Nikon

DIGITAL CAMERA

KeyMission 170

Reference Manual

SnapBridge

Quick Topic Search

- Read this manual thoroughly before using the camera.
- To ensure proper use of the camera, be sure to read “For Your Safety” (page viii), “<Important> Notes About Shockproof, Waterproof, and Dustproof Performance and Condensation” (page xii), and “Notes About Wireless Communication Functions” (page 90).
- After reading this manual, keep it in a readily accessible place for future reference.

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Quick Topic Search

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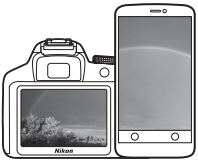
SnapBridge



Your images. The world. Connected

Welcome to SnapBridge — Nikon's new family of services to enrich your image experience. SnapBridge connects your camera and compatible smart device, through a combination of *Bluetooth*® low energy (BLE) technology and a dedicated app. The stories you capture with your Nikon camera and lenses are automatically transferred to the device as they are taken. They can even be uploaded effortlessly to cloud storage services, inviting access across all your devices.

* Wireless communication is not available when the camera is underwater.

Download the SnapBridge 360/170 app to get started!

Take advantage of the wide-ranging convenience by downloading the "SnapBridge 360/170" app onto your smart device now. Through a few simple steps, this app connects your Nikon cameras with a compatible iPhone®, iPad® and/or iPod touch® or smart devices running on the Android™ operating system. The app is available free from the website (http://snapbridge.nikon.com), Apple App Store® and Google Play™.

360/170 Nikon

Download on the App Store

ANDROID APP ON Google Play

For the latest information on SnapBridge, visit the Nikon website for your area (📖vi).

The exciting image experience that SnapBridge offers…

Automatic picture transfer from camera to smart device thanks to the constant connection between the two devices — making online photo sharing easier than ever

* Movies cannot be transferred automatically.

Upload of photos and thumbnail images to the NIKON IMAGE SPACE cloud service

A range of services that enriches your imaging life, including:

- Camera remote control

- Imprinting up to two pieces of credit information (shooting info, shooting date and time, text, and logos) on pictures

- Automatic update of camera's date and time info and location info

- Receive camera's firmware updates

See from page 11 onwards for information on setting or using SnapBridge 360/170.

Introduction

Read This First

Thank you for purchasing the Nikon KeyMission 170 digital camera.

Symbols and Conventions Used in This Manual

- Tap or click in the lower right of each page to display "Quick Topic Search" (ii).
- Symbols

Symbol	Description
	This icon marks cautions and information that should be read before using the camera.
	This icon marks notes and information that should be read before using the camera.
	This icon marks other pages containing relevant information.

- In this manual, microSD, microSDHC, and microSDXC memory cards are referred to as "memory cards".
- The setting at the time of purchase is referred to as the "default setting."
- The names of menu items displayed on the camera screen, and the names of buttons or messages displayed on a computer monitor appear in bold.
- In this manual, images are sometimes omitted from screen display samples so that screen indicators can be more clearly shown.

Information and Precautions

Life-Long Learning

As part of Nikon's "Life-Long Learning" commitment to ongoing product support and education, continually updated information is available online at the following websites:

- For users in the U.S.A.: http://www.nikonusa.com/
- For users in Europe: http://www.europe-nikon.com/support/
- For users in Asia, Oceania, the Middle East, and Africa: http://www.nikon-asia.com/

Visit these websites to keep up-to-date with the latest product information, tips, answers to frequently asked questions (FAQs), and general advice on digital imaging and photography. Additional information may be available from the Nikon representative in your area. Visit the website below for contact information.

http://imaging.nikon.com/

Use Only Nikon Brand Electronic Accessories

Nikon cameras are designed to the highest standards and include complex electronic circuitry. Only Nikon brand electronic accessories (including battery chargers, batteries, AC adapters, and USB cables) certified by Nikon specifically for use with this Nikon digital camera are engineered and proven to operate within the operational and safety requirements of this electronic circuitry.

THE USE OF NON-NIKON ELECTRONIC ACCESSORIES COULD DAMAGE THE CAMERA AND MAY VOID YOUR NIKON WARRANTY.

The use of third-party rechargeable Li-ion batteries not bearing the Nikon holographic seal could interfere with normal operation of the camera or result in the batteries overheating, igniting, rupturing, or leaking.

Holographic seal: Identifies this device as an authentic Nikon product.

For more information about Nikon brand accessories, contact a local authorized Nikon dealer.

Before Taking Important Pictures

Before taking pictures on important occasions (such as at weddings or before taking the camera on a trip), take a test shot to ensure that the camera is functioning normally. Nikon will not be held liable for damages or lost profits that may result from product malfunction.

About the Manuals

- No part of the manuals included with this product may be reproduced, transmitted, transcribed, stored in a retrieval system, or translated into any language in any form, by any means, without Nikon's prior written permission.
- Illustrations and screen content shown in this manual may differ from the actual product.
- Nikon reserves the right to change the specifications of the hardware and software described in these manuals at any time and without prior notice.
- Nikon will not be held liable for any damages resulting from the use of this product.
- While every effort was made to ensure that the information in these manuals is accurate and complete, we would appreciate it were you to bring any errors or omissions to the attention of the Nikon representative in your area (address provided separately).

Comply with Copyright Notices

Under copyright law, photographs or recordings of copyrighted works made with the camera can not be used without the permission of the copyright holder. Exceptions apply to personal use, but note that even personal use may be restricted in the case of photographs or recordings of exhibits or live performances.

Disposing of Data Storage Devices

Please note that deleting images or formatting memory cards does not completely erase the original image data. Deleted files can sometimes be recovered from discarded memory cards using commercially available software, potentially resulting in the malicious use of personal image data. Ensuring the privacy of such data is the user's responsibility.

Before discarding a memory card or transferring ownership to another person, be sure to perform **Reset all** in **Camera settings** in the (setup) menu (59) to reset camera settings. After that, erase all data using commercial deletion software or perform **Format card** in **Camera settings** in the (setup) menu to format the memory card, then completely refill it with images containing no private information (for example, images of empty sky).

Care should be taken to avoid injury or damage to property when physically destroying memory cards.

Conformity Marking

Follow the procedure below to display some of the conformity markings that the camera complies with.

Enter shooting mode ➔ OK button ➔ (setup) icon ➔ OK button ➔ Camera settings ➔ OK button ➔ Conformity marking ➔ OK button

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.
Keep these safety instructions where all those who use this product will read them.

DANGER	**Failure to observe the precautions marked with this icon carries a high risk of death or severe injury.**
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.**

DANGER

- **Do not attach directly to your head.** Failure to observe this precaution could result in accidents or other injury.

WARNING

- **Do not use while operating a vehicle. Mount the product where it will not interfere with vehicle operation. Do not wear this product if this will interfere with the use of required equipment. Do not wear this product where it will come into contact with other people or objects.** Failure to observe these precautions could result in accidents or other injury.
- **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 battery or power source.** Continued operation could result in fire, burns or other injury.
- **Do not handle the plug with wet hands.** Failure to observe this precaution could result in fire or electric shock.

- **Do not let your skin remain in prolonged contact with this product while it is on or plugged in.** Failure to observe this precaution could result in low-temperature burns.
- **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.
- **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 use batteries, chargers, AC adapters, or USB cables not specifically designated for use with this product. When using batteries, chargers, AC adapters, and USB cables designated for use with this product, do not:**
  - **Damage, modify, forcibly tug or bend the cords or cables, place them under heavy objects, or expose them to heat or flame.**
  - **Use travel converters or adapters designed to convert from one voltage to another or with DC-to-AC inverters.**

  Failure to observe these precautions could result in fire or electric shock.
- **Do not handle the plug when charging the product or using the AC adapter during thunderstorms.** Failure to observe this precaution could result in electric shock.
- **Be sure the product has been properly secured. Pay attention to your surroundings. Observe the rules and regulations of all facilities and in all contests where the product is to be used.** Failure to observe these precautions could result in accidents or other injury.

⚠ 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.
- **Turn this product off when its use is prohibited. Disable wireless features when the use of wireless equipment is prohibited.** The radio-frequency emissions produced by this product could interfere with equipment onboard aircraft or in hospitals or other medical facilities.
- **Remove the battery and disconnect the AC adapter if this product will not be used for an extended period.** Failure to observe this precaution could result in fire or product malfunction.

- **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.
- **Check that the equipment is mounted correctly and inspect it for wear and damage at regular intervals.** Failure to observe this precaution could result in accidents or other injury.
- **Do not rapidly or excessively shake your body while the product is attached.** Failure to observe this precaution could result in the product coming loose, causing accidents or other injury.
- **Do not place the product on, or attach it to, unstable surfaces.** Failure to observe this precaution could result in the product coming loose or falling over, causing accidents or other injury.

DANGER for Batteries

- **Do not mishandle batteries.** Failure to observe the following precautions could result in the batteries leaking, overheating, rupturing, or catching fire:
  - Use only rechargeable batteries approved for use in this product.
  - Do not expose batteries to flame or excessive heat.
  - Do not disassemble.
  - Do not short-circuit the terminals by touching them to necklaces, hairpins, or other metal objects.
  - Do not expose batteries or the products in which they are inserted to powerful physical shocks.
- **Do not attempt to recharge EN-EL12 rechargeable batteries using chargers/cameras not specifically designated for this purpose.** Failure to observe this precaution could result in the batteries leaking, overheating, rupturing, or catching fire.
- **If battery liquid comes into contact with the eyes, rinse with plenty of clean water and seek immediate medical attention.** Delaying action could result in eye injuries.

WARNING for Batteries

- **Keep batteries out of reach of children.** Should a child swallow a battery, seek immediate medical attention.
- **Do not immerse batteries in water or expose to rain.** Failure to observe this precaution could result in fire or product malfunction. Immediately dry the product with a towel or similar object should it become wet.
- **Discontinue use immediately should you notice any changes in the batteries, such as discoloration or deformation. Cease charging batteries if they do not charge in the specified period of time.** Failure to observe this precaution could result in the batteries leaking, overheating, rupturing, or catching fire.
- **Prior to disposal, insulate battery terminals with tape.** Overheating, rupture, or fire may result should metal objects come into contact with the terminals. Recycle or dispose of batteries in accord with local regulations.
- **If battery liquid comes into contact with a person's skin or clothing, immediately rinse the affected area with plenty of clean water.** Failure to observe this precaution could result in skin irritation.

<Important> Notes About Shockproof, Waterproof, and Dustproof Performance and Condensation

- The shockproof, waterproof, and dustproof performance described here do not guarantee that the camera will remain completely waterproof or free from damage and trouble under all conditions.
- Do not subject the camera to excessive shock, vibration or pressure by dropping it, hitting it, or placing a heavy object on it. Failure to observe this precaution could deform the camera, cause water to seep inside, or damage the airtight seals, resulting in camera malfunction.
- Your Nikon warrantee may not cover troubles caused by water seeping inside the camera due to improper handling of the camera.

Notes About Shockproof Performance

This camera has passed Nikon's in-house test (drop test from a height of 200 cm (6 ft 6 in.) on a 5 cm (2 in.) thick plywood panel) compliant with the MIL-STD 810F Method 516.5-Shock[1] standard.[2]

Changes in appearance, such as paint peeling off and deformation of the camera, are not measured in Nikon's in-house test.

[1] U.S. Department of Defense test method standard.
This drop test drops 5 cameras in 26 directions (8 edges, 12 corners, and 6 faces) from a height of 122 cm (4 ft) to make sure that one to five cameras pass the test (if any defect is detected during the test, another five cameras are tested to make sure that the test criteria are satisfied for one to five cameras).

[2] When the lens protectors or underwater lens protectors are attached.

Notes About Waterproof and Dustproof Performance

The camera is rated equivalent to JIS/IEC waterproof class 8 (IPX8) and JIS/IEC dustproof class 6 (IP6X) and can shoot images underwater at a depth of 10 m (33 ft) for up to 60 minutes.*

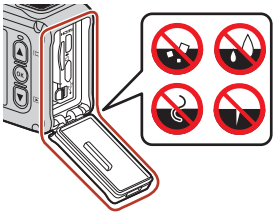
* This rating indicates that the camera has been designed to withstand the specified water pressure for the specified period of time when the camera is used according to the methods defined by Nikon.
- The waterproof performance of this camera was tested in fresh water (swimming pools, rivers, and lakes) and salt water only.
- The inner portion of this camera is not waterproof. Water seeping inside the camera could cause the components to rust, resulting in high repair costs or irreparable damage.

Precautions When Cleaning

- Do not puncture the microphone or speaker openings with a sharp implement. If the inside of the camera is damaged, the waterproof performance will deteriorate.
- Do not use soap, neutral detergents, or chemicals such as benzene for cleaning.

Notes About Shockproof, Waterproof, and Dustproof Performance

- Do not drop the camera, strike it against a hard object such as a rock, or throw it against a water surface.
- Do not subject the camera to shock when using it underwater.
  - Do not subject the camera to water pressure by exposing it to rapids or waterfalls.
  - Do not expose to depths greater than 10 m (33 ft) underwater.
  - Make sure not to drop the camera underwater. This camera does not float in water.
- Do not continuously use the camera underwater for 60 minutes or more.
- Do not insert a wet memory card or battery in the camera.
  - Do not open the battery-chamber/memory card slot cover when the camera or your hands are wet. Doing so may cause water to seep inside the camera or result in camera malfunction.
- Do not open the battery-chamber/memory card slot cover underwater.
- If moisture such as water droplets adheres to the outside of the camera or inside of the battery-chamber/memory card slot cover, immediately wipe it off with a soft dry cloth.
  - If a foreign substance adheres to the outside of the camera or inside of the battery-chamber/memory card slot cover, immediately remove it with a blower or a soft cloth.



- Do not leave the camera in cold conditions or in hot conditions of 40°C (104°F) or more for a long period of time.
  - Doing so could cause deterioration of the waterproof performance.
  - When using the camera underwater, make sure the water temperature is from 0°C to 40°C (32°F to 104°F).
- Do not use the camera at hot springs.

Before Using the Camera Underwater

Check the items below before using the camera underwater.

- Make sure that there are no foreign substances inside the battery-chamber/memory card slot cover.
- Make sure that the waterproofing packing of the battery-chamber/memory card slot cover is not cracked or deformed.
  - Make sure that the waterproofing packing is not detached from the camera.
- Make sure that the battery-chamber/memory card slot cover is firmly closed.
  - Make sure that the battery-chamber/memory card slot cover latch release is in the LOCK position (🕮7).

Notes About Operating Temperature, Humidity, and Condensation

The operation of this camera has been tested at temperatures from −10°C to +40°C (14°F to 104°F).

When you use the camera in cold climate regions or at high altitudes, observe the following precautions.

- Battery performance deteriorates temporarily when cold. Keep the camera and batteries warm under your clothing before use.
- Camera performance may deteriorate temporarily if it is exposed to extreme cold for an extended period. For example, the monitor may appear darker than normal immediately after the camera is turned on, or residual images may be produced.

● Environmental conditions that are likely to cause condensation

Fogging (condensation) may occur on the inside of the monitor, lens, or underwater lens protector when there are sharp temperature changes or high humidity, such as in the environmental conditions described below. This is not a malfunction or defect.

- The camera is suddenly immersed in cold water after being in a hot place on land.
- The camera is brought to a warm place such as inside a building after being in the cold outdoors.
- The battery-chamber/memory card slot cover is opened or closed in a high-humidity environment.
- The camera or underwater lens protector is wet when the underwater lens protector is attached.

● Reducing condensation

- Open the battery-chamber/memory card slot cover, put the camera and a commercially-available desiccant in a container such as a plastic bag, and seal the container. Condensation is less likely to occur if the humidity inside the camera is reduced.
- Avoid storing the camera in places where the camera may become hot (such as places exposed to direct sunlight) before using it underwater. Taking the camera underwater while it is hot causes condensation due to sudden changes in temperature.

● Clearing the fogging

- Turn off the camera and open the battery-chamber/memory card slot cover while in a place where the ambient temperature is stable (avoid places with high temperature, high humidity, sand, or dust).
  To clear the fogging from the lens or monitor, remove the battery and memory card, and leave the battery-chamber/memory card slot cover open to allow the camera to adjust to the ambient temperature. When the underwater lens protector is fogged, remove it.
- If the underwater lens protector is still fogged, try to clear the fogging by removing the underwater lens protector and using the camera for a while before attaching it again.

Notes About Waterproof Performance of the Remote Control

The remote control is rated equivalent to JIS/IEC waterproof class 7 (IPX7), and it is confirmed that water does not seep inside when soaked underwater at a depth of 1 m (3.2 ft) for up to 30 minutes.

- The remote control cannot be used underwater.

Notes About Condensation and Waterproof Performance of the Remote Control

- Do not drop the remote control, strike it against a hard object such as a rock, or throw it against a water surface.
- Do not take the remote control underwater.
  - If the remote control is dropped in water by accident, immediately pick it up and wipe it off with a soft dry cloth.
- Do not insert a wet battery in the remote control.
  - Do not open the battery-chamber cover when the remote control or your hands are wet. Doing so may cause water to seep inside the remote control and result in malfunction.
- If moisture such as water droplets or a foreign substance adheres to the outside of the remote control or the inside of the battery-chamber cover, immediately wipe it off with a soft dry cloth.
- Make sure that the battery-chamber cover is firmly closed.
  - Make sure that the battery-chamber cover is in the CLOSE position.
  - Make sure that no foreign substance such as lint is caught in the battery-chamber cover. Failure to observe this precaution could cause water to seep inside the remote control.
- Do not leave the remote control in cold conditions or in hot conditions of 40°C (104°F) or more for a long period of time.
  - Doing so could cause deterioration of the waterproof performance.
- Do not suddenly bring the remote control to high-humidity environment if it is exposed to extreme cold for an extended period.
  - Condensation may form inside the remote control.

Inspection and Repair

- If the camera is exposed to shock, it is recommended to consult your retailer or Nikon-authorized service representative to confirm the waterproof performance (charged service).
- If the waterproofing packing begins to deteriorate, consult your retailer or Nikon-authorized service representative. The waterproof performance of the waterproofing packing may start to deteriorate after one year.
- If water seeps inside the camera, immediately stop using it and take it to your Nikon-authorized service representative.

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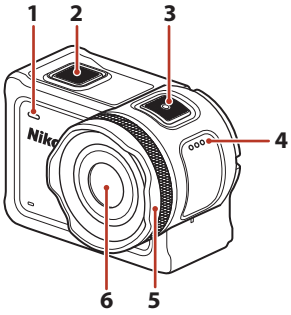
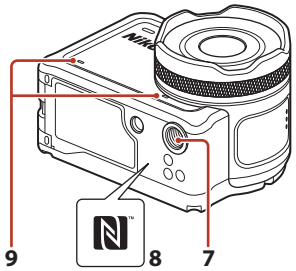
The Camera Body





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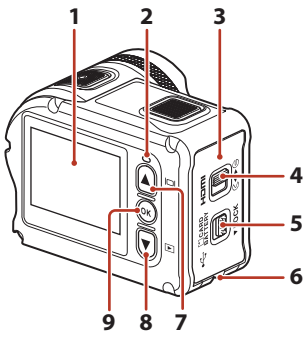

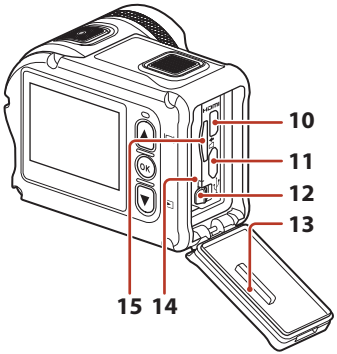

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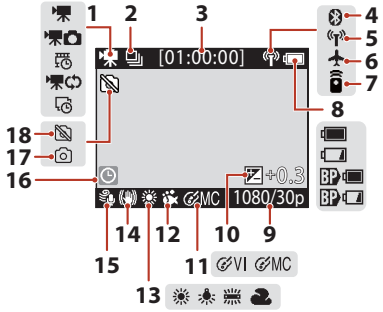
The Monitor

The information that is displayed on the shooting or playback screen changes depending on the camera's settings and state of use.
By default, information is displayed when the camera is turned on and when you operate the camera, and turns off after a few seconds (when **Photo info** is set to **Auto info** in **Monitor settings** (72)).

For Shooting



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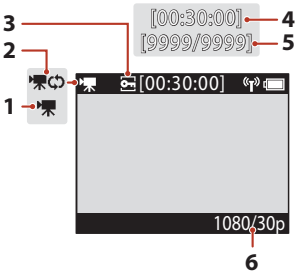
Battery Level Indicator

- : The camera battery level is high.
- : The camera battery level is low.
- BP : The external battery level is high.*
- BP : The external battery level is low.*

* Displayed when the additional battery is installed in the WP-AA1 Waterproof Case (available separately).

For Playback



1	Movie playback mode 46	**4**	Movie length or elapsed playback time
2	Loop recording playback mode 42	**5**	Current image number/total number of images
3	Protect 86	**6**	Movie options 65

Getting Started

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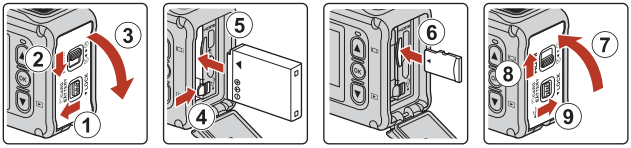
Inserting the Battery and Memory Card



- Unlock the battery-chamber/memory card slot cover latch release (①), slide the battery-chamber/memory card slot cover latch to the position (②), and open the battery-chamber/memory card slot cover towards you (③).
- With the battery's positive and negative terminals oriented correctly, move the orange battery latch (④), and fully insert the battery (⑤).
- Slide the memory card in until it clicks into place (⑥).
- Be careful not to insert the battery or memory card upside-down or backward, as this could cause a malfunction or result in damage to the camera or memory card.
- After closing the cover (⑦), slide the battery-chamber/memory card slot cover latch to the position (⑧), and return the battery-chamber/memory card slot cover latch release to the LOCK position (⑨). Make sure that the orange marks on both latches are not visible.

Notes About Waterproof and Dustproof Performance

See "Notes About Shockproof, Waterproof, and Dustproof Performance" (xiii) for more information.

Formatting a Memory Card

The first time you insert a memory card that has been used in another device into this camera, make sure to format it with this camera.

- **Note that formatting a memory card permanently deletes all images and other data on the memory card.** Be sure to make copies of any images you wish to keep before formatting the memory card.
- Insert the memory card into the camera, and select **Format card** in **Camera settings** (59) in the (setup) menu.

Removing the Battery or Memory Card

Turn the camera off and make sure that the status lamps and screen have turned off, and then open the battery-chamber/memory card slot cover.

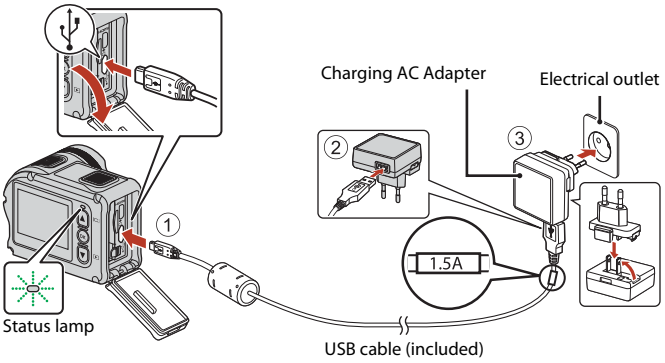
- Move the battery latch to eject the battery.
- Gently push the memory card into the camera to partially eject the memory card.
- Be careful when handling the camera, battery, and memory card immediately after using the camera, as they may be hot.

Memory Cards That Can Be Used

The camera supports microSD, microSDHC, and microSDXC memory cards.

- The camera also supports microSDHC and microSDXC cards compliant with UHS-I.
- Use microSDXC memory cards with an SD Speed Class rating of 6 or faster for recording movies.
  - Use memory cards with a UHS Speed Class rating of 3 or faster when the image size/frame rate is **2160/30p** (4K UHD) or **2160/25p** (4K UHD).
  - When using a memory card with a lower Speed Class rating, movie recording may stop unexpectedly.
- If you use a card reader, make sure that it is compatible with your memory card.
- Contact the manufacturer for information on features, operation, and limitations on use.

Charging the Battery



If a plug adapter* is included with your camera, securely connect it to the Charging AC Adapter. Once the two are connected, attempting to forcibly remove the plug adapter could damage the product.

* The shape of the plug adapter varies according to the country or region in which the camera was purchased. This step can be omitted if the plug adapter comes permanently bonded to the Charging AC Adapter.

- Charging starts when the camera is connected to an electrical outlet while the battery is inserted, as shown in the illustration. The status lamps flash green slowly while the battery is charging.
- When charging is complete, the status lamps turn off. Unplug the Charging AC Adapter from the electrical outlet, and disconnect the USB cable.
  Charging time is about 3 hours for a fully exhausted battery.
- The battery cannot be charged when the status lamps are flashing green quickly, possibly due to one of the reasons described below.
  - The ambient temperature is not suited to charging.
  - The USB cable or Charging AC Adapter is not properly connected.
  - The battery is damaged.

Notes About the USB Cable

- Check the shape and direction of the plugs and do not insert or remove the plugs at an angle.
- Do not use a USB cable other than the UC-E21. Using a USB cable other than the UC-E21 could result in overheating, fire or electric shock.

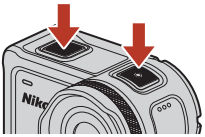
Turning the Camera On While Charging

If you press the movie button or photo button while charging with the Charging AC Adapter, the camera turns on, enabling you to record movies, capture still images, play them back, and operate the setting menus (some menus cannot be operated).

Turning the Camera On or Off

Turning the Camera On

- Press the movie button or photo button to turn on the camera. When the camera turns on, the shooting screen is displayed.
- You can check the battery level on the monitor (📖4) or on the SnapBridge 360/170 app screen.



Turning the Camera Off

- After turning on the camera, it turns off automatically when no operations are performed for 1 minute.
- The camera turns off automatically when no operations are performed for 30 seconds after shooting (default setting). You can configure settings in **Auto off** in **Camera settings** in the (setup) menu (📖59).
- You can turn off the camera by pressing and holding the movie button for at least 3 seconds while the camera is turned on.
- You can also turn off the camera using the following procedure.
  Enter shooting mode ➔ Ⓚ button ➔ Use ▲▼ to select ⏻ (power off) ➔ Ⓚ button

Notes About Turning Off the Camera During Remote Shooting

The camera buttons are disabled when using the SnapBridge 360/170 app to shoot remotely. Before turning off the camera, stop using the remote shooting function. For more information about remote shooting, see SnapBridge 360/170 app online help.

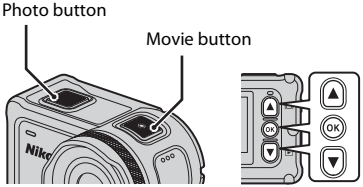
Camera Setup

Setup from a Smartphone or Tablet

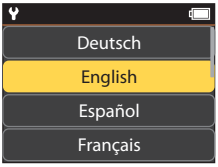
- Before proceeding, install the SnapBridge 360/170 app (iii) and enable Bluetooth and Wi-Fi on your smartphone or tablet (below, "smart device").
- The camera and smart device screens shown in this manual may differ from those of the actual products.

1 Press the movie button or photo button to turn on the camera.

- Use ▲, ▼, and OK on the back side of the camera to select and adjust settings.

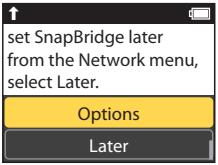


- A language selection dialog will be displayed. Press ▲ or ▼ on the back side of the camera to highlight a language and press OK to select.
- The language can be changed at any time using the **Language** option in **Camera settings** in the (setup) menu (59).
- If no operations are performed for about 30 minutes during setup, the camera automatically turns off.



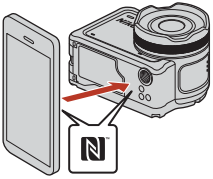
2 When the dialog at right is displayed, press ▲ or ▼ to select **Options**, and press OK.

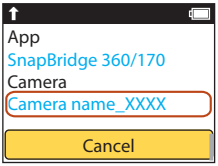
- Press ▼ and scroll down to view the screen at right.
- If you do not wish to use a smart device to configure the camera, select **Later** and press OK (13).



3 Pair (i.e., establish a Bluetooth link between) the camera and the smart device.

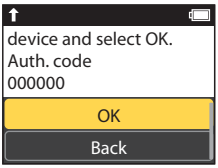
- **Android Devices with NFC Support**
  After checking that NFC is enabled on the smart device, touch the camera N (N-Mark) to the NFC antenna on the smart device to launch the SnapBridge 360/170 app.
  - If the SnapBridge 360/170 download site is displayed, download and install the app before repeating the above steps.
- **iOS Devices and Android Devices Without NFC Support**
  On the camera, press ▲ or ▼ to select **Next**, and press OK. The camera will wait for a connection; launch the SnapBridge 360/170 app on the smart device and follow the on-screen instructions to tap the name of the camera you want to pair with.





4 Check the authentication code.

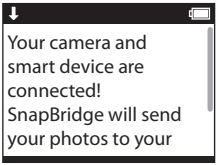
- When the message is displayed prompting you to confirm the authentication code, scroll down the screen to view the authentication code.
- After confirming that the camera and smart device display the same six-digit authentication code, follow the steps below to complete pairing (note that the code may not be displayed in some versions of iOS, but you should follow the steps below even if the code is not displayed).
  - On the camera, press ▲ or ▼ to select **OK**, and press OK.
  - On the smart device, tap **Pairing** (the name of the button varies with the smart device).



Camera

5 Press OK when the dialog at right is displayed.

- When a constant connection between the camera and smart device is established, the dialog at right is displayed.
- If the camera displays **Could not connect.**, press ▲ or ▼ to select **Reconnect** and press OK to return to Step 3. To cancel pairing settings, select **Cancel** and press OK.



6 Follow the on-screen instructions to complete the setup process.

- To record location data with photographs, select **Yes** when prompted and enable the location data features both in the SnapBridge 360/170 app and on the smart device itself (for more information, see the documentation provided with the smart device).
- You can also synchronize the camera clock to the time reported by the smart device by selecting **Yes** when prompted and enabling synchronization in the SnapBridge 360/170 app. If you select **No**, set the camera clock from the menus as described in Step 2 on page 14.
- Setup is complete when the camera returns to the shooting display.
- See page 15 for more information on using SnapBridge.

Where the Use of Wireless Devices Is Prohibited

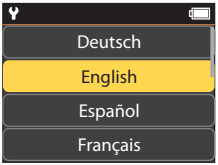
Where the use of wireless devices is prohibited, disable wireless features in the camera network menu by selecting **On** for **Airplane mode**. This will temporarily interrupt the constant connection with the smart device, but the connection is automatically re-established when airplane mode is turned off.

Setup from the Camera Menus

The camera clock can be set manually.

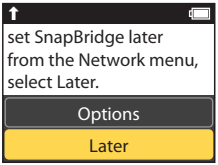
1 Press the movie button or photo button to turn on the camera (📖11).

- A language selection dialog will be displayed. Press ▲ or ▼ on the back side of the camera to highlight a language and press OK to select.
- The language can be changed at any time using the **Language** option in **Camera settings** in the (setup) menu (📖59).



2 When the dialog at right is displayed, press ▲ or ▼ to select **Later**, and press ⓞ.

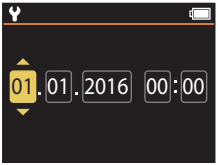
- Press ▼ and scroll down to view the screen at right.
- Select **Yes** when prompted to set the camera clock.



3 Press ▲ or ▼ to choose a date format and press ⓞ.

4 Enter the current date and time and press ⓞ.

- Press ⓞ to highlight items and press ▲ or ▼ to change.
- When the item on the far right is highlighted, press ⓞ to confirm the settings.



5 When prompted, press ▲ or ▼ to highlight **Yes** and press ⓞ.

- The camera exits to the shooting display when setup is complete.

Resetting the Clock

The **Date and time** option in **Camera settings** (📖59) can be used to set the camera clock.

What SnapBridge Can Do for You

The SnapBridge 360/170 app can be used for a variety of tasks once the camera has been paired with your smart device.

Auto Upload

At default settings, pictures will automatically be uploaded to the smart device as they are taken.

- Place the smart device close to the camera and launch the SnapBridge 360/170 app.

Option	Description
Disabling auto upload	Auto upload can be disabled using the **Send while shooting** > **Still images** option in the network menu in **Camera settings** (📖59).
Upload options	Use the **Send while shooting** > **Upload (photos)** item in the network menu in **Camera settings** (📖59) to choose the types of pictures automatically uploaded.
Selecting pictures for upload	You can use (upload) in the camera's playback menu (📖19) to upload pictures that were not automatically uploaded during shooting.
Resizing pictures for upload	Use the SnapBridge 360/170 app to choose the size at which pictures are copied to the smart device. The default size is 2 megapixels.

Notes About Auto Upload

Movies cannot be uploaded using the **Send while shooting** or (upload) options. To upload movies to a smart device, use the SnapBridge 360/170 app.

Wireless Networks

Option	Description
Pairing after camera setup	Select **Connect to device** in the camera network menu, and follow the instructions in "Setup from a Smartphone or Tablet" from Step 2 (📖11).
Unpairing	In the SnapBridge 360/170 app, tap ⚙ in **Connect**, and then tap **End pairing** on the screen that is displayed.
Wi-Fi connection	A Wi-Fi connection is established when using **Remote photography** or **Download selected pictures**. For iOS devices, establish the Wi-Fi connection by selecting the SSID of the camera in **Wi-Fi** in **Settings** on the iOS device. The default setting for **Password** and **Auth./encryp.** can be checked in the ✖ (setup) menu of the camera, in **Camera settings ➔ Network menu ➔ Wi-Fi ➔ Network settings**. Set a new password that is different from the default password.
Number of pairable smart devices	The camera can be paired with up to five smart devices. However, it can connect to only one device at a time.

Re-pairing

Re-pair when pairing again after unpairing.

Select **Connect to device** in the camera network menu, and then follow the instructions on the camera and smart device screen. When **Non-NFC enabled devices: select Next.** is displayed, select **Next** and press the OK button, and then launch the SnapBridge 360/170 app on the smart device. Tap ⚙ in **Connect**, and then tap the product name of the camera you want to pair with on the screen that is displayed. When the authentication code is displayed on the camera screen, follow the instructions in "Setup from a Smartphone or Tablet" from Step 4 (📖12).

Other Options for the SnapBridge 360/170 App

Option	Description
Remote photography	Use the smart device to release the camera shutter.
Change settings remotely	Use the smart device to change settings such as the shooting settings.
Viewing the pictures on the camera	Use the smart device to view and download the pictures on the camera. This option is available even when the camera is off.

- See SnapBridge 360/170 app online help for more information.

Using the Camera

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Playing Back Movies and Still Images 19

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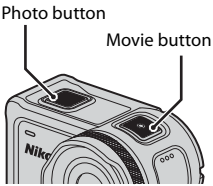
Recording Movies and Shooting Still Images

1 Press the movie button or photo button.

- The camera turns on and the shooting screen is displayed.
- To shoot a series of images, select **Continuous** in the still images menu in the (setup) menu.



2 Press the movie button to record movies, and press the photo button to shoot still images.

- To stop recording a movie, press the movie button again. The recorded movies and captured still images are saved on the memory card.

Notes About Using the Camera Underwater

- When using the camera underwater, attach the underwater lens protector (28). If it is not attached, the images you capture may be blurred.
- Set **Underwater** in **Shooting options** in the (setup) menu (59) to **On**.
- The angle of view (i.e., the area visible in the frame) becomes narrower when underwater.
- Wireless communication is not available when the camera is underwater. Also, the remote control cannot be used.

Turning the Monitor On or Off

- You can turn the monitor on or off by pressing the ▲ (monitor) button while the shooting screen is displayed.
- The monitor automatically turns off 30 seconds after you start recording a movie (default setting). The ▲ (monitor) button cannot be used while recording a movie. You can change the amount of time that elapses before the monitor turns off in **LCD auto off** in **Movie recording** in **Camera settings** in the (setup) menu.

Turning Off the Camera

At the default setting, the camera turns off automatically when no operations are performed for 30 seconds after shooting (10).

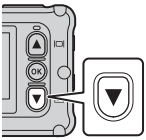
Movies Over 4 GB in Size

When a movie with a file size of more than 4 GB is recorded, the movie is divided into files with a maximum size of 4 GB each.

Playing Back Movies and Still Images

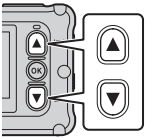
If fingerprints or other stains are on the underwater lens protector, they are captured in images. Use a soft dry cloth to clean the underwater lens protector before shooting.

1 Press the ▼ button.



- If the camera is turned off, turn it on by pressing the movie button or photo button before pressing the ▼ button.
- You can also play back movies and still images by selecting ▶ (playback) on the ⌂ (HOME) screen (📖59).
- The most recently captured still image or the first frame of the most recently recorded movie is displayed on the screen.

2 Press ▲▼ to display the image that you want to play back.

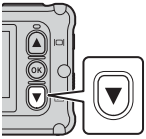


- Press and hold ▲▼ to scroll through the images quickly.
- To play back movies, press the OK button and select ▶ (playback).
- You can edit movies on the camera (📖48).

Transferring Images to a Smart Device

To transfer still images from the camera to a smart device, launch the SnapBridge 360/170 app on the smart device and perform the procedure below on the camera.

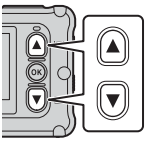
1 Press the ▼ button.



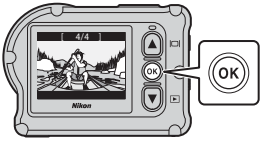
- If the camera is turned off, turn it on by pressing the movie button or photo button before pressing the ▼ button.
- The most recently captured still image or the first frame of the most recently recorded movie is displayed on the screen.

2 Press ▲▼ to display the image that you want to transfer.

- Press and hold ▲▼ to scroll through images quickly.
- Movies cannot be transferred by performing an operation on the camera. To transfer movies to a smart device, use the SnapBridge 360/170 app.

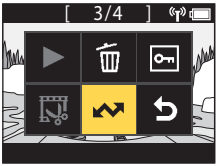


3 Press the ⓞⓚ button to display the playback menu.



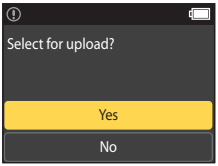
4 Use ▲▼ to select (upload), and press the ⓞⓚ button.

- You can select (delete) in this step to delete the image.



5 Select **Yes**, and press the ⓞⓚ button.

- The image is transferred to the smart device.



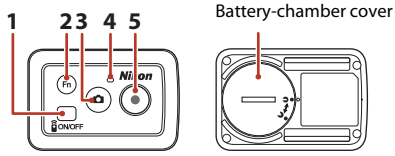
Using Accessories

This section describes the functions of the accessories included with the camera and how to use them.

Using the Remote Control

You can use the ML-L6 Remote Control to record movies, take pictures, and add highlight tags from a distance. You can also use it to turn on the camera.

Parts and Functions of the Remote Control



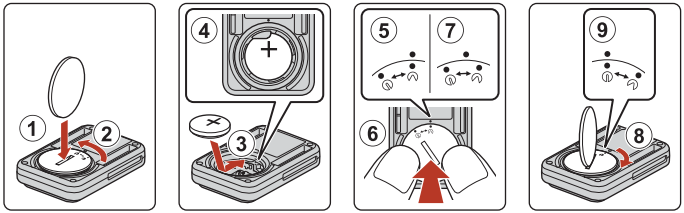
	Part	Function	🕮
1	Power button	Turns on the remote control when pressed, and turns it off when pressed again. Also, turns off the camera.	–
2	Fn button	Performs one of the following operations when pressed while recording a movie: • Adds a highlight tag (default setting) • Switches to high frame rate recording (while recording a movie in add slow motion mode) The operation that is performed when the Fn button is pressed can be specified in **Camera settings** in the ✖ (setup) menu (🕮59).	34, 38
		Switches the connection from the remote control to a paired smart device.	24
3	Photo button	Performs the same function as the photo button on the camera. Turns the camera on and captures a still image.	18
4	Status lamp	Displays the shooting status in conjunction with the status lamps on the camera.	25
5	Movie button	Turns the camera on and starts/stops movie recording.	18

Notes About Using the Remote Control

- The remote control cannot be used underwater.
- Make sure to read "Notes About Waterproof Performance of the Remote Control" (🕮xv) and "Notes About Condensation and Waterproof Performance of the Remote Control" (🕮xv).

Inserting the Battery in the Remote Control

Insert a 3V CR2032 lithium battery.



- Use a coin (①) to turn the battery-chamber cover counterclockwise (②) and open it.
- Insert the battery with the positive side face up (③). Make sure that the battery is firmly inserted at the center of the battery chamber (④).
- Align the mark of the battery-chamber cover with the ● mark of the remote control (⑤), and press the battery-chamber cover with your thumbs (⑥). The battery-chamber cover rotates clockwise slightly and stops (⑦).
- Use a coin to turn the battery-chamber cover clockwise (⑧) to securely lock it. Make sure that the mark of the battery-chamber cover is aligned with the ● mark of the remote control (⑨).
- Make sure that no foreign substance such as lint is caught in the battery-chamber cover. Failure to observe this precaution could impair the waterproof performance and cause water to seep inside the remote control.

Pairing the Camera and Remote Control

Before using the remote control for the first time, it must be paired with the camera. (The remote control included with the camera has already been paired. The settings described below are not necessary.)

* In this manual, "pairing" refers to the establishment of a Bluetooth connection between the camera and remote control.

- The camera can only be paired with one remote control at a time. When the camera is paired to a different remote control, only the most recent pairing information is saved.

1 Enable pairing on the camera.

- Enter shooting mode ➔ Ⓚ button ➔ (setup) icon ➔ Ⓚ button ➔ Camera settings ➔ Ⓚ button ➔ Network menu ➔ Ⓚ button ➔ Connection to remote ➔ Ⓚ button

2 Press and hold (for at least 3 seconds) the power button on the remote control.

- Pairing starts for the camera and remote control. While the process is being performed, the status lamp on the remote control flashes.
- When pairing is complete, the remote control icon is displayed on the shooting screen.
- If a pairing failure message is displayed, perform the procedure again from step 1.

Status Lamps on the Camera

- The status lamps flash green and red alternately while the camera is waiting to be paired.
- When paring is successful, the lamps flash green two times.
- When paring fails, the lamps flash red six times.

Switching Between Smart Device and Remote Control

The camera cannot be operated by both the remote control and a smart device at the same time. Follow the procedure below to switch from one to the other.

Switching from Smart Device to Remote Control

Switch the connection from a smart device to a paired remote control.

1 Select **Camera & remote** in **Choose connection** in **Network menu**.

- The camera connects to the remote control.

2 Turn on the remote control.

- A connection is established between the camera and remote control. The icon is displayed on the shooting screen.

Switching from Remote Control to Smart Device

Switch the connection from the remote control to a paired smart device.

1 Turn on the camera and remote control, then press and hold the Fn button on the remote control.

- The camera connects to the smart device.

2 Launch the SnapBridge 360/170 app on your smart device.

- A connection is established between the camera and smart device. The icon is displayed on the shooting screen.

Using the Wristband (Available Separately)

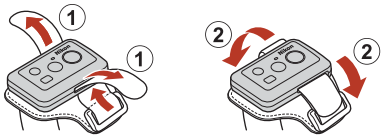
You can use the AA-13 Wristband for Remote Controls to attach the remote control to your wrist.

Attaching the Wristband to Your Wrist

The procedure below describes how to attach the wristband to your left wrist.

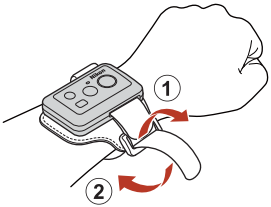
1 Mount the remote control on the wristband.

- Make sure that the hook-and-loop fastener is pressed down firmly to secure the remote control (②).



2 Place the wristband on your wrist.

- Thread the band through the buckle (①), then fold it back on itself and press down firmly to secure it (②).



Notes About Wearing and Using the Wristband

- To prevent the remote control from falling off or malfunctioning, make sure the wristband is securely fastened.
- Do not leave the wristband in water.

Status Lamp on the Remote Control

The status lamp indicates the same status as the status lamps on the camera.

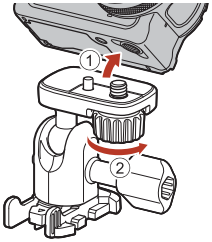
Status	Color	Description
Solid	Red	A movie is being recorded in **Standard movie**, **Movie + photo**, or **Time-lapse movie** mode. A normal speed movie is being recorded in **Add slow motion** mode.
Flashing	Red	A slow motion movie is being recorded in **Add slow motion** mode.
Flashes three times then lights up solid	Red	A movie is being recorded in **Superlapse movie** or **Loop recording** mode.
Lights up briefly then turns off	Green	• A still image is captured. • A highlight tag is added.

Using the Base Adapter and Base Mount

Attaching the base adapter to the camera allows you to use special accessories such as a base mount.

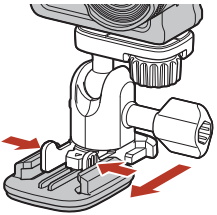
- To increase the adhesive strength, attach the base mount for 24 hours or longer before using the camera.

1 Align the camera screw with the tripod socket of the camera (①), and tighten the screw knob (②).

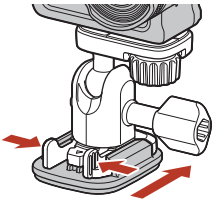


2 Attach the buckle of the base adapter to the base mount.

- While holding the two protrusions of the buckle at the same time, slide the buckle until it clicks into place.

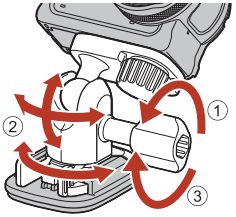


- When removing the buckle, hold the two protrusions at the same time, and slide them in the direction opposite of that for attachment.



3 Adjust the camera angle.

- Loosen the plate lock (①), set the camera angle (②), and then tighten the lock (③).



4 Make sure that there are no foreign substances on the surface to which the base mount will be attached.

- If there are foreign substances such as dust or water, remove them.

5 Peel off the release liner from the back of the base mount, and firmly press the base mount so that the entire surface is attached.

Base Mount

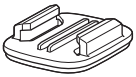
The base mount is an accessory that is used to easily attach and detach a base adapter mounted with the camera.

Attach the base mount to places where you want to mount the camera.

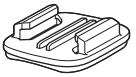
Use the flat or curved type depending on the surface to which the base mount will be attached.

The base mount is not designed for use on vehicles. Do not attach it on vehicles.

- **Base mount (flat):**
  Use to attach to flat surfaces.



- **Base mount (curved):**
  Use to attach to curved surfaces such as helmets.



Notes About Using the Base Adapter and Base Mount

- Do not use the base adapter and base mount so that they are subjected to sudden loads, such as directly attaching them to skis or snowboards. Subjecting them to sudden loads will damage the accessories or detach the base mount.
- You cannot reuse a base mount after it has been attached and then removed.
- The surface may be damaged or the paint may peel off depending on the material to which the base mount is attached. Care should be taken when attaching the base mount.
- The base mount is not suited for attachment to surfaces made of rough material such as wood or concrete.

Using the Lens Protector or Underwater Lens Protector

- **Lens protector***
  Protects the lens from impact from the front.
- **Underwater lens protector**
  Protects the lens when using the camera underwater, or in situations where debris such as gravel may strike the lens.

* The lens protector is attached to the camera at the time of purchase.

Notes About Using the Camera Underwater

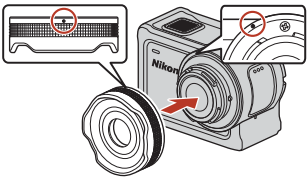
When using the camera underwater, attach the underwater lens protector. If it is not attached, the images you capture may be blurred.

Attaching the Lens Protector or Underwater Lens Protector

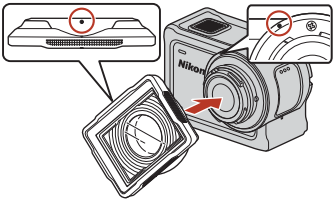
Notes About Attaching the Underwater Lens Protector

Use a soft cloth or air duster to remove foreign substances such as water or dust from the camera or underwater lens protector. If the camera or underwater lens protector is still wet when the underwater lens protector is attached, this could cause condensation.

1 Align the mark on the lens protector with the one on the camera, and mount the lens protector on the camera.



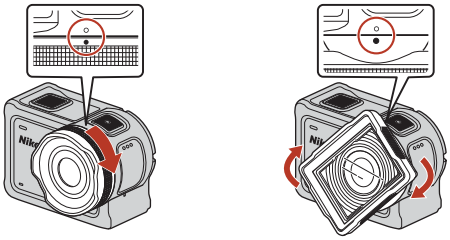
Lens protector



Underwater lens protector

2 Turn the lens protector clockwise to secure it.

- Turn the lens protector until it clicks into place and the mark on the lens protector is aligned with the mark on the top of the camera (O).
- To attach the underwater lens protector, press it against the camera while turning.

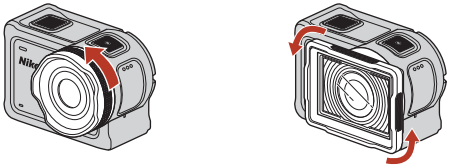


Notes About Checking the Attached Lens Protector

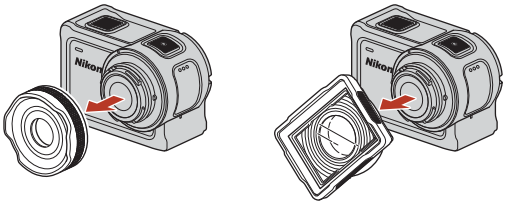
Make sure that the lens protector is securely attached.

Removing the Lens Protector or Underwater Lens Protector

1 Turn the lens protector counterclockwise.



2 Pull the lens protector toward you to remove it.

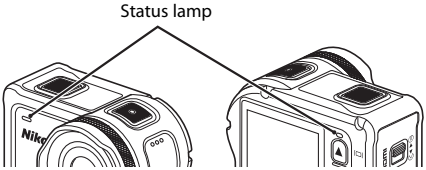


Status Lamps

The status lamps indicate the status of the camera.

Functions of the Front and Back Status Lamps

- The front and back status lamps indicate the same status.
- You can adjust the brightness of the status lamps (76).



Status	Color	Description
Solid	Green	• The camera is connected to a TV via an HDMI cable. • The camera is recognized by the computer. • Still images are being captured.
	Red	A movie is being recorded.
Flashing	Green	• The battery is charging. The lamps turn off when charging is complete. • The camera is connected to a computer via a USB cable. • Pairing is complete.
	Red	• A movie is being recorded in add slow motion mode. • The memory card is being accessed (data is being saved or the memory card is being initialized). • The firmware is being updated. • Pairing failed.
	Green and red	The camera is waiting to be paired (the lamps flash green and red alternately).
Flashing quickly	Green	The battery cannot be charged (error).
	Red	The temperature inside the camera is too hot. The camera will turn off automatically. Wait until the camera temperature has cooled before resuming use.
Lights up briefly	Orange	The lamps light up in orange for a moment when a highlight tag is added, or when the remote control is turned on.

Movies

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Operations During Movie Recording

Notes About Movie Recording

Notes About Memory Cards

Use microSDXC memory cards with an SD Speed Class rating of 6 or faster for recording movies.

- Use memory cards with a UHS Speed Class rating of 3 or faster when the image size/frame rate is **2160/30p** (4K UHD) or **2160/25p** (4K UHD).
- When using a memory card with a lower Speed Class rating, movie recording may stop unexpectedly.

Notes About Saving Images or Movies

The status lamps flash red slowly while images or movies are being saved. **Do not open the battery-chamber/memory card slot cover or remove the battery or memory card** while an indicator is flashing. Doing this could result in loss of data, or in damage to the camera or the memory card.

Camera Temperature

- The camera may become hot when recording movies for an extended period of time or when the camera is used in a hot area.
- If the inside of the camera becomes extremely hot when recording movies, an alert message is displayed on the screen for about five seconds and the status lamps flash red quickly. Then, the camera automatically turns off.
  Leave the camera off until the inside of the camera has cooled.

Notes About Recording at Low Temperature

When the battery temperature is below 0°C (32°F), movies with the size/frame rate set to **2160/30p**, **2160/25p**, **HS 1080/4×**, or **HS 720/8×** cannot be recorded.

- If the battery temperature is below 0°C (32°F) before you start recording, the size/frame rate of the movie switches to **1080/30p** or **1080/25p**.
- If the size/frame rate of the movie is set to **2160/30p**, **2160/25p**, **HS 1080/4×**, or **HS 720/8×** and the battery temperature drops to below 0°C (32°F) while recording, the camera stops recording and automatically turns off. The recorded movie is saved.

Notes About Recorded Movies

- The following phenomena may be seen in the monitor while recording movies. These phenomena are saved in the recorded movies.
  - Banding may occur in images under fluorescent, mercury-vapor, or sodium-vapor lighting.
  - Subjects that move quickly from one side of the frame to the other, such as a moving train or car, may appear skewed.
  - The entire movie image may be skewed when the camera is panned.
  - Lighting or other bright areas may leave residual images when the camera is moved.
- Depending on the distance to the subject, colored stripes may appear on subjects with repeating patterns (fabrics, lattice windows, etc.) during movie recording and playback. This occurs when the pattern in the subject and the layout of the image sensor interfere with each other; it is not a malfunction.

Notes About Vibration Reduction During Movie Recording

When **Electronic VR** (📖66) in **Movie** is set to **On**, the angle of view (i.e., the area visible in the frame) becomes narrower during movie recording.

Notes About Operating the Camera Buttons

If the camera buttons are pressed while recording a movie, the sound of the button operation may be recorded.

Movie Frame

- The area that is captured in a movie varies depending on the **Movie options** settings in **Movie** in the (setup) menu.
- If **Photo info** in **Monitor settings** (📖72) in **Camera settings** in the (setup) menu is set to **Movie frame+auto info**, you can confirm the area that will be captured in a movie before you start recording.

Movies Over 4 GB in Size

When a movie with a file size of more than 4 GB is recorded, the movie is divided into files with a maximum size of 4 GB each.

Capturing Still Images During Movie Recording

When recording a movie, you can save one frame as a still image by pressing the photo button on the remote control while the icon for still image shooting is displayed. Movie recording continues while the still image is being saved.

- The size of captured still images is 2 megapixels (1920 × 1080).

Notes About Capturing Still Images During Movie Recording

- Still images can be captured when using the movie modes indicated below.
  - **Standard movie** or **Loop recording** (when **Movie options** is set to **1080/30p** or **1080/60p**, or **1080/25p** or **1080/50p**)
  - **Superlapse movie**
- Still images cannot be saved during movie recording when the remaining movie recording time is less than five seconds.
- The frames of a movie that were recorded when a still image was being captured may not play back smoothly.

Adding Tags During Movie Recording (Highlight Tags)

You can add tags while recording a movie by pressing the Fn button on the remote control (default setting). You can use the tags as a guide to quickly find a particular scene when playing back the movie (🕮46), or you can easily create a highlight movie based around the tags. The tags can also be used as a guide when editing the movie in the camera (🕮48).

Notes About Using the Fn Button

Make sure that **Insert highlight tag** is selected for the **Remote Fn button** (🕮76) setting in **Camera settings** in the (setup) menu.

Notes About Restrictions for Adding Tags During Recording

- Tags cannot be added when recording a superlapse movie or time-lapse movie.
- A maximum total of 30 tags can be added to each movie recording.

Using the Camera Buttons During Movie Recording

You can configure settings that enable the camera buttons to capture still images or add tags during movie recording (🕮75).

Selecting the Movie Mode

The movie modes described below are available when recording movies.

- **Standard movie (📖37)**
  In this mode, a normal movie is recorded using the settings configured in the (setup) menu (📖59).
- **Add slow motion (📖38)**
  In this mode, you can switch to slow motion recording (high frame rate recording) while recording a movie, using the Fn button on the remote control. The portions of the movie that are recorded in slow motion are played back at a slower speed, adding a dramatic effect.
- **Movie + photo (📖40)**
  In this mode, still images are captured at specified intervals while recording a movie.
- **Superlapse movie (📖41)**
  In this mode, a fast motion movie (**1080/30p** or **1080/25p**) is recorded. This is suited for speeding up the motion of a subject that is recorded while the camera is moving.
- **Loop recording (📖42)**
  After recording a movie for a specified time, the camera continues recording the movie while deleting the recorded movie data from the beginning. The most recent data is saved on the memory card, resulting in a movie of the specified length. Although five separate movie files are recorded, they are played back as a single movie on the camera.
- **Time-lapse movie (📖44)**
  In this mode, still images are captured at a certain interval to record a fast motion movie that shows the changes in a subject that happen slowly over time.

Notes About Movie Mode

There are some modes that cannot be used together with other settings (📖51).

Remote Control Operations

- If you press the Fn button on the remote control while recording a movie, you can add a highlight tag to the movie or switch to high frame rate recording. The available function varies depending on the movie mode.

Movie mode	Add highlight tag	Switch to high frame rate recording
Standard movie	✔	-
Add slow motion	✔	✔
Movie + photo	✔	–
Superlapse movie	–	–
Loop recording	✔	–
Time-lapse movie	–	–

- Configure the **Remote Fn button** (📖76) setting in **Camera settings** in the (setup) menu.

Standard Movie

In this mode, a normal movie is recorded using the settings configured in the (setup) menu (59).

Enter shooting mode ➔ OK button ➔ (setup) icon ➔ OK button ➔ Movie ➔ OK button ➔ Movie mode ➔ OK button ➔ Standard movie ➔ OK button

Recording in Standard Movie Mode

1 Press the movie button to start recording.

- The camera starts recording a movie.

2 Press the movie button to end recording.

Operations Available When Recording in Standard Movie Mode

You can add highlight tags or capture still images (34).

Add Slow Motion

In this mode, you can switch to slow motion recording (high frame rate recording) while recording a movie, using the Fn button on the remote control. The portions of the movie that are recorded in slow motion are played back at a slower speed, adding a dramatic effect. Before using this mode, set the **Remote Fn button** setting to **Add slow motion** (76) in **Camera settings** in the (setup) menu.

Enter shooting mode ➔ OK button ➔ (setup) icon ➔ OK button ➔ Movie ➔ OK button ➔ Movie mode ➔ OK button ➔ Add slow motion ➔ OK button

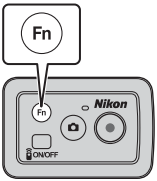
Recording in Add Slow Motion Mode

1 Press the movie button to start recording.

- The camera starts recording a movie.
- The frame rate is displayed at the bottom center of the screen.

2 Press the Fn button on the remote control when you want to start recording in slow motion.

- The camera switches to high frame rate recording.



3 Press the Fn button on the remote control when you want to stop recording in slow motion.

4 Press the movie button to end recording.

Notes About Add Slow Motion Mode

- Still images cannot be captured by pressing the photo button.
- Audio cannot be recorded for the portions of the movie that are recorded in slow motion.

Recording Time and Playback Time

The frame rate of add slow motion varies depending on the **Movie options** setting.

- If **1080/30p** or **1080/60p** is set, the camera switches to slow motion recording with a size/frame rate of 1080/120p.
- If **1080/25p** or **1080/50p** is set, the camera switches to slow motion recording with a size/frame rate of 1080/100p.

For example, if you record a movie in **Add slow motion** with the **1080/30p** setting, the camera records the movie four times faster than normal, and the movie plays back four times slower than normal.

Operations Available When Recording in Add Slow Motion Mode

You can add highlight tags (📖34).

Movie + Photo

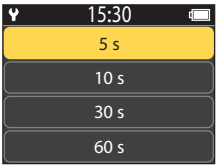
In this mode, still images are captured at specified intervals while recording a movie.

Enter shooting mode ➔ Ⓚ button ➔ (setup) icon ➔ Ⓚ button ➔ Movie ➔ Ⓚ button ➔ Movie mode ➔ Ⓚ button ➔ Movie + photo ➔ Ⓚ button

Recording in Movie + Photo Mode

1 Use ▲▼ to select the shooting interval for still images, and press the Ⓚ button.

- You can select **5 s** (default setting), **10 s**, **30 s**, or **60 s** for the interval at which to capture still images.



2 Press the movie button to start recording.

- The camera starts recording a movie. At the same time, still images are captured at specified intervals.

3 Press the movie button to end recording.

Notes About Movie + Photo Mode

Still images cannot be captured by pressing the photo button.

Operations Available When Recording in Movie + Photo Mode

You can add highlight tags (📖34).

Superlapse Movie

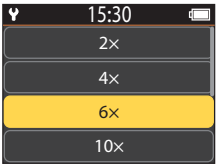
In this mode, a fast motion movie (**1080/30p** or **1080/25p**) is recorded. This is suited for speeding up the motion of a subject that is recorded while the camera is moving.

Enter shooting mode ➔ OK button ➔ (setup) icon ➔ OK button ➔ Movie ➔ OK button ➔ Movie mode ➔ OK button ➔ Superlapse movie ➔ OK button

Recording in Superlapse Movie Mode

1 Use ▲▼ to select the recording speed of the fast motion movie.

- Select **2×**, **4×**, **6×** (default setting), **10×**, or **15×**.
- When **6×** (default setting) is set, a movie that is recorded for six minutes is played back as a superlapse movie that is one minute long.



2 Press the movie button to start recording.

- The camera starts recording a superlapse movie.

3 Press the movie button to end recording.

Notes About Superlapse Movie Mode

You cannot add highlight tags.

Operations Available When Recording in Superlapse Movie Mode

You can capture still images (📖34).

Loop Recording

After recording a movie for a specified time, the camera continues recording the movie while deleting the recorded movie data from the beginning. The most recent data is saved on the memory card, resulting in a movie of the specified length. Although five separate movie files are recorded, they are played back as a single movie on the camera.

- The length of one file varies depending on the specified time.

Specified time	Length of one file
5 min	1 min
10 min	2 min
30 min	6 min
60 min	12 min

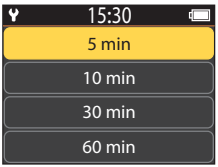
- If the recording time exceeds the specified time and reaches the length of one file, the camera continues recording while deleting the first file.
- If the length of the last file does not reach the length of one file, it is saved as-is.
  Example: If you recorded for 5 min and 30 s with a specified time of **5 min**
  Five 1-min files and one 30-s file are saved (up to six files).

Enter shooting mode ➔ Ⓚ button ➔ (setup) icon ➔ Ⓚ button ➔ Movie ➔ Ⓚ button ➔ Movie mode ➔ Ⓚ button ➔ Loop recording ➔ Ⓚ button

Recording in Loop Recording Mode

1 Use ▲▼ to select the length of the movie to record.

- You can select **5 min** (default setting), **10 min**, **30 min**, or **60 min** for the length of the movie to record.
- If **2160/30p**, **2160/25p**, **HS 1080/4×**, or **HS 720/8×** is selected for **Movie options**, **60 min** cannot be selected.



2 Press the movie button to start recording.

- The camera starts loop recording.

3 Press the movie button to end recording.

Notes About Editing Movies

Movies recorded in loop recording mode cannot be edited on the camera.

Operations Available When Recording in Loop Recording Mode

You can add highlight tags or capture still images (📖34).

Time-lapse Movie

In this mode, still images are captured at a certain interval to record a fast motion movie that shows the changes in a subject that happen slowly over time.

- When **NTSC** is selected for **NTSC/PAL** in **Movie** in the (setup) menu, 300 frames are captured. When **PAL** is selected, 250 frames are captured.

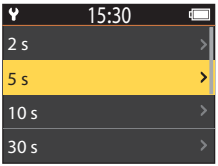
Option	Shooting interval	Time required for shooting	
		NTSC	PAL
2 s	2 seconds	10 minutes	8 minutes 20 seconds
5 s (default setting)	5 seconds	25 minutes	20 minutes 50 seconds
10 s	10 seconds	50 minutes	41 minutes 40 seconds
30 s	30 seconds	2 hours 30 minutes	2 hours 5 minutes
Night sky *	30 seconds	2 hours 30 minutes	2 hours 5 minutes

* Suited for capturing star trails.

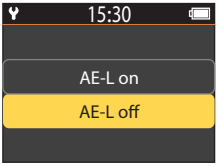
Enter shooting mode ➔ OK button ➔ (setup) icon ➔ OK button ➔ Movie ➔ OK button ➔ Movie mode ➔ OK button ➔ Time-lapse movie ➔ OK button

Recording in Time-lapse Movie Mode

1 Use ▲▼ to select the desired option, and press the OK button.



2 Use ▲▼ to specify whether or not to lock the exposure (brightness), and press the OK button (except when **Night sky** is selected).



- When **AE-L on** is selected, the auto exposure (AE) setting is locked when the first frame is captured, and the remaining frames are captured using the same setting. **AE-L off** is recommended in situations such as at dusk, where the lighting is expected to change dramatically while recording.

3 Use a tripod to stabilize the camera.

4 Press the movie button to start recording.

- The camera starts recording a time-lapse movie.

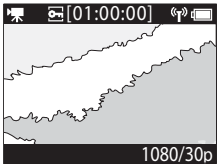
5 Press the movie button to end recording.

Notes About Time-lapse Movie Mode

- If the battery is not sufficiently charged, it may not be possible to capture all of the images.
- Use a tripod or similar equipment to stabilize the camera when recording a time-lapse movie.
- Audio cannot be recorded.
- You cannot add highlight tags or capture still images.

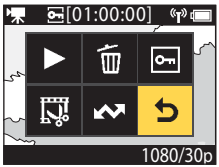
Operations During Movie Playback

To enter playback mode and display the playback screen (📖5), press ▼ (▶ (playback)) while the shooting screen (📖4) is displayed, or select ▶ (playback) on the ⌂ (HOME) screen and press the OK button.



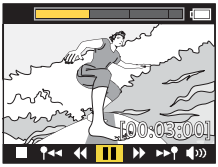
Playback screen

When you press the OK button on the playback screen, the playback menu is displayed.



Playback menu

To play back a movie, select ▶ (movie playback) on the playback menu screen and press the OK button. While playing back movies, the operations described below can be performed by using ▲▼ to select a control and then pressing the OK button.



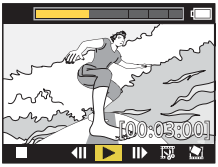
Screen during playback

Movie playback time bar	Shows the movie playback progress. If tags have been added to the movie, a mark (vertical line) is displayed at each tagged point.
■ (stop)	Exit the movie that is playing.
⏮ (skip to previous tag)	Go back to the previous tag.
◀◀ (rewind)	Rewind the movie. The rewind speed is changed to 2×, 4×, and 8× each time the OK button is pressed. The speed returns to normal after 8×.
❚❚ (pause)	Pause movie playback. When the movie is paused, the icons displayed on the bottom of the screen change, enabling you to rewind or advance frame by frame, edit the movie, or save the displayed frame as a still image (📖47).

(fast-forward)	Fast-forward the movie. The fast-forward speed is changed to 2×, 4×, and 8× each time the OK button is pressed. The speed returns to normal after 8×.
(skip to next tag)	Go to the next tag.
(volume)	Display the volume adjustment screen. Use ▲▼ to adjust the volume.

Operations During Pause

While a movie paused, the operations described below can be performed by using ▲▼ to select a control and then pressing the OK button.



■ (stop)	Return to the playback screen (📖5).
(single frame rewind)	Rewind the displayed movie one frame. When the OK button is held down, the camera continuously rewinds.
▶ (playback)	Play back the movie starting from the displayed frame.
(single frame advance)	Advance the displayed movie one frame. When the OK button is held down, the camera continuously advances.
(edit)	Enter the movie edit mode (📖48).
(save frame)	Save the displayed frame as a still image. Still images can be saved while viewing a movie on a TV (📖55).

Editing Movies

The desired portion of a recorded movie can be saved as a separate file.

Notes About Movie Editing

When editing movies, use a sufficiently charged battery to prevent the camera from turning off during editing. If the battery level is low ( ), you cannot edit movies.

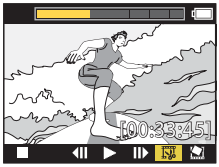
Movies with Highlight Tags

If the movie has highlight tags and you select the (movie edit) menu, the movie edit selection screen is displayed. When **Create movie digest** is selected, the 2.5 seconds before and after each tag are extracted and saved together as a separate highlight movie with sound.

Enter playback mode ➔ select the movie you want to edit ➔ OK button ➔ (movie edit)

Entering the Movie Edit Mode

When you pause the movie during playback, the (edit) icon is displayed. You can also edit the movie by selecting this icon and pressing the OK button (47).

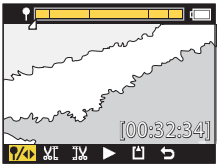


(tag)	Displayed at the top left of the screen when tags are set as the method for selecting the start and end point in (move trim position).
Movie playback time bar	Displayed at the top of the screen, this shows the movie length and status while the movie is being edited. • If tags have been added to the movie, a mark (vertical line) is displayed at each tagged point. • The portion between the editing start point and end point is shown in yellow.

(move trim position)	Change the method for selecting the start point and end point. **Set to tagged point** Move the start or end point cursor to a point that is tagged on the movie playback time bar. **Set manually** Move the start or end point cursor to any point that you choose on the movie playback time bar.
(set start point)	Select the start point of the movie.
(set end point)	Select the end point of the movie.
▶ (preview)	Play back the edited movie from the start point to the end point.
(save)	Save the edited movie and return to the playback screen.
(back)	Exit editing and return to the playback screen. If you select this icon during editing, the changes that you made are canceled.
Movie playback time after editing	Display the movie playback time after editing.

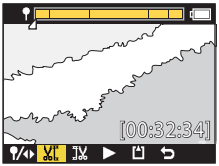
1 Use ▲▼ to highlight (move trim position), press the OK button, and specify the method for selecting the start point and end point (either set manually or to a tagged point).

- When using tagged points to select the start and end point, the icon is displayed at the top left of the screen.



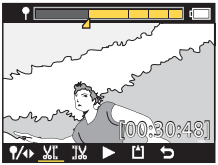
2 Use ▲▼ to highlight (set start point), and press the OK button.

- The highlight indicates that (set start point) is selected.



3 Use ▲▼ to select the start point of the movie you want to extract, and press the ⓞ button.

- The portion before the start point will be trimmed.
- When the start point is applied, the highlight indicates that ✂ (set end point) is selected.



4 Use ▲▼ to select the end point of the movie you want to extract, and press the ⓞ button.

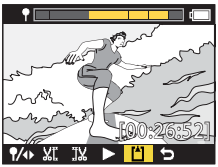
- The portion after the end point will be trimmed.
- When the end point is applied, the highlight indicates that ▶ (preview) is selected.

5 Press the ⓞ button.

- The extracted movie is played back.

6 Use ▲▼ to select 💾 (save), and press the ⓞ button.

- The extracted movie is saved and the camera returns to the playback screen.



Edited Movies

- The file names for edited movies start with "FSCN" (📖104).
- Edited movies cannot be edited again.

Functions That Cannot Be Used Together When Shooting

There are some functions that cannot be used together with other settings.

Restricted function	Setting	Description
Electronic VR	Movie mode	• **Electronic VR** is fixed at **On** when **Superlapse movie** is selected. • **Electronic VR** is fixed at **Off** when **Time-lapse movie** or **Add slow motion** is selected.
	Movie options	**Electronic VR** is available only when **Movie options** is set to **1080/30p**, **1080/60p**, **1080/25p**, or **1080/50p**.
Shooting options	Underwater	The **White balance** and **Color options** settings are disabled when **Underwater** is set to **On**.
	Color options	**White balance** is fixed at AUTO Auto when **Color options** is set to **Monochrome**.
Movie options	Movie mode	• Only one of the following **Movie options** can be selected when **Movie + photo** or **Add slow motion** is selected, or when the length of the movie to record is set to **60 min** for **Loop recording**. **1080/30p** or **1080/60p** for **NTSC**, or **1080/25p** or **1080/50p** for **PAL**. • When **Superlapse movie** is selected, **Movie options** is fixed at **1080/30p** for **NTSC** or **1080/25p** for **PAL**. • When **Time-lapse movie** is selected, **Movie options** is fixed at **2160/30p** for **NTSC** or **2160/25p** for **PAL**.
	Electronic VR	**2160/30p**, **2160/25p**, **HS 1080/4×**, or **HS 720/8×** cannot be selected when **Electronic VR** is set to **On**.

Restricted function	Setting	Description
Capturing still images during movie recording	Movie mode	• Still images cannot be captured by pressing the photo button while recording a movie in **Movie + photo**, **Time-lapse movie**, or **Add slow motion** mode. • While recording a movie in **Standard movie** or **Loop recording** mode, still images can be captured only when **Movie options** is set to **1080/30p**, **1080/60p**, **1080/25p**, or **1080/50p**.
Adding highlight tags	Movie mode	Highlight tags cannot be added when recording a movie in **Superlapse movie** or **Time-lapse movie** mode.

Connecting the Camera to a TV or Computer

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Transferring Images to a Computer (KeyMission 360/170 Utility).....56

Utilizing Images

In addition to using the SnapBridge 360/170 app (iii) to enjoy the captured images, you can also utilize the images in various ways by connecting the camera to the devices described below.

Viewing Images on a TV

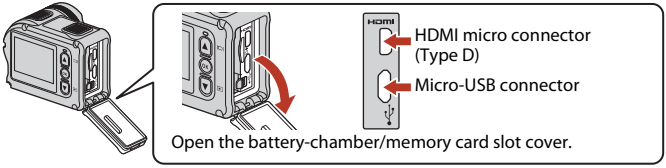
Images and movies captured with the camera can be viewed on a TV.
Connection method: Connect a commercially available HDMI cable to the TV's HDMI input jack.

Transferring Images to a Computer (KeyMission 360/170 Utility)

You can transfer images and movies to a computer for viewing and editing.
Connection method: Connect the camera to the computer's USB port with the USB cable.

- Before connecting to a computer, install KeyMission 360/170 Utility on the computer.

Notes About Connecting Cables to the Camera

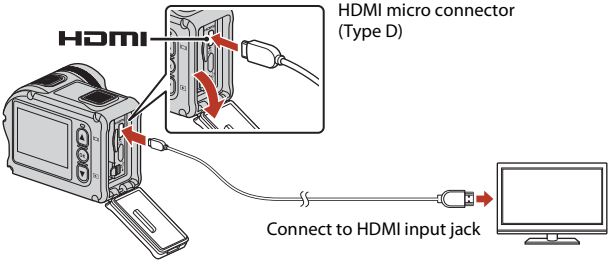


- Make sure to turn the camera off before connecting or disconnecting cables. Check the shape and direction of the plugs and do not insert or remove the plugs at an angle.
- Make sure that the camera battery is sufficiently charged. If the EH-62F AC Adapter (available separately) is used, this camera can be powered from an electrical outlet. Do not, under any circumstances, use an AC adapter other than the EH-62F. Failure to observe this precaution could result in overheating or damage to the camera.
- For information about the connection methods and subsequent operations, refer to the documentation included with the device in addition to this document.

Viewing Images on a TV

1 Turn off the camera (18) and connect it to the TV.

- Check the shape and direction of the plugs and do not insert the plugs at an angle.



2 Set the TV's input to external video input.

- See the documentation provided with your TV for details.

3 Turn on the camera.

- The camera automatically enters playback mode, and images are displayed on the TV.
- The camera screen does not turn on.
- To play back a movie that is recorded at a size/frame rate of **2160/30p** or **2160/25p** in 4K UHD resolution, use a TV and HDMI cable that support 4K.

Transferring Images to a Computer (KeyMission 360/170 Utility)

Installing KeyMission 360/170 Utility

KeyMission 360/170 Utility is free software that enables you to transfer images and movies to your computer for viewing and editing.

You can also change the camera's settings.

To install KeyMission 360/170 Utility, download the latest version of the KeyMission 360/170 Utility installer from the following website and follow the on-screen instructions to complete installation.

KeyMission 360/170 Utility: http://downloadcenter.nikonimglib.com

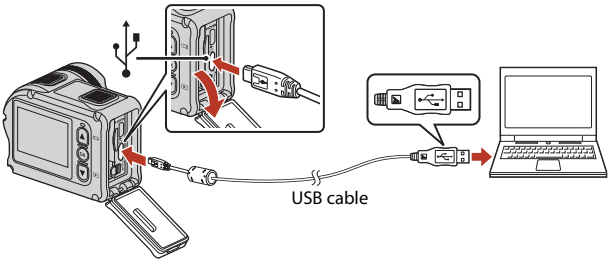
For system requirements and other information, see the Nikon website for your region.

Transferring Images to a Computer

1 Prepare a memory card that contains images.

You can use any of the methods below to transfer images from the memory card to a computer.

- **SD memory card slot/card reader**: Insert the memory card into the card slot of your computer or the card reader (commercially available) that is connected to the computer.
- **Direct USB connection**: Turn the camera off and ensure that the memory card is inserted in the camera. Connect the camera to the computer using the USB cable. The camera automatically turns on.



Notes About Connecting the Camera to a Computer

Disconnect all other USB-powered devices from the computer. Connecting the camera and other USB-powered devices to the same computer simultaneously may cause a camera malfunction or excessive power supply from the computer, which could damage the camera or memory card.

2 Start KeyMission 360/170 Utility.

- Images saved in the camera are displayed.
- If the memory card contains a large number of images, it may take a while for KeyMission 360/170 Utility to start. Wait until KeyMission 360/170 Utility starts.

3 Select the images that you want to transfer, and click ⭳.

- When the storage destination of the images is selected on the screen that is displayed, image transfer begins.

4 Terminate the connection.

- If you are using a card reader or card slot, choose the appropriate option in the computer operating system to eject the removable disk corresponding to the memory card and then remove the memory card from the card reader or card slot.
- If the camera is connected to the computer, turn the camera off and disconnect the USB cable.

Notes About Connecting the USB Cable

Operation is not guaranteed if the camera is connected to the computer via a USB hub.

Using KeyMission 360/170 Utility

See the KeyMission 360/170 Utility online help for more information.

ViewNX-i

Free software ViewNX-i also enables you to transfer images and movies to your computer.

Download the software from our Download Center at the URL below.

http://downloadcenter.nikonimglib.com

Using the Menu

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Menu Operations

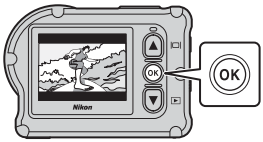
You can configure settings in the menus listed below.

- Movie menu[1, 2]
- Still images menu[1]
- Shooting options menu[1]
- Camera settings menu[1]
- Playback menu[3]

[1] These menus appear on the (setup) menu screen.
[2] Menu icons and available setting options vary depending on the shooting mode.
[3] This menu appears when the OK button is pressed while the playback screen is displayed.

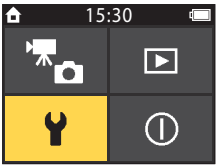
Follow the procedure below to configure settings in the (setup) menu.

1 Press the OK button while the shooting screen is displayed.



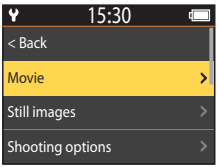
- The (HOME) screen is displayed.
- To return to the shooting screen while configuring settings in the menus, press the movie button or photo button.

2 Use ▲▼ to select (setup), and press the OK button.



- The (setup) menu screen is displayed.

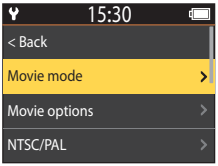
3 Use ▲▼ to select the menu item that you want to configure, and press the OK button.



- Use the same procedure in lower-level menus to select and configure items.
- To return to the previous screen, select **< Back** and press the OK button.

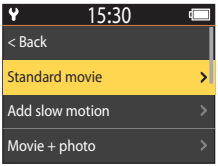
4 Use ▲▼ to select a menu option and press the ⓞ button.

- Certain menu options cannot be set depending on the current shooting mode or the state of the camera.



5 Use ▲▼ to select a setting and press the ⓞ button.

- The setting you selected is applied.



Menu Lists

The Movie Menu

Enter shooting mode ➔ Ⓚ button ➔ (setup) icon ➔ Ⓚ button ➔ Movie ➔ Ⓚ button

Option	Default setting		🕮
Movie mode	**Standard movie**		64
Movie options*	**NTSC**	**1080/30p**	65
	PAL	**1080/25p**	
NTSC/PAL	**NTSC**		66
Electronic VR	**Off**		66
Wind noise reduction	**Off**		67

* The size and frame rate that can be selected in **Movie options** varies depending on the **NTSC/PAL** setting.

The Still Images Menu

Enter shooting mode ➔ Ⓚ button ➔ (setup) icon ➔ Ⓚ button ➔ Still images ➔ Ⓚ button

Option	Default setting	🕮
Still images	**Single**	68

The Shooting Options Menu

Enter shooting mode ➔ Ⓚ button ➔ (setup) icon ➔ Ⓚ button ➔ Shooting options ➔ Ⓚ button

Option	Default setting	🕮
Underwater	**Off**	69
White balance	**AUTO** Auto	69
Color options	**Standard**	70
Exposure compensation	**0.0**	70
Restore default settings	**No**	70

The Camera Settings Menu

Enter shooting mode ➔ Ⓚ button ➔ (setup) icon ➔ Ⓚ button ➔ Camera settings ➔ Ⓚ button

Option	🕮
Date and time	71
Monitor settings	72
Sound settings	73
Auto off	74
Format card	75
Movie recording	75
Remote Fn button	76
Flip vertically	76
LED brightness	76
Charge by computer	77
Language	78
Location data	78
Reset all	79
Conformity marking	79

Option	🕮
Firmware version	79
Network menu	80

The Playback Menu

Enter shooting mode ➔ Press the ▼ button (playback mode) ➔ ⓞ button

Option	🕮
▶ Movie playback	85
Movie edit	85
Delete	85
Upload	86
Protect	86
Back	86

The Movie Menu

Movie Mode

Enter shooting mode ➔ ⓞ button ➔ (setup) icon ➔ ⓞ button ➔ Movie ➔ ⓞ button ➔ Movie mode ➔ ⓞ button

Select the mode for movie recording (📖35).

Option (Movie mode)	Description		📖
Standard movie	Record a normal movie using the settings in the movie menu.		37
Add slow motion	While you are recording a movie, you can switch to slow motion recording (high frame rate recording) using the Fn button on the remote control.		38
Movie + photo	Capture still images at specified intervals while recording a movie.	Set the shooting interval for still images. You can select **5 s** (default setting), **10 s**, **30 s**, or **60 s**.	40
Superlapse movie	Record a fast motion movie.	Set the recording speed. You can select **2×**, **4×**, **6×** (default setting), **10×**, or **15×**.	41
Loop recording	After recording a movie for a specified time, the camera continues recording the movie while deleting the recorded movie data from the beginning (the movie is recorded as five separate files).	Set the length of the movie to record. You can select **5 min** (default setting), **10 min**, **30 min**, or **60 min**.	42
Time-lapse movie	Capture still images at specified intervals and save them to create a fast motion movie.	Set the interval at which to capture still images. You can select **2 s***, **5 s*** (default setting), **10 s***, **30 s***, or **Night sky**.	44

* You can select whether to lock exposure (**AE-L on** or **AE-L off** (default setting)).

Movie Options

Enter shooting mode ➔ ⓞ button ➔ (setup) icon ➔ ⓞ button ➔ Movie ➔ ⓞ button ➔ Movie options ➔ ⓞ button

Select the size and frame rate to use when recording movies. Select normal speed movie options to record at normal speed, or HS movie options to record in slow motion. The size and frame rate that can be selected varies depending on the **NTSC/PAL** setting (66).

- Use microSDXC memory cards with an SD Speed Class rating of 6 or faster for recording movies. Use memory cards with a UHS Speed Class rating of 3 or faster when the image size/frame rate is **2160/30p** (4K UHD) or **2160/25p** (4K UHD).

Normal Speed Movie Options

Option (size/frame rate)	Image size	Aspect ratio (horizontal to vertical)
2160/30p 2160/25p	3840 × 2160	16:9
1080/30p 1080/25p (default setting)	1920 × 1080	16:9
1080/60p 1080/50p	1920 × 1080	16:9

HS Movie Options

Recorded movies are played back in slow motion.

Option (size/frame rate)	Image size Aspect ratio (horizontal to vertical)	Description
HS 1080/4×	1920 × 1080 16:9	Records slow motion movies that play back at 1/4 normal speed.
HS 720/8×	1280 × 720 16:9	Records slow motion movies that play back at 1/8 normal speed.

Notes About HS Movies

Audio cannot be recorded.

NTSC/PAL

Enter shooting mode ➔ OK button ➔ (setup) icon ➔ OK button ➔ Movie ➔ OK button ➔ NTSC/PAL ➔ OK button

Select the frame rate used when recording movies. If you switch the NTSC/PAL setting, the options that can be set in **Movie options** (65) change.

Option	Description
NTSC	Suited for playback on a TV using the NTSC standard.
PAL	Suited for playback on a TV using the PAL standard.

Electronic VR

Enter shooting mode ➔ OK button ➔ (setup) icon ➔ OK button ➔ Movie ➔ OK button ➔ Electronic VR ➔ OK button

Select the vibration reduction setting used when recording movies.

Option	Description
On	Performs electronic VR for camera shake using image processing, when **Movie options** in **Movie** in the (setup) menu is set to **1080/30p**, **1080/60p**, **1080/25p**, or **1080/50p**. • The angle of view (i.e., the area visible in the frame) becomes narrower.
Off (default setting)	Compensation is not performed.

Notes About Electronic VR

The effects of camera shake may not be completely eliminated in some situations.

Wind Noise Reduction

Enter shooting mode ➔ OK button ➔ (setup) icon ➔ OK button ➔ Movie ➔ OK button ➔ Wind noise reduction ➔ OK button

Option	Description
On	Reduces the sound that is produced when wind passes over the microphone during movie recording. Other sounds may become difficult to hear during playback.
Off (default setting)	Wind noise reduction is disabled.

The Still Images Menu

Still Images

Enter shooting mode ➔ OK button ➔ (setup) icon ➔ OK button ➔ Still images ➔ OK button

Option	Description
Single (default setting)	One image is captured each time the photo button is pressed.
Continuous	Continuous shooting is performed while the photo button is pressed. The camera can capture approximately 30 images continuously at a rate of approximately 5 fps.

Notes About Continuous Shooting

It may take some time to save the images after shooting.

Image Size

The number of pixels is fixed at 3840 × 2160 (approx. 8 megapixels, approx. 1:4 compression ratio, and 16:9 aspect ratio (horizontal to vertical)) for both **Single** and **Continuous**.

The Shooting Options Menu

Underwater

Enter shooting mode ➔ Ⓚ button ➔ (setup) icon ➔ Ⓚ button ➔ Shooting options ➔ Ⓚ button ➔ Underwater ➔ Ⓚ button

Select **On** for the appropriate setting when shooting underwater. The default setting is **Off**.

White Balance (Adjusting Hue)

Enter shooting mode ➔ Ⓚ button ➔ (setup) icon ➔ Ⓚ button ➔ Shooting options ➔ Ⓚ button ➔ White balance ➔ Ⓚ button

Adjust the white balance according to the light source or weather conditions, in order to make the colors in images match what you see with your eyes.

Option	Description
AUTO Auto (default setting)	White balance is automatically adjusted.
Daylight	Use under direct sunlight.
Incandescent	Use under incandescent lighting.
Fluorescent	Use under cool white fluorescent lighting.
Cloudy	Use under overcast skies.

Color Options

Enter shooting mode ➔ OK button ➔ (setup) icon ➔ OK button ➔ Shooting options ➔ OK button ➔ Color options ➔ OK button

You can change the image settings according to the shooting conditions or your preferences. Sharpness, contrast, and saturation are automatically adjusted.

Option	Description
Standard (default setting)	Standard processing for balanced results. Recommended for most situations.
VI Vivid	Images are enhanced for a vivid, photoprint effect. Select when you want to emphasize basic colors, such as blue, red, and green.
MC Monochrome	Images are captured in black-and-white.

Exposure Compensation

Enter shooting mode ➔ OK button ➔ (setup) icon ➔ OK button ➔ Shooting options ➔ OK button ➔ Exposure compensation ➔ OK button

You can adjust overall image brightness.

Restore Default Settings

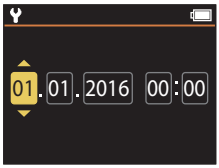
Enter shooting mode ➔ OK button ➔ (setup) icon ➔ OK button ➔ Shooting options ➔ OK button ➔ Restore default settings ➔ OK button

Restore the settings in the shooting options menu to their default values.

Date and Time

Enter shooting mode ➔ Ⓚ button ➔ (setup) icon ➔ Ⓚ button ➔ Camera settings ➔ Ⓚ button ➔ Date and time ➔ Ⓚ button

Set the camera clock.

Option	Description
Sync with smart device	Set whether or not to synchronize the date and time setting with a smart device.
Date and time	Set the date and time if **Sync with smart device** is set to **Off**. • Highlight the next item: Press the Ⓚ button. • Edit the date and time: Press ▲▼. • Apply the setting: Highlight the item on the far right and press the Ⓚ button. 
Date format	Select **Y/M/D**, **M/D/Y**, or **D/M/Y**.

When Date and Time Are Not Set

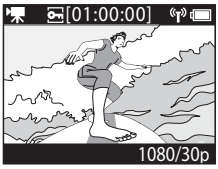
If the camera clock has not been set, the (date not set) indicator is displayed on the screen. This disappears when the date and time are set.

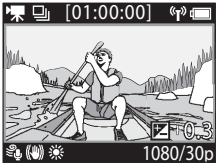
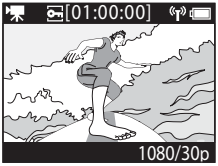
Monitor Settings

Enter shooting mode ➔ ⓞ button ➔ (setup) icon ➔ ⓞ button ➔ Camera settings ➔ ⓞ button ➔ Monitor settings ➔ ⓞ button

Option	Description
Image review	Set whether or not to display the captured image immediately after shooting. • Default setting: **On**
Brightness	Adjust the brightness. • Default setting: **3**
Photo info	Set whether or not to display information on the screen.

Photo Info

	Shooting mode	Playback mode
Hide info		
Auto info (default setting)	The same information as shown in **Show info** is displayed, and it is hidden as shown in **Hide info** if no operations are performed for a few seconds. The information is displayed again when an operation is performed.	
Show info		

	Shooting mode	Playback mode
Movie frame+auto info	 In addition to the information shown in **Auto info**, a frame is displayed before movie recording begins that represents the area that will be captured when recording movies. The movie frame is not displayed while recording movies.	 Same as **Auto info**.

Sound Settings

Enter shooting mode ➔ OK button ➔ (setup) icon ➔ OK button ➔ Camera settings ➔ OK button ➔ Sound settings ➔ OK button

Option	Description
Sound settings	Set the volume of sound that the camera produces when operations are performed. You can set the volume to **High**, **Normal** (default setting), **Low**, or **Off**.

Auto Off

Enter shooting mode ➔ Ⓚ button ➔ (setup) icon ➔ Ⓚ button ➔ Camera settings ➔ Ⓚ button ➔ Auto off ➔ Ⓚ button

Set the amount of time that elapses between when the shooting screen is displayed after shooting ends, and when the camera turns off. You can select **2 s**, **5 s**, **30 s** (default setting), **1 min**, or **5 min**.

Setting the Auto Off Function

- If the camera is powered only by the battery and no operations are performed in the situations described below, the camera turns off regardless of the auto off function setting.
  - After the camera is turned on (before shooting starts): 1 minute
  - After operations are performed in menus or in playback mode: 3 minutes
  - When the camera is waiting to be paired with a smart device that supports NFC, after **Connect to device** is selected in the network menu: 30 minutes
  - When the camera is waiting to be paired with the remote control, after **Connection to remote** is selected in the network menu: 3 minutes
  - When an HDMI cable is connected (if there is no signal): 30 minutes
  - When an USB cable is connected (if there is no data transmitted or received): 30 minutes
- The auto off function is not activated in the following situations:
  - When the EH-62F AC Adapter is connected
  - When the camera is connected to a computer

Format Card

Enter shooting mode ➔ OK button ➔ (setup) icon ➔ OK button ➔ Camera settings ➔ OK button ➔ Format card ➔ OK button

Use this option to format a memory card.
Formatting the memory cards permanently deletes all data. Data that has been deleted cannot be recovered. Make sure to save important images to a computer before formatting.

To start formatting, select **Format** on the screen that is displayed and press the OK button.
- Do not turn the camera off or open the battery-chamber/memory card slot cover during formatting.
- This setting cannot be selected while a wireless connection is established.

Movie Recording

Enter shooting mode ➔ OK button ➔ (setup) icon ➔ OK button ➔ Camera settings ➔ OK button ➔ Movie recording ➔ OK button

Option	Description
Controls	Set whether or not to enable the operation of camera buttons during movie recording. When **Enable** is selected, you can use the camera buttons during movie recording, as described below. • Photo button: Capture still images. • OK button: Add highlight tags. • ▲ button: Turn the monitor on or off. • ▼ button: Switch to slow motion recording (high frame rate recording). The default setting is **Disable**.
LCD auto off	Set the amount of time that elapses between when you start recording a movie and when the monitor turns off. You can select **10 s**, **30 s**, **1 min**, **5 min**, or **Off**. • When **Off** is selected, the monitor remains turned on during movie recording. The default setting is **30 s**.

Notes About Operating the Camera Buttons

If the camera buttons are pressed while recording a movie, the sound of the button operation may be recorded.

Remote Fn Button

Enter shooting mode ➔ OK button ➔ (setup) icon ➔ OK button ➔ Camera settings ➔ OK button ➔ Remote Fn button ➔ OK button

Select the function to use when the Fn button of the remote control (📖21) is pressed.

Option	Description
Insert highlight tag	A highlight tag is added to a movie during recording when the Fn button of the remote control is pressed.
Add slow motion	The camera switches to slow motion (high frame rate) movie recording when the Fn button of the remote control is pressed while recording a movie in **Add slow motion**. This function can be selected only when the movie mode is set to **Add slow motion** (📖38).

- Highlight tags cannot be added when the movie mode is set to **Superlapse movie** or **Time-lapse movie**.

Flip Vertically

Enter shooting mode ➔ OK button ➔ (setup) icon ➔ OK button ➔ Camera settings ➔ OK button ➔ Flip vertically ➔ OK button

Use this option when the camera body is attached or held upside-down, so that the orientation of the recorded images is inverted. When **On** is selected, the orientation of the image and information such as icons and menus displayed in the monitor is inverted. If you do not want to change the orientation, select **Off**.

LED Brightness

Enter shooting mode ➔ OK button ➔ (setup) icon ➔ OK button ➔ Camera settings ➔ OK button ➔ LED brightness ➔ OK button

Adjust the brightness of the status lamps.

Charge by Computer

Enter shooting mode ➔ Ⓚ button ➔ (setup) icon ➔ Ⓚ button ➔ Camera settings ➔ Ⓚ button ➔ Charge by computer ➔ Ⓚ button

Option	Description
Auto (default setting)	When the camera is connected to a computer that is running (📖54), the battery inserted into the camera is automatically charged using power supplied by the computer.
Off	The battery inserted into the camera is not charged when the camera is connected to a computer.

Notes About Charging with a Computer

- When connected to a computer, the camera turns on and starts charging. The camera buttons cannot be operated while charging with a computer.
- About 5 hours 30 minutes are required to charge a fully exhausted battery. Charging time increases when images are transferred while the battery is charging.
- The camera turns off automatically if there is no communication with the computer for 30 minutes after the battery has finished charging.

When the Status Lamps Quickly Flash Green

Charging cannot be performed, possibly due to one of the reasons described below.

- The ambient temperature is not suited to charging. Charge the battery indoors with an ambient temperature of 5°C to 35°C (41°F to 95°F).
- The USB cable is not connected correctly, or the battery is faulty. Make sure that the USB cable is connected correctly or replace the battery if necessary.
- The computer is in sleep mode and is not supplying power. Wake up the computer.
- The battery cannot be charged because the computer cannot supply power to the camera due to the computer's settings or its specifications.

Language

Enter shooting mode ➔ OK button ➔ (setup) icon ➔ OK button ➔ Camera settings ➔ OK button ➔ Language ➔ OK button

Select a language for display of camera menus and messages.

Location Data

Enter shooting mode ➔ OK button ➔ (setup) icon ➔ OK button ➔ Camera settings ➔ OK button ➔ Location data ➔ OK button

Set whether or not to add shooting location information to the images that you take.

Option	Description
Download from device (default setting)	Select **On** to add location information from a smart device to the images that you take. Enable the location information function of the SnapBridge 360/170 app.
Position	Display the obtained location information. • The information is not updated while it is being displayed. To update it, perform **Position** again.

Reset All

Enter shooting mode ➔ Ⓚ button ➔ (setup) icon ➔ Ⓚ button ➔ Camera settings ➔ Ⓚ button ➔ Reset all ➔ Ⓚ button

When **Reset** is selected, the settings in the (setup) menu are restored to their default values.

- The settings in the network menu are also restored to their default values.
- Some settings, such as **Date and time**, **Language**, or **NTSC/PAL**, are not reset.
- This setting cannot be selected while a wireless connection is established.

Resetting File Numbering

To reset file numbering to "0001", delete all images saved on the memory card (🕮85) before selecting **Reset all**.

Conformity Marking

Enter shooting mode ➔ Ⓚ button ➔ (setup) icon ➔ Ⓚ button ➔ Camera settings ➔ Ⓚ button ➔ Conformity marking ➔ Ⓚ button

View some of the conformity markings that the camera complies with.

Firmware Version

Enter shooting mode ➔ Ⓚ button ➔ (setup) icon ➔ Ⓚ button ➔ Camera settings ➔ Ⓚ button ➔ Firmware version ➔ Ⓚ button

View the current camera firmware version.

- This setting cannot be selected while a wireless connection is established.

Network Menu

Enter shooting mode ➔ ⓞ button ➔ (setup) icon ➔ ⓞ button ➔ Camera settings ➔ ⓞ button ➔ Network menu ➔ ⓞ button

Configure the wireless network settings to connect the camera and a smart device.

Option		Description
Airplane mode		Select **On** to turn off all wireless connections.
Connect to device		Select when pairing a smart device with the camera. This option cannot be selected while a wireless connection is established. See step 2 in "Setup from a Smartphone or Tablet" (📖11) for more information. • Re-pair when pairing again after unpairing (📖82).
Connection to remote		Select when pairing the remote control with the camera. When this option is selected, pairing is enabled and the camera waits for the connection to be established.
Choose connection	Camera & smart device	Select whether to connect the camera to a smart device or the remote control.
	Camera & remote	
Send while shooting		Set the conditions for automatically sending images to a smart device.
Wi-Fi	Network settings	**SSID***: Change the SSID. Set a 1- to 32-character alphanumeric SSID.
		Auth./encryp.: Select whether or not to encrypt the communications between the camera and the connected smart device. Communications are not encrypted when **Open** is selected.
		Password*: Set the password. Set an 8- to 32-character alphanumeric password.
		Channel: Select the channel used for wireless connections.
	Current settings	Display the current settings.

Option		Description
Bluetooth	Connection	Select **Disable** to turn off Bluetooth communication.
	Paired devices	Change the smart device to connect with, or delete the pairing with the smart device.
	Send while off	Set whether or not to allow the camera to communicate with the smart device when the camera is off.
Restore default settings		The settings in the network menu are restored to their default values. This option cannot be selected while a wireless connection is established.

* See "Operating the Text Input Keyboard" (84) for information on how to enter alphanumeric characters.

Icons Displayed on the Screen

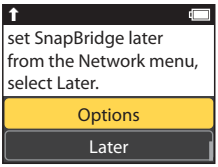
is displayed when **Airplane mode** is selected, is displayed when a Wi-Fi connection is established, is displayed when a Bluetooth connection is established, and is displayed when a remote control connection is established.

Re-pairing

Re-pair when pairing the same smart device again after unpairing using **End pairing** in the SnapBridge 360/170 app.

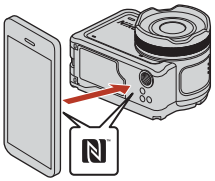
Android Devices with NFC Support

1 Select **Connect to device** in the network menu and press the ⓞ button, and then press ▲ or ▼ to select **Options** and press the ⓞ button when the dialog shown on the right is displayed.



- An NFC confirmation dialog is displayed.

2 After checking that NFC is enabled on the smart device, touch the camera N (N-Mark) to the NFC antenna on the smart device.



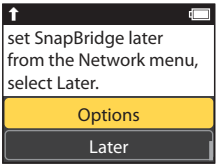
- Launch the SnapBridge 360/170 app. When the confirmation dialog for connecting is displayed, tap **OK**.
- If the SnapBridge 360/170 download site is displayed, download and install the app before repeating the above steps.

3 Follow the instructions on page 12, starting with Step 4.

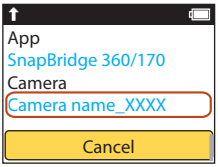
iOS Devices and Android Devices Without NFC Support

1 Select **Connect to device** in the network menu and press the OK button, and then press ▲ or ▼ to select **Options** and press the OK button when the dialog shown on the right is displayed.

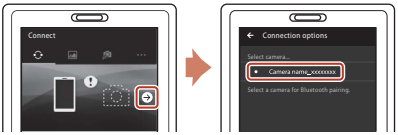
- An NFC confirmation dialog is displayed.



2 On the camera, press ▲ or ▼ to select **Next** and press the OK button, and then launch the SnapBridge 360/170 app on the smart device when the dialog shown on the right is displayed.



3 Tap ➔ in ↻ **Connect**, and then tap the name of the camera you want to pair with.



4 Follow the instructions on page 12, starting with Step 4.

Operating the Text Input Keyboard

- Use ▲▼ on the camera to select the alphanumeric character displayed in the yellow box. Press the OK button to enter the selected character in the text field and move the cursor to the next space.
- To move the cursor in the text field, use ▲▼ on the camera until ◀ or ▶ is displayed in the yellow box, and press the OK button.
- To delete one character, move the cursor to the character you want to delete, select 🗑 in the yellow box, and then press the OK button.
- To apply the setting, select ↵ in the yellow box, and press the OK button.

The Playback Menu

▶ Movie Playback

Enter playback mode ➔ OK button ➔ ▶ (movie playback)

Press to play back the movie that is currently displayed on the screen. See "Operations During Movie Playback" (🕮46) for more information.

Movie Edit

Enter playback mode ➔ OK button ➔ (movie edit)

Press to edit the movie that is currently displayed on the screen. You can extract the desired portion of a movie and save it as a separate movie. See "Editing Movies" (🕮48) for more information.

Delete

Enter playback mode ➔ OK button ➔ (delete)

Delete the still image or movie displayed on the screen.

Notes About Restrictions on Image Deleting

You cannot select and delete multiple images at the same time.

Upload

Enter playback mode ➔ OK button ➔ (upload)

Upload the still image that is selected in the playback menu.
Movies cannot be selected for upload. To upload movies to a smart device, use the SnapBridge 360/170 app.

Protect

Enter playback mode ➔ OK button ➔ (protect)

The camera protects selected images from accidental deletion.
You can apply or cancel the protection for images displayed on the playback screen.
Note that formatting the memory card permanently deletes all data including protected files (📖75).

Back

Return to the playback screen.

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Notices

Notices for Customers in the U.S.A.

**IMPORTANT SAFETY INSTRUCTIONS -
SAVE THESE INSTRUCTIONS.**

DANGER - TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, CAREFULLY FOLLOW THESE INSTRUCTIONS

For connection to a supply not in the U.S.A., use an attachment plug adapter of the proper configuration for the power outlet if needed.

The power supply unit is intended to be correctly orientated in a vertical or floor mount position.

Federal Communications Commission (FCC) Radio Frequency Interference Statement

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/television 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.

Interface Cables

Use the interface cables sold or provided by Nikon for your equipment. Using other interface cables may exceed the limits of Class B Part 15 of the FCC rules.

Notice for Customers in the State of California

WARNING

Handling the cord on this product will expose you to lead, a chemical known to the State of California to cause birth defects or other reproductive harm.

Wash hands after handling.

Nikon Inc.,
1300 Walt Whitman Road, Melville, New York 11747-3064, U.S.A.
Tel: 631-547-4200

Notice for Customers in Canada

CAN ICES-3 B / NMB-3 B

Notices for Customers in Europe

CAUTIONS

RISK OF EXPLOSION IF BATTERY IS REPLACED BY AN INCORRECT TYPE.

DISPOSE OF USED BATTERIES ACCORDING TO THE INSTRUCTIONS.

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.

This symbol on the battery indicates that the battery is to be collected separately.

The following apply only to users in European countries:

- All batteries, whether marked with this symbol or not, are designated for separate collection at an appropriate collection point. Do not dispose of as household waste.
- For more information, contact the retailer or the local authorities in charge of waste management.

Notes About Wireless Communication Functions

Restrictions on Wireless Devices

The wireless transceiver included in this product conforms to wireless regulations in the country of sale and is not for use in other countries (products purchased in the EU or EFTA can be used anywhere within the EU and EFTA). Nikon does not accept liability for use in other countries. Users who are unsure as to the original country of sale should consult with their local Nikon service center or Nikon-authorized service representative. This restriction applies to wireless operation only and not to any other use of the product.

Security

Although one of the benefits of this product is that it allows others to freely connect for the wireless exchange of data anywhere within its range, the following may occur if security is not enabled:

- Data theft: Malicious third-parties may intercept wireless transmissions to steal user IDs, passwords, and other personal information.
- Unauthorized access: Unauthorized users may gain access to the network and alter data or perform other malicious actions. Note that due to the design of wireless networks, specialized attacks may allow unauthorized access even when security is enabled. Nikon is not responsible for data or information leaks that may occur during data transfer.
- Do not access networks that you are not permitted to use, even if they are displayed on your smartphone or tablet. Doing so may be regarded as unauthorized access. Only access networks that you are permitted to use.

Personal Information Management and Disclaimer

- User information registered and configured on the product, including wireless LAN connection settings and other personal information, is susceptible to alteration and loss resulting from operational error, static electricity, accident, malfunction, repair or other handling. Always keep separate copies of important information. Nikon is not responsible for any direct or indirect damages or lost profits resulting from alteration or loss of content that is not attributable to Nikon.
- Before discarding this product or transferring it to another owner, perform **Restore default settings** in **Network menu** in **Camera settings** in the (setup) menu (59) to delete all user information registered and configured with the product, including wireless LAN connection settings and other personal information.
- Nikon is not responsible for any damages resulting from unauthorized use of this product by third parties in the event that the product is stolen or lost.

Precautions when Exporting or Carrying This Product Abroad

This product is controlled by the United States Export Administration Regulations (EAR). The permission of the United States government is not required for export to countries other than the following, which as of this writing are subject to embargo or special controls: Cuba, Iran, North Korea, Sudan, and Syria (list subject to change).

Notice for Customers in the U.S.A. and Canada

Federal Communications Commission (FCC) and Industry of Canada (IC)

Declaration of Conformity

This device complies with Part 15 of FCC Rules and Industry Canada licence-exempt RSS standard(s). Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of this device.

FCC/IC RF Exposure Statement

This transmitter must not be co-located or operated in conjunction with any other antenna or transmitter.

The available scientific evidence does not show that any health problems are associated with using low power wireless devices. There is no proof, however, that these low power wireless devices are absolutely safe. Low power wireless devices emit low levels of radio frequency energy (RF) in the microwave range while being used. Whereas high levels of RF can produce health effects (by heating tissue), exposure of low-level RF that does not produce heating effects causes no known adverse health effects. Many studies of low-level RF exposures have not found any biological effects. Some studies have suggested that some biological effects might occur, but such findings have not been confirmed by additional research.

KeyMission 170, which is equipped with a WM-BN-BM-26_A (FCC ID:2AAD3JA1D0J0 / IC ID:4634A-3152EC) Wireless LAN Module, and ML-L6 Remote Control (FCC ID:CGJ8152EB / IC ID:4634A-8152EB), have been tested and found to comply with FCC/IC radiation exposure limits set forth for an uncontrolled environment and meet the FCC radio frequency (RF) Exposure Guidelines in Supplement C to OET65 and RSS-102 of the IC radio frequency (RF) Exposure rules. Please refer to the SAR test report that was uploaded to FCC website.

Notice for Customers in Europe

Declaration of Conformity (Europe)

Hereby, Nikon Corporation, declares that KeyMission 170 and ML-L6 Remote Control are in compliance with the essential requirements and other relevant provisions of Directive 1999/5/EC. The declaration of conformity may be consulted at http://imaging.nikon.com/support/pdf/DoC_KeyMission_170.pdf.

http://imaging.nikon.com/support/pdf/DoC_ML-L6.pdf.

Caring for the Product

Observe the precautions described below in addition to the warnings in "For Your Safety" (viii–xi) when using or storing the device.

The Camera

For information about the handling precautions for the camera, also read "<Important> Notes About Shockproof, Waterproof, and Dustproof Performance and Condensation" (xii).

Do Not Apply Strong Impact to the Camera

The product may malfunction if subjected to strong shock or vibration. In addition, do not touch or apply force to the lens or lens cover.

Avoid Sudden Changes in Temperature

Sudden changes in temperature, such as when entering or leaving a heated building on a cold day, can cause condensation to form inside the device. To prevent condensation, place the device in a carrying case or a plastic bag before exposing it to sudden changes in temperature.

Keep Away from Strong Magnetic Fields

Do not use or store this device in the vicinity of equipment that generates strong electromagnetic radiation or magnetic fields. Doing so could result in loss of data or camera malfunction.

Do Not Point the Lens at Strong Light Sources for Extended Periods

Avoid pointing the lens at the sun or other strong light sources for extended periods when using or storing the camera. Intense light may cause the image sensor to deteriorate or produce a white blur effect in photographs.

Turn the Product Off Before Removing or Disconnecting the Power Source or Memory Card

Do not remove the battery while the product is on, or while images are being saved or deleted. Forcibly cutting power in these circumstances could result in loss of data or in damage to the memory card or internal circuitry.

Notes About the Monitor

- Monitors (including electronic viewfinders) are constructed with extremely high precision; at least 99.99% of pixels are effective, with no more than 0.01% being missing or defective. Hence while these displays may contain pixels that are always lit (white, red, blue, or green) or always off (black), this is not a malfunction and has no effect on images recorded with the device.
- Images in the monitor may be difficult to see under bright lighting.
- Do not apply pressure to the monitor, as this could cause damage or malfunction. Should the monitor break, care should be taken to avoid injury caused by broken glass and to prevent the liquid crystal from the display touching the skin or entering the eyes or mouth.

The Battery

Precautions for Use

- Note that the battery may become hot after use.
- Do not use the battery at ambient temperatures below 0°C (32°F) or above 40°C (104°F) as this could cause damage or malfunction.
- If you notice any abnormalities such as excessive heat, smoke, or an unusual smell coming from the battery, immediately discontinue use and consult your retailer or Nikon-authorized service representative.
- After removing the battery from the camera or optional battery charger, put the battery in a plastic bag, etc. in order to insulate it.

Charging the Battery

Check the battery level before using the camera and replace or charge the battery if necessary.

- Charge the battery indoors with an ambient temperature of 5°C to 35°C (41°F to 95°F) before use.
- A high battery temperature may prevent the battery from charging properly or completely, and may reduce battery performance. Note that the battery may become hot after use; wait for the battery to cool before charging.
  When charging the battery inserted into this camera using the Charging AC Adapter or a computer, the battery is not charged at battery temperatures below 0°C (32°F) or above 45°C (113°F).
- Do not continue charging once the battery is fully charged as this will result in reduced battery performance.
- The battery temperature may increase during charging. However, this is not a malfunction.

Carrying Spare Batteries

Whenever possible, carry fully charged spare batteries when taking pictures on important occasions.

Using the Battery When Cold

On cold days, the capacity of batteries tends to decrease. If an exhausted battery is used at a low temperature, the camera may not turn on. Keep spare batteries in a warm place and exchange as necessary. Once warmed, a cold battery may recover some of its charge.

Battery Terminals

Dirt on the battery terminals may prevent the camera from functioning. Should the battery terminals become dirty, wipe them off with a clean, dry cloth before use.

Charging an Exhausted Battery

Turning the camera on or off while an exhausted battery is inserted in the camera may result in reduced battery life. Charge the exhausted battery before use.

Storing the Battery

- Always remove the battery from the camera or optional battery charger when it is not being used. Minute amounts of current are drawn from the battery while it is in the camera, even when not in use. This may result in excessive battery drain and complete loss of function.
- Recharge the battery at least once every six months and completely exhaust it before returning it to storage.
- Put the battery in a plastic bag, etc. in order to insulate it and store it in a cool place. The battery should be stored in a dry location with an ambient temperature of 15°C to 25°C (59°F to 77°F). Do not store the battery in hot or extremely cold locations.

Battery Life

A marked drop in the time a fully charged battery retains its charge, when used at room temperature, indicates that the battery needs to be replaced. Purchase a new battery.

Recycling Used Batteries

Replace the battery when it no longer holds a charge. Used batteries are a valuable resource. Please recycle used batteries in accordance with local regulations.

The Charging AC Adapter

- The EH-73P/EH-73PCH Charging AC Adapter is for use only with compatible devices. Do not use with another make or model of device.
- Do not use any USB cable other than the UC-E21. Using a USB cable other than the UC-E21 could result in overheating, fire or electric shock.
- Do not, under any circumstances, use another make or model of AC adapter other than the EH-73P/EH-73PCH Charging AC Adapter or USB-AC adapter. Failure to observe this precaution could result in overheating or in damage to the camera.
- The EH-73P/EH-73PCH is compatible with AC 100–240 V, 50/60 Hz electrical outlets. When using in other countries, use a plug adapter (commercially available) as necessary. For more information about plug adapters, consult your travel agency.

Memory Cards

Precautions for Use

- Use only microSD, microSDHC, or microSDXC memory cards (📖8).
- Be sure to follow the precautions described in the documentation included with the memory card.
- Do not put labels or stickers on memory cards.

Formatting

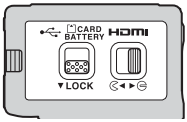
- Do not format the memory card using a computer.
- The first time you insert a memory card that has been used in another device into this camera, be sure to format it with this camera. We recommend formatting new memory cards with this camera before using them with this camera.
- **Note that formatting a memory card permanently deletes all images and other data on the memory card.** Be sure to make copies of any images you wish to keep before formatting the memory card.
- If the message **Card is not formatted. Format card?** is displayed when the camera is turned on, the memory card must be formatted. If there is data that you do not want to delete, select **No**. Copy the necessary data to a computer, etc. If you want to format the memory card, select **Yes** to start formatting.
- Do not perform the following during formatting, while data is being written to or deleted from the memory card, or during data transfer to a computer. Failure to observe this precaution could result in the loss of data or in damage to the camera or memory card:
  - Open the battery-chamber/memory card slot cover to remove/insert the battery or memory card.
  - Turn off the camera.
  - Disconnect the AC adapter.

Cleaning and Storage

Cleaning after Using the Camera Underwater

Follow the procedure below to rinse the camera with fresh water within 60 minutes after using it underwater or at the beach. The underwater lens protector is used here as an example.

1. Check that the battery-chamber/memory card slot cover is securely closed (locked).



- Check that the battery-chamber/memory card slot cover latch and battery-chamber/memory card slot cover latch release are positioned as shown in the figure on the right, and that their orange indicator marks are not visible.

2. Wash with fresh water while the underwater lens protector is attached.

Immerse the camera in a shallow basin filled with fresh water for 10 minutes.

- Immerse the camera in fresh water and shake it sufficiently in the water to remove any foreign substances from the camera. If foreign substances still remain, remove them with a cotton swab, etc.
- When the camera is immersed in the water, a few air bubbles may come out from the water drain holes of the camera such as openings in the microphone or speakers. This is not a malfunction.

3. Wipe off water droplets with a soft dry cloth, and dry the camera in a well-ventilated and shady place.

- Place the camera on a dry cloth to dry it.
- Do not dry the camera with hot air from a hair dryer or clothes dryer.

4. Check that there are no water droplets, remove the underwater lens protector, and then remove any water droplets or sand remaining on the inner side of the underwater lens protector with a soft dry cloth.

- Attaching an underwater lens protector while the inner side is still wet could cause condensation or a malfunction.

5. After making sure that there are no water droplets on the camera, open the battery-chamber/memory card slot cover and use a soft dry cloth to gently wipe off any water or sand remaining on the waterproofing packing or inside the camera.

- If the cover is closed when the inside is wet, this could cause condensation or a malfunction.

Cleaning after Using the Camera in Conditions Other than Underwater

Use a blower or air duster to remove any dust or lint that adheres to the lens, lens protector, monitor, camera body, special accessories, etc. To remove fingerprints or other stains, gently wipe the parts with a soft dry cloth. If you wipe with too much pressure or with a rough cloth, it may damage the camera or cause a malfunction.

Storage

If you do not intend to use the camera for an extended period, remove the battery and avoid storing the camera in any of the following types of locations:

- Places that are poorly ventilated or subject to humidity of over 60%
- Places exposed to temperatures above 50°C (122°F) or below –10°C (14°F)
- Places next to equipment that produces strong electromagnetic fields, such as televisions or radios
  To prevent mold or mildew, take the camera out of storage at least once a month, and turn it on and release the shutter a few times before putting it away again. Completely exhaust the battery before storing it, and recharge it at least once every six months. Also, place the battery in a container such as plastic bag in order to insulate it, and store it in a cool place.

Error Messages

Refer to the table below if an error message is displayed.

Display	Cause/Solution	🕮
Battery temperature is elevated. The camera will turn off. The camera will turn off to prevent overheating.	The camera turns off automatically. Wait until the camera or battery temperature has cooled before resuming use.	–
The battery is cold. Ending recording.	The battery temperature dropped to below 0°C (32°F) while recording movies with the size/frame rate set to **2160/30p**, **2160/25p**, **HS 1080/4×**, or **HS 720/8×**. The camera stops recording and automatically turns off. To continue recording, change **Movie options**. If you want to continue recording movies with the size/frame rate set to **2160/30p**, **2160/25p**, **HS 1080/4×**, or **HS 720/8×**, remove the battery from the camera and hold it in your hands to heat it up.	32
Battery exhausted.	Charge the battery.	–
This card cannot be used. This card cannot be read.	An error occurred while accessing the memory card. • Use an approved memory card. • Check that the terminals are clean. • Confirm that the memory card is correctly inserted.	7, 8
Card is not formatted. Format card?	The memory card has not been formatted for use in the camera. Formatting deletes all data saved on the memory card. If you need to keep copies of any images, make sure to select **No** and save the copies to a computer or other medium before formatting the memory card. Select **Format** and press the OK button to format the memory card.	75
Out of memory.	Delete images or insert a new memory card.	7, 85

Display	Cause/Solution	🕮
Image cannot be saved.	An error occurred while saving the image. Insert a new memory card or format the memory card.	7, 75
	The camera has run out of file numbers. Insert a new memory card or format the memory card.	7, 75
	There is not enough space to save the edited image. Delete unnecessary images or insert a new memory card.	7, 85
Cannot record movie.	A time-out error occurred while saving the movie on the memory card. Select a memory card with a faster write speed.	8, 33
Memory contains no images.	There are no images on the memory card.	–
This image cannot be deleted.	The image is protected. Disable protection.	86
Wireless connection ended.	The wireless connection is disconnected in the following situations: • When the reception is poor • When the battery level is low • When a cable is connected or disconnected, or a memory card is removed or inserted Use a fully charged battery, disconnect the cables, and establish the wireless connection again.	–
The battery is cold. Frame size/rate set to 1080/30p.	The battery temperature is below 0°C (32°F). If you want to continue recording movies with the size/frame rate set to **2160/30p**, **2160/25p**, **HS 1080/4×**, or **HS 720/8×**, remove the battery from the camera and hold it in your hands to heat it up.	32
The battery is cold. Frame size/rate set to 1080/25p.		
System error	An error occurred in the camera's internal circuitry. Turn the camera off, remove and reinsert the battery, and turn the camera on. If the error persists, contact your retailer or Nikon-authorized service representative.	100
Update error	The camera failed to update the firmware. Try updating the firmware again.	–

Troubleshooting

If the camera fails to function as expected, check the list of common problems below before consulting your retailer or Nikon-authorized service representative.

Power, Display, Settings Issues

Problem	Cause/Solution	🕮
The camera is on but does not respond.	• Wait for recording to end. • If the problem persists, turn the camera off. If the camera does not turn off, remove and reinsert the battery or batteries or, if you are using an AC adapter, disconnect and reconnect the AC adapter. Note that although any data currently being recorded will be lost, data that have already been recorded will not be affected by removing or disconnecting the power source.	–
The camera cannot be turned on.	The battery is exhausted.	7, 9, 94
The camera turns off without warning.	• The camera automatically turns off to save power (auto off function). • The camera and battery may not work properly at low temperatures. • If the size/frame rate of the movie is set to **2160/30p**, **2160/25p**, **HS 1080/4×**, or **HS 720/8×** and the battery temperature drops to below 0°C (32°F) while recording, the camera stops recording and automatically turns off. • The inside of the camera has become hot. Leave the camera off until the inside of the camera has cooled, and then try turning it on again.	10 93 32 –
The monitor is blank.	• If you press the ▲ button on the back side of the camera while shooting, the monitor turns on or off. • The camera is off. • The camera automatically turns off to save power (auto off function). • The camera is connected to a TV or computer. • The camera and smart device are connected using a Wi-Fi connection and the camera is being operated by remote control. • If you are using the AC adapter, check the cord connection. • The monitor turns off 30 seconds after you start recording a movie (default setting). You can change the amount of time that elapses before the monitor turns off in **LCD auto off** in **Movie recording** in **Camera settings** in the (setup) menu.	3 11 10 – – 105 75

Problem	Cause/Solution	🕮
The camera becomes hot.	The camera may become hot when used for an extended period of time to record movies or when used in a hot environment. This is not a malfunction.	–
The battery inserted in the camera cannot be charged.	• Confirm all connections. • When connected to a computer, the camera may not charge for any of the reasons described below. - **Off** is selected for **Charge by computer** in **Camera settings** in the ✖ (setup) menu. - Battery charging is not possible if the camera's display language and date and time have not been set, or the date and time were reset after the camera's clock battery was exhausted. Use the Charging AC Adapter to charge the battery. - Battery charging may stop when the computer enters sleep mode. - Depending on the computer specifications, settings, and status, battery charging may not be possible.	9 59, 77 71 – –
The monitor is hard to see.	• The surrounding area is too bright. - Move to a darker place. • Adjust the screen brightness.	 72
🕒 flashes on the screen. Date and time of recording are not correct.	• If the camera clock has not been set, 🕒 flashes on the shooting screen, and images and movies saved before the clock is set are dated "00/00/0000 00:00" and "01/01/2016 00:00" respectively. Set the correct time and date for **Date and time** in **Camera settings** in the ✖ (setup) menu. • The camera clock is not as accurate as ordinary watches or clocks. Periodically compare the time of the camera clock with that of a more accurate timepiece, and reset as required.	71
Screen for setting date and time is displayed when the camera is turned on. The camera settings reset.	The clock battery is exhausted; all settings were restored to their default values. Configure the camera settings again. • The internal clock battery is used to power the camera clock and to retain certain settings. Charging time of the clock battery takes about 10 hours when you insert the batteries into the camera or connect the AC adapter (available separately) to the camera, and the clock battery operates for several days even after the camera battery is removed.	–

Problem	Cause/Solution	🕮
The camera cannot be operated via the smart device.	• Perform pairing. • If pairing has already been performed, select **Camera & smart device** or **Camera & remote** in **Choose connection** in the network menu.	12, 23 80
The camera cannot be operated via the remote control.		

Shooting Issues

Problem	Cause/Solution	🕮
Cannot switch to shooting mode.	Disconnect the HDMI cable or USB cable.	54
Cannot take pictures or record movies.	• When the camera is in playback mode or when menus are displayed, press the movie button or photo button to return to the shooting screen. • The battery is exhausted.	2, 19, 59 7, 9, 94
Images are blurred.	• Try using **Electronic VR** when recording movies. • Use a tripod to stabilize the camera.	66 –
No sound when the shutter is released or operations are performed.	**Off** is selected for **Sound settings** in **Camera settings** in the ✖ (setup) menu. No sound is produced with some shooting modes and settings, even when **High**, **Normal**, or **Low** is selected.	73
Images appear smeared.	The lens or underwater lens protector is dirty. Clean the lens or underwater lens protector.	96
Colors are unnatural.	White balance or color is not adjusted properly.	69
Randomly spaced bright pixels ("noise") appear in image.	The subject is dark and the shutter speed is too slow, or ISO sensitivity is too high. This is not a malfunction.	–
Images are too dark (underexposed).	Adjust exposure compensation.	70
Images are too bright (overexposed).	Adjust exposure compensation.	70

Problem	Cause/Solution	🕮
Saving images takes time.	It may take more time to save images when using continuous shooting mode.	–
A ring-shaped belt or rainbow-colored stripe appears in the monitor or images.	When shooting with backlighting or when a very strong light source (such as sunlight) is in the frame, a ring-shaped belt or rainbow-colored stripe (ghosting) may occur. Change the position of the light source, or frame the picture so that the light source does not enter the frame, and try again.	–

Playback Issues

Problem	Cause/Solution	🕮
File cannot be played back.	• This camera may not be able to play back images saved with another make or model of digital camera. • This camera cannot play back movies recorded with another make or model of digital camera. • This camera may not be able to play back data edited on a computer.	–
Cannot edit image.	• Still images cannot be edited on the camera. • Movies that have been already edited cannot be edited again. • There is not enough free space on the memory card. • This camera is unable to edit images captured with other cameras. • Movies recorded in certain movie modes cannot be edited on the camera.	–
Images are not displayed on TV.	• **NTSC/PAL** is not correctly set in **Movie** in the ✖ (setup) menu. • The memory card contains no images.	59, 66 –

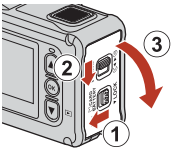
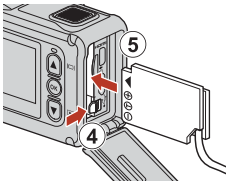
File Names

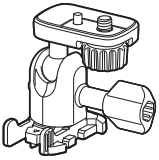
Images or movies are assigned file names as follows.

File name: DSCN 0001 .MP4
(1) (2) (3)

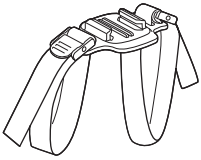
(1) Identifier	Not shown on the screen of the camera. • DSCN: Standard images (movies, still images) • FSCN: Edited movies
(2) File number	Assigned in ascending order, starting with "0001" and ending with "9999."
(3) Extension	Indicates file format. • .JPG: Still images • .MP4: Movies

Accessories

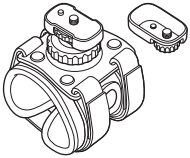
Battery charger	**MH-65 Battery Charger** Charging time is about 2 hours and 30 minutes for a fully exhausted battery.
AC adapter	**EH-62F AC Adapter** (connect as shown)   • While using the AC adapter, the battery-chamber/memory card slot cover cannot be closed. • Do not pull the cord of the AC adapter. If the cord is pulled, the connection between the camera and power source is interrupted, and the camera turns off.



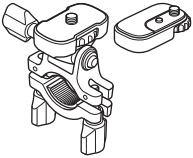
AA-1B Base Adapter



AA-5 Vented Helmet Strap Mount

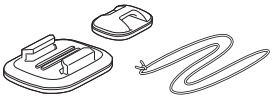


AA-6 Wrist Mount

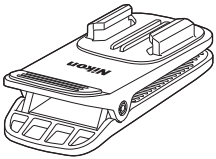


AA-7 Handlebar Mount

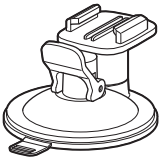
AA-8 Chest Mount



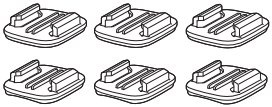
AA-9 Surfboard Mount



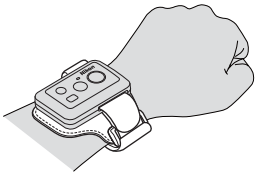
AA-10 Backpack Mount Clip



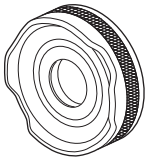
AA-11 Suction Cup Mount



AA-12 Base Mount Set
(3 Flat + 3 Curved)



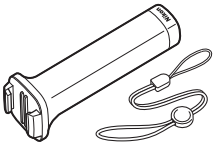
AA-13 Wristband for Remote Controls



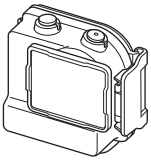
AA-14B Lens Protector

AA-15B Underwater Lens Protector

ML-L6 Remote Control



MP-AA1 Handy Grip



WP-AA1 Waterproof Case

Availability may vary with country or region.
See our website or brochures for the latest information.

Specifications

Nikon KeyMission 170 Digital Camera

Type	Compact digital camera
Number of effective pixels	8.3 million
Image sensor	1/2.3-in. type CMOS; approx. 12.71 million total pixels
Lens	NIKKOR lens
Focal length	2.4 mm (equivalent to 15 mm lens in 35mm [135] format)
f/-number	f/2.8
Construction	7 elements in 5 groups
Angle of view	170 degrees
Vibration reduction	Electronic VR (movies)
Focus	Fixed focus
Focus range	Approx. 40 cm (1 ft 4 in.)–∞ (distance measured from center of front surface of lens)
Monitor	3.7 cm (1.5-in.), approx. 345k-dot, TFT LCD
Frame coverage (shooting mode)	Approx. 97% horizontal and vertical (compared to actual picture)
Frame coverage (playback mode)	Approx. 99% horizontal and vertical (compared to actual picture)
Storage	
Media	microSD/microSDHC/microSDXC memory card
File system	DCF and Exif 2.3 compliant
File formats	Still images: JPEG Movies: MP4 (Video: H.264/MPEG-4 AVC, Audio: AAC stereo)
Image size	8M (3840 × 2160)

Movie options	
Normal speed movie options	When **NTSC/PAL** is set to **NTSC** • 2160/30p • 1080/30p • 1080/60p When **NTSC/PAL** is set to **PAL** • 2160/25p • 1080/25p • 1080/50p
HS movie options	HS 1080/4× HS 720/8×
ISO sensitivity (Standard output sensitivity)	ISO 100–1600
Exposure	
Metering mode	Matrix
Exposure control	Programmed auto exposure and exposure compensation (–2.0 – +2.0 EV in steps of $^{1}/_{3}$ EV)
Shutter	CMOS electronic shutter
Speed	$^{1}/_{16000}$–$^{1}/_{2}$ s
Interface	
USB connector	Micro-USB connector (Do not use any USB cable other than the included UC-E21 USB Cable.), Hi-Speed USB
HDMI connector	HDMI micro connector (Type D)
Wi-Fi (Wireless LAN)	
Standards	IEEE 802.11b/g (standard wireless LAN protocol)
Operating frequency	2412–2462 MHz (1-11 channels)
Authentication	Open system, WPA2-PSK
Bluetooth	
Communication protocols	Bluetooth Specification Version 4.1

Supported languages	Chinese (Simplified and Traditional), Dutch, English, French, German, Italian, Japanese, Korean, Russian, Spanish
Power sources	One EN-EL12 Rechargeable Li-ion Battery (included) EH-62F AC Adapter (available separately)
Charging time	Approx. 3 h (when using EH-73P/EH-73PCH Charging AC Adapter and when no charge remains)
Battery life[1]	
Still images	Approx. 250 shots when using EN-EL12
Movie recording (actual battery life for recording)[2]	Approx. 60 min when using EN-EL12
Tripod socket	1/4 (ISO 1222)
Dimensions (W × H × D)	Approx. 66.4 × 46.8 × 42.7 mm (2.7 × 1.9 × 1.7 in.) (including AA-14B Lens Protector, excluding projections)
Weight	Approx. 134.5 g (4.8 oz) (including AA-14B Lens Protector, battery, and memory card)
Operating environment	
Temperature	-10°C– +40°C (14°F–104°F) (for land use), 0°C–40°C (32°F–104°F) (for underwater use)
Humidity	85% or less (no condensation)
Waterproof performance	JIS/IEC protection class 8 (IPX8) equivalent (under our testing conditions) Capacity to record images and movies underwater up to a depth of 10 m (33 ft) and for 60 minutes
Dustproof performance	JIS/IEC protection class 6 (IP6X) equivalent (under our testing conditions)
Shockproof performance[3]	Cleared our testing conditions[4] compliant with MIL-STD 810F Method 516.5-Shock

- All measurements are performed in conformity with Camera and Imaging Products Association (CIPA) standards or guidelines.

1 Battery life does not reflect the use of SnapBridge and may vary with the conditions of use, including temperature, the interval between shots, and the length of time that menus and images are displayed.

2 The remaining movie recording time (the amount of time that can be recorded for an individual movie) displayed at the top of the shooting screen depends on the remaining amount of space on the memory card. Recording may end before this limit is reached if the camera temperature becomes elevated.

3 When the lens protectors or underwater lens protectors are attached.

4 Dropped from a height of 200 cm (6 ft 6 in.) onto a surface of 5 cm (2 in.) thick plywood (changes in appearance, such as paint peeling off and deformation of the drop shock portion and waterproof performance are not subject to the test).
These tests do not guarantee that the camera will be free from damage or trouble under all conditions.

EN-EL12 Rechargeable Li-ion Battery

Type	Rechargeable lithium-ion battery
Rated capacity	DC 3.7 V, 1050 mAh
Operating temperature	0°C–40°C (32°F–104°F)
Dimensions (W × H × D)	Approx. 32 × 43.8 × 7.9 mm (1.3× 1.7 × 0.3 in.)
Weight	Approx. 22.5 g (0.8 oz)

EH-73P/EH-73PCH Charging AC Adapter

Rated input	AC 100–240 V, 50/60 Hz, Max 0.14 A
Rated output	DC 5.0 V, 1.0 A
Operating temperature	0°C–40°C (32°F–104°F)
Dimensions (W × H × D)	Approx. 55 × 22 × 54 mm (2.2 × 0.9 × 2.2 in.) (excluding plug adapter) For Argentina: Approx. 55 × 63 × 59 mm (2.2 × 2.5 × 2.4 in.) For India: Approx. 55 × 63.5 × 59 mm For Korea: Approx. 55 × 67 × 59 mm
Weight	Approx. 51 g (1.8 oz) (excluding plug adapter) For Argentina and India: Approx. 76 g (2.7 oz) For Korea: Approx. 73 g

The symbols on this product represent the following:
~ AC, ⎓ DC, ⧈ Class II equipment (The construction of the product is double-insulated.)

ML-L6 Remote Control

Power sources		3V CR2032 lithium battery
Bluetooth		
	Communication protocols	Bluetooth Specification Version 4.1
	Communication distance	Approx. 10 m (10 yd)
Operating environment		
	Temperature	-10°C– +40°C (14°F–104°F) (for land use)
	Humidity	85% or less (no condensation)
Waterproof performance		JIS/IEC protection class 7 (IPX7) equivalent (under our testing conditions) It is confirmed that water does not seep inside when soaked underwater at a depth of 1 m (3.2 ft) for up to 30 minutes. However, the remote control cannot be used underwater.
Dimensions (W × H × D)		Approx. 60.0 × 13.8 × 40.0 mm (2.4 × 0.6 × 1.6 in.) (excluding projections)
Weight		Approx. 22.6 g (0.8 oz) (including battery)

AA-1B Base Adapter

Dimensions (W × H × D)	Approx. 63.5 × 54.5 × 46.0 mm (2.5 × 2.2 × 1.9 in.) (excluding camera screw)
Weight	Approx. 44 g (1.6 oz)
Load capacity	Up to 300 g (10.5 oz)

AA-2 Base Mount (Flat)

Dimensions (W × H × D)	Approx. 40.0 × 12.5 × 49.2 mm (1.6 × 0.5 × 2.0 in.) (excluding projections)
Weight	Approx. 10 g (0.36 oz)

AA-3 Base Mount (Curved)

Dimensions (W × H × D)	Approx. 40.0 × 12.5 × 49.2 mm (1.6 × 0.5 × 2.0 in.) (excluding projections)
Weight	Approx. 9 g (0.32 oz)

AA-14B Lens Protector

Dimensions (W × D)	Approx. 38.0 × 12.5 mm (1.5 × 0.5 in.)
Weight	Approx. 5.6 g (0.2 oz)

AA-15B Underwater Lens Protector

Dimensions (W × H × D)	Approx. 53.0 × 39.8 × 14.0 mm (2.1 × 1.6 × 0.6 in.) (excluding projections)
Weight	Approx. 20 g (0.71 oz)

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