

Nikon

NIKKOR

NIKKOR Z 800mm f/6.3 VR S

Reference Guide

- Read this document thoroughly before using the product.
- To ensure proper use of the product, be sure to read "For Your Safety" (page 5).
- After reading this document, keep it readily accessible for future reference.

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Table of Contents

Introduction	4
Before You Begin	4
For Your Safety	5
Using the Lens	8
Parts of the Lens: Names and Functions	8
Attachment and Removal	19
Attaching and Removing the Lens Hood	24
Attaching a Strap	27
Memory Recall	28
Using the Tripod Collar Ring	30
Vibration Reduction (VR)	32
Filters	33
Precautions for Use	39
Lens Maintenance	41
Technical Notes	42
Cameras with AF-Assist Illuminators	42
Using the Lens on Cameras with a Built-in Flash	43
Accessories	44

Specifications..... 45

Notices..... 47

Introduction

Before You Begin

Before using this product, please read these instructions carefully. You will also need to consult the documentation provided with the camera.

- This lens is intended exclusively for use with mirrorless cameras featuring a Nikon Z mount.
- Update the camera firmware to the latest version. With earlier versions, the camera may fail to detect the lens correctly and some features may not be available. The latest version of the camera firmware can be downloaded from the Nikon Download Center at the URL below.


<https://downloadcenter.nikonimglib.com/>


No reproduction in any form of this document, in whole or in part (except for brief quotation in critical articles or reviews), may be made without written authorization from NIKON CORPORATION.

For Your Safety

To prevent damage to property or injury to yourself or to others, read “For Your Safety” in its entirety before using this product.

After reading these safety instructions, keep them readily accessible for future reference.

 **WARNING:** Failure to observe the precautions marked with this icon could result in death or severe injury.

 **CAUTION:** Failure to observe the precautions marked with this icon could result in injury or property damage.

WARNING

Do not disassemble or modify this product. Do not touch internal parts that become exposed as the result of a fall or other accident.

Failure to observe these precautions could result in electric shock or other injury.

Should you notice any abnormalities such as the product producing smoke, heat, or unusual odors, immediately disconnect the camera power source.

Continued operation could result in fire, burns or other injury.

Keep dry. Do not handle with wet hands.

Failure to observe these precautions could result in fire or electric shock.

 **WARNING**

Do not use this product in the presence of flammable dust or gas such as propane, gasoline or aerosols.

Failure to observe this precaution could result in explosion or fire.

Do not directly view the sun or other bright light source through the lens.

Failure to observe this precaution could result in visual impairment.

Keep this product out of reach of children.

Failure to observe this precaution could result in injury or product malfunction.

In addition, note that small parts constitute a choking hazard. Should a child swallow any part of this product, seek immediate medical attention.

Do not entangle, wrap or twist the straps around your neck.

Failure to observe this precaution could result in accidents.

Do not handle with bare hands in locations exposed to extremely high or low temperatures.

Failure to observe this precaution could result in burns or frostbite.

 **CAUTION**

Do not leave the lens pointed at the sun or other strong light sources.

Light focused by the lens could cause fire or damage to product's internal parts. When shooting backlit subjects, keep the sun well out of the frame. Sunlight focused into the camera when the sun is close to the frame could cause fire.

Do not leave the product where it will be exposed to extremely high temperatures, for an extended period such as in an enclosed automobile or in direct sunlight.

Failure to observe this precaution could result in fire or product malfunction.

Do not transport cameras or lenses with tripods or similar accessories attached.

Failure to observe this precaution could result in injury or product malfunction.

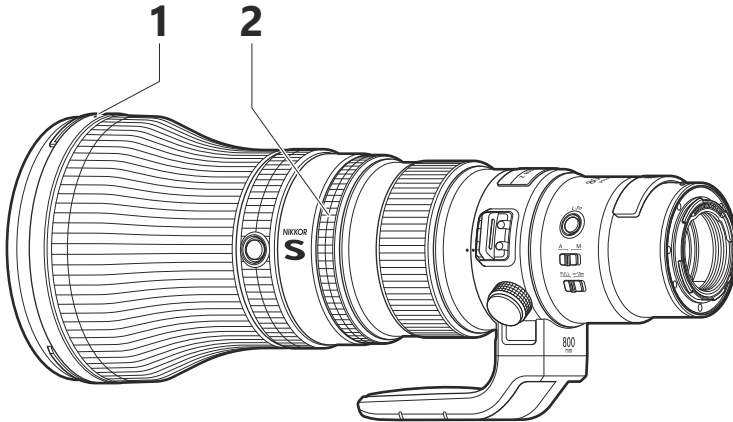
Keep the product at least 5 cm (2.0 in.) from pacemakers and other medical devices.

Medical devices in close proximity could be affected by the magnet or magnets in the product.

Using the Lens

Parts of the Lens: Names and Functions

The parts of the lens are listed below.



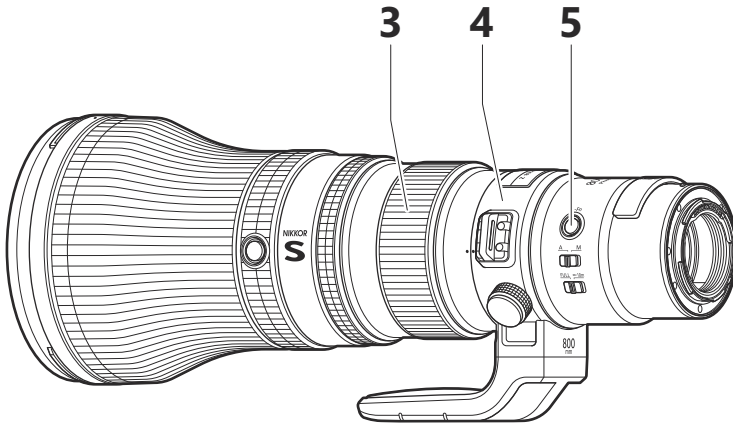
1 Lens hood mounting mark

Use when attaching the lens hood.

 ["Attaching and Removing the Lens Hood" \(p.24\)](#)

2 Control ring

Rotate to adjust a setting such as **[Aperture]** or **[Exposure compensation]** assigned using the camera. For more information, see the description of **[Custom control assignment]**, **[Custom controls]**, or **[Custom controls (shooting)]** in the documentation provided with the camera.



3 Focus ring

Use for manual focus.

- When focusing using autofocus, you can adjust focus manually by rotating the ring while the shutter-release button is pressed halfway.

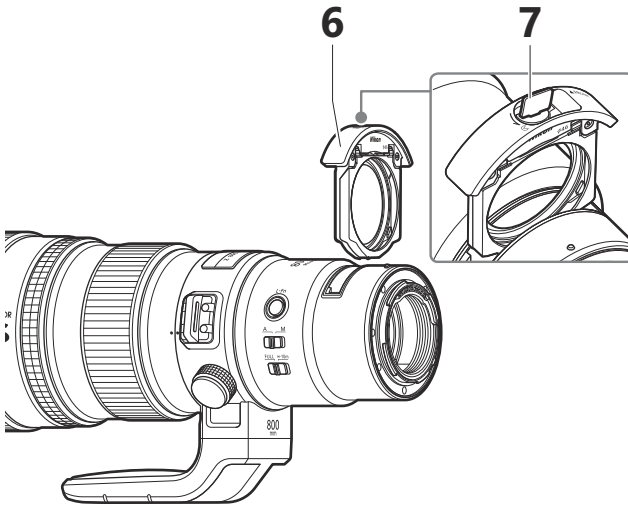
4 Tripod collar ring

The camera can be rotated between “wide” and “tall” orientations when a tripod is attached to the tripod collar.

📖 [“Using the Tripod Collar Ring” \(p.30\)](#)

5 L-Fn button

Press to perform a function assigned using the camera. For more information, see the description of [**Custom control assignment**], [**Custom controls**], or [**Custom controls (shooting)**] in the documentation provided with the camera.



6 Slip-in filter holder

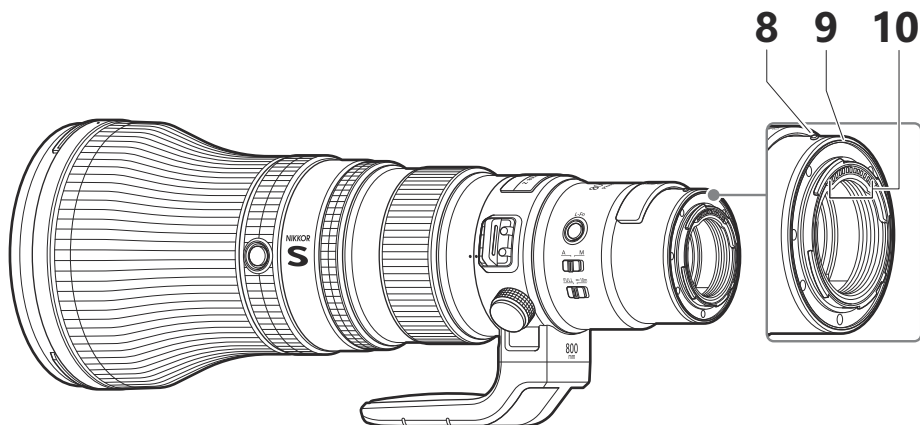
For use with optional 46 mm screw-on filters.

📖 ["Filters" \(p.33\)](#)

7 Slip-in filter holder tab

Use when inserting or removing the filter holder.

📖 ["Filters" \(p.33\)](#)



8 Lens mounting mark

Use when mounting the lens on the camera.

 ["Attachment and Removal" \(p.19\)](#)

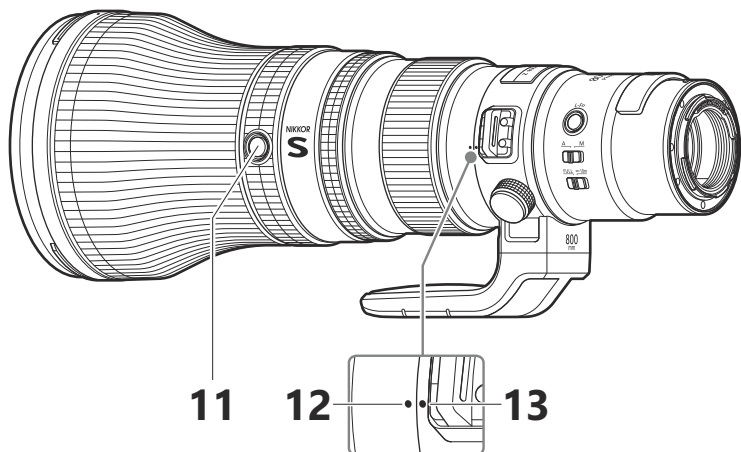
9 Rubber lens-mount gasket

Helps prevent the ingress of water droplets or dust along the surfaces where the lens and camera meet when the lens is mounted on the camera. *

* *There is no guarantee that the gasket is completely proof against the ingress of water droplets or dust in all circumstances.*

10 CPU contacts

Used to transfer data to and from the camera.



11 L-Fn2 buttons

Press to perform a function assigned using the camera. For more information, see the description of [**Custom control assignment**], [**Custom controls**], or [**Custom controls (shooting)**] in the documentation provided with the camera. There are four buttons positioned around the lens at 90° intervals.

12 Lens rotation indices

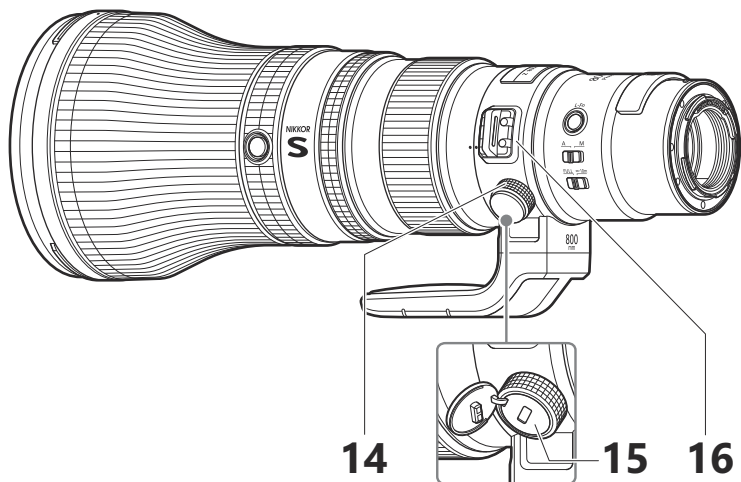
Use when rotating the camera to shoot in landscape (“wide”) or portrait (“tall”) orientation. There are four indices positioned around the lens at 90° intervals.

[📖 “Using the Tripod Collar Ring” \(p.30\)](#)

13 Tripod collar ring rotation indices

Use when rotating the camera to shoot in landscape (“wide”) or portrait (“tall”) orientation. There are three indices positioned around the lens at 90° intervals.

[📖 “Using the Tripod Collar Ring” \(p.30\)](#)



14 Tripod collar ring attachment screw

Fix the tripod collar ring in place.

📖 ["Using the Tripod Collar Ring" \(p.30\)](#)

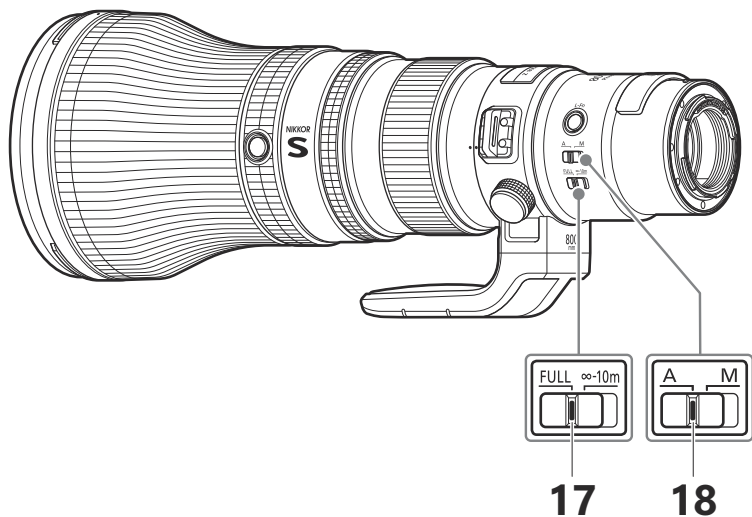
15 Security slot (for anti-theft cable)

Attach a third-party anti-theft cable. For more information, see the documentation provided with the cable.

16 Strap eyelets

For use when attaching a strap. There are two eyelets, one on each side.

📖 ["Attaching a Strap" \(p.27\)](#)



17 Focus limit switch

Choose the autofocus range.

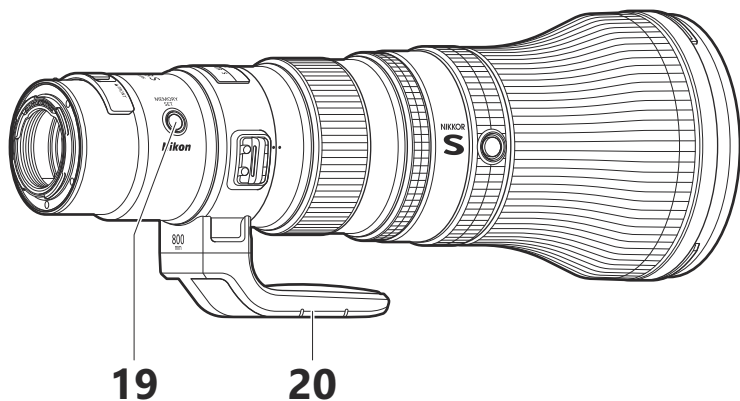
- **FULL**: Choose to focus on subjects at any distance between 5 m (16.41 ft) and ∞ .
- **$\infty - 10\text{ m}$** : Focus is limited to distances of 10 m (32.81 ft) and more. Select this option for faster focusing if your subject will always be at distance of at least 10 m (32.81 ft).

18 Focus-mode switch

Choose a focus mode.

- **A**: Autofocus
- **M**: Manual focus

Note that regardless of the setting chosen, focus must be adjusted manually when manual focus mode is selected using camera controls.



19 Memory set button

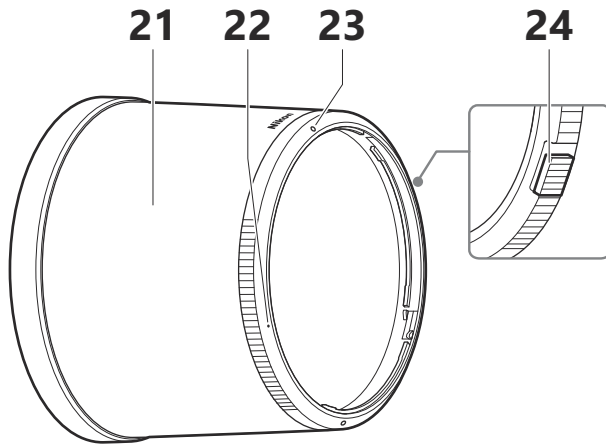
Save the current focus position. The saved position can be instantly restored by pressing a control to which **[Recall focus position]** has been assigned (“memory recall”).

📖 [“Memory Recall” \(p.28\)](#)

20 Tripod collar

Attach a tripod. For information on removing the tripod collar, contact a Nikon-authorized service representative.

📖 [“Using the Tripod Collar Ring” \(p.30\)](#)



21 Lens hood

Lens hoods block stray light that would otherwise cause flare or ghosting. They also serve to protect the lens.

📖 ["Attaching and Removing the Lens Hood" \(p.24\)](#)

22 Lens hood alignment mark

Use when attaching the lens hood.

📖 ["Attaching and Removing the Lens Hood" \(p.24\)](#)

23 Lens hood lock mark

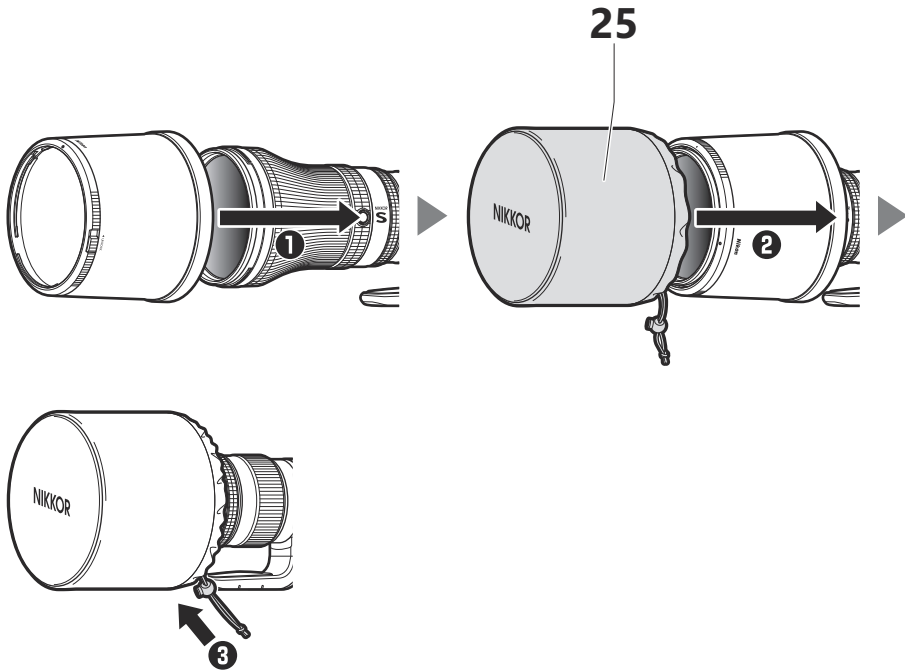
Use when attaching the lens hood.

📖 ["Attaching and Removing the Lens Hood" \(p.24\)](#)

24 Lens hood release

Use when removing the lens hood.

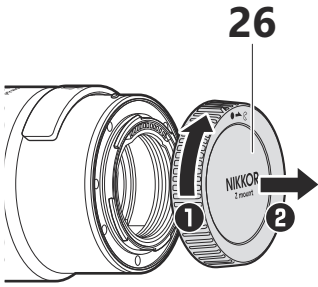
📖 ["Attaching and Removing the Lens Hood" \(p.24\)](#)



25 Slip-on lens cap (front cap)

- Be sure to reattach the cap when transporting the lens or when transporting the camera with the lens attached.
- Reverse the lens hood before using the slip-on lens cap.

📖 ["Attaching and Removing the Lens Hood" \(p.24\)](#)

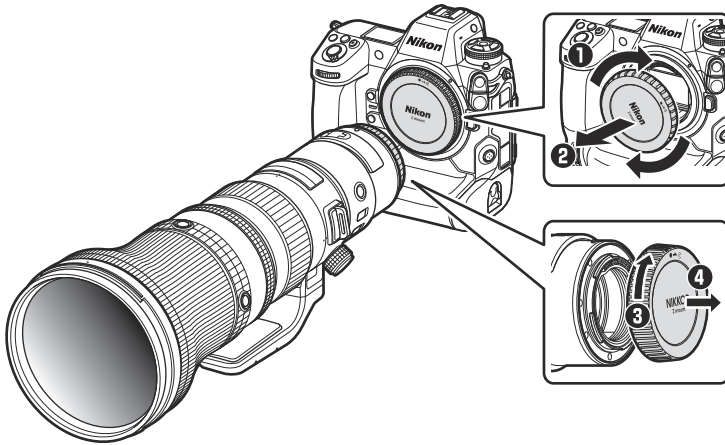


26 Lens cap (rear cap)

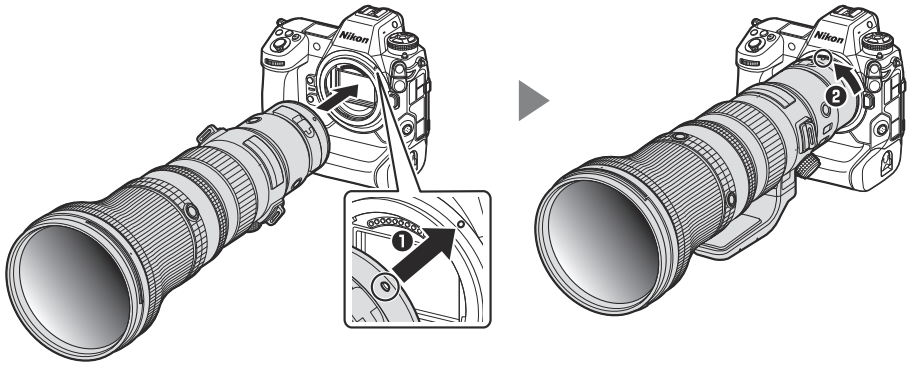
Attachment and Removal

Attaching the Lens

1. Turn the camera off, remove the body cap, and detach the rear lens cap.

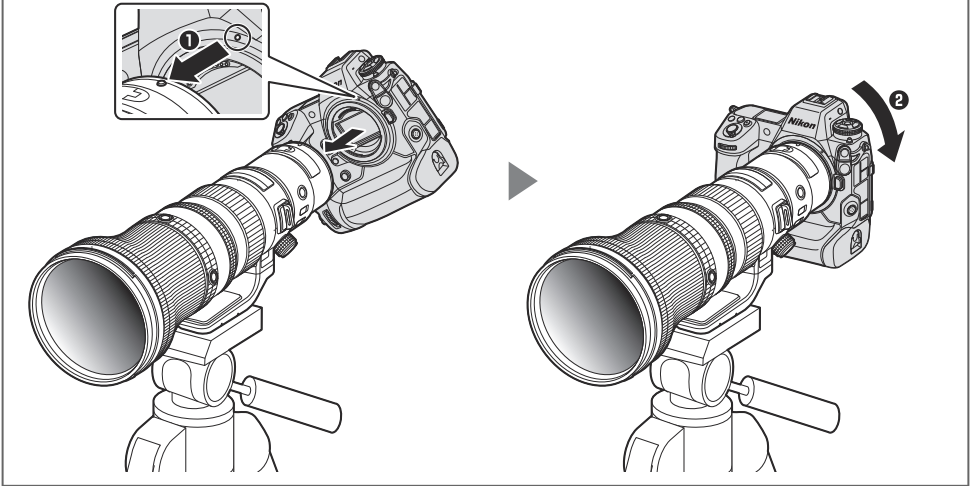


2. Position the lens on the camera body, keeping the mounting mark on the lens aligned with the mounting mark on the camera body (①), and then rotate the lens counterclockwise (②) until it clicks into place.



✓ When the Lens Is Mounted on a Tripod: Attaching the Camera

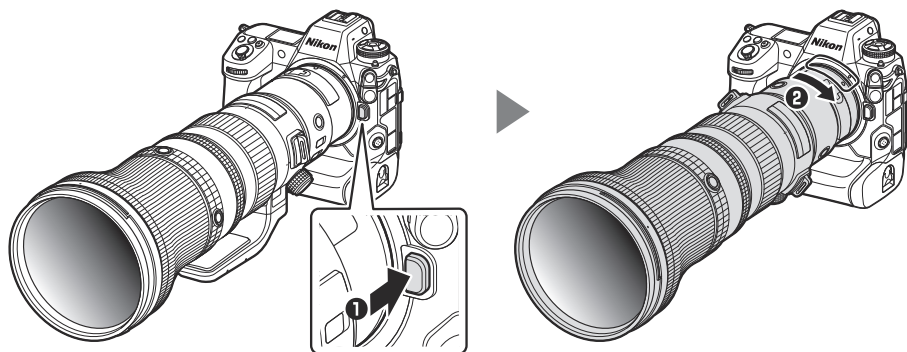
Position the camera on the lens, keeping the mounting mark on the lens aligned with the mounting mark on the camera body (❶), and then rotate the camera clockwise until the lens clicks into place (❷).



Removing the Lens

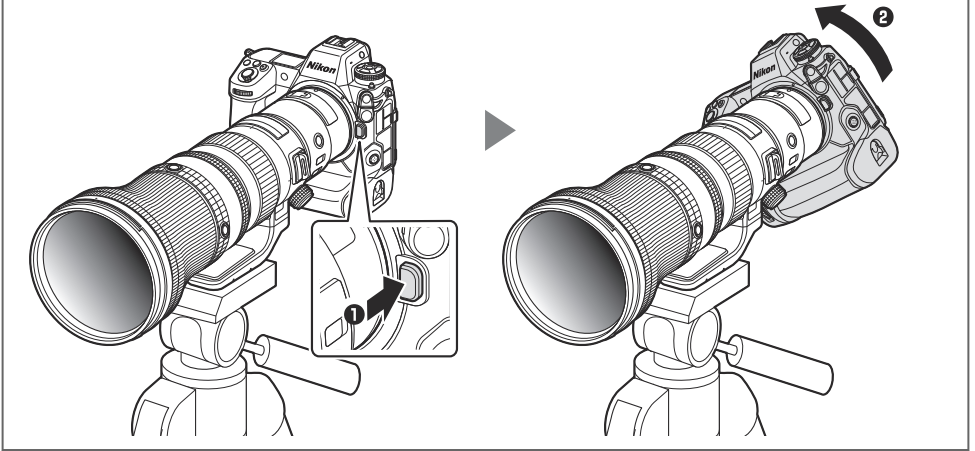
1. Turn the camera off.

2. Press and hold the lens release button (❶) while turning the lens clockwise (❷).



✓ When the Lens Is Mounted on a Tripod: Removing the Camera

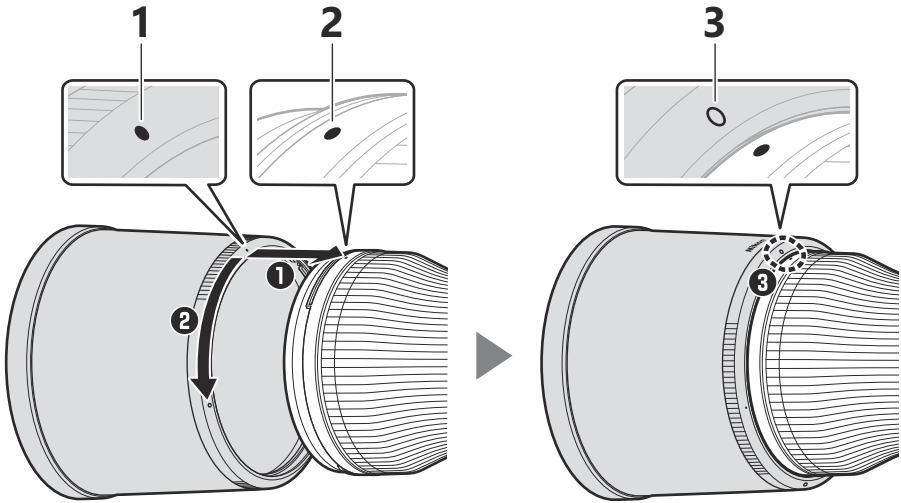
Press and hold the lens release button (❶) while turning the camera counterclockwise (❷).



Attaching and Removing the Lens Hood

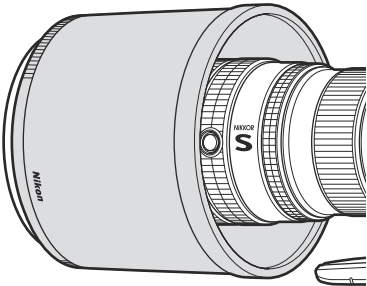
Attaching the Lens Hood

- Align the lens hood mounting mark with the lens hood alignment mark (1) and then rotate the lens hood (2) until the mounting mark is aligned with the lens hood lock mark (3).



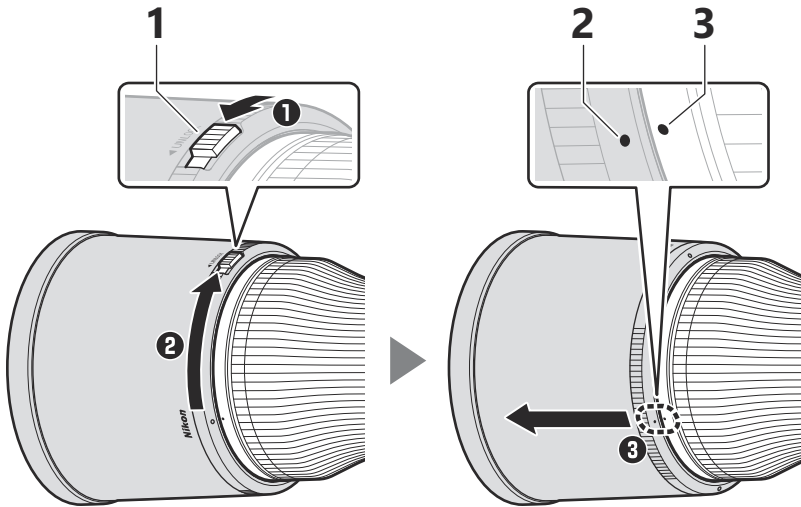
- 1 Lens hood alignment mark
- 2 Lens hood mounting mark
- 3 Lens hood lock mark

- The hood can be reversed and mounted on the lens when not in use.



Removing the Lens Hood

- Slide the lens hood release until it clicks (❶), rotate the hood as shown (❷) until the lens hood alignment mark aligns with the lens hood mounting mark, and remove the hood (❸).



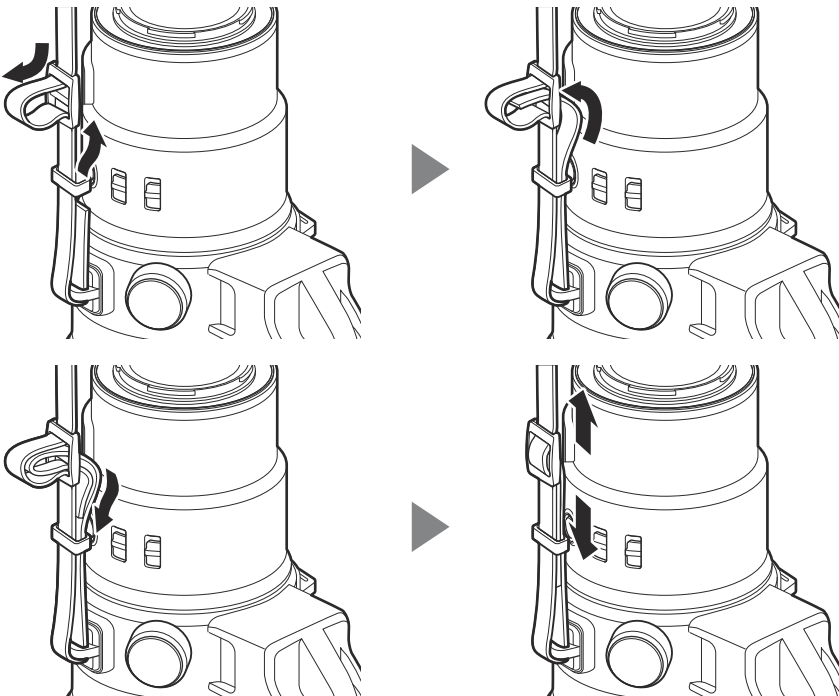
- ❶ Lens hood release
- ❷ Lens hood alignment mark
- ❸ Lens hood mounting mark

- The same procedure can be used when the lens hood is reversed.

Attaching a Strap

To attach a strap, follow the steps below.

- *If the strap is not attached correctly, the lens could fall, causing injury.*
- *Use a lens strap when carrying the camera with the lens attached. Using a strap attached to the camera alone could damage the strap or the mounts on the camera or lens, causing the camera or lens to fall.*

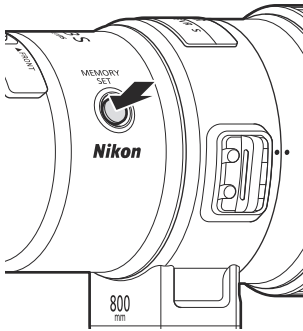


Memory Recall

Save a frequently-used focus position to the lens. The saved position can then be quickly recalled.

Saving Focus Positions

- Focus on a subject at the desired distance and then press and hold the memory set button. An icon will be displayed in the camera monitor if the operation is successful.



- The operation can be performed in any focus mode.
- The stored distance is not reset when the camera is turned off.
- The stored distance is however reset when the lens is detached.

Using Stored Focus Positions

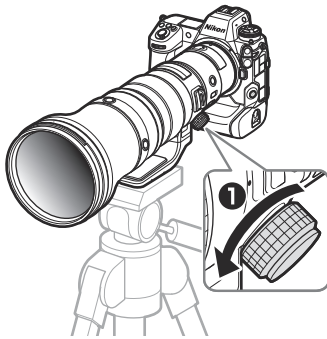
The saved focus position will be restored while the control to which [**Recall focus position**] has been assigned via [**Custom controls**] or [**Custom controls (shooting)**] is pressed. To take a picture at the saved focus position, release the shutter without lifting your finger from the control. Release the control to resume normal auto or manual focus.

Using the Tripod Collar Ring

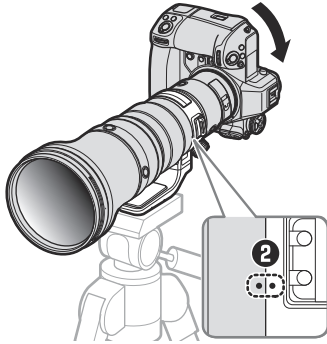
Attach tripods to the lens tripod collar, not to the camera.

Attaching tripods to the lens tripod collar rather than to the camera allows the camera to be rotated as described below to take pictures in "tall" or "wide" orientation while a tripod is attached.

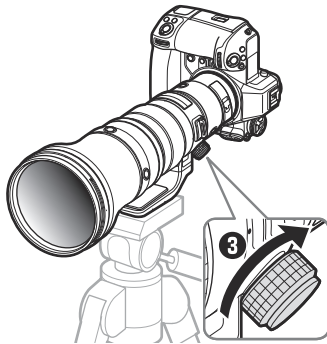
1. Loosen the tripod collar attachment screw (1).



2. Rotate the camera, using the rotation indices for reference (2).



3. Tighten the tripod collar ring attachment screw (3).



Vibration Reduction (VR)

The lens supports vibration reduction. Vibration reduction settings can be adjusted from the camera. See the documentation provided with the camera for details.

Vibration reduction allows shutter speeds slower than would otherwise be the case, expanding the range of shutter speeds available.

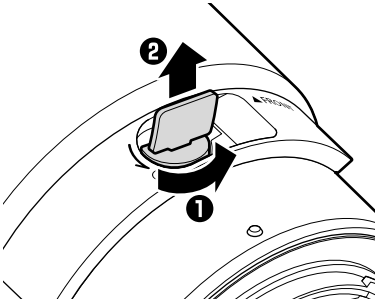
Vibration Reduction

- Due to the design of the vibration reduction system, the lens may rattle when shaken. This does not indicate a malfunction.
- To reduce blur caused by tripod shake, select **[Normal]** or **[Sport]** for the on-camera vibration reduction option when the camera is mounted on a tripod. Note, however, that depending on the type of tripod and shooting conditions, there may be cases in which **[Off]** is the preferred option.
- **[Normal]** or **[Sport]** is recommended when the camera is mounted on a monopod.

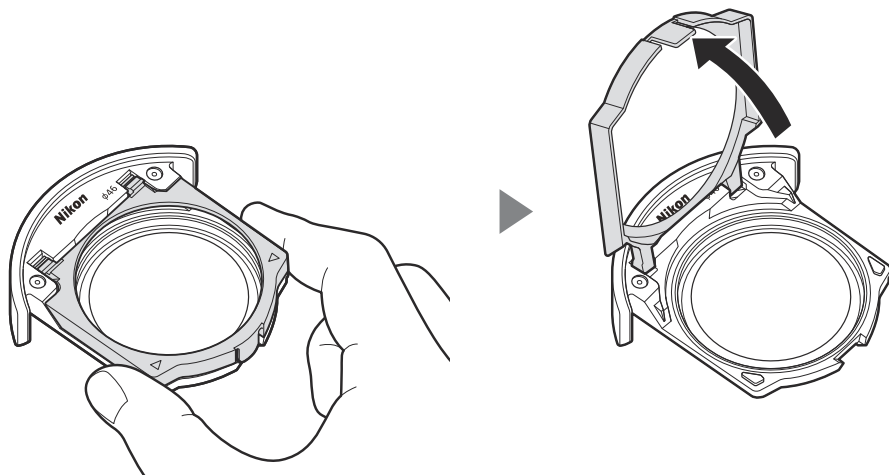
Filters

The lens is designed for use without filters, and can be used without a filter inserted under most conditions. In situations in which a filter is required, an optional 46 mm screw-on filter can be inserted in the slip-in filter holder as described below.

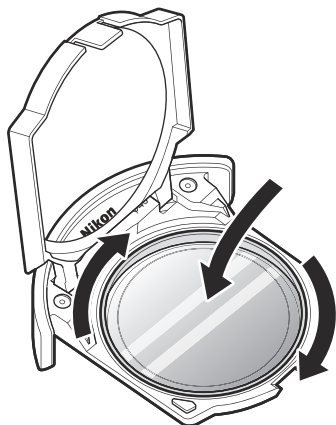
1. Lift the slip-in filter holder tab, rotate it to ☹️ (①), and remove the slip-in filter holder (②).



2. Press the ▽ points on either side of the slip-in filter holder and open the cover.

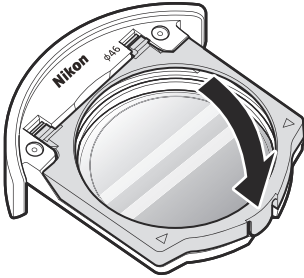


3. Insert a 46 mm screw-on filter.

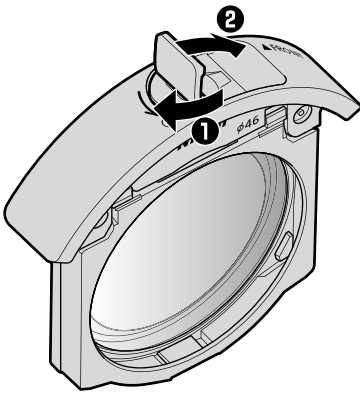


Depending on their shape, some filters cannot be used with the slip-in filter holder. Use filters that fit the holder.

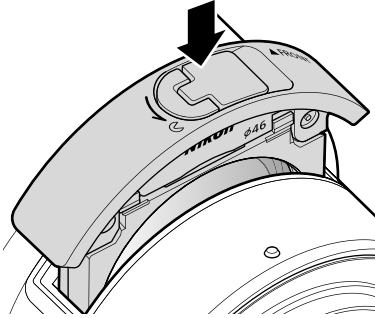
4. Close the slip-in filter holder cover.



5. Rotate the slip-in filter holder tab as shown (1) and lower it back into its starting position (2).



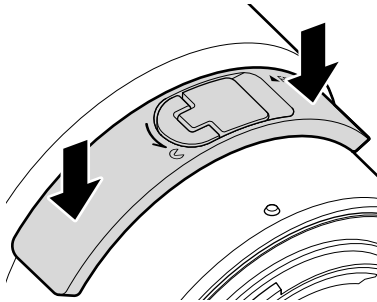
6. Insert the slip-in filter holder into the slip-in filter holder slot.



Insert the holder with the side labeled "FRONT" facing forward (toward the focus ring).

7. Slide the slip-in filter holder in until it latches.

- Slide the slip-in filter holder in until it clicks into place.



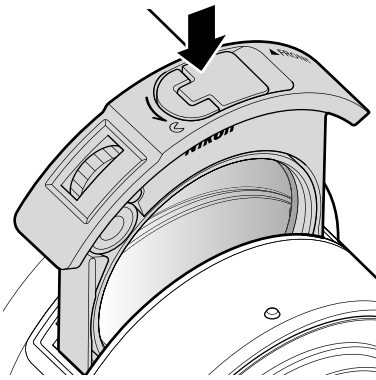
- Be sure the slip-in filter holder is securely latched.

Using Optional Filters

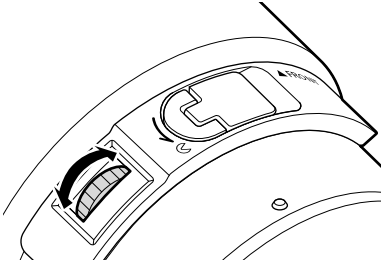
- Using a filter slightly increases the minimum focus distance and shifts the focus distance from that shown by the focus distance display.
- When using memory recall, be sure to attach the filter before storing the focus position.

Using an Optional C-PL460 Slip-in Circular Polarizing Filter

- The C-PL460 blocks unwanted reflections from glass, water, and other non-metallic surfaces.
- It is used in place of the supplied slip-in filter holder.



- Before taking pictures, rotate the ring to control the reflections visible in the shooting display.



- Using a filter slightly increases the minimum focus distance and shifts the focus distance from that shown by the focus distance display.
- When using memory recall, be sure to attach the filter before storing the focus position.
- Do not leave the filter for long periods in direct sunlight or in locations that are exposed to excessive humidity or high temperatures.

Precautions for Use

- Do not pick up or hold the lens or camera using only the lens caps or lens hood.
- Observe the following precautions while the lens is attached to the camera:
 - Be sure to support the lens when holding the camera. Failure to observe this precaution could damage the lens and camera mounts.
 - Use a lens strap when carrying the camera with the lens attached. Using a strap attached to the camera alone could damage the strap or the mounts on the camera or lens, causing the camera or lens to fall.
- Keep the CPU contacts clean.
- Should the rubber lens-mount gasket be damaged, cease use immediately and take the lens to a Nikon-authorized service center for repair.
- Reattach the lens caps when the lens is not in use.
- Creases will form if the supplied lens cap (front cap) is folded, but this does not prevent the cap from being used.

- Do not leave the lens in humid locations or in locations in which it may be exposed to moisture. Rusting of the internal mechanism can cause irreparable damage.
- Do not leave the lens next to open flames or in other extremely hot locations. Extreme heat could damage or warp the lens.
- Taking the lens from a warm to a cold environment or *vice versa* may cause damaging condensation inside and outside the lens. Place the lens in a sealed bag or plastic case before taking it across a temperature boundary. The lens can be taken from the bag or case once it has had time to adjust to the new temperature.
- We recommend that you place the lens in its case to protect it from scratches during transport.
- Nikon will not be held liable in the event that the lens is stolen or damaged while a third-party anti-theft cable is attached to the security slot.
- Keep credit cards and other such magnetic storage devices away from the camera and lens. Data stored on the device could be corrupted.

Lens Maintenance

- Removing dust is normally sufficient to clean the glass surfaces of the lens.
- When cleaning the fluorine-coated front lens element:
 - Smudges, fingerprints, and other oily stains can be removed using a soft, clean cotton cloth or third-party lens cleaning tissue; clean from the center outwards using a circular motion.
 - To remove stubborn stains, wipe gently using a soft cloth lightly dampened with a small amount of distilled water, ethanol, or third-party lens cleaner.
 - Drop-shaped marks may form on fluorine-coated surfaces, which are highly water- and oil-repellent. Such marks can be removed with a dry cloth.
- When cleaning the rear lens element, which is not fluorine-coated:
 - Smudges, fingerprints, and other oily stains can be removed using a soft, clean cotton cloth or third-party lens cleaning tissue lightly dampened with a small amount of ethanol or third-party lens cleaner; clean from the center outwards in a circular motion. Be sure to clean evenly and thoroughly without leaving smears.
- Never use organic solvents such as paint thinner or benzene to clean the lens.
- Do not store the lens in direct sunlight or with naphtha or camphor moth balls. If the lens will not be used for an extended period, store it in a cool, dry location to prevent mold and rust.

Technical Notes

Cameras with AF-Assist Illuminators

The lens or lens hood may block the light from the camera AF-assist illuminator.

- For the information on using the lens with cameras that have built-in AF-assist illuminators, visit the site below.

<https://downloadcenter.nikonimglib.com/>

Using the Lens on Cameras with a Built-in Flash

Shadows will be visible in photos where light from the built-in flash is obscured by the lens or lens hood. Remove the lens hood before shooting. Note, however, that depending on the distance to the subject and lens focal length, shadows may appear even when the lens hood is removed.

- For information on the subject distances and focal lengths at which shadows will not appear in photos taken with a built-in flash, visit the site below.

<https://downloadcenter.nikonimglib.com/>

Accessories

Supplied Accessories

- LC-K106 Lens Cap (front cap)
- LF-N1 Lens Cap (rear cap)
- HB-104 Lens Hood
- Strap
- CL-L3 Lens Case

Other Compatible Accessories

- 46 mm filters (P = 0.5 mm, for use with slip-in filter holder)
- C-PL460 Slip-in Circular Polarizing Filter
- Z TELECONVERTER TC-1.4×/TC-2.0×

Filters

Use only one filter at a time.

Teleconverters

Depending on the subject, ambient lighting conditions, and the focus point selected, the camera may be unable to focus using autofocus or the focus indicator for electronic rangefinding may flicker while a teleconverter is attached.

Specifications

Mount	Nikon Z mount
Focal length	800 mm
Maximum aperture	f/6.3
Lens construction	22 elements in 14 groups (including 3 ED elements, 1 SR element, 1 PF element, elements with a Nano Crystal coat, and a fluorine-coated front lens element)
Angle of view	FX format: 3° 10'
	DX format: 2°
Focusing system	Internal focusing system
Vibration reduction	Lens shift using voice coil motors (VCMs)
Minimum focus distance (measured from focal plane)	5 m (16.41 ft)
Maximum reproduction ratio	0.16×
Diaphragm blades	9 (rounded diaphragm opening)
Aperture range	f/6.3 – 32
Focus limit switch	Two positions: FULL (∞ – 5 m) and ∞ – 10 m

Dimensions (maximum diameter × distance to end of lens from camera lens mount flange)	Approx. 140 mm × 385 mm (5.6 in. × 15.2 in.)
Weight	Approx. 2385 g (5 lb 4.2 oz)

Nikon reserves the right to change the appearance, specifications, and performance of this product at any time and without prior notice.

Phase Fresnel (PF) Lenses

This lens features a Phase Fresnel (PF) element. The PF element uses a diffraction technique* to reduce chromatic aberration. When used with standard glass elements, PF elements greatly reduce chromatic aberration, allowing lenses much smaller and lighter than their ordinary refraction-based equivalents, but are prone to colored ring flare (PF flare) when a bright light source is in or near the frame.

- Colored ring flare in photographs can be reduced using the [**PF Flare Control**] option in NX Studio. See NX Studio's online help for more information.
- [**PF Flare Control**] can be used only with photographs. It is not available with videos.
- NX Studio is available for download from the Nikon Download Center. Be sure to always use the latest version.

<https://downloadcenter.nikonimglib.com/>

* *Diffraction: Light has the properties of a wave. It bends around obstacles in its path in a phenomenon known as diffraction. This causes a pattern of chromatic dispersion opposite to that caused by refraction.*

Notices

Notices for Customers in the U.S.A.

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Federal Communications Commission (FCC) Radio Frequency Interference Statement

Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

CAUTIONS

• Modifications

The FCC requires the user to be notified that any changes or modifications made to this device that are not expressly approved by Nikon Corporation may void the user's authority to operate the equipment.

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Tel.: 631-547-4200

Notices for Customers in Canada

CAN ICES-003 (B) / NMB-003 (B)

Notices for Customers in Europe

This symbol indicates that electrical and electronic equipment is to be collected separately.



The following apply only to users in European countries:

- This product is designated for separate collection at an appropriate collection point. Do not dispose of as household waste.
- Separate collection and recycling helps conserve natural resources and prevent negative consequences for human health and the environment that might result from incorrect disposal.
- For more information, contact the retailer or the local authorities in charge of waste management.