 connected via a sync cord to the camera set at "B," the flash will not go off even when the open-flash button is pushed. So, make sure to remove the connecting cord from the camera before using the open-flash button.

The open-flash button is also used in conjunction with the ready-light to determine if you can get the correct exposure when shooting on automatic. This is especially useful when doing bounce flash. After setting up the shot, push the open-flash button. If the ready-light does not blink, you can take the picture. If it does blink, try moving the flash closer to the subject or bounce surface,

or reset the Sensor Unit SU-2 to a color-coded position calling for a wider aperture.

CONTROLS IN DETAIL — continued



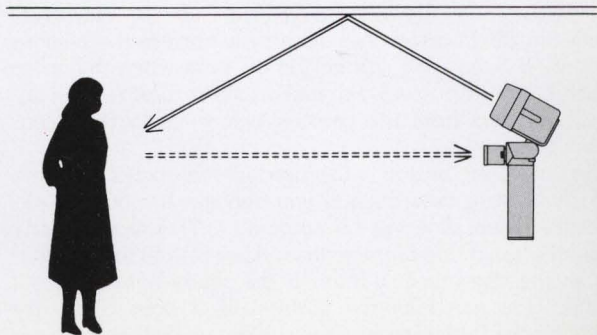
Flash Head ②

The SB-14's movable flash head can be tilted back up to 120° and rotated 120° to the left and 120° to the right; click-stops are provided at 30° , 60° , 90° and 120° for both tilting and rotating movements. For normal shooting, point the flash head straight ahead. In this position, the light travels directly out to the subject providing the maximum amount of light possible. However, to soften the shadows and lower the contrast for indoor snapshots, you can tilt the flash head up and simultaneously rotate it to the left or right to bounce the light off the ceiling or walls. Consult the illustration for details. Note that unless the surface you are using to bounce the light off of is white or silver, your color photographs will come out with an unnatural color cast similar to that of the reflecting surface.

The color temperature of the SB-14's light output is balanced for use with daylight type color film.

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Note: When the flash head is tilted up to 120° , rotation is somewhat restricted; and depending on the amount of rotation, tilt might be restricted.

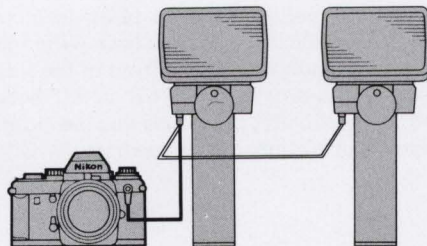


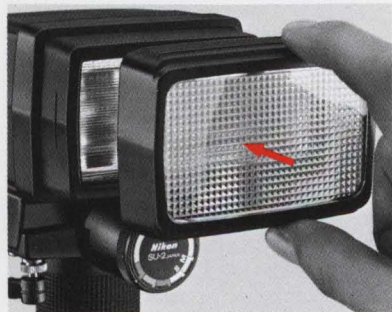


Sync/Multiple Flash Sockets ⑥

Two standard Nikon screw-type terminals are provided on the Speedlight SB-14. Either terminal can be used to connect the SB-14 to the camera, while the other is provided for connecting the SB-14 with another flash unit in series for multiple flash operation. When using the Nikon Speedlight SB-11, 12, 14 or 15 as a secondary unit, connect the flash units together using the Sync Cord SC-11 or SC-15. With the SB-10 or SB-7, use the Sync Cord SC-5, SC-6 or SC-7.

Note: In multiple flash operation, make sure to use both flash units on manual.





Wide-Flash Adapter SW-5 ①

The angle of illumination of the SB-14 by itself covers the picture angle of a 28mm wideangle lens. When the wide-flash adapter is attached onto the front of the flash head, it increases the illumination from 67° to 77° horizontally and 48° to 56° vertically, providing just the right amount of coverage when a 24mm lens is used.

Note: With the SW-5 attached, the light output of the flash unit is reduced, resulting in a decrease in guide number from 32 to 22 (ASA/ISO 100 and meters) or 52 to 36 (ASA/ISO 25 and feet). Automatic shooting ranges with ASA/ISO 100 decrease to 0.6m to 5.6m (2 to 18 ft.) at f/4, 0.6m to 4m (2 to 13 ft.) at f/5.6 and 0.6m to 2.8m (2 to 9 ft.) at f/8.

TIPS ON AUTOMATIC FLASH SHOOTING

Subject's Reflectivity

When you shoot a dark subject (one with low reflectivity), reduce the aperture selected by one-half to one full f/stop. When the subject is light in tone (has high reflectivity), reset the aperture so that it is one-half to one full f/stop wider. Otherwise, your pictures might come out over- or underexposed.

If you photograph a subject of very high reflectivity, such as when shooting directly into a mirror or metallic surface, underexposure is certain to occur. In this case, take pictures on manual.

Sensor Unit SU-2

The sensor reads the light reflected from the subject. If something, such as the sync cord or your finger, comes between the sensor and the light reflected from the subject, the SB-14 will be unable to deliver the correct exposure.

Fill-In Flash Photography

In fill-in flash photography with a very bright background, overexposure might occur. Make sure that the scene's brightness does not exceed the exposure value determined by the combination of shutter speed you set and aperture selected.

ACCESSORIES

DC Unit SD-7

Accepting six C-type batteries, the SD-7 is designed to be used as a power source for both the Nikon Speedlights SB-14 and SB-11. It has a neckstrap for convenient use.



TTL Sensor Cord SC-12

One meter long, this cord allows the SB-14 to be used with the Nikon F3 or F3 High-Eyepoint camera for automatic through-the-lens control of the flash exposure. When attached, the camera's shutter speed is automatically switched to the proper flash synchronization speed of 1/80 sec. with the shutter speed dial at A or 1/125 sec. and above. The ready-light inside the camera's viewfinder also operates in the normal manner.



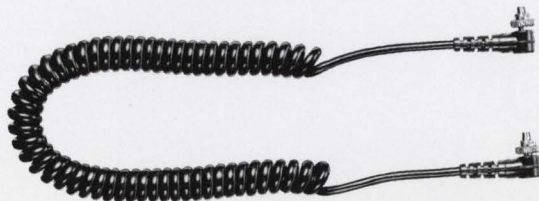
Sensor Remote Cord SC-13

Also one meter long, the SC-13 allows mounting of the SB-14's Sensor Unit SU-2 directly on the Nikon FE, FM2, FM, FG, or EM's hot shoe for automatic, off-camera operation with the flash unit pointed in any direction. With the Nikon F3 or F3 High-Eyepoint camera, the Flash Unit Coupler AS-4 is required and control of the flash exposure is automatic, but not through-the-lens.



Sync Cord SC-15

A coiled cord over one meter in length, the SC-15 screws into the camera's sync terminal and allows the SB-14 to be detached from its bracket and used off-camera.



"RED EYE"

"Red eye," an optical phenomenon in which a subject's eyes appear red in photographs taken with a flash unit, is a result of the flash light's directly illuminating the retina. This happens when the subject looks straight into the camera on which a flash unit is mounted. The effect becomes more pronounced if there is little or no ambient light. In this case, the pupil of the eye is wide open, and the illuminated retina is clearly visible.

To avoid "red eye" you can take any or all of the following steps:

1. Brighten the room to minimize the opening of the subject's pupils.
2. Instruct the subject not to look straight into the camera.
3. Keep the flash unit as far away as possible from the camera by means of a sync cord.

Note that once "red eye" appears, there is no way of retouching the negatives.

OPTIMUM BATTERY PERFORMANCE

1. New batteries: Between manufacturing and first use, all batteries exhibit some drain. Therefore, care should be taken to purchase the newest (and freshest) ones possible. To help you do this, some manufacturers stamp the date of manufacture on the bottom of each battery. Ask your camera dealer for assistance in interpreting the codes.
2. Temperature: Battery life ratings are based on operation at around 20°C (68°F). At other temperatures, battery life is shortened. At 0°C, for instance, battery life is shortened by as much as 2/3. Spare batteries should therefore be kept available if operation in low temperatures is anticipated.
3. Continuous use: Batteries are drained much more quickly by continuous use than by intermittent use.
4. Storage: When not in use, the batteries should be removed to prevent damage from leakage. To minimize drain during the period of disuse, store the batteries in a cool, dry place.
5. Battery brands: Do not use mixed brands of batteries, nor batteries with different model numbers. Also, avoid mixing new and old batteries since proper performance will not be obtained and battery leakage may occur.
6. Disposal: Do not dispose of batteries by burning. Also, for safety's sake, do not disassemble batteries when disposing.
7. Polarity: When installing batteries, observe the voltage polarities carefully. Reversal of the positive (+) and negative (-) terminals will result in leakage.

SPECIFICATIONS

Guide number

(ASA/ISO 100 and meters) 32 (22 with Wide-Flash Adapter SW-5)

(ASA/ISO 25 and feet) 52 (36 with Wide-Flash Adapter SW-5)

Angle of coverage

Horizontal: 67° (77° with SW-5)

Vertical: 48° (56° with SW-5)

Power source

Battery Pack SD-7 holding six C-type batteries

Battery	Number of flashes	Recycling time
1.2V rechargeable NiCd batteries	approx. 100 times	less than 4 sec.
1.5V alkaline-manganese batteries	approx. 270 times	less than 9.5 sec.
1.5V manganese batteries	approx. 80 times	less than 12 sec.

Usable f/stops and automatic shooting range

Unit: m (feet)

Position of shooting mode selector	Film sensitivity (ASA/ISO)						Auto shooting range	
	25	50	100	200	400	800	Normal operation	With Wide-Flash Adapter SW-5
	f/stop							
Orange	2	2.8	4	5.6	8	11	0.6~8 (2.0~26.2)	0.6~5.6 (2.0~18.4)
Yellow	2.8	4	5.6	8	11	16	0.6~5.6 (2.0~18.4)	0.6~4 (2.0~13.1)
Blue	4	5.6	8	11	16	22	0.6~4 (2.0~13.1)	0.6~2.8 (2.0~9.2)

Dimensions

Approx. 217mm(H)×94mm(W)×91mm(D)

Weight

Approx. 515g (with the Sensor Unit SU-2)

Approx. 290g (Bracket SK-5 only)

Accessories provided

Sensor Unit SU-2

Bracket SK-5

Wide-Flash Adapter SW-5

Sync Cord SC-11



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