Nikon

DIGITAL CAMERA

COOLPIX AW130

Reference Manual

En

Introduction

Read This First

To get the most from this Nikon product, be sure to read "For Your Safety" (□vi–viii), "<Important> Shockproof, Waterproof, Dustproof, Condensation" (□ix), "<Important> Notes About Location Data Functions (GPS/GLONASS, Electronic Compass)" (□xv), and "Wi-Fi (Wireless LAN Network)" (□xix), and all other instructions thoroughly and keep them where they will be read by all who use the camera.

- If you want to start using the camera right away, see "Preparing for Shooting" (□6) and "Basic Shooting and Playback Operations" (□12).
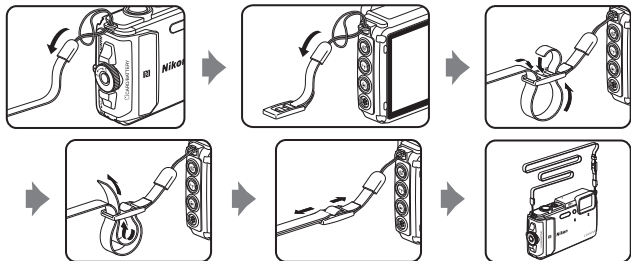
Other Information

- Symbols and Conventions

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.

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

Attaching the Camera Strap for Land Use

Remove the strap for land use before using the camera underwater.

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 COOLPIX cameras are designed to the highest standards and include complex electronic circuitry. Only Nikon brand electronic accessories (including battery chargers, batteries, Charging AC Adapters, 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 monitor 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).

Notice Concerning Prohibition of Copying or Reproduction

Note that simply being in possession of material that was digitally copied or reproduced by means of a scanner, digital camera or other device may be punishable by law.

• Items prohibited by law from being copied or reproduced

Do not copy or reproduce paper money, coins, securities, government bonds or local government bonds, even if such copies or reproductions are stamped "Sample." The copying or reproduction of paper money, coins, or securities which are circulated in a foreign country is prohibited. Unless the prior permission of the government was obtained, the copying or reproduction of unused postage stamps or post cards issued by the government is prohibited.

The copying or reproduction of stamps issued by the government and of certified documents stipulated by law is prohibited.

• Cautions on certain copies and reproductions

The government has issued cautions on copies or reproductions of securities issued by private companies (shares, bills, checks, gift certificates, etc.), commuter passes, or coupon tickets, except when a minimum of necessary copies are to be provided for business use by a company. Also, do not copy or reproduce passports issued by the government, licenses issued by public agencies and private groups, ID cards and tickets, such as passes and meal coupons.

• Comply with copyright notices

The copying or reproduction of copyrighted creative works such as books, music, paintings, woodcut prints, maps, drawings, movies, and photographs is governed by national and international copyright laws. Do not use this product for the purpose of making illegal copies or to infringe copyright laws.

Disposing of Data Storage Devices

Please note that deleting images or formatting data storage devices such as memory cards or built-in camera memory does not completely erase the original image data. Deleted files can sometimes be recovered from discarded storage devices 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 data storage device or transferring ownership to another person, erase all data using commercial deletion software, or set **Record location data** in **Location data options** in the location data options menu (□78) to **Off** after formatting the device and 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 data storage devices.

For the COOLPIX AW130, the log data saved on the memory card is handled in the same way as other data. To erase the log data that is obtained but not stored on the memory card, select **Create log ➔ End all logs ➔ Erase logs**.

To delete the Wi-Fi settings, select **Restore default settings** in the Wi-Fi options menu (□78).

Conformity Marking

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

Press the MENU button ➔ Y menu icon ➔ Conformity marking ➔ ⑥ button

For Your Safety

To prevent damage to your Nikon product or injury to yourself or to others, read the following safety precautions in their entirety before using this equipment. Keep these safety instructions where all those who use the product will read them.

The consequences that could result from failure to observe the precautions listed in this section are indicated by the following symbol:

⚠ This icon marks warnings, information that should be read before using this Nikon product, to prevent possible injury.

WARNINGS

⚠ Turn off in the event of malfunction

Should you notice smoke or an unusual smell coming from the camera or charging AC adapter, unplug the charging AC adapter and remove the battery immediately, taking care to avoid burns. Continued operation could result in injury. After removing or disconnecting the power source, take the equipment to a Nikon-authorized service representative for inspection.

⚠ Do not disassemble

Touching the internal parts of the camera or charging AC adapter could result in injury. Repairs should be performed only by qualified technicians. Should the camera or charging AC adapter break open as the result of a fall or other accident, take the product to a Nikon-authorized service representative for inspection, after unplugging the product and/or removing the battery.

⚠ Do not use the camera or charging AC adapter in the presence of flammable gas

Do not use electronic equipment in the presence of flammable gas, as this could result in explosion or fire.

⚠ Remove the strap when using the camera underwater

Twisting the camera strap around the neck may cause suffocation.

⚠ Handle the camera strap with care

Never place the strap around the neck of an infant or child.

⚠ Keep out of reach of children

Particular care should be taken to prevent infants from putting the battery or other small parts into their mouths.

⚠ **Do not remain in contact with the camera, charging AC adapter, or AC adapter for extended periods while the devices are on or in use**

Parts of the devices become hot. Leaving the devices in direct contact with the skin for extended periods may result in low-temperature burns.

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

Failure to observe this precaution could cause damage or fire.

⚠ **Use the appropriate power supply (battery, charging AC adapter, AC adapter, USB cable)**

Using a power supply other than those provided or sold by Nikon could result in damage or malfunction.

⚠ **Observe caution when handling the battery**

The battery may leak, overheat, or explode if improperly handled. Observe the following precautions when handling the battery for use in this product:

- Before replacing the battery, turn the product off. If you are using the charging AC adapter/AC adapter, be sure it is unplugged.
- Use only a Rechargeable Li-ion Battery EN-EL12 (included). Charge the battery by using a camera that supports battery charging. To perform this operation, use the Charging AC Adapter EH-71P/EH-71PCH/EH-73P/ EH-73PCH (included) and USB Cable UC-E21 (included). The Battery Charger MH-65 (available separately) is also available to charge the battery without using a camera.
- When inserting the battery, do not attempt to insert it upside down or backwards.
- Do not short or disassemble the battery or attempt to remove or break the battery insulation or casing.
- Do not expose the battery to flame or to excessive heat.
- Do not immerse in or expose to water.
- Put the battery in a plastic bag, etc. to insulate the terminal before transporting it. Do not transport or store with metal objects such as necklaces or hairpins.
- The battery is prone to leakage when fully discharged. To avoid damage to the product, be sure to remove the battery when no charge remains.
- Discontinue use immediately should you notice any change in the battery, such as discoloration or deformation.
- If liquid from the damaged battery comes in contact with clothing or skin, rinse immediately with plenty of water.

⚠ **Observe the following precautions when handling the charging AC adapter**

- Keep dry. Failure to observe this precaution could result in fire or electric shock.

- Dust on or near the metal parts of the plug should be removed with a dry cloth. Continued use could result in fire.
- Do not handle the plug or go near the charging AC adapter during lightning storms. Failure to observe this precaution could result in electric shock.
- Do not damage, modify, forcibly tug or bend the USB cable, place it under heavy objects, or expose it to heat or flames. Should the insulation be damaged and the wires become exposed, take it to a Nikon-authorized service representative for inspection. Failure to observe these precautions could result in fire or electric shock.
- Do not handle the plug or charging AC adapter with wet hands. Failure to observe this precaution could result in electric shock.
- Do not use with travel converters or adapters designed to convert from one voltage to another or with DC-to-AC inverters. Failure to observe this precaution could damage the product or cause overheating or fire.

⚠ **Use appropriate cables**

When connecting cables to the input and output jacks, use only the cables provided or sold by Nikon for the purpose, to maintain compliance with product regulations.

⚠ **Handle moving parts with care**

Be careful that your fingers or other objects are not pinched by the moving parts.

⚠ **Using the flash close to your subject's eyes could cause temporary visual impairment**

The flash should be no less than 1 m (3 ft 4 in.) from the subject.
Particular care should be observed when photographing infants.

⚠ **Do not operate the flash with the flash window touching a person or object**

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

⚠ **Follow the instructions of airline and hospital personnel**

⚠ **Do not touch the camera directly for a long time in low temperatures of 0°C (32°F) or lower**

If the skin contacts metal parts etc., it may result in injury to the skin. Wear gloves etc.

⚠ **Observe caution when using the movie light**

Do not look directly into the movie light. This could damage the eyes or result in visual impairment.

<Important> Shockproof, Waterproof, Dustproof, Condensation

- Make sure to read the following instructions as well as the instructions provided in "Caring for the Product" ([]160).

Notes About Shockproof Performance

This camera has passed Nikon's in-house test (drop test from a height of 210 cm (7 ft) on a 5 cm (2 in.) thick plywood panel) compliant with MIL-STD 810F Method 516.5-Shock*.

This test does not guarantee the waterproof performance of the camera or that the camera will be free from damage or trouble under all conditions.

Changes in appearance, such as paint peeling off and deformation of the drop shock portion are not subject to the Nikon's in-house test.

* 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 (48 in.) 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).

Do not subject the camera to excessive shock, vibration or pressure by dropping, hitting it, or placing a heavy object on it.

Failure to observe this precaution could deform the camera, damage the airtight seals, or cause water to seep inside the camera, resulting in camera malfunction.

- Do not use the camera deeper than 30 m (100 ft) underwater.
- Do not subject the camera to water pressure by exposing it to running water.
- Do not sit down with the camera in the pocket of your trousers.
  Do not forcibly stuff the camera into a bag.

Notes About Waterproof and Dustproof Performances

The camera is equivalent to JIS/IEC waterproof grade 8 (IPX8) and JIS/IEC dustproof grade 6 (IP6X) and enables shooting images underwater at a depth of 30 m (100 ft) for up to 60 minutes.*

This rating does not guarantee the waterproof performance of the camera or that the camera will be free from damage or trouble under all conditions.

* 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.

If the camera is subjected to excessive shock, vibration or pressure caused by dropping it, hitting it, or placing a heavy object on it, the waterproof performance is not guaranteed.

- If the camera is exposed to shocks, it is recommended to consult your retailer or Nikon-authorized service representative to confirm the waterproof performance (charged service).
  - Do not drop the camera, strike it against a hard object such as a rock, or throw it against a water surface.
  - Do not use the camera deeper than 30 m (100 ft) underwater.
  - Do not subject the camera to water pressure by exposing it to rapids or waterfalls.
  - Your Nikon warrantee may not cover troubles caused by water seeping inside the camera due to improper handling of the camera.
- If water seeps inside the camera, immediately stop using the camera. Wipe off moisture from the camera, and at once take the camera to your Nikon-authorized service representative.
- The waterproof performance of this camera is designed to work for fresh water (swimming pools, rivers and lakes) and seawater 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.
- Accessories are not waterproof.
- If a liquid such as water droplets falls on the outside of the camera or inside of the battery-chamber/memory card slot cover, immediately wipe it off with a soft dry cloth. Do not insert a wet memory card or battery in the camera. If the battery-chamber/memory card slot cover is opened or closed under wet conditions near a waterfront or underwater, this could cause water to seep inside the camera or result in camera malfunction.

  Do not open or close the cover with wet hands. This could cause water to seep inside the camera or result in camera malfunction.
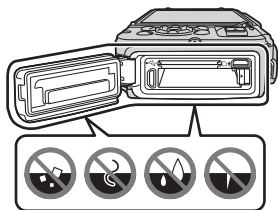
- If a foreign substance adheres to the outside of the camera or inside of the battery-chamber/memory card slot cover (in locations such as yellow waterproof packing, hinges, memory card slot, or terminals), immediately remove it with a blower. If a foreign substance adheres to the waterproof packing inside of the battery-chamber/ memory card slot cover, remove it with the included brush. Do not use the included brush for anything other than cleaning the waterproof packing.

- If a foreign substance such as suntan oil, sunscreen lotion, hot spring, bath mix powder, detergent, soap, organic solvent, oil, or alcohol adheres to the camera, immediately wipe it off. This could cause deterioration of the camera exterior.

- Do not leave the camera in low temperature conditions in cold climate regions or in high-temperature conditions of 40℃ (104°F) or more (in particular, a place exposed to direct sunlight, inside the cabin of a car, on a boat, on the beach, or near heating apparatus) for a long period of time. This could cause deterioration of the waterproof performance.
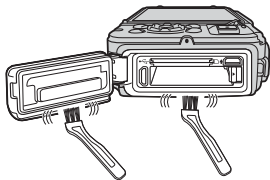
Before Using the Camera Underwater

Remove the strap for land use before using the camera underwater.

1. Make sure that there are no foreign substances inside the battery-chamber/memory card slot cover.
- Any foreign substances such as sand, dust or hair inside the battery-chamber/memory card slot cover should be removed with a blower.
- Any liquid such as water droplets inside the battery-chamber/memory card slot cover should be wiped off with a soft dry cloth.

2. Make sure that the waterproof packing of the battery-chamber/memory card slot cover is not cracked or deformed.
- The waterproof performance of waterproof packing may start to deteriorate after one year.
 If the waterproof packing begins to deteriorate, consult your retailer or Nikon-authorized service representative.
- Make sure that the waterproof packing is not detached from the camera.

3. Make sure that the battery-chamber/memory card slot cover is firmly closed.
- Rotate the battery-chamber/memory card slot cover latch until it clicks into place. Make sure that the thin cord of the camera strap does not get caught.
- Make sure that the latch indicator indicates the "Close" status.

Notes About Using the Camera Underwater

Observe the following precautions to prevent water from seeping inside the camera.

- Do not dive into water deeper than 30 m (100 ft) with the camera.
- Do not continuously use the camera underwater for 60 minutes or more.
- Use the camera in the water temperature range from 0°C to 40°C (32°F to 104°F) when using it underwater.
- Do not use the camera at hot springs.
- Do not open or close the battery-chamber/memory card slot cover underwater.
- Do not subject the camera to shock when using it underwater. Do not jump into water with the camera or subject it to high water pressure conditions such as rapids or waterfalls.
- This camera does not float in water. Make sure not to drop the camera underwater.

Cleaning after Using the Camera Underwater

Within 60 minutes after using the camera underwater or at the beach, use a soft cloth lightly dampened with fresh water to wipe off any sand, dust, or salt, and dry thoroughly.

If you leave the camera in wet conditions where salt particles or other foreign substances are adhered to it, this could cause damage, discoloration, corrosion, a bad smell or deterioration of waterproof performance.

The cleaning procedure described below is recommended to ensure long-term operation of the camera.

- Before cleaning the camera, thoroughly remove water droplets, sand, salt particles, or other foreign substances from your hands, body, and hair.
- It is recommended to clean the camera indoors to avoid a place where it could be exposed to water spray or sand.
- Do not open the battery-chamber/memory card slot cover until all foreign substances are washed off with water and all moisture is wiped off.

1. Keep the battery-chamber/memory card slot cover closed and wash off the camera with fresh water.

Immerse the camera in a shallow basin filled with fresh water (such as tap water and well-water that do not contain salt) for 10 minutes.

- If the buttons or switches do not operate properly, foreign substances may have adhered. Since this could cause a malfunction, immerse the camera in fresh water and shake it sufficiently in the water to remove the any foreign substances from the camera.
- 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.
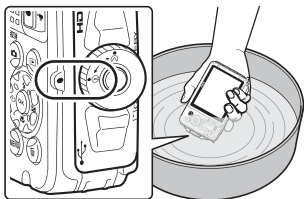
2. Wipe off water droplets with a soft cloth and dry the camera in the well-ventilated and shady place.

- Place the camera on a dry cloth to dry it.
  Water will flow out from openings in the microphone or speakers.
- Do not dry the camera with hot air from a hair dryer or clothes dryer.
- Do not use chemicals (such as benzine, thinner, alcohol, or cleanser), soap, or neutral detergents.
  If the waterproof packing or body of the camera becomes deformed, the waterproof performance will deteriorate.

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

- If you open the cover before the camera is thoroughly dried, water droplets may fall on a memory card or battery.
  The water droplets may also seep inside the battery-chamber/memory card slot cover (in locations such as waterproof packing, hinges, memory card slot, or terminals).
  If that happens, wipe the water off with a dry soft cloth.
- If the cover is closed when the inside is wet, this could cause condensation or malfunction.
- If the microphone or speaker openings are clogged with water droplets, the sound may deteriorate or become distorted.
  - Wipe the water off with a dry soft cloth.
  - 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.
- See "Cleaning" (□164) for more information.

Notes About Operating Temperature and 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.

- The performance of the batteries (number of images shot and shooting time) will drop temporarily. Keep the camera and batteries warm inside a cold-resistant container or under your clothing before use.
- If the camera is in a very cold state, the performance may drop temporarily, for example, the monitor may be darker than normal immediately after the camera is turned on or residual images may be produced.
- When snow or water droplets adhere to the exterior of the camera, immediately wipe them off.
  - If the buttons or switches are frozen, they may not operate smoothly.
  - If the microphone or speaker openings are clogged with water droplets, the sound may deteriorate or become distorted.

Operating environmental conditions such as temperature and humidity may cause fogging (condensation) on the inside of the monitor or lens. This is not the camera malfunction or defect.
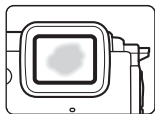
Environmental conditions that are likely to cause condensation inside of the camera

Fogging (condensation) may occur on the inside of the monitor or lens in the following environmental conditions where there are sharp temperature changes or high humidity.

- The camera is suddenly immersed in low temperature water after being in a high temperature place on land, such as on the beach or in direct sunlight.
- The camera is brought to a warm place such as inside a building from the cold climate outside.
- The battery-chamber/memory card slot cover is opened or closed in a high-humidity environment.

Clearing the fogging

- Open the battery-chamber/memory card slot cover after turning off the camera in a place where the ambient temperature is stable (avoid any place that has high-temperature/high-humidity, sand or dust).
  To clear the fogging, remove the battery and memory card, and leave the camera with the battery-chamber/memory card slot cover open to allow the camera to adjust to the ambient temperature.
- If the fogging does not clear, consult your retailer or Nikon-authorized service representative.

<Important> Notes About Location Data Functions (GPS/GLONASS, Electronic Compass)

Map/location name data of this camera

Before using the location data functions, make sure to read "USER LICENSE AGREEMENT FOR MAP DATA AND LOCATION NAME DATA" (□187) and agree to the terms.

- The maps and location name information (Points of Interest: POI) are as of April 2014.

  The maps and location name information will not be updated.

- The details of geological formations are displayed simplistically according to the scale of a map. The scale of a map and level of detail of the location data vary depending on country and region.

  If the latitude becomes higher, the horizontal and vertical scales displayed on the monitor vary, therefore displayed geological formations differ from the actual formations. Use the maps and location name information only as a guide.

- The detailed map data and location name information (Points of Interest: POI) of the People's Republic of China ("China") and the Republic of Korea are not provided for the COOLPIX AW130.

Notes about record location data functions and log recording

- When **Record location data** in **Location data options** in the location data options menu is set to **On** or while recording logs, record location data functions and log recording will continue to operate even after the camera is turned off (□132).

- An individual may be identified from still images or movies that have been recorded with location data. Observe caution when you transfer still images or movies recorded with location data, or log files to a third party or upload them to a network such as the Internet where the public can view them. Make sure to read "Disposing of Data Storage Devices" (□v).

Notes about measurement functions

The COOLPIX AW130 is a camera. Do not use this camera as a navigation device or measuring instrument.

- Use information (such as direction, altitude and water depth) measured by the camera as a guideline only. Do not use this information for navigation of an airplane, car, and person or land survey applications.
- When you use the camera for mountain climbing, trekking, or underwater, make sure to take a map, navigation device, or measuring instrument separately.

Using the camera overseas

- Before taking the camera with location data functions overseas for travel, consult your travel agency or embassy of the country you are visiting to confirm whether there is any restriction on use.
  For example, you cannot record location data logs without permission from the government in China.
  Set **Record location data** to **Off**.
- The location data may not function properly in China and on the borders between China and neighboring countries (as of December 2014).

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

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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.

Wi-Fi (Wireless LAN Network)

This product is controlled by the United States Export Administration Regulations, and you are required to obtain permission from the United States government if you export or re-export this product to any country to which the United States embargoes goods. The following countries were subject to embargo: Cuba, Iran, North Korea, Sudan, and Syria. Since the target countries are subject to change, please contact the United States Department of Commerce for the latest information.

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.

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.

COOLPIX AW130, which is equipped with a DW092 (FCC ID:EW4DW092 / IC ID:4634A-3149EC) Wireless LAN Module, has been tested and found to comply with FCC/IC radiation exposure limits set forth for an uncontrolled environment and meets 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.

Declaration of Conformity (Europe)

Hereby, Nikon Corporation, declares that COOLPIX AW130 is 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_AW130.pdf.

Notice for Customers in Jamaica

This product contains a Type Approved Module by Jamaica: "SMA – DW092"

Precautions when Using Radio Transmissions

Always keep in mind that radio transmission or reception of data is subject to interception by third parties. Note that Nikon is not responsible for data or information leaks that may occur during data transfer.

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 **Reset all** in the setup menu ($\Box$78) to delete all user information registered and configured with the product, including wireless LAN connection settings and other personal information.

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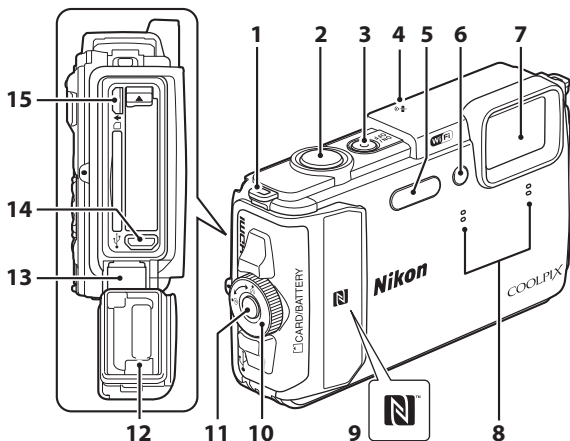
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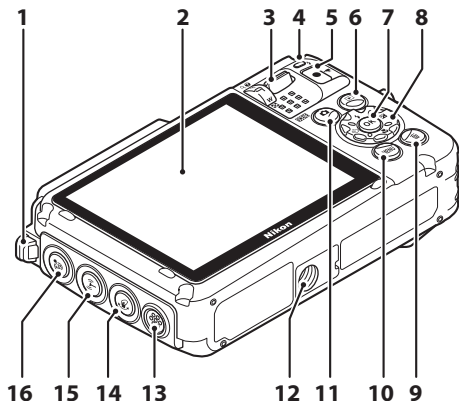
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* Also referred to as the "monitor" in this manual.

The Monitor

The information that is displayed in the monitor during shooting and playback 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** (□121)).

Shooting Mode
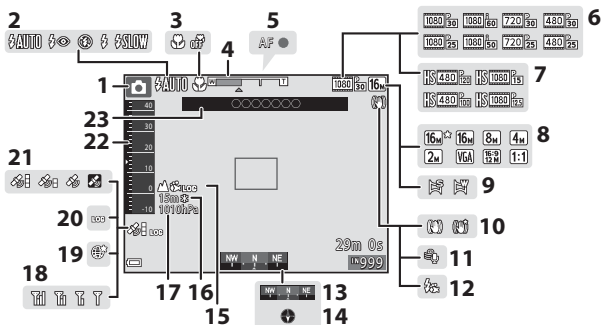
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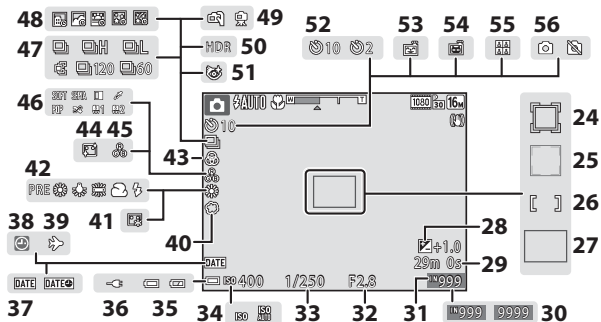
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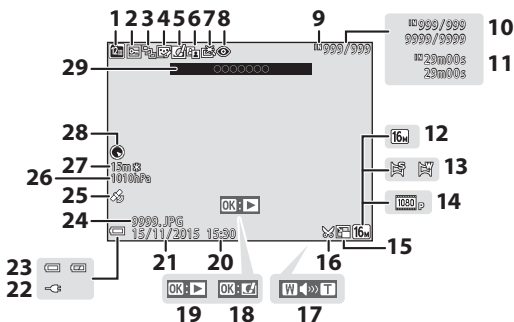
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Preparing for Shooting

Insert the Battery and Memory Card

Battery latch   Memory card slot
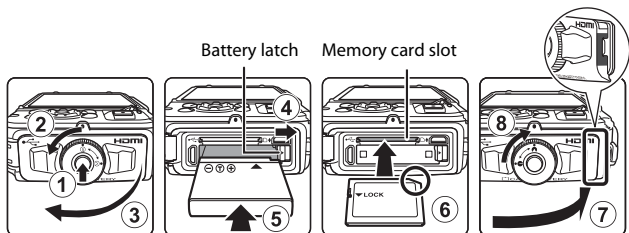
- Press the battery-chamber/memory card slot cover latch release (①) and rotate the battery-chamber/memory card slot cover latch (②) to open the cover (③).
- With the battery's positive and negative terminals oriented correctly, move the orange battery latch (④), and fully insert the battery (⑤).
- Slide 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.
- Close the battery-chamber/memory card slot cover (⑦) and, while pressing it firmly against the camera so that the red portion on the side of the cover is hidden, rotate the battery-chamber/memory card slot cover latch until it clicks into place (⑧).
  Make sure that the cover is securely locked.

✔ 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. Insert the memory card into the camera, press the **MENU** button, and select **Format card** in the setup menu (□78).

✔ Notes About Closing the Cover without Getting the Camera Strap or Cord Caught

If the camera strap's cord gets caught in the battery-chamber/memory card slot cover when it is closed, the cover could be damaged. Before closing the battery-chamber/memory card slot cover, make sure that the strap or cord does not get caught in it.

Preparing for Shooting

⚠ **Opening/Closing the Battery-Chamber/Memory Card Slot Cover**

Do not open and close the battery-chamber/memory card slot cover in a sandy or dusty environment or with wet hands. If the cover is closed without removing foreign particles, water may seep inside the camera or the camera may become damaged.

- If foreign particles get inside the cover or camera, immediately remove them with a blower or brush.
- If liquid such as water gets inside the cover or camera, immediately wipe it off with a soft and dry cloth.

Removing the Battery or Memory Card

Turn the camera off and make sure that the power-on lamp and monitor 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 become hot .

Memory Cards and Internal Memory

Camera data, including images and movies, can be saved either on a memory card or in the camera's internal memory. To use the camera's internal memory, remove the memory card.

Charge the Battery

1 With the battery installed, connect the camera to an electrical outlet.

Charge lamp   Charging AC Adapter

Electrical outlet

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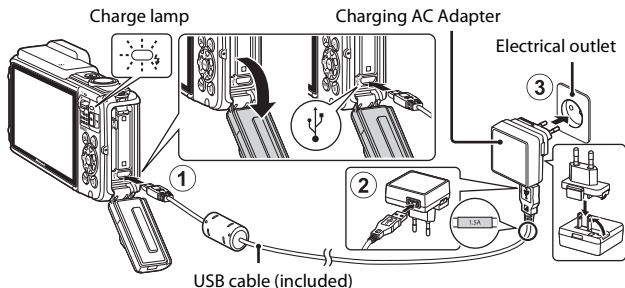
If a plug adapter* is included with your camera, securely connect it to the Charging AC Adapter. Once the two are connected, attempting to forcibly remove the plug adapter could damage the product.

* 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.

- The charge lamp slowly flashes green to indicate that the battery is charging.
- When charging is complete, the charge lamp turns off. It takes about 2 hours and 20 minutes to charge a fully exhausted battery.
- The battery cannot be charged when the charge lamp quickly flashes green, 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.

2 Disconnect the Charging AC Adapter from the electrical outlet and then disconnect the USB cable.

⚠ **Notes About the USB Cable**

- 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.

- Make sure that the plugs are properly oriented. Do not insert or remove the plugs at an angle when connecting or disconnecting them.

⚠ **Notes About Charging the Battery**

- The camera can be operated while the battery is charging, but the charging time increases.

- If the battery level is extremely low, you may not be able to operate the camera while the battery is charging.

- Do not, under any circumstances, use another make or model of AC adapter other than Charging AC Adapter EH-71P/EH-71PCH/EH-73P/EH-73PCH, and do not use a commercially available USB-AC adapter or a battery charger for a mobile phone. Failure to observe this precaution could result in overheating or in damage to the camera.

✐ **Charging Using a Computer or Battery Charger**

- You can also charge the battery by connecting the camera to a computer.

- You can use the Battery Charger MH-65 (available separately) to charge the battery without using the camera.

Turn the Camera On and Set the Display Language, Date, and Time

When the camera is turned on for the first time, the language-selection screen and the date and time setting screen for the camera clock are displayed.

1 Press the power switch to turn on the camera.

- The monitor turns on.
- To turn the camera off, press the power switch again.
- Note that the power switch is enabled a few seconds after the battery is inserted. Wait a few seconds before pressing the power switch.
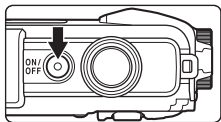
2 Use the multi selector ▲▼ to select the desired language and press the Ⓚ button.

Language
Български
Čeština
Dansk
Deutsch
English
Español
Cancel
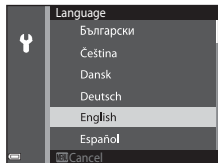
3 Select **Yes** and press the ⓀⓀ button.

4 Select your home time zone and press the ⓀⓀ button.

- Press ▲ to display ⬙ above the map and enable daylight saving time. Press ▼ to disable it.

London, Casablanca
Back
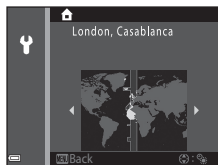
5 Use ▲▼ to select the date format and press the Ⓚ button.

6 Set the date and time, and press the 🆗 button.

- Use ◀▶ to select a field and then use ▲▼ to set the date and time.
- Select the minute field and press the 🆗 button to confirm the setting.

Date and time

D M Y h m

01 . 01 . 2015 00 : 00

Edit
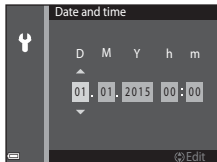
7 When the confirmation dialog is displayed, use ▲▼ to select **Yes** and press the 🆗 button.

8 Read the message about the waterproof function, and press ▶.

- There are seven message screens.
- Press the 🆗 button after confirming the last message.
- The shooting screen is displayed, and you can take pictures in scene auto selector mode.
- Battery level indicator
  ▭: The battery level is high.
  ▬: The battery level is low.
- Number of exposures remaining
  🔟 is displayed when no memory card is inserted in the camera, and images are saved in the internal memory.

Number of exposures remaining
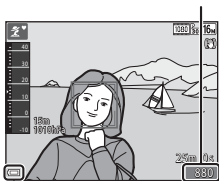
Battery level indicator

🖉 **Changing the Language or the Date and Time Setting**

- You can change these settings using the **Language** and **Time zone and date** settings in the 🌱 setup menu (🕮78).
- You can enable or disable daylight saving time in the 🌱 setup menu by selecting **Time zone and date** followed by **Time zone**. Press the multi selector ▶ and then ▲ to enable daylight saving time and move the clock forward one hour, or ▼ to disable daylight saving time and move the clock back one hour.

🖉 **The Clock Battery**

- The camera's clock is powered by a built-in backup battery.
  The backup battery charges when the main battery is inserted into the camera or when the camera is connected to an optional AC adapter, and it can run the clock for several days after about 10 hours of charging.
- If the camera's backup battery becomes exhausted, the date and time setting screen is displayed when the camera is turned on. Set the date and time again (🕮10).

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Basic Shooting and Playback Operations

Shooting with Scene Auto Selector Mode

1 Hold the camera steady.

- Keep fingers and other objects away from the lens, flash, AF assist-illuminator, microphone, and speaker.

- When taking pictures in portrait ("tall") orientation, turn the camera so that the flash is above the lens.
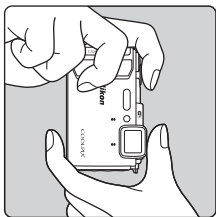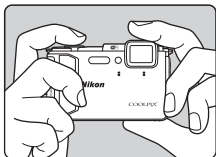
2 Frame the picture.

- Move the zoom control to change the zoom lens position.

Zoom in

Zoom out

- When the camera recognizes the shooting scene, the shooting mode icon changes accordingly.
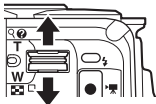
Shooting mode icon
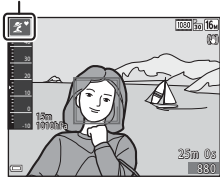
3 Press the shutter-release button halfway.

- When the subject is in focus, the focus area or focus indicator is displayed in green.
- When you are using digital zoom, the camera focuses in the center of the frame and the focus area is not displayed.
- If the focus area or focus indicator flashes, the camera is unable to focus. Modify the composition and try pressing the shutter-release button halfway again.
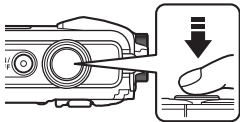
4 Without lifting your finger, press the shutter-release button the rest of the way down.

⚠️ Notes About Saving Images or Movies

The indicator showing the number of exposures remaining or the indicator showing the remaining recording time flashes 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.

🖉 The Auto Off Function

- When no operations are performed for about one minute, the monitor turns off, the camera enters standby mode, and then the power-on lamp flashes. The camera turns off after remaining in standby mode for about three minutes.
- To turn the monitor back on while the camera is in standby mode, perform an operation such as pressing the power switch or shutter-release button.

🖉 When Using a Tripod

- We recommend using a tripod to stabilize the camera in the following situations:
  - When shooting in dim lighting with the flash mode (🗐19) set to ⚡ (off)
  - When the zoom is at a telephoto position
- When using a tripod to stabilize the camera during shooting, set **Photo VR** to **Off** in the setup menu (🗐78) to prevent potential errors caused by this function.

Basic Shooting and Playback Operations

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Using the Zoom

When you move the zoom control, the zoom lens position changes.

- To zoom in: Move toward **T**
- To zoom out: Move toward **W**
  When you turn the camera on, the zoom moves to the maximum wide-angle position.

Telephoto

Wide-angle

- A zoom indicator is displayed on the shooting screen when the zoom control is moved.

W			T

Optical zoom   Digital zoom

- Digital zoom, which allows you to further magnify the subject up to approximately 4× the maximum optical zoom ratio, can be activated by moving and holding the zoom control toward **T** when the camera is zoomed in to the maximum optical zoom position.
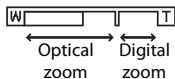
C Digital Zoom

The zoom indicator changes to blue when the digital zoom is activated, and it changes to yellow when the zoom magnification is increased further.

- Zoom indicator is blue: Image quality is not noticeably reduced by using the Dynamic Fine Zoom.
- Zoom indicator is yellow: There may be cases in which image quality is noticeably reduced.
- The indicator remains blue across a wider area when the image size is smaller.

The Shutter-release Button

Press halfway		To set focus and exposure (shutter speed and aperture value), press the shutter-release button lightly until you feel a slight resistance. Focus and exposure remain locked while the shutter-release button is pressed halfway.
Press all the way		Press the shutter-release button all the way to release the shutter and take a picture. Do not use force when pressing the shutter-release button, as this may result in camera shake and blurred images. Press the button gently.

Basic Shooting and Playback Operations

Play Back Images

1 Press the ▶ (playback) button to enter playback mode.

- If you press and hold down the ▶ button while the camera is turned off, the camera turns on in playback mode.
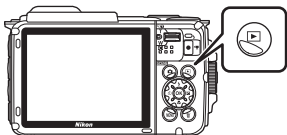
2 Use the multi selector to select an image to display.

Display the previous image

- Press and hold down ▲▼◀▶ to scroll through the images quickly.
- To return to shooting mode, press the ▶ button or shutter-release button.

Display the next image

- When **OK : ✍** is displayed in full-frame playback mode, you can press the ⑥ button to apply an effect to the image.

- Move the zoom control toward **T** (Q) in full-frame playback mode to zoom in on an image.

- In full-frame playback mode, move the zoom control toward **W** (◰◰) to switch to thumbnail playback mode and display multiple images on the screen.
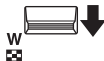
Delete Images

1 Press the 🗑 (delete) button to delete the image currently displayed in the monitor.

2 Use the multi selector ▲▼ to select the desired deletion method and press the 🅿 button.

- To exit without deleting, press the MENU button.

Delete
Current image
Erase selected images
All images
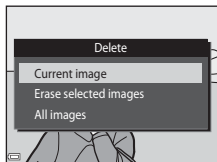
3 Select **Yes** and press the 🅿 button.

- Deleted images cannot be recovered.

Erase 1 image?
Yes
No
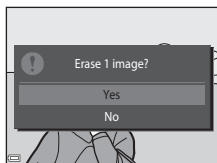
⚠ Deleting Images Captured Continuously (Sequence)

- Images captured continuously are saved as a sequence, and only the first image of the sequence (the key picture) is displayed in playback mode (default setting).
- If you press the 🗑 button while a key picture is displayed for a sequence of images, all images in the sequence are deleted.

0004.JPG
15/11/2015 15:30

4/5

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- To delete individual images in a sequence, press the 🅿 button to display them one at a time and press the 🗑 button.

🖉 Deleting the Image Captured While in Shooting Mode

When using shooting mode, press the 🗑 button to delete the last image that was saved.

Operating the Erase Selected Images Screen

1 Use the multi selector ◀▶ to select an image to be deleted, and then use ▲ to display 🗑.

- To undo the selection, press ▼ to remove 🗑.
- Move the zoom control (□2) toward **T** (Q) to switch to full-frame playback or **W** (⊞) to switch to thumbnail playback.

2 Add 🗑 to all images that you want to delete and then press the ⓸ button to confirm the selection.

- A confirmation dialog is displayed. Follow the on-screen instructions to complete operations.

Basic Shooting and Playback Operations

Changing the Shooting Mode

The shooting modes described below are available.

- **Scene auto selector**
  The camera automatically recognizes the shooting scene when you frame a picture, making it easier to take pictures using settings that suit the scene.
- **Scene mode**
  Camera settings are optimized according to the scene that you select.
- **SOFT Special effects**
  Effects can be applied to images during shooting.
- **Smart portrait**
  Use glamour retouch to enhance human faces during shooting, and use the smile timer or self-collage function to take pictures.
- **Short movie show**
  The camera creates a short movie that is up to 30 seconds long (**1080/30p** or **1080/25p**) by recording and automatically combining multiple movie clips that are several seconds long.
- **Auto mode**
  Used for general shooting. Settings can be changed to suit the shooting conditions and the type of shot that you want to capture.

1 When the shooting screen is displayed, press the ▲ (shooting mode) button.
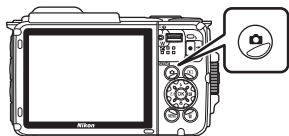
2 Use the multi selector ▲▼ to select a shooting mode and press the ⓀⓀ button.

- When scene mode or special effects mode is selected, press ▶ to select a scene mode or effect before pressing the ⓀⓀ button.
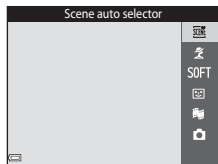
Using the Flash, Self-timer, Etc.

When the shooting screen is displayed, you can press the multi selector ▲ (⚡)
◀ (⏱) ▼ (✿) ▶ (⭿) to set the functions described below.

- **⚡ Flash mode**
  You can select a flash mode to match the shooting conditions.
- **⏱ Self-timer**
  The camera releases the shutter 10 seconds or 2 seconds after you press the
  shutter-release button.
- **✿ Macro mode**
  Use macro mode when you take close-up pictures.
- **⭿ Exposure compensation**
  You can adjust overall image brightness.

The functions that can be set vary depending on the shooting mode.

Recording Movies

Display the shooting screen and press the ● (🎬
movie-record) button to start recording a movie.
Press the ● (🎬) button again to end recording.

- To play back a movie, select a movie in full-
  frame playback mode and press the ⓞⓚ button.
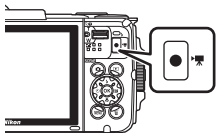
Action Control

The operations described below can be performed by shaking or tilting the camera.

Displaying the Previous or Next Image in Full-frame Playback Mode

In full-frame playback mode, shake the camera up/down to display the next image, or forward/backward to display the previous image (when **Playback action control** in the setup menu (□78) is set to **On**).

- Make sure to hold the camera firmly with the camera strap around your hand, and use your wrist to shake the camera as shown in the illustration.
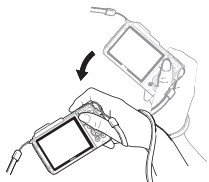
Using Action Menu

Press the ☛ (action) button to display the action menu.

- Shake the camera to select an option listed below, and press the ☛ button to perform the operation.
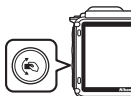
Action menu

Option	Description
Shooting mode selection	Select a shooting mode (only restricted to some shooting modes).
🎬 Start movie recording	Press the ☛ button to record/end a movie.
▶ Quick playback	Display an image in full-frame playback mode.
🌐 Current position	Display the current position on a map (only when the location data has been successfully calculated (□132)).
✕ Exit	Exit the action menu.

While the action menu is displayed, operations can be performed using only the ☛ button, shutter-release button, power switch, or **T** button.

Adjusting the Map Display

- You can scroll the displayed map by tilting the camera while pressing the ☛ button.
- You can zoom in on the displayed map by shaking the camera once, and zoom out by shaking it twice (when **Map actions** in the setup menu is set to **On**).

Shooting Features

🎞 (Scene Auto Selector) Mode

The camera automatically recognizes the shooting scene when you frame a picture, making it easier to take pictures using settings that suit the scene.

Enter shooting mode → 🗖 (shooting mode) button → 🎞 (scene auto selector) mode → 🆗 button

When the camera automatically recognizes the shooting scene, the shooting mode icon displayed on the shooting screen changes accordingly.

🔄	Portrait (for taking close-up portraits of one or two people)
🔄	Portrait (for taking portraits of large numbers of people, or images in which the background takes up a large portion of the frame)
🔄	Landscape
🔄	Night portrait (for taking close-up portraits of one or two people)
🔄	Night portrait (for taking portraits of large numbers of people, or images in which the background takes up a large portion of the frame)
🔄	Night landscape
🔄	Close-up
🔄	Backlighting (for taking pictures of subjects other than people)
🔄	Backlighting (for taking portrait pictures)
🔄	Underwater*
🔄	Other scenes

* The camera is switched to underwater mode when it is lowered into water. When the camera detects it is underwater while **Record location data** in **Location data options** in the location data options menu is set to **On** and positioning has been performed, the screen to select whether to record location data on the image that is shot underwater is displayed. When you select **Yes** or **No** and press the 🆗 button, the shooting screen is displayed.

⚠ Notes About 🎞 (Scene Auto Selector) Mode

- Depending on shooting conditions, the camera may not select the desired scene mode. In this case, select another shooting mode (🕮18).
- When the digital zoom is in effect, the shooting mode icon changes to 🔄.

❌ After Taking the Camera Out of the Water

After taking the camera out of water, sometimes it may not automatically switch to another scene from underwater mode.

Gently brush any water droplets with your hand from the camera or wipe it off with a soft and dry cloth. See "Cleaning after Using the Camera Underwater" (☐xii) for more information on caring for the camera.

Functions Available in 🖾 (Scene Auto Selector) Mode

- Flash mode (☐44)
- Self-timer (☐46)
- Exposure compensation (☐48)
- Image mode (☐80)

Scene Mode (Shooting Suited to Scenes)

When a scene is selected, camera settings are automatically optimized for the selected scene.

Enter shooting mode → ☐ (shooting mode) button → 🎭 (second icon from the top*) → ▶ → ▲▼ → select a scene → ⑱ button

* The icon of the last scene selected is displayed.

🎭 Portrait (default setting)	🌆 Dusk/dawn[1, 2, 3]
🏞 Landscape[1, 2]	🌃 Night landscape[1, 2] (□25)
⏱ Time-lapse movie (□28)	🌷 Close-up (□25)
🏃 Sports[2] (□24)	🍴 Food (□25)
👤 Night portrait (□24)	🎆 Fireworks show[1, 3] (□26)
🎉 Party/indoor[2] (□24)	🏢 Backlighting[2] (□26)
🏖 Beach[2]	▭ Easy panorama (□30)
❄ Snow[2]	🐕 Pet portrait (□27)
🌄 Sunset[2, 3]	🐟 Underwater[2] (□27)

[1] The camera focuses at infinity.
[2] The camera focuses on the area in the center of the frame.
[3] Use of a tripod is recommended, because the shutter speed is slow. Set **Photo VR** (□124) to **Off** in the setup menu when using a tripod to stabilize the camera during shooting.

Displaying a Description of Each Scene Mode (Help Display)

Select a scene and move the zoom control (□2) toward **T** (❷) to view a description of that scene. To return to the previous screen, move the zoom control toward **T** (❷) again.
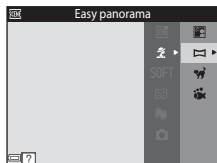
Tips and Notes

🏃 Sports

- While the shutter-release button is held all the way down, the camera shoots up to about 5 images continuously at a rate of about 7.0 fps (when image mode is set to 16м).
- The frame rate for continuous shooting may vary depending on the current image mode setting, the memory card used, or shooting conditions.
- Focus, exposure, and hue are fixed at the values determined with the first image in each series.

🌃 Night portrait

- On the screen displayed when 🌃 **Night portrait** is selected, select 🖐 **Hand-held** or 🛆 **Tripod**.
- 🖐 **Hand-held** (default setting):
  - While the 🌃 icon on the shooting screen is displayed in green, press the shutter-release button all the way to capture a series of images which are combined into a single image and saved.
  - Once the shutter-release button is pressed all the way, hold the camera still until a still image is displayed. After taking a picture, do not turn the camera off before the monitor switches to the shooting screen.
  - If the subject moves while the camera is shooting continuously, the image may be distorted, overlapped, or blurred.
- 🛆 **Tripod**:
  - One image is captured at a slow shutter speed when the shutter-release button is pressed all the way.
  - Vibration reduction is disabled even when **Photo VR** (□124) in the setup menu is set to **On**.

🎉 Party/indoor

- To avoid the effects of camera shake, hold the camera steady. Set **Photo VR** (□124) to **Off** in the setup menu when using a tripod to stabilize the camera during shooting.

Shooting Features

🌆 Night landscape

- On the screen displayed when 🌆 **Night landscape** is selected, select 🖐 **Hand-held** or 🔧 **Tripod**.
- 🖐 **Hand-held** (default setting):
  - While the 🌆 icon on the shooting screen is displayed in green, press the shutter-release button all the way to capture a series of images which are combined into a single image and saved.
  - Once the shutter-release button is pressed all the way, hold the camera still until a still image is displayed. After taking a picture, do not turn the camera off before the monitor switches to the shooting screen.
  - The angle of view (i.e., the area visible in the frame) seen in the saved image is narrower than that seen in the monitor at the time of shooting.

- 🔧 **Tripod**:
  - One image is captured at a slow shutter speed when the shutter-release button is pressed all the way.
  - Vibration reduction is disabled even when **Photo VR** (□124) in the setup menu is set to **On**.

🌷 Close-up

- Macro mode (□47) is enabled and the camera automatically zooms to the closest position at which it can focus.
- You can move the focus area. Press the 🆗 button, use the multi selector ▲▼◀▶ to move the focus area, and press the 🆗 button to apply the setting.

🍴 Food

- Macro mode (□47) is enabled and the camera automatically zooms to the closest position at which it can focus.
- You can adjust hue by using the multi selector ▲▼. The hue setting is saved in the camera's memory even after the camera is turned off.
- You can move the focus area. Press the 🆗 button, use the multi selector ▲▼◀▶ to move the focus area, and press the 🆗 button to apply the setting.
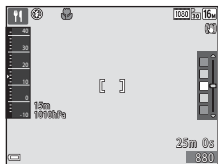
⚜ Fireworks show

- The shutter speed is fixed at four seconds.

⚜ Backlighting

- On the screen displayed when ⚜ **Backlighting** is selected, select **ON** or **OFF** to enable or disable the high dynamic range (HDR) function based on the type of image you want to capture.
- **OFF** (default setting): The flash fires to prevent the subject from being hidden in shadow.
  - When the shutter-release button is pressed all the way down, one image is captured.
- **ON**: Use when taking pictures with very bright and dark areas in the same frame.
  - When the shutter-release button is pressed all the way, the camera shoots images continuously at high speed, and saves the following two images:
    - A non-HDR composite image
    - An HDR composite image in which the loss of details in highlights or shadows is minimized
  - If there is only enough memory to save one image, an image processed by D-Lighting (☐66) at the time of shooting, in which dark areas of the image are corrected, is the only image saved.
  - Once the shutter-release button is pressed all the way, hold the camera still until a still image is displayed. After taking a picture, do not turn the camera off before the monitor switches to the shooting screen.
  - The angle of view (i.e., the area visible in the frame) seen in the saved image is narrower than that seen in the monitor at the time of shooting.

🐕 Pet portrait

- When you point the camera at a dog or cat, the camera detects the pet's face and focuses on it. By default, the camera detects a dog or cat face and automatically releases the shutter (pet portrait auto release).
- On the screen displayed when 🐕 **Pet portrait** is selected, select **S Single** or ⬚ **Continuous**.
  - **S Single**: The camera captures one image when a dog or cat face is detected.
  - ⬚ **Continuous**: The camera captures three images continuously when a dog or cat face is detected.

⚠ **Pet Portrait Auto Release**

- Press the multi selector ◀ (⏱) to change the **Pet portrait auto release** setting.
  - 🐾: The camera detects a dog or cat face and automatically releases the shutter.
  - **OFF**: The camera does not release the shutter automatically, even if a dog or cat face is detected. Press the shutter-release button. The camera also detects human faces when **OFF** is selected.
- **Pet portrait auto release** is set to **OFF** after five bursts have been taken.
- Shooting is also possible by pressing the shutter-release button, regardless of the **Pet portrait auto release** setting.

⚠ **Focus Area**

- When the camera detects a face, the face is displayed inside a yellow border. When the camera acquires focus on a face displayed inside a double border (focus area), the double border changes to green. If no faces are detected, the camera focuses on the subject in the center of the frame.

- Under some shooting conditions, the pet face may not be detected and other subjects may be displayed inside a border.
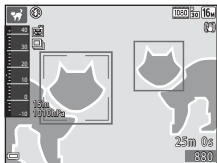
🤿 Underwater

- If you select **Underwater**, screens about recording of location data (□135) and water depth calibration are displayed followed by messages about waterproofing. The next message is displayed when you press the multi selector ▶ after reading the messages. When the shutter-release button is pressed, the camera switches to shooting mode without displaying any subsequent screens.
- See "<Important> Shockproof, Waterproof, Dustproof, Condensation" (□ix) for more information on shooting underwater.

Shooting Features

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Shooting Time-lapse Movies

The camera can automatically capture 300 still images at a specified interval to create time-lapse movies ($\overline{\underline{1080}}_{30}$ **1080/30p**) that are approximately 10 seconds long.

Enter shooting mode ➜ ☐ (shooting mode) button ➜ 𝒵 (second icon from the top*) ➜ ▶ ➜ ▲▼ ➜ 🕓 (time-lapse movie) ➜ 🆗 button

* The icon of the last scene selected is displayed.

Type	Interval time	Recording time
🎞 Cityscape (10 minutes) (default setting)	2 seconds	10 minutes
🎞 Landscape (25 minutes)	5 seconds	25 minutes
🎞 Sunset (50 minutes)	10 seconds	50 minutes
🎞 Night sky (150 minutes)[1]	30 seconds	2 hours 30 minutes
🎞 Star trails (150 minutes)[2]	30 seconds	2 hours 30 minutes

[1] Suited for recording the movement of stars. The focus is fixed at infinity.
[2] Star movement appears as lines of light due to image processing. The focus is fixed at infinity.

1 Use the multi selector ▲▼ to select a type, and press the 🆗 button.
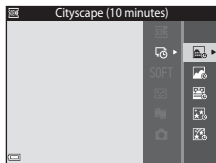
2 Select whether or not to fix exposure (brightness), and press the 🆗 button (except for 🎞 and 🎞).

- When **AE-L on** is selected, the exposure is fixed based on the first image.
  Select **AE-L off** when shooting under conditions with extreme changes in brightness, such as during sunset.
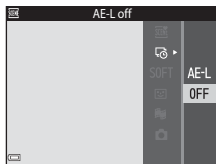
3 Stabilize the camera by using a tool such as a tripod.

4 Press the shutter-release button to capture the first image.

- Set exposure compensation (□48) before releasing the shutter for the first image. Exposure compensation cannot be changed after the first image is captured. Focus and hue are fixed when the first image is captured.

- The shutter is automatically released for the second and subsequent images.
- The monitor may turn off while the camera is not capturing images.
- Shooting ends automatically when 300 images are captured.
- Press the ® button to end shooting before the specified recording time elapses and save the time-lapse movie.
- Audio and still images cannot be saved.

⚠ Notes About Time-lapse Movie

- The camera cannot capture images if a memory card is not inserted. Do not exchange the memory card until shooting is complete.
- Use a fully charged battery to prevent the camera from turning off unexpectedly.
- Time-lapse movies cannot be recorded by pressing the ● (🎥 movie-record) button.
- Vibration reduction is disabled even when **Photo VR** (□124) in the setup menu is set to **On**.

Shooting with Easy Panorama

Enter shooting mode → ◻ (shooting mode) button → ⚡ (second icon from the top*) → ▶ → ▲▼ → ◻ (easy panorama) → ⓞⓚ button

* The icon of the last scene selected is displayed.

1 Select ◻ᵗᵈ **Normal** or ◻ᵂᴵᴰᴱ **Wide** as the shooting range and press the ⓞⓚ button.

- When the camera is readied in the horizontal position, the image size (width × height) is as follows:
  - ◻ᵗᵈ **Normal**: 4800 × 920 when moved horizontally, 1536 × 4800 when moved vertically
  - ◻ᵂᴵᴰᴱ **Wide**: 9600 × 920 when moved horizontally, 1536 × 9600 when moved vertically
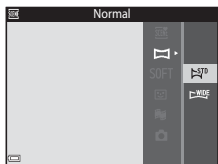
2 Frame the first edge of the panorama scene, and then press the shutter-release button halfway to focus.

- The zoom position is fixed at wide-angle position.
- The camera focuses in the center of the frame.
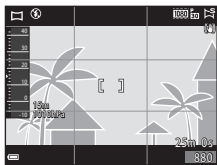
3 Press the shutter-release button all the way, and then remove your finger from the shutter-release button.

- △▽◁▷ are displayed to indicate the direction of camera movement.

Shooting Features

4 Move the camera in one of the four directions until the guide indicator reaches the end.

Guide

- When the camera detects which direction it is moving in, shooting begins.
- Shooting ends when the camera captures the specified shooting range.
- Focus and exposure are locked until shooting ends.
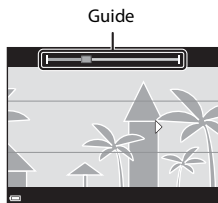
Example of camera movement

- Using your body as the axis of rotation, move the camera slowly in an arc, in the direction of the marking (△▽◁▷).
- Shooting stops if the guide does not reach the edge within about 15 seconds (when ▷STD **Normal** is selected) or within about 30 seconds (when ▷WIDE **Wide** is selected) after shooting starts.

⚠ Notes About Easy Panorama Shooting

- The range of the image seen in the saved image is narrower than that seen in the monitor at the time of shooting.
- If the camera is moved too quickly or shaken too much, or if the subject is too uniform (e.g. walls or darkness), an error may occur.
- If shooting is stopped before the camera reaches the half-way point in the panorama range, a panorama image is not saved.
- If more than half of the panorama range is captured but shooting ends before reaching the edge of the range, the range not captured is recorded and displayed in gray.

Shooting Features

Playback with Easy Panorama

Switch to playback mode (☐15), display an image captured using easy panorama in full-frame playback mode, and then press the Ⓚ button to scroll the image in the direction that was used when shooting.

45m
1010hPa

OK:▶

0004.JPG
15/11/2015 15:30
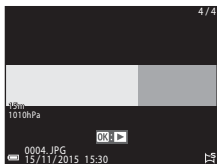
Playback controls are displayed in the monitor during playback.
Use the multi selector ◀▶ to select a control, and then press the Ⓚ button to perform the operations described below.

◼ ◼ ◀◀ ❚❚ ▶▶
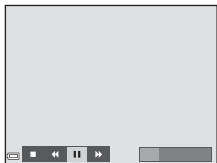
Function	Icon	Description	
Rewind	◀◀	Hold down the Ⓚ button to scroll backward quickly.	
Advance	▶▶	Hold down the Ⓚ button to scroll forward quickly.	
Pause	❚❚	Pause playback. The operations listed below can be performed while paused.	
		◀❚❚	Hold down the Ⓚ button to rewind.
		❚❚▶	Hold down the Ⓚ button to scroll.
		▶	Resume automatic scrolling.
End	◼	Switch to full-frame playback mode.	

B Notes About Easy Panorama Images

- The images cannot be edited on this camera.
- This camera may not be able to scroll the playback of, or zoom in on, easy panorama images captured with another make or model of digital camera.

B Notes About Printing Panorama Images

The entire image may not be able to be printed depending on the printer's settings. Additionally, printing may not be possible depending on the printer.

Shooting Features

Special Effects Mode (Applying Effects When Shooting)

Effects can be applied to images during shooting.

Enter shooting mode ➔ ◻ (shooting mode) button ➔ SOFT (third icon from the top*) ➔ ▶ ➔ ▲▼ ➔ select an effect ➔ ⓴ button

* The icon of the last effect selected is displayed.

Type	Description
SOFT Soft (default setting)	Softens the image by adding a slight blur to the entire image.
SEPIA Nostalgic sepia	Adds a sepia tone and reduces the contrast to simulate the qualities of an old photograph.
◼ High-contrast monochrome	Changes the image to black and white and gives it sharp contrast.
✎ Selective color	Creates a black and white image in which only the specified color remains.
POP Pop	Increases the color saturation of the entire image to create a bright look.
✗ Cross process	Gives the image a mysterious appearance based on a specific color.
🗐1 Toy camera effect 1	Gives the entire image a yellowish hue and darkens the image periphery.
🗐2 Toy camera effect 2	Decreases the color saturation of the entire image and darkens the image periphery.

- The camera focuses on the area in the center of the frame.
- When **Selective color** or **Cross process** is selected, use the multi selector ▲▼ to select the desired color, and press the ⓴ button to apply the color. To change the color selection, press the ⓴ button again.

Smart Portrait Mode (Enhancing Human Faces When Shooting)

You can take a picture with the glamour retouch function to enhance human faces.

Enter shooting mode ➔ ◻ (shooting mode) button ➔ ☺ Smart portrait mode ➔ ⓞⓚ button

1 Press the multi selector ▶.

2 Apply an effect.

- Use ◀▶ to select an effect.
- Use ▲▼ to adjust the amount of effect.
- You can simultaneously apply multiple effects.
  ☺ **Skin softening**, ☺ **Foundation makeup**, ○ **Soft**, ☻ **Vividness**, ☒ **Brightness (Exp. +/-)**
- Select ☒ **Exit** to hide the slider.
- Press the ⓞⓚ button after checking the settings for all effects.

Slider

Skin softening
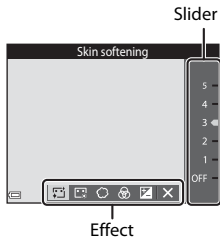
Effect

3 Frame the picture and press the shutter-release button.

⚠ Notes About Smart Portrait Mode

The amount of effect may differ between the image on the shooting screen and the saved image.

✐ Glamour Retouch Settings

A histogram is displayed when you select **Brightness (Exp. +/-)**. See ☐48 for more information.

Functions Available in Smart Portrait Mode

- Glamour retouch (□34)
- Smile timer (□35)
- Self-Collage (□36)
- Flash mode (□44)
- Self-timer (□46)
- Smart portrait menu (□92)

Using Smile Timer

Enter shooting mode → **△** (shooting mode) button → **☺** Smart portrait mode → **⑥** button

When you press the multi selector ◀ to select **☺ Smile timer** and press the **⑥** button, the camera automatically releases the shutter whenever a smiling face is detected.

- Set the glamour retouch function before selecting smile timer (□34).
- When you press the shutter-release button to take a picture, smile timer is terminated.
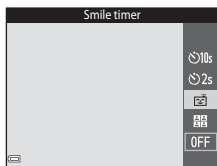
⚠ Notes About Smile Timer

Under some shooting conditions, the camera may be unable to detect faces or smiles (□51). The shutter-release button can also be used for shooting.

✐ When the Self-timer Lamp Flashes

When using smile timer, the self-timer lamp flashes when the camera detects a face and flashes quickly immediately after the shutter is released.

Shooting Features

Using Self-Collage

The camera can capture a series of four or nine images at intervals and save them as a one-frame image (a collage image).

Enter shooting mode → ✦ (shooting mode) button → ☺ Smart portrait mode → ⓞⓚ button

1 Press the multi selector ◀ to select ☷ **Self-Collage**, and press the ⓞⓚ button.

- A confirmation dialog is displayed.
- When you press the **MENU** button and select **Self-Collage** before pressing ◀, you can configure the settings for **Number of shots**, **Interval**, and **Shutter sound** (□92).
- If you want to apply glamour retouch when shooting, set the effect before selecting self-collage (□34).
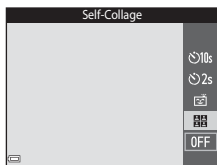
2 Take a picture.

- When you press the shutter-release button, a countdown starts (about five seconds) and the shutter is automatically released.
- The camera automatically releases the shutter for the remaining pictures. A countdown starts about three seconds before shooting.
- The number of shots is indicated by ○ in the monitor. It is displayed in green during shooting and it changes to white after shooting.
- When the camera finishes taking the specified number of shots, the collage image is saved.
- Each captured image is saved as an individual image separate from the collage image. The individual images are saved as a sequence, and a one-frame collage image is used as the key picture (□62).

Shooting Features

⚠ Notes About Self-Collage

- If you press the shutter-release button before the camera takes the specified number of shots, shooting is canceled and the collage image is not saved. The pictures that were taken before shooting was canceled are saved as individual images.

- This function may not be available to use in combination with other functions (☐56).

Short Movie Show Mode (Combining Movie Clips to Create Short Movies)

The camera creates a short movie that is up to 30 seconds long (🎬 **1080/ 30p** or 🎬 **1080/25p**) by recording and automatically combining multiple movie clips that are several seconds long.

Enter shooting mode ➔ ▲ (shooting mode) button ➔ 🎬 Short movie show mode ➔ ⑥ button

1 Press the MENU (menu) button and configure the settings for recording movies.

- **Number of shots**: Set the number of movie clips that the camera records and the recording time for each movie clip. By default, the camera records 15 movie clips that are 2 seconds each to create a 30-second short movie.

	Number of shots	2×15
	Special effects	OFF
	Background music	
	End recording	

- **Special effects** (□33): Apply various effects to movies when shooting. Effects can be changed for each movie clip.
- **Background music**: Select the background music. You can preview it by moving the zoom control (□2) toward **T** (**Q**).
- After the settings are complete, press the MENU button or shutter-release button to exit the menu.
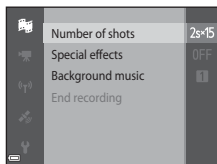
2 Press the ● (🎥 movie-record) button to record a movie clip.

- The camera automatically stops recording the movie clip when the time specified in step 1 elapses.
- Movie clip recording can be paused temporarily.
  See "Pausing Movie Recording" (□41).
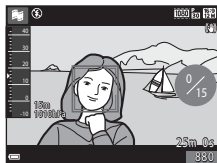
3 Check the recorded movie clip, or delete it.

- To check it, press the ⊗ button.
- To delete it, press the 🗑 button. The last recorded movie clip or all movie clips can be deleted.
- To continue recording movie clips, repeat the operation in step 2.
- To change the effects, return to step 1.
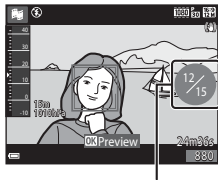
Number of movie clips recorded

4 Save the short movie show.

- The short movie show is saved when the camera finishes recording the specified number of movie clips.
- To save a short movie show before the camera finishes recording the specified number of movie clips, press the **MENU** button when the shooting standby screen is displayed, and then select **End recording**.
- Movie clips are deleted when a short movie show is saved.

Shooting Features

Operations During Movie Clip Playback

To adjust the volume, move the zoom control while a movie clip is playing ($\square$2).

Playback controls are displayed in the monitor.

The operations described below can be performed by using the multi selector $\blacktriangleleft\blacktriangleright$ to select a control and then pressing the $\text{\textcircled{R}}$ button.

Playback controls

Function	Icon	Description
Rewind	◀◀	Hold down the $\text{\textcircled{R}}$ button to rewind the movie.
Advance	▶▶	Hold down the $\text{\textcircled{R}}$ button to advance the movie.
Pause	⏸	Pause playback. The operations listed below can be performed while paused.
		◀‖ Rewind the movie one frame. Hold down the $\text{\textcircled{R}}$ button for continuous rewinding.
		‖▶ Advance the movie one frame. Hold down the $\text{\textcircled{R}}$ button for continuous advancing.
		▶ Resume playback.
End playback	◼	Return to the shooting screen.
End recording	🔲	Save the short movie show using the recorded movie clips.

⚠ Notes About Recording a Short Movie Show

- The camera cannot record movies if a memory card is not inserted.
- Do not exchange the memory card until a short movie show is saved.

Shooting Features

🖉 **Pausing Movie Recording**

- A still image (🖼 **4608×2592**) can be captured if you press the shutter-release button when the shooting standby screen is displayed.
- You can pause movie recording and play back images or enter other shooting modes to take pictures. Movie recording resumes when you enter short movie show mode again.

Functions Available in Short Movie Show Mode

- Self-timer (□46)
- Macro mode (□47)
- Exposure compensation (□48)
- Short movie show menu (□38)
- Movie options menu (□100)

■ (Auto) Mode

Used for general shooting. Settings can be adjusted to suit the shooting conditions and the type of shot you want to capture.

Enter shooting mode ➔ ■ (shooting mode) button ➔ ■ (auto) mode ➔ ⓦ button

- You can change how the camera selects the area of the frame to focus on by changing the **AF area mode** setting (□88).
  The default setting is **Target finding AF** (□53).

Functions Available in ■ (Auto) Mode

- Creative slider (□43)
- Flash mode (□44)
- Self-timer (□46)
- Macro mode (□47)
- Shooting menu (□80)

Shooting Features

Using the Creative Slider

You can adjust the brightness (exposure compensation), vividness, and hue when shooting.

Enter shooting mode → ☐ (shooting mode) button → ☐ (auto) mode →
® button

---

1 Press the multi selector ▶.

2 Use ◀▶ to select an item.

- **ᵂ Hue**: Adjust the hue (reddish/bluish) of the entire image.
- **ᵂ Vividness**: Adjust the vividness of the entire image.
- **✎ Brightness (Exp. +/-)**: Adjust the brightness of the entire image.

Brightness (Exp. +/-)

+2.0

+0.3

–2.0
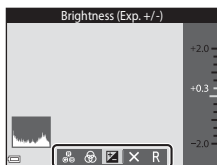
3 Use ▲▼ to adjust the level.

- You can preview the results on the monitor.
- To set another item, return to step 2.
- Select ✕ **Exit** to hide the slider.
- To cancel all settings, select ↻ **Reset** and press the ® button. Return to step 2 and adjust the settings again.

Slider

Brightness (Exp. +/-)

+2.0

+0.3

–2.0

Histogram
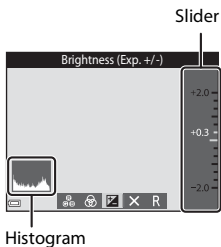
4 Press the ® button when setting is complete.

- The settings are applied and the camera returns to the shooting screen.

🖉 Creative Slider Settings

- This function may not be available to use in combination with other functions (□56).
- The settings for brightness (exposure compensation), vividness and hue are saved in the camera's memory even after the camera is turned off.
- See "Using the Histogram" (□48) for more information.

Shooting Features

Flash Mode

You can select a flash mode to match the shooting conditions.

1 Press the multi selector ▲ (✦).

2 Select the desired flash mode (□□45) and press the ⓞ button.

- If the setting is not applied by pressing the ⓞ button within a few seconds, the selection will be canceled.

🖉 The Flash Lamp

- The status of the flash can be confirmed by pressing the shutter-release button halfway.
  - On: The flash fires when you press the shutter-release button all the way down.
  - Flashing: The flash is charging. The camera cannot shoot images.
  - Off: The flash does not fire when a picture is taken.
- If the battery level is low, the monitor turns off while the flash is charging.

Shooting Features
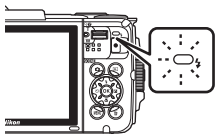
Available Flash Modes

$AUTO	Auto
	The flash fires when necessary, such as in dim lighting. • The flash mode icon on the shooting screen is displayed only immediately after the setting is made.
$⊚	Auto with red-eye reduction
	Reduce "red-eye" in portraits caused by the flash.
⊛	Off
	The flash does not fire. • We recommend using a tripod to stabilize the camera when shooting in dark surroundings.
$	Fill flash
	The flash fires whenever a picture is taken. Use to "fill-in" (illuminate) shadows and backlit subjects.
$SLOW	Slow sync
	Suited to evening and night portraits that include background scenery. The flash fires when necessary to illuminate the main subject; slow shutter speeds are used to capture background at night or under dim lighting.

🖉 The Flash Mode Setting

• The setting may not be available with some shooting modes (🔲49).
• The setting applied in ● (auto) mode is saved in the camera's memory even after the camera is turned off.

🖉 Red-eye Reduction

Pre-flashes are fired repeatedly at low intensity before the main flash, reducing the red-eye effect. If the camera detects red-eye while saving an image, the affected area is processed to reduce red-eye before the image is saved.

Note the following when shooting:

• Because pre-flashes are fired, there is a slight lag between when the shutter-release button is pressed and when the image is shot.
• More time than usual is required to save images.
• Red-eye reduction may not produce the desired results in some situations.
• In rare cases, red-eye reduction may be applied unnecessarily to other areas of the image. In these cases, select another flash mode and take the picture again.

Shooting Features

Self-timer

The camera is equipped with a self-timer that releases the shutter 10 seconds or 2 seconds after you press the shutter-release button.

Set **Photo VR** (□124) to **Off** in the setup menu when using a tripod to stabilize the camera during shooting.

1 Press the multi selector ◀ (⟳).

2 Select ⟳**10s** or ⟳**2s**, and press the ⟪ button.

- ⟳**10s** (10 seconds): Use on important occasions, such as weddings.
- ⟳**2s** (2 seconds): Use to prevent camera shake.
- If the setting is not applied by pressing the ⟪ button within a few seconds, the selection will be canceled.
- When the shooting mode is **Pet portrait** scene mode, 図 (pet portrait auto release) is displayed (□27). The self-timer cannot be used.
- When the shooting mode is smart portrait mode, you can also use 図 **Smile timer** (□35) and 盟 **Self-Collage** (□36) in addition to the self-timer.
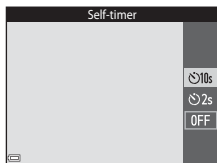
3 Frame the picture and press the shutter-release button halfway.

- Focus and exposure are set.

4 Press the shutter-release button the rest of the way down.

- Countdown starts. The self-timer lamp flashes and then glows steadily about one second before the shutter is released.
- When the shutter is released, the self-timer is set to **OFF**.
- To stop the countdown, press the shutter-release button again.

Shooting Features
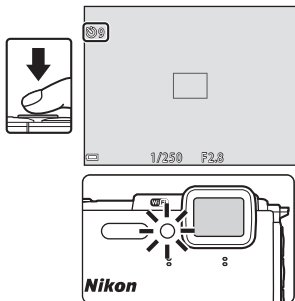
Macro Mode (Taking Close-up Pictures)

Use macro mode when taking close-up pictures.

1 Press the multi selector ▼ (✿).

2 Select **ON** and press the ⓚ button.

- If the setting is not applied by pressing the ⓚ button within a few seconds, the selection will be canceled.

Macro mode

ON
OFF
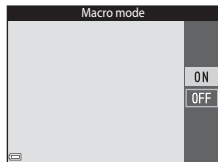
3 Move the zoom control to set the zoom ratio to a position where ✿ and the zoom indicator are displayed in green.

- When the zoom ratio is set to a position where the zoom indicator is displayed in green, the camera can focus on subjects as close as approximately 10 cm (4 in.) from the lens.
  When the zoom is at the position where △ is displayed, the camera can focus on subjects as close as approximately 1 cm (0.4 in.) from the lens.

⚠ Notes About Using the Flash

The flash may be unable to light the entire subject at distances of less than 50 cm (1 ft 8 in.).

🖉 The Macro Mode Setting

- The setting may not be available with some shooting modes (☐49).
- If the setting is applied in ☐ (auto) mode, it will remain saved in the camera's memory even after the camera is turned off.

Shooting Features

Exposure Compensation (Adjusting Brightness)

You can adjust overall image brightness.

1 Press the multi selector ▶ (☒).

2 Select a compensation value and press the ⑱ button.

- To brighten the image, set a positive (+) value.
- To darken the image, set a negative (–) value.
- The compensation value is applied, even without pressing the ⑱ button.

Histogram

- When the shooting mode is smart portrait mode, the glamour retouch screen is displayed instead of the exposure compensation screen (□34).
- When the shooting mode is ■ (auto) mode, the creative slider is displayed instead of the exposure compensation screen (□43).
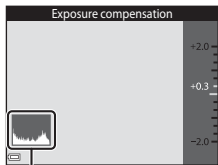
C Exposure Compensation Value

- The setting may not be available with some shooting modes (□49).
- When the exposure compensation is set while using the flash, the compensation is applied to both the background exposure and to the flash output.

C Using the Histogram

A histogram is a graph showing the distribution of tones in the image. Use as a guide when using exposure compensation and shooting without the flash.

- The horizontal axis corresponds to pixel brightness, with dark tones to the left and bright tones to the right. The vertical axis shows the number of pixels.
- Increasing the exposure compensation value shifts the tone distribution to the right, and decreasing it shifts the tone distribution to the left.

Default Settings (Flash, Self-timer, Etc.)

Default settings for each shooting mode are listed below.

	Flash (📖44)	Self-timer (📖46)	Macro (📖47)	Exposure compensation (📖48)
🅧 (scene auto selector)	4AUTO^1	Off	Off[2]	0.0
🅢 (scene)				
❖ (portrait)	$4\circledast$	Off	Off[3]	0.0
▨ (landscape)	$\circledast^3$	Off	Off[3]	0.0
🎞 (time-lapse movie)	$\circledast^3$	Off	Off[3]	0.0[4]
❖ (sports)	$\circledast^3$	Off[3]	Off[3]	0.0
❖ (night portrait)	$4\circledast^5$	Off	Off[3]	0.0
❖ (party/indoor)	$4\circledast^6$	Off	Off[3]	0.0
❖ (beach)	4AUTO	Off	Off[3]	0.0
❖ (snow)	4AUTO	Off	Off[3]	0.0
❖ (sunset)	$\circledast^3$	Off	Off[3]	0.0
❖ (dusk/dawn)	$\circledast^3$	Off	Off[3]	0.0
❖ (night landscape)	$\circledast^3$	Off	Off[3]	0.0
❖ (close-up)	$\circledast$	Off	On[3]	0.0
❖ (food)	$\circledast^3$	Off	On[3]	0.0
❖ (fireworks show)	$\circledast^3$	Off[3]	Off[3]	0.0[3]
❖ (backlighting)	$4/\circledast^7$	Off	Off[3]	0.0
❖ (easy panorama)	$\circledast^3$	Off[3]	Off[3]	0.0
❖ (pet portrait)	$\circledast^3$	⏱[8]	Off	0.0
❖ (underwater)	$\circledast$	Off	Off	0.0

	Flash (□44)	Self-timer (□46)	Macro (□47)	Exposure compensation (□48)
✨ (special effects)	⚡	Off	Off	0.0
😊 (smart portrait)	⚡AUTO	Off⁹	Off³	_¹⁰
🎬 (short movie show)	⚡³	Off	Off	0.0
◻ (auto)	⚡AUTO	Off	Off	_¹¹

¹ The camera automatically selects the flash mode appropriate for the scene it has selected. ⚡ (off) can be selected manually.

² Cannot be changed. The camera enters macro mode when 🌷 is selected.

³ Cannot be changed.

⁴ Cannot be changed when **Night sky (150 minutes)** or **Star trails (150 minutes)** is selected.

⁵ Cannot be changed. The flash mode setting is fixed at fill flash with red-eye reduction when **Tripod** is set.

⁶ Slow sync with red-eye reduction flash mode may be used.

⁷ Flash is fixed at ⚡ (fill flash) when **HDR** set to **OFF**, and is fixed at ⚡ (off) when **HDR** is set to **ON**.

⁸ Self-timer cannot be used. Pet portrait auto release can be turned on or off (□27).

⁹ 😊 **Smile timer** (□35) and 🎞 **Self-Collage** (□36) can be used in addition to self-timer.

¹⁰ Glamour retouch is displayed (□34).

¹¹ Creative slider is displayed (□43).

Shooting Features

Focusing

The focus area varies depending on the shooting mode.

Using Face Detection

In the following shooting modes, the camera uses face detection to automatically focus on human faces.

- ![SCENE icon] (scene auto selector) mode (□21)
- **Portrait** or **Night portrait** scene mode (□23)
- Smart portrait mode (□34)
- When **AF area mode** (□88) in ![camera] (auto) mode (□42) is set to **Face priority**.
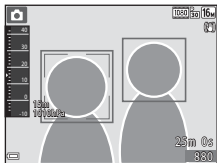
If the camera detects more than one face, a double border is displayed around the face that the camera focuses on, and single borders are displayed around the other faces.

If the shutter button is pressed halfway when no faces are detected:
- In ![SCENE icon] (scene auto selector) mode, the focus area changes depending on the scene.
- In **Portrait** and **Night portrait** scene modes or in smart portrait mode, the camera focuses in the center of the frame.
- In ![camera] (auto) mode, the camera selects the focus area containing the subject closest to the camera.

B Notes About Face Detection

- The camera's ability to detect faces depends on a variety of factors, including the direction in which the faces are looking.
- The camera cannot detect faces in the following situations:
  - When faces are partially hidden by sunglasses or otherwise obstructed
  - When faces take up too much or too little of the frame

C Face Detection During Movie Recording

When **AF area mode** (□104) in the movie menu is set to **Face priority**, the camera focuses on human faces during movie recording. If the ● (🎥 movie-record) button is pressed when no faces are detected, the camera focuses on the area in the center of the frame.

Using Skin Softening

When the shutter is released while using one of the shooting modes listed below, the camera detects human faces and processes the image to soften facial skin tones (up to three faces).

- Smart portrait mode (□34)
  - The amount of **Skin softening** effect can be adjusted.
- ▨ (scene auto selector) mode (□21)
- **Portrait** or **Night portrait** scene mode (□23)

Editing functions such as **Skin softening** can be applied to saved images by using **Glamour retouch** (□67) even after shooting.

⚠ Notes About Skin Softening

- It may take more time than usual to save images after shooting.
- Under some shooting conditions, the desired skin softening results may not be achieved, and skin softening may be applied to areas of the image where there are no faces.

Using Target Finding AF

When **AF area mode** (□88) in ○ (auto) mode is set to **Target finding AF**, the camera focuses in the manner described below when you press the shutter-release button halfway.

- The camera detects the main subject and focuses on it. When the subject is in focus, the focus area is displayed in green. If a human face is detected, the camera automatically sets focus priority on it.
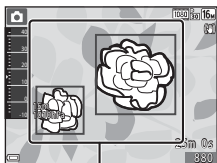
Focus areas

- If no main subject is detected, the camera automatically selects one or more of the nine focus areas containing the subject closest to the camera. When the subject is in focus, the focus areas that are in focus are displayed in green.
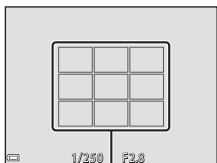
Focus areas

⚠ Notes About Target Finding AF

- Depending on shooting conditions, the subject that the camera determines to be the main subject may vary.
- The main subject may not be detected when using certain **White balance** settings.
- The camera may not detect the main subject appropriately in the following situations:
  - When the subject is very dark or bright
  - When the main subject lacks clearly defined colors
  - When the shot is framed so that the main subject is at the edge of the monitor
  - When the main subject is composed of a repeating pattern

Shooting Features

Subjects Not Suitable for Autofocus

The camera may not focus as expected in the following situations. In rare cases, the subject may not be in focus despite the fact that the focus area or the focus indicator is displayed in green:

- Subject is very dark
- Objects of sharply differing brightness are included in the scene (e.g. the sun behind the subject makes that subject appear very dark)
- No contrast between the subject and surroundings (e.g. a portrait subject wearing a white shirt is standing in front of a white wall)
- Several objects are at different distances from the camera (e.g. the subject is inside a cage)
- Subjects with repeating patterns (window blinds, buildings with multiple rows of similarly shaped windows, etc.)
- Subject is moving rapidly

In the situations noted above, try pressing the shutter-release button halfway to refocus several times, or focus on another subject positioned at the same distance from the camera as the actual desired subject, and use focus lock (A55).

Focus Lock

Focus lock shooting is recommended when the camera does not activate the focus area that contains the desired subject.

1 Set **AF area mode** to **Center** in mode (□88).

2 Position the subject in the center of the frame and press the shutter-release button halfway.

- The camera focuses on the subject and the focus area is displayed in green.
- Exposure is also locked.
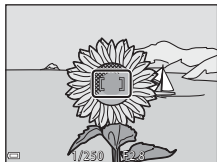
3 Without lifting your finger, recompose the picture.

- Make sure to maintain the same distance between the camera and the subject.
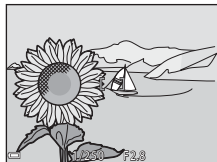
4 Press the shutter-release button the rest of the way down to take the picture.

Functions That Cannot Be Used Simultaneously When Shooting

Some functions cannot be used with other menu options.

Restricted function	Option	Description
Flash mode	Continuous (□84)	When a setting other than **Single** is selected, the flash cannot be used.
	Blink proof (□93)	When **Blink proof** is set to **On**, the flash cannot be used.
	Underwater flash (□126)	When **Underwater flash** is set to **On**, **Auto with red-eye reduction** cannot be selected. If **Auto with red-eye reduction** was selected beforehand, the setting changes to **Auto**.
Self-timer	AF area mode (□88)	When **Subject tracking** is selected, the self-timer cannot be used.
Macro mode	AF area mode (□88)	When **Subject tracking** is selected, macro mode cannot be used.
Image mode	Continuous (□84)	**Image mode** is set as follows depending on the continuous shooting setting: • **Pre-shooting cache**: 🔳 (image size: 1280 × 960 pixels). • **Continuous H: 120 fps**: 🔳 (image size: 640 × 480 pixels) • **Continuous H: 60 fps**: 🔳 (image size: 1280 × 960 pixels)
White balance	Hue (Using the creative Slider) (□43)	When **Hue** is adjusted using the creative slider, **White balance** setting is not available in the shooting menu.
Continuous	Self-timer (□46)	If the self-timer is used when **Pre-shooting cache** is selected, the setting is fixed at **Single**.

Restricted function	Option	Description
ISO sensitivity	Continuous (□84)	When **Pre-shooting cache**, **Continuous H: 120 fps**, or **Continuous H: 60 fps** is selected, **ISO sensitivity** is fixed at **Auto**.
AF area mode	White balance (□82)	When a setting other than **Auto** is selected for **White balance** in **Target finding AF** mode, the camera does not detect the main subject.
Blink proof	Self-Collage (□36)	When **Self-Collage** is set, **Blink proof** is disabled.
Date stamp	Continuous (□84)	When a setting other than **Single** is selected, date and time cannot be stamped on images.
	Blink proof (□93)	When **Blink proof** is set to **On**, date and time cannot be imprinted on images.
Photo VR	Flash mode (□44)	If the flash fires when **On (hybrid)** is selected, **Photo VR** operates using the **On** setting.
	Self-timer (□46)	If the self-timer is used when **On (hybrid)** is selected, **Photo VR** operates using the **On** setting.
	Continuous (□84)	If Continuous is set to any setting other than **Single** when **On (hybrid)** is selected, **Photo VR** operates using the **On** setting.
	ISO sensitivity (□87)	If ISO sensitivity is set to **Fixed range auto** or ISO 400 or higher when **On (hybrid)** is selected, **Photo VR** operates using the **On** setting.

Shooting Features

Restricted function	Option	Description
Digital zoom	AF area mode ($\square$88)	When **Subject tracking** is selected, digital zoom cannot be used.
Shutter sound	Continuous ($\square$84)	When a setting other than **Single** is selected, the shutter sound is disabled.

B Notes About Digital Zoom

- Depending on the shooting mode or the current settings, digital zoom may not be available ($\square$125).
- When digital zoom is in effect, the camera focuses in the center of the frame.

Shooting Features

Playback Features

Playback Zoom

Moving the zoom control toward **T** (**Q** playback zoom) in full-frame playback mode (□15) zooms in on the image.

Displayed area guide

Full-frame Playback   Image is zoomed in.
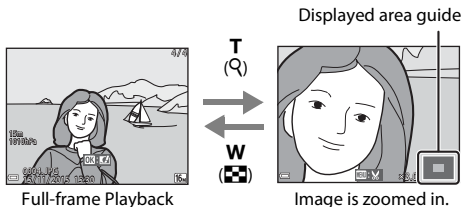
- You can change the magnification rate by moving the zoom control toward **W** (□) or **T** (**Q**).
- To view a different area of the image, press the multi selector ▲▼◀▶.
- When a zoomed image is displayed, press the ⓚ button to return to full-frame playback mode.

🖉 Cropping Images

When a zoomed image is displayed, you can press the **MENU** button to crop the image to include only the visible portion and save it as a separate file (□70).

Thumbnail Playback/Calendar Display

Moving the zoom control toward **W** (■ thumbnail playback) in full-frame playback mode (□15) displays images as thumbnails.

Full-frame Playback   Thumbnail Playback   Calendar Display

- You can change the number of thumbnails displayed by moving the zoom control toward **W** (■) or **T** (Q).
- While using thumbnail playback mode, press the multi selector ▲▼◀▶ to select an image and then press the ® button to display that image in full-frame playback mode.
- While using calendar display mode, press ▲▼◀▶ to select a date and then press the ® button to display the images captured on that day.

B Notes About Calendar Display

Images captured when the camera's date is not set are treated as images captured on January 1, 2015.

List by Date Mode

Press the ▶ button (playback mode) ➔ ▶ button ➔ ⓜ List by date ➔ ⓚ button

Use the multi selector ▲▼ to select a date and then press the ⓚ button to play back the images captured on the selected date.

- Functions in the playback menu (□94) can be used for the images in the selected shooting date (except **Copy**).
- The following operations are available while the shooting date selection screen is displayed.

	List by date		
	20/11/2015	[	3]
	15/11/2015	[	2]
	10/11/2015	[	1]
	05/11/2015	[	10]

- **MENU** button: The functions listed below are available.
  - Slide show
  - Protect*
  - * The same settings can be applied to all images captured on the selected date.
- 🗑 button: Deletes all images captured on the selected date.

❎ Notes About List by Date Mode

- Up to the most recent 29 dates can be selected. If images exist for more than 29 dates, all images saved earlier than the most recent 29 dates will be combined under **Others**.
- The 9,000 most recent images can be displayed.
- Images captured when the camera's date is not set are treated as images captured on January 1, 2015.

Playback Features

Viewing and Deleting Images Captured Continuously (Sequence)

Viewing Images in a Sequence

Images captured continuously or with the self-collage function are saved as a sequence.

The first image of a sequence is used as the key picture to represent the sequence when displayed in full-frame playback mode or thumbnail playback mode (default setting). For the self-collage function, a collage image is used as the key picture.

To display each image in the sequence individually, press the 🆗 button.

After pressing the 🆗 button, the operations listed below are available.

- To display the previous or next image, press the multi selector ◀▶.
- To display images that are not included in the sequence, press ▲ to return to the key picture display.
- To display images in a sequence as thumbnails, or to play them back in a slide show, set **Sequence display options** to **Individual pictures** in the playback menu (□98).

B Sequence Display Options

Images captured continuously with cameras other than this camera cannot be displayed as a sequence.

C Playback Menu Options Available When Using Sequence

- When images in a sequence are displayed in full-frame playback mode, press the **MENU** button to select functions in playback menu (□94).
- If you press the **MENU** button when a key picture is displayed, the following settings can be applied to all images in the sequence:
  - Mark for Wi-Fi upload, Protect, Copy

Playback Features

Deleting Images in a Sequence

When the 🗑 (delete) button is pressed for images in a sequence, the images that are deleted vary depending on how the sequences are displayed.

- When the key picture is displayed:

  - **Current image**:   All images in the displayed sequence are deleted.
  - **Erase selected images**:   When a key picture is selected on the erase selected images screen (□17), all images in that sequence are deleted.
  - **All images**:   All images on the memory card or in the internal memory are deleted.

- When images in a sequence are displayed in full-frame playback mode:

  - **Current image**:   The image currently displayed is deleted.
  - **Erase selected images**:   Images that are selected in the sequence are deleted.
  - **Entire sequence**:   All images in the displayed sequence are deleted.

Playback Features

Editing Images (Still Images)

Before Editing Images

You can easily edit images on this camera. Edited copies are saved as separate files.

Edited copies are saved with the same shooting date and time as the original.

C **Restrictions on Image Editing**

- An image can be edited up to 10 times.
- You may not be able to edit images of a certain size or with certain editing functions.

Quick Effects: Changing Hue or Mood

Quick effects type	Description
Painting/Photo illustration/Soft portrait/ Portrait (color + B&W)/Fisheye/ Cross screen/Miniature effect	Processes images with a variety of effects.
Fog removal	Reduces blurring of images caused by underwater shooting.

1 Display the image to which you want to apply an effect in full-frame playback mode and press the ⓴ button.

2 Use the multi selector ▲▼◀▶ to select the desired effect and press the ⓴ button.

- Move the zoom control (□2) toward **T** (ℚ) to switch to full-frame playback or **W** (▣) to switch to thumbnail playback.
- To exit without saving the edited image, press the **MENU** button.

Playback Features
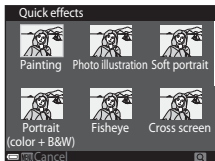
3 Select **Yes** and press the 🆗 button.

- An edited copy is created.

Quick Retouch: Enhancing Contrast and Saturation

Press the ▶ button (playback mode) → select an image → MENU button
→ Quick retouch → 🆗 button

Use the multi selector ▲▼ to select
the amount of effect applied and press
the 🆗 button.

- The edited version is displayed on the right.
- To exit without saving the copy, press ◀.

Quick retouch

Normal

◇Amount
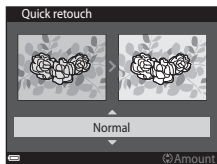
D-Lighting: Enhancing Brightness and Contrast

Press the ▶ button (playback mode) ➔ select an image ➔ MENU button
➔ D-Lighting ➔ ⑥ button

Use the multi selector ▲▼ to select
OK and press the ⑥ button.

- The edited version is displayed on the right.
- To exit without saving the copy, select **Cancel**
  and press the ⑥ button.
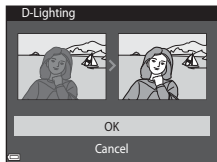
Red-eye Correction: Correcting Red-eye When Shooting with the Flash

Press the ▶ button (playback mode) ➔ select an image ➔ MENU button
➔ Red-eye correction ➔ ⑥ button

Preview the result and press the ⑥
button.

- To exit without saving the copy, press the multi
  selector ◀.
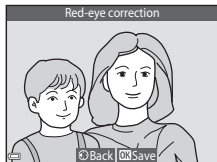
⚠ Notes About Red-eye Correction

- Red-eye correction can only be applied to images when red-eye is detected.
- Red-eye correction can be applied to pets (dogs or cats) even if their eyes are not red.
- Red-eye correction may not produce the desired results in some images.
- In rare cases, red-eye correction may be applied unnecessarily to other areas of the image.

Glamour Retouch: Enhancing Human Faces

Press the ▶ button (playback mode) ➔ select an image ➔ **MENU** button
➔ Glamour retouch ➔ 🟢 button

1 Use the multi selector ▲▼◀▶ to
select the face that you want to
retouch and press the 🟢 button.

- When only one face is detected, proceed to
step 2.
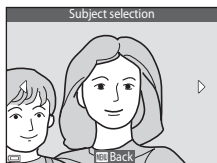
2 Use ◀▶ to select the effect, use
▲▼ to select the effect level, and
press the 🟢 button.

- You can simultaneously apply multiple
effects.
Adjust or check the settings for all effects
before pressing the 🟢 button.
🙂 (Small face), 🖼 (Skin softening), ⬛
(Foundation makeup), 🖼 (Glare reduction), 😊 (Hide eye bags), 😄 (Big
eyes), 😄 (Whiten eyes), 😄 (Eye shadow), 😄 (Mascara), 😄 (Whiten teeth),
😄 (Lipstick), 😄 (Redden cheeks)
- Press the **MENU** button to return to the screen for selecting a person.
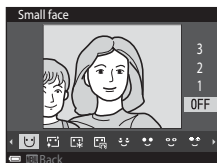
3 Preview the result and press the
🟢 button.

- To change the settings, press ◀ to return to
step 2.
- To exit without saving the edited image,
press the **MENU** button.

4 Select **Yes** and press the 🆗 button.

- An edited copy is created.

Save OK?

Yes

No
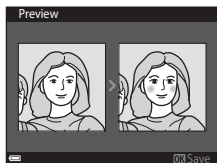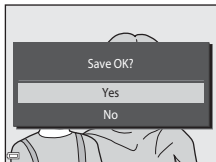
⚠ Notes About Glamour Retouch

- Only one face at a time can be edited. To retouch another face in the same image, select the edited copy of the image and make additional changes.
- Depending on the direction in which faces are looking, or the brightness of faces, the camera may be unable to accurately detect faces, or the glamour retouch function may not perform as expected.
- If no faces are detected, a warning is displayed and the screen returns to the playback menu.
- The glamour retouch function is available only for images captured at an ISO sensitivity of 1600 or lower.

Data Imprint: Imprinting Information Such as Altitude and Direction Measured by the Electronic Compass on Images

Press the ▶ button (playback mode) ➔ select an image ➔ **MENU** button ➔ Data imprint ➔ 🆗 button

Use the multi selector ▲▼ to select **OK** and press the 🆗 button.

- The information to be imprinted on images includes the altitude or water depth, atmospheric pressure, direction measured by the electronic compass, date/time, and latitude and longitude recorded on images (□119, 132, 140).

Data imprint

OK

Cancel

- To exit without saving the copy, select **Cancel** and press the 🆗 button.
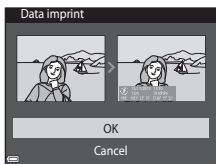
⚠ Notes About Data Imprint

- Only the information recorded on images is imprinted on the images.
- The information may not be displayed properly if the image size is small.

Small Picture: Reducing the Size of an Image

Press the ▶ button (playback mode) ➔ select an image ➔ MENU button
➔ Small picture ➔ ℗ button

1 Use the multi selector ▲▼ to
select the desired copy size and
press the ℗ button.

- Images captured at an image mode setting
  of 🔲 **4608×2592** are saved at a size of 640
  × 360, and images captured at an image
  mode setting of 🔲 **3456×3456** are saved
  at a size of 480 × 480. Press the ℗ button to
  proceed to step 2.
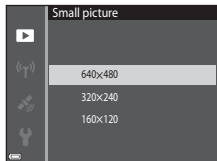
2 Select **Yes** and press the ℗
button.

- An edited copy is created (compression
  ratio of approximately 1:8).

Playback Features
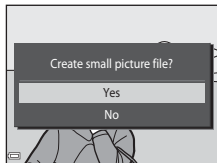
Crop: Creating a Cropped Copy

1 Move the zoom control to enlarge the image (□59).

2 Adjust the image so that only the portion that you want to keep is displayed, and then press the **MENU** (menu) button.

- Move the zoom control toward **T** (**Q**) or **W** (**⊞**) to adjust the magnification rate. Set a magnification rate at which 🖼: ✂ is displayed.
- Use the multi selector ▲▼◀▶ to scroll to the portion of the image that you want to display.
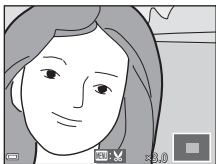
3 Confirm the area that you want to keep, and press the **⊛** button.
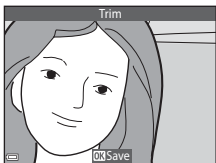
4 Select **Yes** and press the **⊛** button.

- An edited copy is created.

🖉 Image Size

- The aspect ratio (horizontal and vertical ratio) of a cropped image is the same as that of the original image.
- An image that is cropped to a size of 320 × 240 or smaller is displayed at a small size on the playback screen.

Playback Features

Recording and Playing Back Movies

1 Display the shooting screen.

- Check the remaining amount of movie recording time.
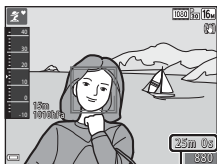
2 Press the ● (🎥 movie-record) button to start movie recording.

- The focus area for autofocus differs depending on the setting of **AF area mode** ([↓]104).

- Press the multi selector ▶ to pause recording, and press ▶ again to resume recording (except when an HS movie option is selected in **Movie options**). Recording automatically ends if it remains paused for about five minutes.

- You can capture a still image by pressing the shutter-release button while recording a movie ([↓]74).
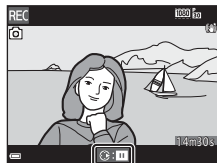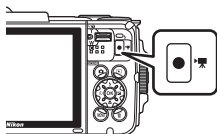
3 Press the ● (🎥 movie-record) button again to end recording.

4 Select a movie in full-frame playback mode and press the ⓞⓚ button to play it back.

- An image with a movie options icon is a movie.

Movie options

Recording and Playing Back Movies

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Area Captured in Movies

- The area that is captured in a movie varies depending on the **Movie options** settings in the movie menu.
- If **Photo info** in **Monitor settings** (□121) 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.

Maximum Movie Recording Time

Individual movie files cannot exceed 4 GB in size or 29 minutes in length, even when there is sufficient free space on the memory card for longer recording.

- The remaining recording time for a single movie is displayed on the shooting screen.
- The actual remaining recording time may vary depending on the movie content, subject movement, or type of memory card.
- Memory cards with an SD Speed Class rating of 6 or faster are recommended when recording movies (□197). Movie recording may stop unexpectedly when memory cards with a lower Speed Class rating are used.

❚✗ Notes About Camera Temperature

- The camera may become hot when shooting 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, the camera will automatically stop recording.
  The amount of time remaining until the camera stops recording (10s) is displayed.
  After the camera stops recording, it turns itself off.
  Leave the camera off until the inside of the camera has cooled.

Notes About Movie Recording

❚✗ Notes About Saving Images or Movies

- The indicator showing the number of exposures remaining or the indicator showing the remaining recording time flashes 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.
- When using the camera's internal memory, recording movies may take some time.
- Depending on the file size of a movie, it may not be possible to record the movie in the internal memory or copy it from a memory card to the internal memory.

⚠️ Notes About Recorded Movies

- There may be some degradation in image quality when digital zoom is used.
- The sounds of zoom control operation, zoom, autofocus lens drive movement, movie vibration reduction, and aperture operation when brightness changes may be recorded.
- 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 or the amount of zoom applied, 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 **Movie VR** (□106) in the movie menu is set to **On (hybrid)**, the angle of view (i.e., the area visible in the frame) becomes narrower during movie recording.
- When using a tripod to stabilize the camera during shooting, set **Movie VR** to **Off** to prevent potential errors caused by this function.

⚠️ Notes About Autofocus for Movie Recording

Autofocus may not perform as expected (□54). Should this occur, try the following:

1. Set **AF area mode** to **Center** and **Autofocus mode** to **Single AF** (default setting) in the movie menu before starting movie recording.
2. Frame another subject (positioned at the same distance from the camera as the intended subject) in the center of the frame, press the ● (🎬 movie-record) button to start recording, and modify the composition.

Capturing Still Images While Recording Movies

If the shutter-release button is pressed all the way while recording a movie, one frame is saved as a still image. Movie recording continues while the still image is being saved.

- While 🔘 is displayed in the monitor, still images can be captured. While 🚫 is displayed, still images cannot be captured.
- The size of the captured image varies depending on the **Movie options** setting (🞎100).

⚠ Notes About Capturing Still Images During Movie Recording

- Still images cannot be captured during a movie recording in the following situations:
  - When movie recording is paused
  - When the remaining movie recording time is less than 5 seconds
  - When **Movie options** is set to 🔲 **1080/60i**, 🔲 **1080/50i**, 🔲 **480/30p**, 🔲 **480/25p**, or HS movie
- The frames of a movie that were recorded when a still image was being captured may not play back smoothly.
- The sound of pressing the shutter-release button may be recorded in the movie.
- If the camera moves when the shutter-release button is pressed, the image may be blurred.

Operations During Movie Playback

To adjust the volume, move the zoom control while a movie is playing (□2).
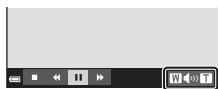
Volume indicator

Playback controls are displayed in the monitor. The operations described below can be performed by using the multi selector ◀▶ to select a control and then pressing the ⓴ button.

When paused

Function	Icon	Description
Rewind	◀◀	Hold down the ⓴ button to rewind the movie.
Advance	▶▶	Hold down the ⓴ button to advance the movie.
Pause	❚❚	Pause playback. The operations listed below can be performed while paused.
	◀❚	Rewind the movie one frame. Hold down the ⓴ button for continuous rewinding.
	❚▶	Advance the movie one frame. Hold down the ⓴ button for continuous advancing.
	▶	Resume playback.
	🖳	Extract the desired portion of a movie and save it as a separate file.
	🖾	Extract a single frame of a movie and save it as a still image.
End	■	Return to full-frame playback mode.

Recording and Playing Back Movies

Editing Movies

Extracting Only the Desired Portion of a Movie

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

1 Play back a movie and pause at the start point of the portion that you want to extract (□75).

2 Use the multi selector ◀▶ to select 🎬 in the playback controls, and then press the ⓴ button.
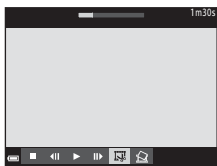
3 Use ▲▼ to select 🎬 (choose start point) in the editing controls.
- Use ◀▶ to move the start point.
- To cancel editing, select ↩ (return), and press the ⓴ button.

Choose start point

8m30s
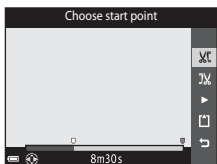
4 Use ▲▼ to select 🎬 (choose end point).
- Use ◀▶ to move the end point.
- To preview the specified portion, select ▶ and then press the ⓴ button. Press the ⓴ button again to stop previewing.

Choose end point

3m 0s
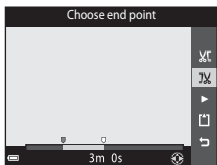
5 Use ▲▼ to select 🎬 (save) and press the ⓴ button.
- Follow the instructions on the screen to save the movie.

Save

3m 0s
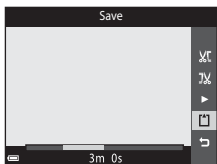
✔ Notes About Movie Editing

- Use a sufficiently charged battery to prevent the camera from turning off during editing. When the battery level indicator is ⬛, movie editing is not possible.
- A movie that was created by editing cannot be trimmed again.
- The actual trimmed portion of a movie may differ slightly from the portion selected using the start and end points.
- Movies cannot be trimmed so that they are less than two seconds long.

Saving a Frame from a Movie as a Still Image

The desired frame of a recorded movie can be extracted and saved as a still image.

- Pause a movie and display the frame to be extracted (□75).
- Use the multi selector ◀▶ to select the ☒ control and press the ⓘ button.

- Select **Yes** when a confirmation dialog is displayed, and press the ⓘ button to save the image.
- The image quality of the saved still image is normal (compression ratio of approximately 1:8). The image size is determined by the type (image size) (□100) of the original movie. For example, a still image saved from a movie recorded with **1080/30p** (or **1080/25p**) is ▣ (1920 × 1080 pixels).
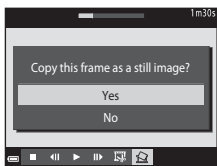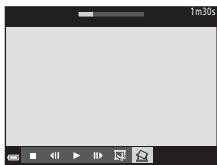
✔ Notes About Saving Still Images

Frames of movies recorded with **1080/60i**, **1080/50i**, **480/30p**, **480/25p**, or HS movies (□101) cannot be saved as still images.

Recording and Playing Back Movies

Using Menus

You can set the menus listed below by pressing the MENU (menu) button.

- **A Shooting menu**

  Available by pressing the MENU button when the shooting screen is displayed.

  Allows you to change image size and quality, continuous shooting settings, etc.

- **▶ Playback menu**

  Available by pressing the MENU button when viewing images in full-frame playback mode or thumbnail playback mode.

  Allows you to edit images, play slide shows, etc.

- **🎥 Movie menu**

  Available by pressing the MENU button when the shooting screen is displayed.

  Allows you to change movie recording settings.

- **«T» Wi-Fi options menu**

  Allows you to configure Wi-Fi settings for connecting the camera and a smart device.

- **📍 Location data options menu**

  Allows you to adjust the options for the location data functions.

- **Y Setup menu**

  Allows you to adjust basic camera functions such as date and time, display language, etc.

1 Press the MENU (menu) button.

- The menu is displayed.
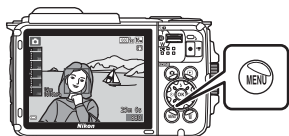
2 Press the multi selector ◀.

- The current menu icon is displayed in yellow.
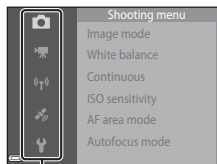
Menu icons

3 Select a menu icon and press the ⓦ button.

- The menu options become selectable.

	Set up
◘	Time zone and date
🎥	Monitor settings
(ɣ)	Date stamp
	Photo VR
	AF assist
Ÿ	Digital zoom
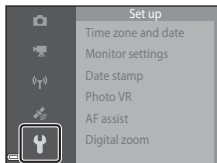
4 Select a menu option and press the ⓦ button.

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

◘	Time zone and date	
🎥	Monitor settings	
(ɣ)	Date stamp	OFF
	Photo VR	(⌐)
	AF assist	AUTO
Ÿ	Digital zoom	ON
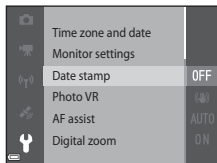
5 Select a setting and press the ⓦ button.

- The setting you selected is applied.
- When you are finished using the menu, press the **MENU** button.
- When a menu is displayed,

	Date stamp
◘	
🎥	
(ɣ)	**DATE** Date
	DATE© Date and time
Ÿ	Off

you can switch to shooting mode by pressing the shutter-release button, ◘ button, or ● (🎥) button.

Using Menus

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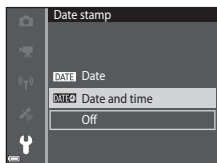
The Shooting Menu (for ■ (Auto) Mode)

Image Mode (Image Size and Quality)

Enter shooting mode* ➔ MENU button ➔ Image mode ➔ ⓚ button

* This setting can also be changed in shooting modes other than auto. The changed setting is also applied to other shooting modes.

Select the combination of image size and compression ratio to be used when saving images.

The higher the image mode setting, the larger the size at which it can be printed, and the lower the compression ratio, the higher the quality of the images, but the number of images that can be saved is reduced.

Option*	Compression ratio	Aspect ratio (horizontal to vertical)
🔟★ 4608×3456★	Approx. 1:4	4:3
🔟 4608×3456 (default setting)	Approx. 1:8	4:3
🔠 3264×2448	Approx. 1:8	4:3
🔟 2272×1704	Approx. 1:8	4:3
🔟 1600×1200	Approx. 1:8	4:3
🔟 640×480	Approx. 1:8	4:3
🔟 4608×2592	Approx. 1:8	16:9
🔟 3456×3456	Approx. 1:8	1:1

* The numerical values indicate the number of pixels that are captured.
  Example: 🔟 **4608×3456** = approx. 16 megapixels, 4608 × 3456 pixels

⚠ Notes About Printing Images at 1:1 Aspect Ratio

Change the printer setting to "Border" when printing images at a 1:1 aspect ratio. Some printers may not be able to print images at a 1:1 aspect ratio.

⚠ Notes About Image Mode

This function may not be available to use in combination with other functions (□56).

✐ Number of Images That Can Be Saved

- The approximate number of images that can be saved can be checked in the monitor when shooting (□11).
- Note that due to JPEG compression, the number of images that can be saved may vary greatly depending on the image content, even when using memory cards with the same capacity and the same image mode setting. In addition, the number of images that can be saved may vary depending on the make of the memory card.
- If the number of exposures remaining is 10,000 or more, the number of exposures remaining display shows "9999".

White Balance (Adjusting Hue)

Enter shooting mode ➔ ◘ (shooting mode) button ➔ ◘ (auto) mode
➔ ⓘ button ➔ MENU button ➔ White balance ➔ ⓘ button

Adjust white balance to suit 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.
PRE Preset manual	Use when the desired result is not achieved with **Auto**, **Incandescent**, etc. (☐83).
☀ Daylight	Use under direct sunlight.
☀ Incandescent	Use under incandescent lighting.
☵ Fluorescent	Use under fluorescent lighting.
☁ Cloudy	Use under overcast skies.
⚡ Flash	Use with the flash.

✔ Notes About White Balance

- Set the flash to ⊘ (off) when white balance is set to any setting other than **Auto** and **Flash** (☐44).
- This function may not be available to use in combination with other functions (☐56).

Using Preset Manual

Use the procedure below to measure the white balance value under the lighting used during shooting.

1 Place a white or gray reference object under the lighting that will be used during shooting.

2 Use the multi selector ▲▼ to select **Preset manual** in the **White balance** menu, and press the ⓞ button.

- The camera zooms in to the position for measuring white balance.

White balance	
AUTO	Auto
PRE	Preset manual ▸
☀	Daylight
☀	Incandescent
☰	Fluorescent
☁	Cloudy
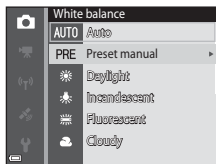
3 Select **Measure**.

- To apply the last measured value, select **Cancel** and press the ⓞ button.

Preset manual

Cancel
Measure
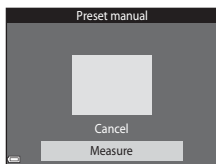
4 Frame the white or gray reference object in the measuring window, and press the ⓞ button to measure the value.

- The shutter is released and measurement is complete (no image is saved).

Preset manual

Cancel
Measure
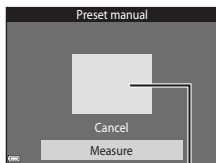
Measuring window

❎ Notes About Preset Manual

A value for flash lighting cannot be measured with **Preset manual**. When shooting using the flash, set **White balance** to **Auto** or **Flash**.

Using Menus

Continuous Shooting

Enter shooting mode → ☐ (shooting mode) button → ☐ (auto) mode
→ ⓚ button → MENU button → Continuous → ⓚ button

Option	Description
Ⓢ Single (default setting)	One image is captured each time the shutter-release button is pressed.
🔲H Continuous H	While the shutter-release button is held all the way down, images are captured continuously. • The frame rate for continuous shooting is about 7.0 fps and the maximum number of continuous shots is about 5 (when image mode is set to 🔟 **4608×3456**).
🔲L Continuous L	While the shutter-release button is held all the way down, images are captured continuously. • The frame rate for continuous shooting is about 2.2 fps and the maximum number of continuous shots is about 10 (when image mode is set to 🔟 **4608×3456**).
🔲 Pre-shooting cache	When the shutter-release button is pressed halfway, pre-shooting cache shooting begins. When the shutter-release button is pressed the rest of the way down, the camera saves the current image as well as the images captured immediately before the button is pressed (□86). This function helps you to avoid missing the shot. • The frame rate for continuous shooting is about 15.1 fps and the maximum number of continuous shots is 25, including a maximum of 5 frames captured in the pre-shooting cache. • Image mode is fixed at 🔳 (image size: 1280 × 960 pixels).
🔲120 Continuous H: 120 fps	Each time the shutter-release button is pressed all the way, images are captured at a high speed rate. • The frame rate for continuous shooting is about 120 fps and the maximum number of continuous shots is 50. • Image mode is fixed at 🔳 (image size: 640 × 480 pixels).
🔲60 Continuous H: 60 fps	Each time the shutter-release button is pressed all the way, images are captured at a high speed rate. • The frame rate for continuous shooting is about 60 fps and the maximum number of continuous shots is 25. • Image mode is fixed at 🔳 (image size: 1280 × 960 pixels).

❌ Notes About Continuous Shooting

- Focus, exposure, and white balance are fixed at the values determined with the first image in each series.
- It may take some time to save the images after shooting.
- When ISO sensitivity increases, noise may appear in captured images.
- The frame rate for continuous shooting may vary depending on the current image mode setting, the memory card used, or shooting condition.
- When using **Pre-shooting cache**, **Continuous H: 120 fps**, or **Continuous H: 60 fps**, banding or variance in brightness or hue may occur in images that were captured under lighting that flickers at high speeds, such as fluorescent, mercury-vapor, or sodium-vapor lighting.
- This function may not be available to use in combination with other functions (□56).

C **Pre-shooting Cache**

When the shutter-release button is pressed halfway or all the way down, images are saved as described below.

Press down halfway

Press down all the way

Images saved before pressing all the way

Images saved by pressing all the way
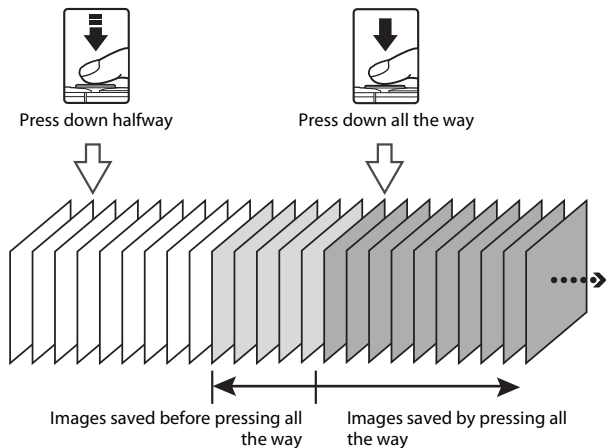
- The pre-shooting cache icon (🔄) on the shooting screen changes to green while the shutter-release button is pressed halfway.

ISO Sensitivity

Enter shooting mode ➔ 🅾 (shooting mode) button ➔ 🅾 (auto) mode
➔ 🆗 button ➔ MENU button ➔ ISO sensitivity ➔ 🆗 button

A higher ISO sensitivity allows darker subjects to be captured. Additionally, even with subjects of similar brightness, pictures can be taken at faster shutter speeds, and blurring caused by camera shake and subject movement can be reduced.

• When a higher ISO sensitivity is set, images may contain noise.

Option	Description
AUTO Auto (default setting)	Sensitivity is automatically selected from the range of ISO 125 to 1600.
ISO AUTO Fixed range auto	Select the range in which the camera automatically adjusts ISO sensitivity, from **ISO 125-400** or **ISO 125-800**.
125, 200, 400, 800, 1600, 3200, 6400	Sensitivity is locked at the specified value.

⚠ Notes About ISO Sensitivity

This function may not be available to use in combination with other functions (□56).
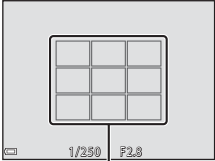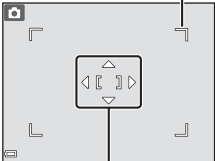
✐ ISO Sensitivity Display on the Shooting Screen
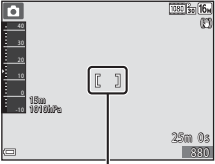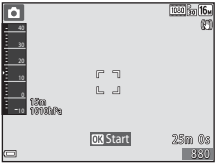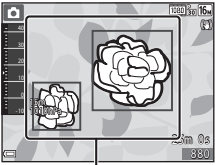
• When **Auto** is selected, 🔢 is displayed when the ISO sensitivity increases.
• When **Fixed range auto** is selected, the maximum value for ISO sensitivity is displayed.

Using Menus

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AF Area Mode

Enter shooting mode ➔ ■ (shooting mode) button ➔ ■ (auto) mode
➔ ⦿ button ➔ MENU button ➔ AF area mode ➔ ⦿ button

Use this option to determine how the camera selects the focus area for
autofocus when shooting still images.

Option	Description	
⚇ Face priority	When the camera detects a human face, it focuses on that face. See "Using Face Detection" (□51) for more information.	 Focus area
	When framing a composition with no human subjects or detected faces, the camera automatically selects one or more of the nine focus areas containing the subject closest to the camera when the shutter-release button is pressed halfway.	 Focus areas
〔⦿〕 Manual	Use the multi selector ▲▼◀▶ to move the focus area to where you want to focus. • To use the multi selector to configure the flash mode or other settings, press the ⦿ button. To return to moving the focus area, press the ⦿ button again.	Scope of movable focus area Focus area

Option	Description
[■] Center	The camera focuses on the subject in the center of the frame.
⊕ Subject tracking	Use this function to take pictures of moving subjects. Register the subject on which the camera focuses. The focus area automatically moves to track the subject. See "Using Subject Tracking" (□90) for more information.
[⊡] Target finding AF (default setting)	When the camera detects the main subject, it focuses on that subject. See "Using Target Finding AF" (□53) for more information.

Focus area

Focus areas

⚠ Notes About AF Area Mode

- When digital zoom is in effect, the camera focuses in the center of the frame regardless of the **AF area mode** setting.
- This function may not be available to use in combination with other functions (□56).

🖊 AF Area Mode for Movie Recording

AF area mode for movie recording can set with **AF area mode** (□104) in the movie menu.

Using Subject Tracking

Enter shooting mode ➜ ■ (shooting mode) button ➜ ■ (auto) mode
➜ ® button ➜ MENU button ➜ AF area mode ➜ ® button ➜
⊞ Subject tracking ➜ ® button ➜ MENU button

1 Register a subject.

- Align the subject that you want to track with the border in the center of the monitor and press the ® button.
- When the subject is registered, a yellow border (focus area) is displayed around it and the camera begins tracking the subject.
- If the subject cannot be registered, the border is displayed in red. Change the composition and try registering the subject again.
- To cancel subject registration, press the ® button.
- If the camera can no longer track the registered subject, the focus area disappears. Register the subject again.
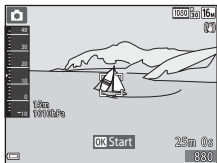
2 Press the shutter-release button fully to take the picture.

- If the shutter-release button is pressed while the focus area is not displayed, the camera focuses on the subject in the center of the frame.
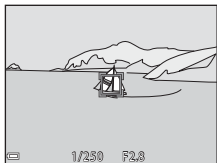
⚠ Notes About Subject Tracking

- If you perform operations such as zooming while the camera is tracking the subject, the registration is canceled.
- Subject tracking may not be possible in certain shooting conditions.

Autofocus Mode

Enter shooting mode ➔ ◻ (shooting mode) button ➔ ◻ (auto) mode
➔ 🆗 button ➔ 🗲 MENU button ➔ Autofocus mode ➔ 🆗 button

Set how the camera focuses when shooting still images.

Option	Description
AF-S Single AF	The camera focuses only when the shutter-release button is pressed halfway.
AF-F Full-time AF	The camera continues focusing even when the shutter-release button is not pressed halfway. The sound of lens drive movement is heard while the camera focuses.
PRE-AF Pre-focus (default setting)	Even when the shutter-release button is not pressed halfway, the camera focuses automatically if the composition of the framed image is significantly changed.

✐ Autofocus Mode for Movie Recording

Autofocus mode for movie recording can be set with **Autofocus mode** (□105) in the movie menu.

Using Menus

The Smart Portrait Menu

- See "Image Mode (Image Size and Quality)" ($\square$80) for information about **Image mode**.

Self-Collage

Enter shooting mode ➜ $\bigcirc$ (shooting mode) button ➜ $\boxed{\because}$ Smart portrait mode ➜ $\large\textcircled{\tiny 0K}$ button ➜ MENU button ➜ Self-Collage ➜ $\large\textcircled{\tiny 0K}$ button

Option	Description
Number of shots	Set the number of shots that the camera automatically captures (number of captured images for an aggregated image). • **4** (default setting) or **9** can be selected.
Interval	Set the interval time between each shot. • **Short**, **Medium** (default setting), or **Long** can be selected.
Shutter sound	Set whether to activate the shutter sound when shooting with the self-collage function. • **Standard**, **SLR**, **Magic** (default setting), or **Off** can be selected. • The same setting that is specified for **Shutter sound** in **Sound settings** in the setup menu is not applied to this setting.

Blink Proof

Enter shooting mode ➜ 🔾 (shooting mode) button ➜ 🙂 Smart portrait mode ➜ 🅺 button ➜ 🎛 button ➜ Blink proof ➜ 🅺 button

Option	Description
👁 On	The camera automatically releases the shutter twice with every shot and saves one image in which the subject's eyes are open. • If the camera saved an image in which the subject's eyes may have been closed, the dialog shown on the right is displayed for a few seconds. • The flash cannot be used.
Off (default setting)	Turns the blink proof off.
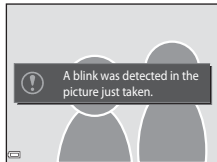
⚠ Notes About Blink Proof

This function may not be available to use in combination with other functions (□56).

The Playback Menu

- See "Editing Images (Still Images)" ($\square$64) for information about image editing functions.

Mark for Wi-Fi Upload

Press the $\blacktriangleright$ button (playback mode) ➔ MENU button ➔ Mark for Wi-Fi upload ➔ $\circledR$ button

Select images in the camera that you want to transfer to a smart device in advance before transferring them.

On the image selection screen ($\square$99), select or deselect images for the **Mark for Wi-Fi upload** function.

Note that when you select **Reset all** ($\square$131) in the setup menu or **Restore default settings** ($\square$108) in the Wi-Fi options menu, the **Mark for Wi-Fi upload** settings that you made are canceled.

Slide Show

Press the ▶ button (playback mode) ➔ MENU button ➔ Slide show ➔ ⓚ button

Play back images one by one in an automated "slide show." When movie files are played back in the slide show, only the first frame of each movie is displayed.

1 Use the multi selector ▲▼ to select **Start** and press the ⓚ button.

- The slide show begins.
- To change the interval between images, select **Frame intvl**, press the ⓚ button, and specify the desired interval time before selecting **Start**.

Slide show	
Start	
Frame intvl	3s
☐ Loop	
	Pause→ⓚ

- To repeat the slide show automatically, select **Loop** and press the ⓚ button before selecting **Start**.
- The maximum playback time is up to about 30 minutes even if **Loop** is enabled.
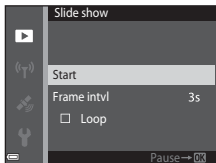
2 End or restart the slide show.

- The screen shown on the right is displayed after the slide show ends or is paused. To exit the show, select ■ and then press the ⓚ button. To resume the slide show, select ▶ and then press the ⓚ button.

Operations During Playback

- Use the multi selector ◀▶ to display the previous/next image. Press and hold to rewind/fast forward.
- Press the ⓚ button to pause or end the slide show.

Using Menus

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Protect

Press the ▶ button (playback mode) ➔ **MENU** button ➔ Protect ➔ ⦿ button

The camera protects selected images from accidental deletion.

Select images to protect or cancel protection from the image selection screen (□99).

Note that formatting the memory card or the camera's internal memory permanently deletes all data including protected files (□129).
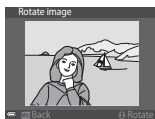
Rotate Image

Press the ▶ button (playback mode) ➔ **MENU** button ➔ Rotate image ➔ ⦿ button

Specify the orientation in which saved images are displayed during playback. Still images can be rotated 90 degrees clockwise or 90 degrees counterclockwise.

Select an image from the image selection screen (□99). When the Rotate image screen is displayed, press the multi selector ◀▶ to rotate the image 90 degrees.
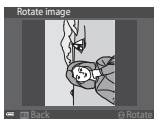
Rotate 90 degrees counterclockwise
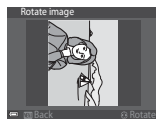
Rotate 90 degrees clockwise

Press the ⦿ button to finalize display orientation, and save orientation information with the image.

Using Menus

Copy (Copy Between the Memory Card and Internal Memory)

Press the ▶ button (playback mode) ➔ MENU button ➔ Copy ➔ ⑳ button

Images can be copied between a memory card and the internal memory.

- When a memory card that contains no images is inserted and the camera is switched to playback mode, **Memory contains no images.** is displayed. In that case, press the MENU button to select **Copy**.

1 Use the multi selector ▲▼ to select a destination option to which images are copied and press the ⑳ button.

Copy
Camera to card
Card to camera
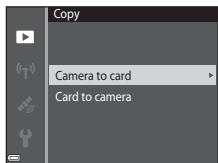
2 Select a copy option and press the ⑳ button.
- When you choose **Selected images**, use the image selection screen to specify images (□99).
- When you choose the **Card to camera** option, **All images** is not available.

Camera to card
Selected images
All images
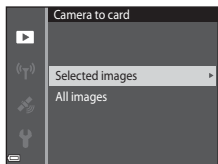
❎ Notes About Copying Images

- Only files in formats that this camera can record can be copied.
- Operation is not guaranteed with images captured with another make of camera or that have been modified on a computer.

✐ Copying Images in a Sequence

- If you select a key picture of a sequence in **Selected images**, all images in the sequence are copied.
- If you press the MENU button while images in a sequence are displayed, only the **Card to camera** copy option is available. All images in the sequence are copied if you select **Current sequence**.

Using Menus

Sequence Display Options

Press the ▶ button (playback mode) ➔ MENU button ➔ Sequence display options ➔ ⑯ button

Select the method used to display images in the sequence (□62).

Option	Description
🗗 Individual pictures	Displays each image in a sequence individually. 🗗 is displayed on the playback screen.
🖻 Key picture only (default setting)	Displays only the key picture for images in a sequence.

Settings are applied to all sequences, and the setting is saved in the camera's memory even if the camera is turned off.

The Image Selection Screen

When an image selection screen such as the one shown on the right is displayed while operating the camera, follow the procedures described below to select the images.
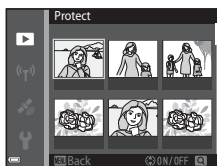
1 Use the multi selector ◀▶ to select an image.

- Move the zoom control (□2) toward **T** (🔍) to switch to full-frame playback or **W** (🔲) to switch to thumbnail playback.
- Only one image can be selected for **Rotate image**. Proceed to step 3.
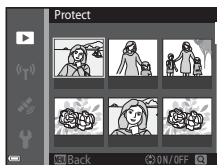
2 Use ▲▼ to select or deselect (or to specify the number of copies).

- When an image is selected, an icon is displayed below the image. Repeat steps 1 and 2 to select additional images.

3 Press the ⓞ button to apply image selection.

- When a confirmation dialog is displayed, follow the on-screen instructions to operate.

The Movie Menu

Movie Options

Enter shooting mode ➔ MENU button ➔ 🎥 menu icon ➔ Movie options ➔ 🇴🇰 button

Select the desired movie option to record. Select normal speed movie options to record at normal speed, or HS movie options (□101) to record in slow or fast motion. The movie options that can be selected vary depending on the **Frame rate** setting (□107).

• Memory cards with an SD Speed Class rating of 6 or faster are recommended for recording movies (□197).

Normal Speed Movie Options

Option (Image size/Frame rate*, File format)	Image size	Aspect ratio (horizontal to vertical)
1080ᵷₒ 1080/30p 1080ᵷₛ 1080/25p (default setting)	1920 × 1080	16:9
1080ᵢₒ 1080/60i 1080ᵢₛ 1080/50i	1920 × 1080	16:9
720ᵷₒ 720/30p 720ᵷₛ 720/25p	1280 × 720	16:9
480ᵷₒ 480/30p 480ᵷₛ 480/25p	640 × 480	4:3

* Interlaced format uses Fields per second.

HS Movie Options

Recorded movies are played back in fast or slow motion.
See "Recording Movies in Slow Motion and Fast Motion (HS Movie)" (📖103).

Option	Image size Aspect ratio (horizontal to vertical)	Description
480 📹 480 📹 HS 480/4×	640 × 480 4:3	1/4-speed slow motion movies • Max. recording time*: 15 seconds (playback time: 1 minute)
1080 📹 1080 📹 HS 1080/0.5×	1920 × 1080 16:9	2× speed fast motion movies • Max. recording time*: 2 minutes (playback time: 1 minute)

* While recording movies, the camera can be switched between normal speed movie recording and slow motion or fast motion movie recording. The maximum recording time shown here refers only to the portion of the movie that is recorded in slow motion or fast motion.
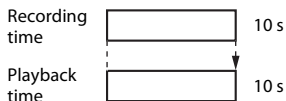
⚠ Notes About HS Movie

- Sound is not recorded.
- Zoom position, focus, exposure, and white balance are locked when movie recording starts.
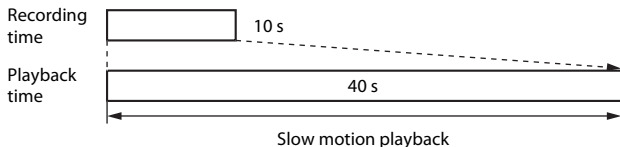
Using Menus

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C **Playing Back in Slow Motion and Fast Motion**

When recording at normal speed:

Recording
time   [   ] 10 s

Playback
time   [   ] 10 s

When recording at 480 ₘ HS 480/4× (480 ₘ HS 480/4×):
Movies are recorded at 4× normal speed.
They are played back in slow motion at 4× slower speed.

Recording
time   [   ] 10 s

Playback
time   [40 s   ]

          |————————————————————————————————|
          Slow motion playback

When recording at 1080 ₚ₅ HS 1080/0.5× (1080 ₚₑ HS 1080/0.5×):
Movies are recorded at 1/2 normal speed.
They are played back in fast motion at 2× faster speed.

Recording
time   [   ] 10 s

Playback
time   [   ] 5 s

          |————|
          Fast motion playback

Using Menus
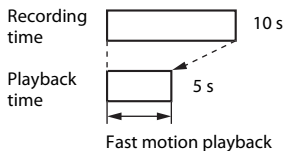
Recording Movies in Slow Motion and Fast Motion (HS Movie)

Enter shooting mode ➔ MENU button ➔ ᠇ᢖᢅ menu icon ➔ Movie options ➔ ᠒ᦂᦁ button

Movies recorded using HS movie can be played back in slow motion at 1/4 of the normal playback speed, or in fast motion at twice the normal playback speed.

1 Use the multi selector ▲▼ to select an HS movie option (□101) and press the ᠒ᦂᦁ button.

- After applying the option, press the MENU button to return to the shooting screen.
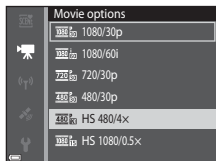
2 Press the ● (ᢖᢅ movie-record) button to start recording.

- The camera starts recording an HS movie.
- The camera switches between normal speed movie recording and HS movie recording each time the ᠒ᦂᦁ button is pressed.
- The movie options icon changes when switching between HS movie recording and normal speed movie recording.
- When the maximum recording time for HS movies (□101) is reached, the camera automatically switches to normal speed movie recording.
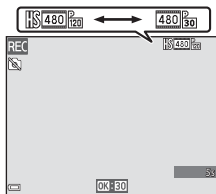
3 Press the ● (ᢖᢅ movie-record) button to end recording.

AF Area Mode

Enter shooting mode ➔ MENU button ➔ 🎬 menu icon ➔ AF area mode ➔ 🞫 button

Use this option to determine how the camera selects the focus area for autofocus during movie recording.

Option	Description
👤 Face priority (default setting)	When the camera detects a human face, it focuses on that face (□51). When **Autofocus mode** in the movie menu is set to **Single AF**, the camera focuses on the subject in the center of the frame even if **Face priority** is selected.
[■] Center	The camera focuses on the subject in the center of the frame.

- When an HS movie option is selected in **Movie options**, the setting is fixed at **Center**.
- When **Movie VR** is set to **On (hybrid)** and **Movie options** is set to 1080/60i or 1080/50i, the setting is fixed at **Center**.

Autofocus Mode

Enter shooting mode ➔ MENU button ➔ 🎬 menu icon ➔ Autofocus mode
➔ 🆗 button

Set how the camera focuses in movie mode.

Option	Description
AF-S Single AF (default setting)	Focus is locked when movie recording starts. Select this option when the distance between the camera and subject will remain fairly consistent during movie recording.
AF-F Full-time AF	The camera focuses continuously during movie recording. Select this option when the distance between the camera and subject will change significantly during recording. The sound of the camera focusing may be heard in the recorded movie. Use of **Single AF** is recommended to prevent the sound of the camera focusing from interfering with recording.

• When an HS movie option is selected in **Movie options**, the setting is fixed at **Single AF**.

Movie VR

Enter shooting mode ➔ MENU button ➔ 🎥 menu icon ➔ Movie VR ➔ 🆗 button

Select the vibration reduction setting used when recording movies.
Select **Off** when using a tripod to stabilize the camera during shooting.

Option	Description
(🤚)* On (hybrid) (default setting)	Performs optical compensation for camera shake using lens shift VR and simultaneously performs electronic VR using image processing. The angle of view (i.e., the area visible in the frame) becomes narrower.
(🤚) On	Performs compensation for camera shake using lens shift VR.
Off	Compensation is not performed.

⚠ Notes About Movie VR

- The effects of camera shake may not be completely eliminated in some situations.
- Only lens shift VR is used to compensate for camera shake when **Movie options** is set to HS movies, even if **Movie VR** is set to **On (hybrid)**.

Movie Light

Enter shooting mode ➔ MENU button ➔ 🎥 menu icon ➔ Movie light ➔ 🆗 button

Enable or disable the movie light that assists recording in dark places during movie recording.

Option	Description
On	The movie light is turned on for lighting when movies are recorded.
Off (default setting)	The movie light is turned off.

Wind Noise Reduction

Enter shooting mode ➔ MENU button ➔ 🎥 menu icon ➔ Wind noise reduction ➔ 🆗 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.

- When an HS movie option is selected in **Movie options**, the setting is fixed at **Off**.

Frame Rate

Enter shooting mode ➔ MENU button ➔ 🎥 menu icon ➔ Frame rate ➔ 🆗 button

Select the frame rate (fields per second for the interlaced format) used when recording movies. When the frame rate setting is switched, options that can be set in **Movie options** (□100) change.

Option	Description
30 fps (30p/60i)	Suited for playback on a TV using the NTSC standard.
25 fps (25p/50i)	Suited for playback on a TV using the PAL standard.

The Wi-Fi Options Menu

Press the MENU button ➔ "Y" menu icon ➔ ® button

Configure the Wi-Fi (wireless LAN) settings to connect the camera and a smart device.
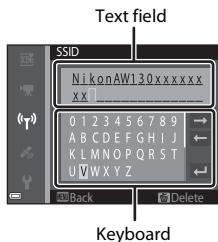
Option	Description
Connect to smart device	Select when wirelessly connecting the camera and a smart device. See "Using the Wi-Fi (Wireless LAN) Function" (☐146) for more information.
Upload from camera	Select when wirelessly connecting the camera and a smart device. See "Using the Wi-Fi (Wireless LAN) Function" (☐146) for more information. • The images to transfer can be selected on the image selection screen before establishing a Wi-Fi connection (☐99). The SSID and password of the camera are displayed on the screen after images are selected.
Disable Wi-Fi	Select to terminate the wireless connection between the camera and a smart device. See "Using the Wi-Fi (Wireless LAN) Function" (☐146) for more information.
Options	**SSID**: Change the SSID. The SSID configured here is displayed on the smart device. Set a 1- to 24-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** (default setting) is selected.
	Password: Set the password. Set an 8- to 16-character alphanumeric password.
	Channel: Select the channel used for wireless connections.
	Subnet mask: Use the default setting (**255.255.255.0**) under normal conditions.
	DHCP server IP address: Use the default setting (**192.168.0.10**) under normal conditions.
Current settings	Display the current settings.
Restore default settings	Restore the Wi-Fi settings to their default values.

Operating the Text Input Keyboard

Character Input for SSID and Password

- Use the multi selector ▲▼◄► to select alphanumeric characters. Press the Ⓚ 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, select ← or → on the keyboard, and press the ⓀK button.
- To delete one character, press the 🗑 button.
- To apply the setting, select ↵ on the keyboard and press the ⓀK button.

Text field

SSID

N i k o n A W 1 3 0 x x x x x x
x x

0 1 2 3 4 5 6 7 8 9   →
A B C D E F G H I J   ←
K L M N O P Q R S T
U V W X Y Z   ↵

Back   Delete

Keyboard

Character Input for Channel, Subnet Mask, and DHCP Server IP Address

- Use the multi selector ▲▼ to set the numbers. To move to the next digit, press ► or the ⓀK button. To return to the previous digit, press ◄.
- To apply the setting, select the last digit and press the ⓀK button.

DHCP server IP address

1 9 2 . 1 6 8 . 0 . 1 0

Edit

The Location Data Options Menu

- Display the location data options menu directly by pressing the **MENU** button while a map is displayed.

Location Data Options

Press the **MENU** button ➔ 🏕 (location data options) menu icon ➔ Location data options ➔ 🆗 button

Option	Description
Record location data	When set to **On**, signals are received from the positioning satellites, and positioning starts (□133). • Default setting: **Off**
Update A-GPS file	A memory card is used to update the A-GPS (assist GPS) file. Using the latest A-GPS file can shorten the time needed for calculating the location data. • See "Updating the A-GPS File" (□110) for more information.
Erase location data	The location data and POI information recorded on images are erased. Before pressing the **MENU** button, select the images with the location data or POI information that you want to delete. • The deleted location data or POI information cannot be recovered. • The location data of images captured with cameras other than this camera cannot be erased.

Updating the A-GPS File

Download the latest A-GPS file from the website below, and use it to update the file.

http://nikonimglib.com/agps3/

- The A-GPS file for the COOLPIX AW130 is only available from the website above.

1 Download the latest A-GPS file to the computer from the website.

2 Use a card reader or other device to copy the downloaded file to the "NCFL" folder of the memory card.

- The "NCFL" folder is located directly under the memory card root directory. If the memory card does not have "NCFL" folder, create a new folder.

3 Insert the memory card containing the copied file into the camera.

4 Turn on the camera.

5 Press the MENU button to display the location data options menu, and use the multi selector to select **Location data options**.

6 Select **Update A-GPS file**, and update the file.

- About two minutes are needed to update the A-GPS file.

M Notes About Updating A-GPS File

- The A-GPS file is disabled when a position is determined for the first time after the camera is purchased. The A-GPS file becomes active from the second operation for determining a location.
- The validity period of the A-GPS file can be checked on the update screen. If the validity period has expired, it is displayed in gray.
- Once the validity period of the A-GPS file has expired, calculating the location data will not become faster. Updating of the A-GPS file before using the location data functions is recommended.

Distance Units

Press the MENU button → ⚐ (location data options) menu icon → Distance units → ⓚ button

The distance units of the map display can be selected from **km (m)** (kilometers, meters) (default setting) or **mi (yd)** (miles, yards).

Using Menus

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Calculate Distance

Press the ▶ button (playback mode) ➔ display a map (□136) ➔ MENU button ➔ ♨ (location data options) menu icon ➔ Calculate distance ➔ ℗ button

Calculate the linear distance from the current position to the shooting location of the image or between the shooting locations of two images.

1 Use the multi selector ▲▼ to select the desired option for calculating the distance, and press the ℗ button.

- When **Position now⇔image** is selected, the camera starts calculating the current position. Proceed to step 3.
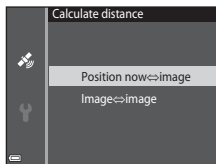
2 Use ◀▶ to select the image that is the start point, and press the ℗ button.

- To adjust the scale of the map, use the zoom control (**W** (▣)/**T** (○)).

3 Press ◀▶ to select the image that is the end point.

- Each time an image is selected, the distance is displayed on the screen.
- To end distance calculation, press the ℗ button.

Distance

❎ Notes About Distance Calculation

- If the location data is not recorded on the image, the distance cannot be calculated.
- In order to calculate the distance using **Position now⇔image**, the current position must have been successfully calculated (□132).

Using Menus

Points of Interest (POI) (Recording and Displaying Location Name Information)

Press the MENU button → ✍ (location data options) menu icon → Points of interest (POI) → ⑩ button

Configure the POI (Points of Interest, location name information) settings.

Option	Description
Embed POI	Set whether or not to record the location name information on the images to be shot. • Default setting: **Off** • The location name information can be recorded on both still images and movies.
Display POI	Set whether or not to display the location name information on the shooting screen or playback screen (□3, 5). • If **Embed POI** was set to **On** when an image was taken, the location name information for the image is displayed on the playback screen. • Default setting: **Off**
Level of detail	Set the display level of the location name information. A higher display level shows more detailed regional information. • When set to level 1: country names are displayed. • When set to levels 2 to 5: the information displayed varies depending on the country. • When set to level 6: landmark names (facilities) are displayed.

Edit POI	Before pressing the MENU button, select the image to change the location name information.
	• **Update POI**: The location name information recorded on the image can be changed.
	  - When level 6 is selected, press the multi selector ◀▶ to change the landmark name.
	  - To change the POI information level, press the multi selector ▲▼.
	• **Remove POI**: The location name information recorded on the image is deleted.

🖉 POI Display

If there is no location name information at the set display level, the location name information may not be displayed or "---" may be displayed.

Create Log

Press the MENU button ➔ ♨ (location data options) menu icon ➔ Create log ➔ ⓚ button

Start or stop recording logs, and save them (□141).

Option	Description
Start all logs*	The camera records location, altitude, and water depth logs. • Select an interval and time duration that the camera uses for log recording. The default setting is **15 s** for interval and **Log data for next 24 hrs** for time duration.
Start location log*	The camera records a location log. • Select an interval and time duration that the camera uses for log recording. The default setting is **15 s** for interval and **Log data for next 24 hrs** for time duration.
Start depth log*	The camera records a water depth log. • Select an interval that the camera uses for log recording. The default setting is **1 min** for interval, and time duration is fixed to one hour.

* Cannot be selected if there is a log that has not been saved. Select **End all logs**, **End location log**, or **End depth log**, and save or delete the log.

View Log

Press the MENU button ➜ ✎ (location data options) menu icon ➜ View log ➜ ⓚ button

Check or erase the log data stored on the memory card using **Create log** ($\square$114).

Option	Description
Location logs	Select a log (date) that you want to display and press the ⓚ button to display a location log on a map ($\square$144). • Press the 🗑 (delete) button to delete the selected log or all saved location logs.
Altitude/depth logs	Select a log (date) that you want to display and press the ⓚ button to display the altitude or water depth data as a graph ($\square$145). • Press the 🗑 (delete) button to delete the selected log or all saved altitude/depth logs.

Set Clock from Satellite

Press the MENU button ➜ ✎ (location data options) menu icon ➜ Set clock from satellite ➜ ⓚ button

Signals from the positioning satellites are used to set the date and time of the camera's internal clock. Check the positioning status before setting the clock using this option.

❚ Notes About Set Clock from Satellite

- To set the camera's internal clock, positioning must have been done successfully ($\square$132).
- Date/time adjustment by **Set clock from satellite** is set according to the time zone set in **Time zone and date** ($\square$119) in the setup menu. Check the time zone before setting **Set clock from satellite**.
- The date/time set using **Set clock from satellite** is not as accurate as radio clocks. Use **Time zone and date** in the setup menu to set the time if it is not accurate in **Set clock from satellite**.

Electronic Compass

Press the MENU button ➔ ⚡ (location data options) menu icon ➔
Electronic compass ➔ 🆗 button

Option	Description
Compass display	Set whether or not to display a compass on the shooting screen. • Default setting: **Off** • The direction the camera is pointing is displayed based on measured direction information. • When the camera lens faces downward, the compass display switches to a circle compass with a red arrow that points north. **-** Display style: north, east, south, and west **-** Display range: 16 cardinal points • The direction measured by the electronic compass can be imprinted on images using **Data imprint** in the playback menu (A68).
Compass correction	Correct the compass when the compass direction is not displayed correctly. When the screen shown on the right is displayed, swing the camera to draw a figure eight in the air while turning your wrist to face the camera forward and backward, side to side, or up and down. Compass correction Move camera in a figure eight.

Using Menus

⚠ **Notes About Using the Electronic Compass**

- The electronic compass is not displayed when the camera lens is facing upwards.
- Do not use the electronic compass in this camera for mountain climbing and other specialized applications. The displayed information is intended as a general guide only.
- Direction may not be measured correctly near the following objects: magnets, metals, electrical motors, electrical home appliances or electrical power cables.
- Direction may not be measured correctly in the following places: in automobiles, trains, ships, airplanes, inside buildings or in underground malls
- Direction may not be measured correctly if the location data cannot be calculated.

Using Menus

Altitude/depth Options

Press the MENU button ➔ 🏵 (location data options) menu icon ➔
Altitude/depth options ➔ 🆗 button

Option	Description
Altimeter/depth gauge	Set whether or not to display the altimeter or depth gauge on the shooting screen. • Default setting: **On**

Alt./depth correction	The altitude or water depth value is compensated.
	• **Use location data**: The altitude is compensated using the record location data function.
	  - When the confirmation dialog is displayed, select **Yes** and press the 🆗 button. The altitude is compensated using the displayed value.
	  - The data is not compensated underwater.
	• **Correct manually**: Enter the altitude or water depth to compensate the data.
	  - Use the multi selector ▲▼ to change the value and use ◀▶ to change the input position of the digits.
	  - When the cursor is positioned on the rightmost digit, press the 🆗 button to set this value.
	• **Reset**: The compensation set using **Use location data** or **Correct manually** is canceled.
	  - When the compensation cancellation dialog is displayed, select **Yes** and press the 🆗 button. The compensated value is canceled.

Altitude/depth units	Set the unit of distance for displaying altitude or water depth to **m** (meters) (default setting) or **ft** (feet).

⚠ Notes About Altitude/Depth Options
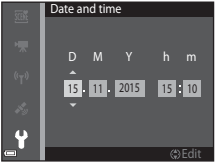
- To correct the altitude or water depth using **Use location data** of **Alt./depth correction**, **Record location data** in **Location data options** in the location data options menu must be set to **On**, and also positioning must have been performed based on signals received from four or more satellites ($\square$132).

- When **Altimeter/depth gauge** is set to **On**, the altimeter or depth gauge, altitude or water depth, and the atmospheric pressure are displayed even if **Hide info** is selected for **Photo info** in **Monitor settings** in the setup menu ($\square$78).

Using Menus

The Setup Menu

Time Zone and Date

Press the MENU button ➔ ✿ menu icon ➔ Time zone and date ➔ 🆗 button

Set the camera clock.

Option	Description
Date and time	• Select a field: Press the multi selector ◀▶. • Edit the date and time: Press ▲▼. • Apply the setting: Select the minute setting and press the 🆗 button. Date and time D M Y h m 15 . 11 . 2015 15 : 10 ⏏Edit
Date format	Select **Year/Month/Day**, **Month/Day/Year**, or **Day/Month/Year**.
Time zone	Set time zone and daylight saving time. • When **Travel destination** (✈) is set after having set the home time zone (🏠), the time difference between the travel destination and the home time zone is automatically calculated, and the date and time are saved for the selected region.

Setting the Time Zone

1 Use the multi selector ▲▼ to select **Time zone** and press the 🆗 button.

Time zone and date
Date and time
Date format   D/M/Y
Time zone   🏠
London, Casablanca
15/11/2015 15:30
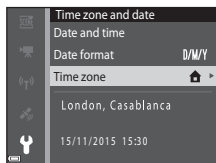
2 Select ♠ **Home time zone** or ✈ **Travel destination** and press the Ⓚ button.

- The date and time displayed in the monitor changes depending on whether the home time zone or travel destination is selected.

Time zone
♠ Home time zone
✈ Travel destination

London, Casablanca

15/11/2015 15:30

3 Press ▶.

Time zone
♠ Home time zone
✈ Travel destination

London, Casablanca

15/11/2015 15:30
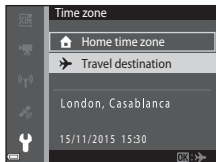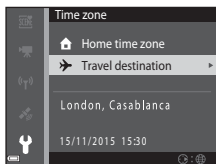
4 Use ◀▶ to select the time zone.

- Press ▲ to enable daylight saving time function, and ♈ is displayed. Press ▼ to disable the daylight saving time function.
- Press the ⓀK button to apply the time zone.
- If the correct time is not displayed for the home or travel destination time zone setting, set the appropriate time in **Date and time**.

✈
New York, Toronto, Lima

10:30   −05:00

Back
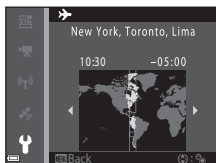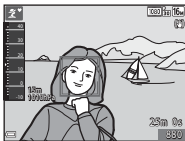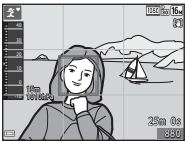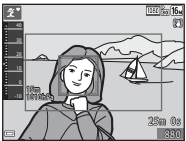
Monitor Settings

Press the MENU button ➔ 🅈 menu icon ➔ Monitor settings ➔ 🆗 button

Option	Description
Photo info	Set whether or not to display information in the monitor.
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

	Shooting mode	Playback mode
Show 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.	
Hide info		

Using Menus

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	Shooting mode	Playback mode
Framing grid+auto info	In addition to the information shown in **Auto info**, a framing grid is displayed to help frame pictures. The framing grid is not displayed while recording movies.	Same as **Auto info**.
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**.

Date Stamp

Press the MENU button ➔ Y menu icon ➔ Date stamp ➔ 🆗 button

The shooting date and time can be stamped on
images when shooting. The information can be
printed even when using a printer that does not
support the date imprinting function.

Option	Description
DATE Date	Date is stamped on images.
DATE⊕ Date and time	Date and time are stamped on images.
Off (default setting)	Date and time are not stamped on images.

⚠ Notes About Date Stamp

- Stamped dates form a permanent part of image data and cannot be deleted. The date and time cannot be stamped on images after they have been captured.
- The date and time cannot be stamped in the following situations:
  - When using **Sports**, **Night portrait** (when **Hand-held** is selected), **Night landscape** (when **Hand-held** is selected), **Backlighting** (when **HDR** is set), **Easy panorama**, or **Pet portrait** (when **Continuous** is selected) scene mode
  - When the continuous shooting setting (🔲84) is set to a setting other than **Single**
  - When shooting movies
  - When saving still images during moving recording
- The stamped date and time may be difficult to read when using a small image size.

✐ Printing a Shooting Date on Images Without a Date Stamp

You can transfer images to a computer and use the ViewNX 2 software (🔲157) to imprint the shooting date on the images when they are printed.

Using Menus

Photo VR

Press the MENU button ➜ 🍴 menu icon ➜ Photo VR ➜ 🆗 button

Select the vibration reduction setting used when shooting still images.
Select **Off** when using a tripod to stabilize the camera during shooting.

Option	Description
(🤚)★ On (hybrid)	Performs optical compensation for camera shake using the lens shift method. Under the following conditions, also performs electronic VR using image processing. • Flash: Does not fire • Shutter speed: Slower than 1/30 second at the maximum wide-angle position and 1/60 second at the maximum telephoto position • Self-timer: **OFF** • **Continuous** setting: **Single** • ISO sensitivity: ISO 200 or lower The image recording time may be longer than usual.
(🤚) On (default setting)	Compensation for camera shake is performed using lens shift VR.
Off	Compensation is not performed.

⚠ Notes About Photo VR

- After turning on the camera or after switching from playback mode to shooting mode, wait for the shooting mode screen to be displayed completely before taking pictures.
- Images in the camera monitor may be displayed blurry immediately after shooting.
- The effects of camera shake may not be completely eliminated in some situations.
- When the shutter speed is extremely slow, images cannot be compensated using image processing even when **On (hybrid)** is set.

Using Menus

AF Assist

Press the MENU button ➔ ♈ menu icon ➔ AF assist ➔ 🅞🅚 button

Option	Description
AUTO Auto (default setting)	The AF-assist illuminator automatically lights up when you press the shutter-release button under dim lighting. The illuminator has a range of about 3.0 m (9 ft 10 in.) at the maximum wide-angle position and about 3.0 m (9 ft 10 in.) at the maximum telephoto position. • Note that for some shooting modes or focus areas, the AF-assist illuminator may not light.
Off	The AF-assist illuminator does not light.

Digital Zoom

Press the MENU button ➔ ♈ menu icon ➔ Digital zoom ➔ 🅞🅚 button

Option	Description
On (default setting)	Digital zoom is enabled.
Off	Digital zoom is disabled.

⚠ Notes About Digital Zoom

• Digital zoom cannot be used in the following shooting modes:
  - **Portrait**, **Night portrait**, **Night landscape**, **Backlighting** (when **HDR** is set), **Easy panorama**, **Pet portrait**, or **Underwater** scene mode
  - Smart portrait mode
• Digital zoom cannot be used in other shooting modes when using certain settings (□58).

Sound Settings

Press the MENU button ➔ ♈ menu icon ➔ Sound settings ➔ ㊞ button

Option	Description
Button sound	When **On** (default setting) is selected, the camera produces one beep when operations are performed, two beeps when focus is acquired on the subject, and three beeps when an error occurs. The start-up sound is also produced. • Sounds are disabled when using **Pet portrait** scene mode.
Shutter sound	When **On** (default setting) is selected, the shutter sound is produced when the shutter is released. • The shutter sound is not produced when using continuous shooting mode, when recording movies, or when using **Pet portrait** scene mode.

Underwater Flash

Press the MENU button ➔ ♈ menu icon ➔ Underwater flash ➔ ㊞ button

Select **On** when shooting underwater using an SB-N10 underwater speedlight (available separately) (□183). The default setting is **Off**.

B Notes About Underwater Flash

This function may not be available to use in combination with other functions (□56).

Action Control Response

Press the MENU button ➔ ❢ menu icon ➔ Action control response ➔ ⑩ button

Set the sensitivity of the operation performed when shaking the camera (action control) (□20). When this option is set to **High**, the operation is performed even if the camera shake movement is small. When this option is set to **Low**, the operation is performed if the camera shake movement is large. The default setting is **Medium**.

❢ Notes About Action Control Response

When viewing images with **Quick playback** of action control or in full-frame playback mode, operation response of selecting images is fixed.

Playback Action Control

Press the MENU button ➔ ❢ menu icon ➔ Playback action control ➔ ⑩ button

Option	Description
On (default setting)	An image can be selected by shaking the camera in full-frame playback mode.
Off	The image cannot be selected by shaking the camera.

❢ Notes About Playback Action Control

When **Playback action control** is set to **On**, the displayed images are not rotated automatically even if the orientation of the camera is changed.

Map Actions

Press the MENU button ➔ 🔧 menu icon ➔ Map actions ➔ 🆗 button

Option	Description
On (default setting)	You can zoom in and out of maps by shaking the camera (□20).
Off	You cannot zoom in and out of maps by shaking the camera.

🚫 Notes About Map Actions

If the 🔄 (action) button is pressed, you can zoom in and out of maps only by using the zoom control (□2).

Auto Off

Press the MENU button ➔ 🔧 menu icon ➔ Auto off ➔ 🆗 button

Set the amount of time that elapses before the camera enters standby mode (□13).
You can select **30 s**, **1 min** (default setting), **5 min**, or **30 min**.

🖉 Setting the Auto Off Function

The time that passes before the camera enters standby mode is fixed in the following situations:

- When a menu is displayed: 3 minutes (when auto off is set to **30 s** or **1 min**)
- When shooting using **Pet portrait auto release**: 5 minutes (when auto off is set to **30 s** or **1 min**)
- When shooting using **Smile timer**: 5 minutes (when auto off is set to **30 s** or **1 min**)
- When the AC Adapter EH-62F is connected: 30 minutes
- When an HDMI cable is connected: 30 minutes

Format Card/Format Memory

Press the MENU button ➔ 🔧 menu icon ➔ Format card/Format memory ➔ Ⓚ button

Use this option to format a memory card or the internal memory.

Formatting the memory cards or internal memory permanently deletes all data. Data that has been deleted cannot be recovered. Make sure to save important images to a computer before formatting.

Formatting a Memory Card

- Insert a memory card into the camera.
- Select **Format card** in the setup menu and then press the ⓀK button.

Formatting the Internal Memory

- Remove the memory card from the camera.
- Select **Format memory** in the setup menu and then press the ⓀK button.

To start formatting, select **Format** on the screen that is displayed and press the ⓀK button.

- Do not turn the camera off or open the battery-chamber/memory card slot cover during formatting.
- This setting cannot be selected while Wi-Fi is connected.

Language

Press the MENU button ➔ 🔧 menu icon ➔ Language ➔ ⓀK button

Select a language for display of camera menus and messages.

Charge by Computer

Press the MENU button ➔ ♈ menu icon ➔ Charge by computer ➔ ⓇⓀ button

Option	Description
AUTO Auto (default setting)	When the camera is connected to a computer that is running (□150), 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. If the camera is turned off, charging stops.
- About 4 hours 10 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 Charge Lamp Quickly Flashes 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 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.

Reset All

Press the MENU button ➔ 🔧 menu icon ➔ Reset all ➔ 🆗 button

When **Reset** is selected, the camera's settings are restored to their default values.
- Some settings, such as **Time zone and date** or **Language**, are not reset.
- This setting cannot be selected while Wi-Fi is connected.

🖉 **Resetting File Numbering**

To reset file numbering to "0001", delete all images saved on the memory card or in the internal memory (□16) before selecting **Reset all**.

Conformity Marking

Press the MENU button ➔ 🔧 menu icon ➔ Conformity marking ➔ 🆗 button

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

Firmware Version

Press the MENU button ➔ 🔧 menu icon ➔ Firmware version ➔ 🆗 button

View the current camera firmware version.
- This setting cannot be selected while Wi-Fi is connected.

Using Location Data Functions/ Displaying Maps

The camera starts to receive signals from positioning satellites when **Record location data** in **Location data options** in the ❖ (location data options) menu (□78) is set to **On**.

Reception status can be checked on the shooting screen.

- ❖ or ❖H: The camera receives signals from three or more satellites and is calculating the location data.
- ❖: The camera receives signals, but is not able to perform positioning.
- ☒: The camera does not receive signals.
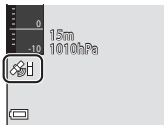
Recording the Shooting Location Data to Images

- The camera records location data (latitude and longitude) to images when shooting while the camera is positioning.
- When **Compass display** in **Electronic compass** in the location data options menu is set to **On**, the approximate direction of shooting is also recorded.

Recording Logs

- When the camera is positioning and **Create log** in the location data options menu is set to **Start all logs**, you can record location data, altitude, and water depth data at specified intervals while you move around with the camera.
- Recorded logs (movement information such as location data, altitude, or water depth) can be saved on a memory card and can be displayed as a map or a graph when **View log** in the location data options menu is selected. To save a log, select **Create log** and stop recording, and then select **Save logs**.

Displaying a Map

- The current position is displayed on a map when you press the ⊞ (map) button while the shooting screen is displayed and the camera is positioning.
- The image shooting location is displayed when you play back an image with recorded location data and press the ⊞ button.

Recording Location Data to Images

Press the **MENU** button ➔ 🌏 (location data options) menu icon ➔ Location data options ➔ 🉆 button

Set **Time zone and date** (□119) correctly before using the location data functions.

1 Set **Record location data** to On.

- Press the **MENU** button or shutter-release button to exit the menu screen after the setting is complete.
- Operate the camera under the open sky to get better reception.

Location data options	
Record location data	OFF ▸
Update A-GPS file	
Erase location data	
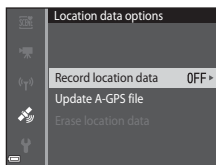
2 Check the reception status on the shooting screen.

- 🛰 or 🛰: The camera receives signals from three or more satellites and is calculating the location data. The location data is recorded to images.
- 🛰: Signals are being received from the satellites, but positioning is not possible. The location data is not recorded to images.

Location data reception

- 🛰: Signals cannot be received from the satellites, and positioning is not possible. The location data is not recorded to images.
- Press the 🌏 button while the camera is positioning to check the current position on a map (□138).
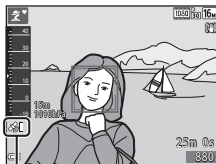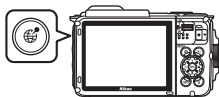
3 Take a picture while the camera is positioning.

- The location data is recorded to the captured image.
- Recorded location data can be checked on the map (□136).

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M Notes About Location Data Functions

- Before using the location data functions, read "<Important> Notes About Location Data Functions (GPS/GLONASS, Electronic Compass)" (□xv).

- It takes a few minutes to calculate location data when positioning is performed for the first time or after a long period in which positioning could not be performed, or just after the battery is replaced.

- You can reduce the time for calculating location data by using the latest A-GPS file (□110).

- Positions of the positioning satellites change constantly.
  You may not be able to determine the position or it may take some time depending on your location and the time.
  To use the location data functions, use the camera in an open-air area with few obstacles in the sky.
  Signal receiving will be smoother if the positioning antenna (□1) is facing the sky.

- The following locations which block or reflect signals may result in failed or inaccurate positioning.
  - Inside buildings or underground locations
  - Between high-rise buildings
  - Under overpasses
  - Inside tunnels
  - Near high-voltage electrical power lines
  - Between clusters of trees
  - Underwater

- Using a mobile phone of 1.5 GHz band near this camera may disrupt positioning.

- When carrying this camera around while positioning, do not place it in a metal bag. Positioning cannot be performed if the camera is covered with metal materials.

- When there is a significant difference in the signals from the positioning satellites, there could be a deviation of up to several hundred meters.

- Be aware of your surroundings when positioning.

- The shooting date and time that is displayed when playing back images is determined by the camera's internal clock at the time of shooting.
  The time at which the camera calculated the location data is recorded to images, but it is not displayed on the camera screen.

- The location data for the first frame will be recorded on a series of images shot using continuous shooting.

M Battery Drain While Recording Location Data and Log Recording

- When **Record location data** is set to **On**, record location data functions will continue to operate at the specified interval for approximately six hours even after the camera is turned off. Also, record location data functions and log recording will continue to operate while recording logs (□141) even after the camera is turned off.

- When **Record location data** is set to **On** or while recording logs, the battery power will drain faster than usual. Confirm the battery level especially when recording a log using **Start all logs** or **Start depth log**.

🖉 **Points of Interest (POI) Information**

POI information is location name information for the nearest landmarks (facilities) and other details.

Location name information (POI information)

- When **Display POI** in **Points of interest (POI)** (□113) in the location data options menu is set to **On**, the nearest location name information for the current position is displayed during shooting (only when the camera is positioning).

- When **Embed POI** is set to **On**, location name information can be recorded on the image during shooting (only when the camera is positioning).

- If the location name information was recorded on the image during shooting, this information is displayed when **Display POI** is set to **On** during playback.

- The location name information may not be displayed depending on the setting level in **Level of detail** in **Points of interest (POI)**. Also, certain landmark names may not be registered, or the landmark name may be different.
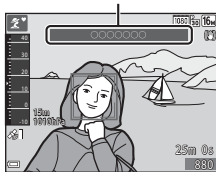
🖉 **Underwater Recording of Location Data**

The screen on the right is displayed if you select **Underwater** scene mode or select 🔀 (scene auto selector) mode and then submerge the camera underwater while location data is being calculated.

If you select **Yes** and press the 🆗 button, the location data calculated prior to underwater shooting is recorded to the images to be shot underwater.

Underwater

Do you want to use the location data last obtained before submerging? These data will be recorded with every shot taken until you resurface.

Yes

No
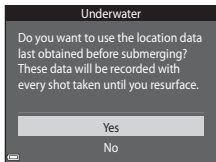
🖉 **Images with Recorded Location Data**

- The 🚕 icon is displayed during playback for images which have the location data recorded (□5).

- The location data recorded on an image can be checked on a map with ViewNX 2 after transferring the image to a computer (□157).

- The actual shooting location may differ from the location data recorded to the image files due to the accuracy of the calculated location data and differences in the geodetic system used.

- The location data and POI information recorded on images can be erased using **Erase location data** in **Location data options** (□110). The erased information cannot be recovered.

Displaying the Shooting Location (Playback Mode)

Press the ▶ button (playback mode) ➔ select an image recorded with location data* ➔ 🌐 button

* The ⚿ icon is displayed during playback for images which have the location data recorded (□5).

- Shooting location: The shooting location of the image with recorded location data is displayed on a map. The shooting location of the image selected before the 🌐 button was pressed is displayed in yellow.
  The approximate shooting direction is indicated by ⊕ for images captured when **Compass display** is set to **On** (□116). ⊕ (pointing toward the top of the screen) indicates north.

Shooting location

Thumbnail display

- Thumbnail display: If shooting locations appear on the map, images are displayed as thumbnails.
- The operations described below can be performed while a map is displayed.
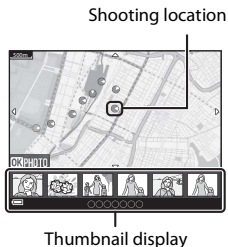
Map Operations

Operation	Description
Multi selector[1]	Move the map display (in eight directions).
Zoom control[1]	• **T** (🔍): Zoom in on the map display. • **W** (🔲): Zoom out the map display.
🌐 button	Return to the playback screen.
🆗 button[2]	Select images in thumbnail playback mode. See "Operations When Thumbnail Images Are Selected" (□137).

[1] Action control can be used (□20).
[2] Disabled when there are no shooting locations on the displayed map.

Operations When Thumbnail Images Are Selected

Operation	Description	
Multi selector	Use ◀▶ to switch the selected thumbnail image. • The shooting location of the selected image changes to yellow on the map.	
Zoom control	• **T** (Q): Display the selected image in full-frame playback mode. Use ◀▶ to display the previous or next image. • **W** (🔲): Return to the map display.	
🗑 button	Return to the playback screen.	
® button	A menu is displayed, and the options described below can be selected.	
	Scroll map*	Return to the map operation screen and display a map with the shooting location of the selected image in the center.
	Altitude/ depth logs*	Display an altitude/depth log graph (□145). Press the ® button while the graph is displayed to return to the map operation screen.
	Save location	Save the shooting location of the selected image.
	Center on saved location	Move directly to the saved location. See "Map Operations of Saved Locations" (□139) for more information.

* Only **Altitude/depth logs** can be selected if the camera was recording an altitude/depth log when shooting the selected images. Only **Scroll map** can be selected if the camera was not recording an altitude/depth log.

⚠ Notes About Map Display

- Maps cannot be displayed while the camera is being charged with the charging AC adapter.
- The map display cannot be rotated. Only the north up display (the top of the screen indicates the north) is available.
- The map display scale varies depending on which country is shown on the map.
- If the **MENU** button is pressed while the map is displayed, **Time zone and date**, **Format card**/**Format memory**, **Language**, and **Reset all** in the setup menu (□119) cannot be selected.

Using Location Data Functions/Displaying Maps

Displaying the Current Position on a Map (Shooting Mode)

> Enter shooting mode while the camera is positioning[1] ➔ 🌐 button[2]

1 See "Recording Location Data to Images" (□133) for more information.
2 A world map is displayed by pressing the 🌐 button when the camera is not positioning.

- The current position is displayed in the center of the map. You can save a location and display the map recorded with the saved location.
- When the camera lens faces downward, a compass is displayed.
- The previously displayed map is displayed when the camera is turned on for the second and subsequent times.
- The operations described below can be performed while a map is displayed.

Current position

Compass

Operation	Description	
Multi selector[1]	Move the map display (in eight directions).	
Zoom control[1]	• **T** (Q): Zoom in on the map display. • **W** (▣): Zoom out the map display.	
🌐 button	Display a screen that indicates information such as the direction (□139). Press the button again to return to the shooting screen.	
🛞 button	A menu is displayed, and the options described below can be selected.	
	Center on current location[2]	Display the current position in the center of the map.
	Save location	Use the multi selector to select a location, and press the 🛞 button to save the location (up to 30 locations). • Select **No** on the confirmation dialog to exit the registration screen.
	Center on saved location	Move directly to the saved location. • See "Map Operations of Saved Locations" (□139) for more information.

1 Action control can be used (□20).
2 Cannot be selected when the camera is not positioning.

📖 Notes About Direction and Location Data Display

Direction or location data, etc. is displayed when a map is being displayed in shooting mode or if the 🔮 button is held down while the power is off.

1 Date and time
2 Location data reception
3 Create log display (location data)
4 Create log display (altitude/water depth)
5 Altitude
6 Atmospheric pressure
7 Direction
8 Latitude and longitude
9 Location name information (Points of Interest: POI)*
10 Compass display
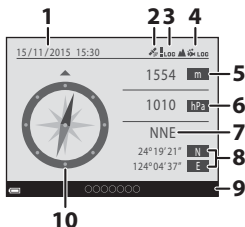
* "----" may be displayed for the location name information depending on the setting level in **Level of detail** of **Points of interest (POI)**.

📖 Map Operations of Saved Locations

If you press the 🆗 button and select **Center on saved location** while a map is displayed (□136, 138) or a thumbnail is selected (□144), the map scrolls to the saved location that is closest to the center of the screen.

- Use the multi selector ▲▼◀▶ to move to other saved locations.
- Press the 🗑 button to cancel saving a location.
  - **Current location**: Cancel saving of the selected location.
  - **Selected locations**: Delete a batch of saved locations. Use the multi selector to select a saved location and press the 🗑 button. Press the 🗑 button again to deselect it. Press the 🆗 button after you finish selecting the locations.
  - **All locations**: Delete the all saved locations at once.
- Press the 🆗 button to exit the operation screen.

Using Location Data Functions/Displaying Maps

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Using Altimeter and Depth Gauge

You can check the atmospheric pressure as well as the altitude or water depth of the current position on the screen, and record the displayed values to the captured images.

- The altitude, water depth, and atmospheric pressure that are recorded to images can be imprinted on the images by using **Data imprint** (□68) in the playback menu.
- Captured images and related logs can be displayed if you use the altitude or water depth log recording functions (□145).

⚠ Notes About Altimeter and Depth Gauge

- Use **Alt./depth correction** in **Altitude/depth options** (□118) in the location data options menu to correct the altitude or water depth in advance. Before using the camera underwater, make sure to adjust the data to 0 m (0 ft) at the surface of water.
- Do not use the altimeter or depth gauge in this camera for specialized applications such as mountain climbing or underwater diving. The displayed information is intended as a general guide only.
- Since the altitude is calculated using the camera's internal barometer, the data may not be displayed correctly in some climate conditions.
- When the scale of the depth gauge display exceeds 25 m (82 ft), the depth gauge display turns orange. When the scale of the depth gauge display exceeds 30 m (98 ft), the depth gauge display turns red.

✎ Altitude/Water Depth

- The altimeter or depth gauge can be displayed when **Altimeter/depth gauge** in **Altitude/depth options** in the location data options menu is set to **On** (default setting).
- The depth gauge and water depth are displayed when you select **Underwater** scene mode, or select 🞄 (scene auto selector) mode and then submerge the camera underwater. If the camera is not being used underwater when **Underwater** is selected, the depth gauge display is fixed at 0 m (0 ft).

Altimeter or depth gauge

Atmospheric pressure

Altitude or water depth

- The display range of the altitude is -300 m to +4500 m (-984 to +14,760 ft), and the display range of the water depth is 0 m to 35 m (0 ft to 114 ft).
- When altitude or water depth is corrected, 🔆 is displayed next to the altitude or water depth.
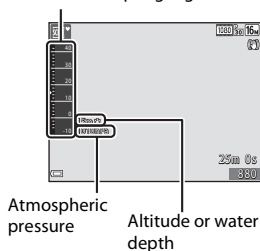
Recording Movement Data Logs

Press the MENU button ➔ 🥾 (location data options) menu icon ➔ Create log ➔ 🅾️ button

1 Use the multi selector ▲▼ to select the type of log to record, and press the 🅾️ button.

- **Start all logs**: Location, altitude, and water depth data logs are recorded.
- **Start location log**: A location data log is recorded.
- **Start depth log**: A water depth log is recorded.

	Create log
	Start all logs ▸
	End all logs
(ʏ)	Start location log
	End location log
🥾	Start depth log
	End depth log
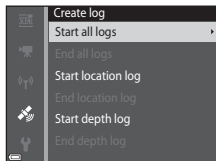
2 Select the interval to use for log recording, and press the 🅾️ button.

- The intervals that can be set vary depending on the type of log that is recorded.
- If **Start depth log** was selected, log recording starts (the time duration is fixed at one hour).

	Log interval
	15 s ▸
	30 s
(ʏ)	1 min
	3 min
🥾	5 min
	10 min
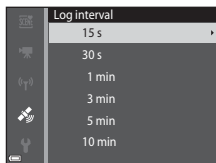
3 Select the duration of the log recording, and press the 🅾️ button.

- Log recording starts. Press the MENU button to exit the menu screen.
- **LOG** is displayed on the shooting screen during log recording (□3).
- Log recording automatically ends when the specified time elapses, and the log data is temporarily recorded on the camera. Save the log data to a memory card when log recording is complete (□143).
- Logs that are saved to a memory card can be displayed on a map or as a graph (□144, 145).

	Start log
	Log data for next 6 hrs
(ʏ)	Log data for next 12 hrs
	Log data for next 24 hrs
🥾	Log data for next 72 hrs

Using Location Data Functions/Displaying Maps
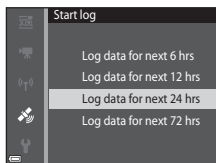
⚠ **Notes About Log Recording**

- If the date and time are not set, the log cannot be recorded.

- When recording all logs or a water depth log, correct the altitude or water depth using **Alt./depth correction** in **Altitude/depth options** ($\square$118) in the location data options menu before log recording starts.

- Use a fully charged battery to prevent the camera from turning off during log recording. When the battery power becomes exhausted, log recording ends. While the altitude log or water depth log is recorded, the battery is exhausted much faster. Exercise caution regarding the remaining battery level.

- Log data cannot be recorded while the camera is not positioning, even if log recording has already started.

- Even when the camera is turned off, log recording is continuously performed until the preset time has elapsed if there is still time remaining for log recording.

- Log recording ends due to the operations below even when there is time remaining for log recording.
  - The battery is removed
  - **Record location data** in **Location data options** is set to **Off** (except when **Start depth log** is used to start recording a depth log).
  - **Reset all** in the setup menu is performed
  - The setting of the internal clock (time zone or date and time) is changed
  - An option to end log recording is selected in **Create log** in the location data options menu ($\square$143)

- Log recording is paused during the operations below.
  - During continuous shooting
  - During movie recording
  - When connected with a USB cable or HDMI cable

  Log recording is resumed when the above operations are finished.

- The log data is temporarily stored in the camera. New logs cannot be recorded if the log data remains in the camera. After recording log data, save it on a memory card ($\square$143).

Ending Log Recording and Saving Logs on a Memory Card

Press the MENU button ➔ 🕹 (location data options) menu icon ➔ Create log ➔ 🆗 button

Recorded logs must to be saved to a memory card in order to display them on a map or as a graph.

1 When log recording is completed, select the log to end and press the 🆗 button.

- You can select the log to end recording before the specified time duration elapses.

Create log	
Start all logs	
End all logs	▶
Start location log	
End location log	
Start depth log	
End depth log	
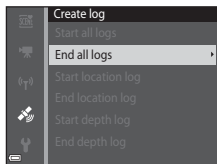
2 Select **Save logs**, and press the 🆗 button.

- The log data is saved to a memory card.

End all logs
Save logs
Erase logs
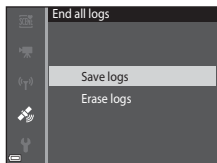
B Notes About Log Data

- No log data is saved if the camera is unable to calculate any location data between the time that log recording starts and ends.
- See "Log Data Saved on Memory Cards" (📖181) for more information.

C Erasing Log Data

- To erase the log data that is temporarily stored in the camera, select **Erase logs** in step 2.
- To erase the log data that is stored on the memory card, select **Location logs** (📖144) or **Altitude/depth logs** (📖145) in **View log**, and press the 🗑 button.

Displaying the Recorded Location Data on a Map

Press the MENU button ➔ ♒ (location data options) menu icon ➔ View log ➔ ⊛ button ➔ Location logs ➔ ⊛ button

- When you select a log (date) that you want to display and press the ⊛ button, the route of the recorded log is displayed on a map.
- Press the 🗑 button when the log list screen is displayed to delete the selected log or all saved location logs.
- The operations described below can be performed while a map is displayed.

Location log

Operation	Description	
Multi selector*	Move the map display (in eight directions).	
Zoom control*	• **T** (Q): Zoom in on the map display. • **W** (➜): Zoom out the map display.	
🗑 button	Delete the displayed log.	
⊛ button	A menu is displayed, and the options described below can be selected.	
	Location logs	Return to the log list screen.
	Save location	Use the multi selector to select a location, and press the ⊛ button to save the location (up to 30 locations). • Select **No** on the confirmation dialog to exit the registration screen.
	Center on saved location	Move directly to the saved location. • See "Map Operations of Saved Locations" (□139) for more information.

* Action control can be used (□20).

📝 Location Log Data

Log data is NMEA format-compliant. However, the log data is not guaranteed to display in all NMEA format-compliant software or cameras.

Display Altitude/depth Logs as a Graph

Press the MENU button ➔ ⌖ (location data options) menu icon ➔ View log ➔ ⓚ button ➔ Altitude/depth logs ➔ ⓚ button

- Select a log (date) that you want to display and press the ⓚ button to display the altitude or water depth data as a graph.
  - The horizontal axis of the graph shows the total time of log recording, and the vertical axis of the graph shows the total variations in altitude/depth during log recording.
  - If images were captured while the log was being recorded, they are displayed as thumbnails, and shooting points are displayed on a graph.

Shooting point

Selection area

Thumbnail display

- Press the 🗑 button when the log list screen is displayed to delete the selected log or all saved altitude/depth logs.
- The operations described below can be performed while a graph is displayed.

Operation	Description
MENU button	Return to the log list screen.
Multi selector	Use ◀▶ to move the yellow selection area. • The yellow selection area is displayed when the camera obtains more than 30 recorded logs.
Zoom control	Move toward **T** (Q) to zoom in on the area inside the selection area. • Use ◀▶ to move the displayed area. • Move toward **W** (▣) to return to the full graph display.
ⓚ button	Thumbnail images are selected, and operations described below can be performed.
	Multi selector	Use ◀▶ to switch the selected image. • The shooting point of the selected image changes to yellow on the graph.
	Zoom control	• **T** (Q): Display the selected image in full-frame playback mode. Use ◀▶ to display the previous or next image. • **W** (▣): Return to the graph display.
	ⓚ button	Return to the graph operation screen.

Using Location Data Functions/Displaying Maps

Using the Wi-Fi (Wireless LAN) Function

You can perform the following functions if you install the dedicated software "Wireless Mobile Utility" on your smart device that runs on Android OS or iOS, and connect it to the camera.

Take Photos

You can capture still images using the two methods described below.
- Release the shutter on the camera and save the captured images to a smart device.
- Use a smart device to remotely release the camera shutter and save images to the smart device.

View Photos

Images that are saved in the camera's memory card can be transferred and viewed on your smart device. You can also preselect the images in the camera that you want to transfer to your smart device.

B Notes

Security settings such as the password are not configured at the time of purchase. It is the user's responsibility to configure the appropriate security settings in **Options** in the Wi-Fi options menu (□78) if necessary.

Installing the Software on the Smart Device

1 Use your smart device to connect to the Google Play Store, App Store or other online apps marketplace and search for "Wireless Mobile Utility."
- Check the user's manual provided with your smart device for further details.

2 Check the description and other information and install the software.

C User's Manual for Wireless Mobile Utility

Download the user's manual from the website below.
- Android OS: http://nikonimglib.com/ManDL/WMAU/
- iOS: http://nikonimglib.com/ManDL/WMAU-ios/

To establish a connection with the camera, press the **(T)** (Wi-Fi) button on the camera, turn on the Wi-Fi function of the smart device, and then start the "Wireless Mobile Utility" on the smart device while "Negotiating... Please wait." is displayed on the camera.

Connecting the Smart Device to the Camera

1 Press the ᵗᵞ⁾ (Wi-Fi) button on the camera.
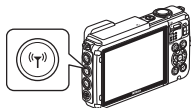
- The screen shown on the right is displayed.
- If no connection confirmation is received from the smart device within three minutes, **No access.** is displayed and the camera returns to the Wi-Fi options screen.
- You can also select **Connect to smart device** in the Wi-Fi options menu to display the screen shown on the right.

Connect to smart device
SSID:
XXXXXXXXXXXXXXXX
XXXXXX

Cancel

2 Set the Wi-Fi setting on the smart device to On.

- Check the user's manual provided with your smart device for further details.
- After the network names (SSIDs) that can be used for the smart device are displayed, select the SSID displayed on the camera.
- When **Auth./encryp.** in the Wi-Fi options menu is set to **WPA2-PSK-AES**, the message for entering a password is displayed. Enter the password that is displayed on the camera.

3 While "Negotiating... Please wait." is displayed on the camera, start the "Wireless Mobile Utility" installed on the smart device.

- The screen for selecting "Take photos" or "View photos" is displayed.
- When the message "Cannot connect to camera." is displayed, return to step 1 and retry the procedure.
- "Installing the Software on the Smart Device" (□146).

🖉 Touching an NFC-compatible Smart Device to the Camera for a Wi-Fi Connection

When you use an Android OS smart device that is compatible with near field communication (NFC) functions, you can establish a Wi-Fi connection and start the "Wireless Mobile Utility" by touching the NFC antenna of the smart device to the ⓝ (N-Mark) on the camera.

Using the Wi-Fi (Wireless LAN) Function

To Terminate the Wi-Fi Connection

Perform one of the operations described below.

- Turn off the camera.
- Select **Disable Wi-Fi** in the Wi-Fi options menu on the camera (except when the camera is operated by remote control).
- Set the Wi-Fi setting on the smart device to Off.

⚠ Notes About Wi-Fi Connection

- Wi-Fi connection operations are disabled in the following situations:
  - When the camera is connected to a TV, computer, or printer
  - While recording movies
  - While the camera is processing data such as saving images or recording movies
  - When the camera is connected to a smart device
- Select **Disable Wi-Fi** in areas where the use of radio waves is prohibited.
- When Wi-Fi is connected, **Auto off** is disabled.
- When Wi-Fi is connected, the battery drains faster than normal.
- Wi-Fi is disconnected in the following situations:
  - When the battery level is low
  - When movie recording starts in short movie show mode

🖉 Security Settings

If no security settings (encryption and password) are configured for the camera's Wi-Fi function, unauthorized third parties may access the network and cause harm. We strongly recommend performing the required security settings before using the Wi-Fi function.

Use **Options** in the Wi-Fi options menu (□108) to perform the security settings.

Preselecting Images in the Camera That You Want to Transfer to a Smart Device

You can preselect images in the camera that you want to transfer to a smart device. Movies cannot be preselected for transfer.

1 Select images to transfer.

You can preselect the images to transfer to a smart device in the following menus:

- **Mark for Wi-Fi upload** in the playback menu (□94)
- **Upload from camera** in the Wi-Fi options menu (□108)

When using **Upload from camera**, the SSID and password of the camera are displayed after images are selected.

2 Connect the camera and smart device (□147).

When you tap "View Photos" in the "Wireless Mobile Utility", the confirmation screen is displayed and the specified images are transferred to the smart device.

✔ Preselecting Images to Transfer During Playback

While the camera is in playback mode, press the ⟨T⟩ (Wi-Fi) button or use the NFC function to establish a Wi-Fi connection, and preselect the displayed images that you want to transfer.

- In full-frame playback mode, you can add one image at a time. When a key picture is selected, all images in that sequence are added.
- In thumbnail playback mode, you can add one image that is selected by the cursor.
- In calendar display mode, you can add all images that were captured on the selected date.

This operation is not available when you use **Connect to smart device** in the Wi-Fi options menu to establish the Wi-Fi connection.

Connecting the Camera to a TV, Printer, or Computer

You can enhance your enjoyment of images and movies by connecting the camera to a TV, printer, or computer.
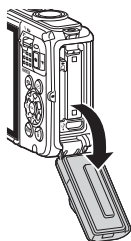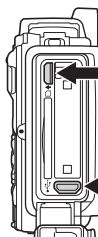
HDMI micro connector (Type D)

Micro-USB connector

Open the battery-chamber/ memory card slot cover (□6).

Insert the plug straight.
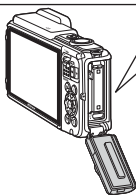
- Before connecting the camera to an external device, make sure the remaining battery level is sufficient and turn the camera off. Additionally, open the battery-chamber/memory card slot cover and make sure that no water droplets are inside. Wipe away any moisture with a soft dry cloth before connecting the camera to the device. Before disconnecting, make sure to turn the camera off.
- If the AC Adapter EH-62F (available separately) is used, this camera can be powered from an electrical outlet. Do not use any other make or model of AC adapter as it may cause the camera to heat up or malfunction.
- 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

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.

Printing images without using a computer

If you connect the camera to a PictBridge-compatible printer, you can print images without using a computer.
Connection method: Connect the camera directly to the printer's USB port with the USB cable.

Viewing and organizing images on a computer

You can transfer images to a computer to perform simple retouching and manage image data.
Connection method: Connect the camera to the computer's USB port with the USB cable.

- Before connecting to a computer, install ViewNX 2 on the computer (□157).
- If any USB devices that draw the power from the computer are connected, disconnect them from the computer before you connect the camera to it. 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.

Connecting the Camera to a TV (Playback on a TV)

1 Turn off the camera and connect it to the TV.

- Make sure that the plugs are properly oriented. Do not insert or remove the plugs at an angle when connecting or disconnecting them.

HDMI micro connector (Type D)

to HDMI jack
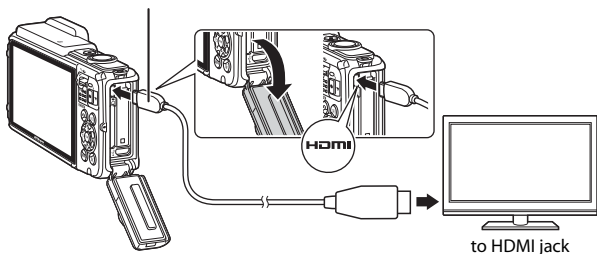
2 Set the TV's input to external input.

- See the documentation provided with your TV for details.

3 Hold down the ▶ (playback) button to turn on the camera.

- Images are displayed on the TV.
- The camera monitor does not turn on.
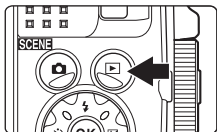
Connecting the Camera to a Printer (Direct Print)

Users of PictBridge-compatible printers can connect the camera directly to the printer and print images without using a computer.

Connecting the Camera to a Printer

1 Turn on the printer.

2 Turn off the camera and connect it to the printer using the USB cable.

- Make sure that the plugs are properly oriented. Do not insert or remove the plugs at an angle when connecting or disconnecting them.
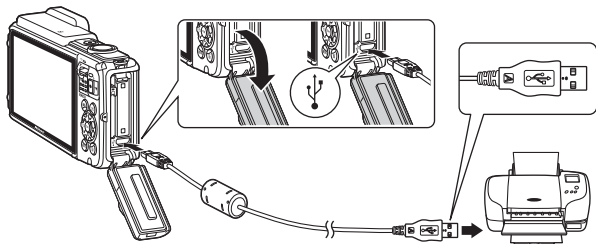
3 The camera is automatically turned on.

- The **PictBridge** startup screen (①) is displayed in the camera monitor, followed by the **Print selection** screen (②).

①

PictBridge

②

Print selection
15/11/2015 No. 32 [32]
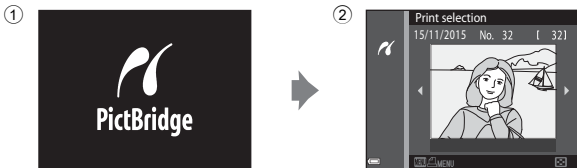
B **If the PictBridge Startup Screen Is Not Displayed**

When **Auto** is selected for **Charge by computer** (□130), it may be impossible to print images with direct connection of the camera to some printers. If the PictBridge startup screen is not displayed after the camera is turned on, turn the camera off and disconnect the USB cable. Set **Charge by computer** to **Off** and reconnect the camera to the printer.

Printing Images One at a Time

1 Use the multi selector ◂▸ to select the desired image and press the ℗ button.

- Move the zoom control toward **W** (☒) to switch to thumbnail playback or **T** (Q) to switch to full-frame playback.

Print selection
15/11/2015   No. 32   [32]
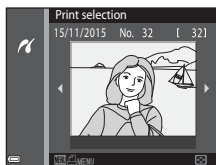
2 Use ▲▼ to select **Copies** and press the ℗ button.

- Use ▲▼ to set the desired number of copies (up to nine) and press the ℗ button.
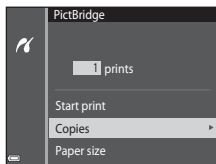
PictBridge

1 prints

Start print
Copies
Paper size

3 Select **Paper size** and press the ℗ button.

- Select the desired paper size and press the ℗ button.
- To print with the paper size setting configured on the printer, select **Default**.
- The paper size options available on the camera vary depending on the printer that you use.

PictBridge

4 prints

Start print
Copies
Paper size
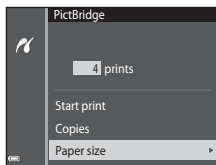
4 Select **Start print** and press the ℗ button.

- Printing starts.

PictBridge

4 prints

Start print
Copies
Paper size
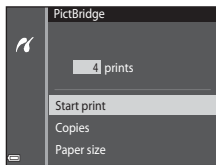
Printing Multiple Images

1 When the **Print selection** screen is displayed, press the MENU (menu) button.
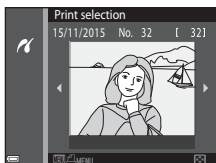
2 Use the multi selector ▲▼ to select **Paper size** and press the � button.

- Select the desired paper size and press the ⓚ button.
- To print with the paper size setting configured on the printer, select **Default**.
- The paper size options available on the camera vary depending on the printer that you use.
- To exit the print menu, press the MENU button.
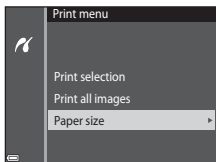
3 Select **Print selection**, or **Print all images**, and press the ⓚ button.
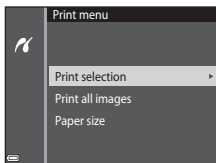
Print selection

Select images (up to 99) and the number of copies (up to 9) of each.

- Use the multi selector ◀▶ to select images, and use ▲▼ to specify the number of copies to be printed.
- Images selected for printing are indicated by 凸 and the number of copies to be printed. To cancel the print selection, set the number of copies to 0.

- Move the zoom control toward **T** (**Q**) to switch to full-frame playback or **W** (▣) to switch to thumbnail playback.
- Press the 🆗 button when setting is complete. When the screen for confirming the number of print copies is displayed, select **Start print** and press the 🆗 button to start printing.

Print all images

One copy each of all images saved in the internal memory, or on the memory card, is printed.

- When the screen for confirming the number of print copies is displayed, select **Start print** and press the 🆗 button to start printing.

Using ViewNX 2 (Transferring Images to a Computer)

Installing ViewNX 2

ViewNX 2 is free software that enables you to transfer images and movies to your computer so that you can view, edit, or share them. To install ViewNX 2, download the ViewNX 2 installer from the website below and follow the on-screen installation instructions.

http://nikonimglib.com/nvnx/

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.

  To transfer images that are saved in the camera's internal memory, remove the memory card from the camera before connecting it to the computer.
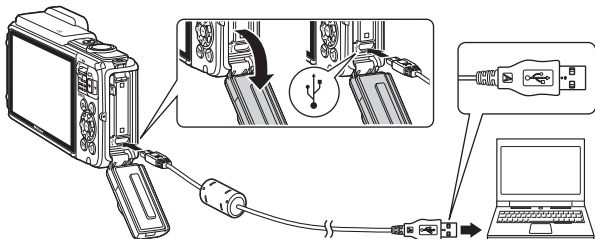
If a message is displayed prompting you to choose a program, select Nikon Transfer 2.

- **When using Windows 7**

  If the dialog shown at right is displayed, follow the steps below to select Nikon Transfer 2.

  1 Under **Import pictures and videos**, click **Change program**. A program selection dialog will be displayed; select **Import File using Nikon Transfer 2** and click **OK**.

  2 Double-click **Import File**.

If the memory card contains a large number of images, it may take a while for Nikon Transfer 2 to start. Wait until Nikon Transfer 2 starts.

M Notes About Connecting the USB Cable

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

2 After Nikon Transfer 2 starts, click **Start Transfer**.
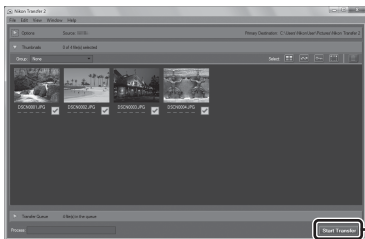
Start Transfer

- Image transfer begins. When image transfer is complete, ViewNX 2 starts and the transferred images are displayed.
- Consult online help for more information on using ViewNX 2.

3 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.

Technical Notes

Caring for the Product

Observe the precautions described below in addition to the warnings in "For Your Safety" ($\Box$vi–viii) and "<Important> Shockproof, Waterproof, Dustproof, Condensation" ($\Box$ix) when using or storing the device.

The Camera

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.

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 product memory or internal circuitry.

Notes About the Monitor

- Monitors and 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.

- Due to the general characteristics of OLED monitors, prolonged or repeated display of the same screen or image may result in screen burn. Screen burn can be recognized by decreased brightness in portions of the monitor or mottled display. In some cases, screen burn may become permanent. However, images are in no way affected by screen burn.
  To prevent screen burn, do not set monitor brightness higher than necessary and do not display the same screen or image for an extended period of time.

- 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.

The Battery

Precautions for Use

- Note that the battery may become hot after use.

- Do not use the battery at ambient temperatures below -10℃ (-14℉) or above 40℃ (104℉) 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℃ to 35℃ (41℉ to 95℉) 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℃ (32℉) or above 45℃ (113℉).

- 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 Charging AC Adapter EH-71P/EH-71PCH/EH-73P/EH-73PCH 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 Charging AC Adapter EH-71P/EH-71PCH/EH-73P/EH-73PCH, and do not use a commercially available USB-AC adapter or a battery charger for a mobile phone. Failure to observe this precaution could result in overheating or in damage to the camera.
- The EH-71P/EH-71PCH/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 Secure Digital memory cards. See "Approved Memory Cards" (□197) for recommended memory cards.
- 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**. The confirmation dialog will be displayed. To start formatting, press the ℗ button.
- 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

Do not use alcohol, thinner, or other volatile chemicals.

Lens	Avoid touching glass parts with your fingers. Remove dust or lint with a blower (typically a small device with a rubber bulb attached to one end that is pumped to produce a stream of air out the other end). To remove fingerprints or other stains that cannot be removed with a blower, wipe the lens with a soft cloth, using a spiral motion that starts at the center of the lens and working toward the edges. If this fails, clean the lens using a cloth lightly dampened with commercial lens cleaner.
Monitor	Remove dust or lint with a blower. To remove fingerprints and other stains, clean the monitor with a soft, dry cloth, being careful not to apply pressure.
Body	• Use a blower to remove dust, dirt, or sand, then wipe gently with a soft, dry cloth. • 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. • See "Notes About Waterproof and Dustproof Performances" (Aix) and "Cleaning after Using the Camera Underwater" (Axii) for more information. Note that foreign matter inside the camera could cause damage not covered by the warranty.

Storage

Remove the battery if the camera will not be used for an extended period. To prevent mold or mildew, take the camera out of storage at least once a month. Turn the camera on and release the shutter a few times before putting the camera away again. Do not store the camera in any of the following locations:

- Places that are poorly ventilated or subject to humidity of over 60%
- Exposed to temperatures above 50°C (122°F) or below –10°C (14°F)
- Next to equipment that produces strong electromagnetic fields, such as televisions or radios

For storing the battery, follow the precautions in "The Battery" (A161) in "Caring for the Product" (A160).

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.	–
Memory card is write protected.	The write-protect switch is in the "lock" position. Slide the write-protect switch to the "write" position.	–
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.	6, 197
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 **Yes** and press the 🞘 button to format the memory card.	163
Out of memory.	Delete images or insert a new memory card.	6, 16
Image cannot be saved.	An error occurred while saving the image. Insert a new memory card or format the memory card or internal memory.	129
	The camera has run out of file numbers. Insert a new memory card or format the memory card or internal memory.	129
	There is insufficient space to save the copy. Delete images from the destination.	16

Display	Cause/Solution	◻
Save previously recorded data as a time-lapse movie?	The camera turned off while recording a time-lapse movie. • Select **Yes** to create a time-lapse movie with the previously captured images. • Select **No** to delete the incomplete data.	–
Image cannot be modified.	Check that the images can be edited.	64, 175
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.	72, 197
Memory contains no images.	There are no images in the internal memory or on the memory card. • Remove the memory card to play back images in the internal memory. • To copy the images saved in the camera's internal memory to the memory card, press the **MENU** button to select **Copy** in the playback menu.	7 97
File contains no image data. This file cannot be played back.	The file was not created or edited with this camera. The file cannot be viewed on this camera. View the file using a computer or the device used to create or edit this file.	–
All images are hidden.	There are no images available for a slide show, etc.	95
This image cannot be deleted.	The image is protected. Disable protection.	96
Failed to set clock from satellite.	The camera clock was not set correctly. Change the location or time and determine the location again.	–
No A-GPS file found on card.	An A-GPS file that can be updated is not found on the memory card. Check the following items: • Whether the memory card is inserted • Whether the A-GPS file is stored on the memory card • Whether the A-GPS file saved on the memory card is more recent than the A-GPS file saved in the camera • Whether the A-GPS file is still valid	–

Display	Cause/Solution	◻
Update failed.	The A-GPS file is unable to be updated. The A-GPS file may be corrupted. Download the file from the website once more.	110
Unable to determine current position.	The camera is unable to determine the current position when distance is calculated. Change the location or time and determine the location again.	–
Cannot save to card.	A memory card is not inserted. Insert a memory card.	6
	No log data was recorded.	143
	The maximum number of log data events that can be saved per day has been exceeded. • Location logs: Up to 36 log data events per day • Altitude and water depth logs: Up to 34 log data events each per day	181
	The maximum number of log data events that can be saved in one memory card has been exceeded. • Location logs: Up to 100 log data events • Altitude log and water depth log: Combined total of up to 100 log data events Replace the memory card with a new one or delete log data that is no longer required from a memory card.	143, 181
Unable to correct compass.	The camera is unable to calibrate the electronic compass. Swing the camera to draw a figure eight in the air outdoors while turning your wrist to face the camera forward and backward, side to side, or up and down.	116

Display	Cause/Solution	◻
No access.	The camera could not receive the signal from the smart device. Establish the wireless connection again. • Press the **(ᴛ)** (Wi-Fi) button. • Touch an NFC-compatible smart device to the camera. • Select **Connect to smart device** in the Wi-Fi options menu.	108, 147
Could not connect.	The camera failed to establish the connection while receiving the signals from the smart device. Set a different channel in **Channel** under **Options** in the Wi-Fi options menu, and establish the wireless connection again.	108, 147
Wi-Fi connection terminated.	The Wi-Fi 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 TV, computer, and printer from the camera, and establish the wireless connection again.	108, 147
Lens error. Try again after turning the camera off and on.	If the error persists, contact your retailer or Nikon-authorized service representative.	170
Communications error	An error occurred while communicating with the printer. Turn the camera off and reconnect the USB cable.	153
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.	170

Display	Cause/Solution	🕮
Printer error: check printer status.	After solving the problem, select **Resume** and press the 🆗 button to resume printing.*	–
Printer error: check paper.	Load the specified size of paper, select **Resume**, and press the 🆗 button to resume printing.*	–
Printer error: paper jam.	Remove the jammed paper, select **Resume**, and press the 🆗 button to resume printing.*	–
Printer error: out of paper.	Load the specified size of paper, select **Resume**, and press the 🆗 button to resume printing.*	–
Printer error: check ink.	There is a problem with the printer's ink. Check the ink, select **Resume**, and press the 🆗 button to resume printing.*	–
Printer error: out of ink.	Replace the ink cartridge, select **Resume**, and press the 🆗 button to resume printing.*	–
Printer error: file corrupt.	There is a problem with the image file to be printed. Select **Cancel** and press the 🆗 button to cancel printing.	–

* See the documentation provided with your printer for further guidance and information.

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. • The power switch is enabled a few seconds after the battery is inserted. Wait a few seconds before pressing the power switch.	6, 8, 162 –
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. • 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.	13 161 –
The monitor is blank.	• The camera is off. • The camera automatically turns off to save power (auto off function). • The flash lamp flashes while the flash is charging. Wait until charging is complete. • 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.	10 13 – – –
The camera becomes hot.	The camera may become hot when used for an extended period of time to shoot movies or when used in a hot environment; this is not a malfunction.	–

| Problem	Cause/Solution	$\square$
The battery inserted in the camera cannot be charged.	• Confirm all connections.	8
	• 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 the setup menu.	78, 130
	- Battery charging stops if the camera is turned off.	–
	- 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.	10, 11
	- Battery charging may stop when the computer enters sleep mode.	–
	- Depending on the computer specifications, settings, and status, battery charging may not be possible.	–
The monitor is hard to read.	• Adjust the monitor brightness.	121
	• The monitor is dirty. Clean the monitor.	164
⊕ flashes on the screen.	• 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 "01/01/2015 00:00" respectively. Set the correct time and date for **Time zone and date** in the setup menu.	4, 119
Date and time of recording are not correct.	• 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.	
No indicators displayed in monitor.	**Hide info** is selected for **Photo info** in **Monitor settings** in the setup menu.	121
Date stamp not available.	**Time zone and date** has not been set in the setup menu.	119
Date not stamped on images even when **Date stamp** is enabled.	• The current shooting mode does not support **Date stamp**.	123
	• The date cannot be stamped on movies.	

Problem	Cause/Solution	$\square$
Screen for setting time zone and date is displayed when the camera is turned on.	The clock battery is exhausted; all settings were restored to their default values.	10, 11
The camera settings reset.		
The camera makes sound.	When **Autofocus mode** is set to **Full-time AF** or while in some shooting modes, the camera may produce an audible focusing sound.	18, 91, 105

Shooting Issues

Problem	Cause/Solution	$\square$
Cannot switch to shooting mode.	Disconnect the HDMI cable or USB cable.	150
Cannot take pictures or record movies.	• When the camera is in playback mode, press the ■ button, Shutter-release button, or ● (🎥) button.	1, 15
	• When menus are displayed, press the **MENU** button.	78
	• The flash is charging while the flash lamp is flashing.	44
	• The battery is exhausted.	6, 8, 162
The camera cannot focus.	• The subject is too close. Try shooting using scene auto selector mode, **Close-up** scene mode, or macro mode.	18, 19, 21, 25, 47
	• The subject is hard to focus on.	54
	• Set **AF assist** in the setup menu to **Auto**.	125
	• Turn the camera off and then on again.	–
Images are blurred.	• Use the flash.	44
	• Increase the ISO sensitivity value.	87
	• Enable **Photo VR** when shooting still images. Enable **Movie VR** when recording movies.	106, 124
	• Use a tripod to stabilize the camera (using the self-timer at the same time is more effective).	46

Problem	Cause/Solution	$\square$
Bright specks appear in images captured with flash.	The flash is reflecting off particles in the air. Set the flash mode setting to $\textcircled{\$}$ (off).	44
Flash does not fire.	• The flash mode is set to $\textcircled{\$}$ (off). • A scene mode that restricts the flash is selected. • A function that restricts the flash is enabled.	44 49 56
Digital zoom cannot be used.	• **Digital zoom** is set to **Off** in the setup menu. • Digital zoom cannot be used with certain shooting modes or when using certain settings in other functions.	125 58, 125
Image mode not available.	A function that restricts **Image mode** is enabled.	56
No sound when the shutter is released.	**Off** is selected for **Shutter sound** in **Sound settings** in the setup menu. No sound is produced with some shooting modes and settings, even when **On** is selected.	126
AF-assist illuminator does not light.	**Off** is selected for **AF assist** in the setup menu. AF-assist illuminator may not light depending on the position of the focus area or shooting mode, even when **Auto** is selected.	125
Images appear smeared.	The lens is dirty. Clean the lens.	164
Colors are unnatural.	White balance or hue is not adjusted properly.	25, 43, 82
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. Noise can be reduced by: • Using the flash • Specifying a lower ISO sensitivity setting	 44 87
Images are too dark (underexposed).	• The flash mode is set to $\textcircled{\$}$ (off). • The flash window is blocked. • The subject is beyond the range of the flash. • Adjust exposure compensation. • Increase ISO sensitivity. • The subject is backlit. Select **Backlighting** scene mode or set the flash mode setting to $\maltese$ (fill flash).	44 12 193 48 87 26, 44

Technical Notes

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Problem	Cause/Solution	$\square$
Images are too bright (overexposed).	Adjust exposure compensation.	48
Unexpected results when flash set to $\sharp\circledast$ (auto with red-eye reduction).	Use any scene mode other than **Night portrait**, and change the flash mode to any setting other than $\sharp\circledast$ (auto with red-eye reduction) and try taking the picture again.	44, 49
Skin tones are not softened.	• In some shooting conditions, facial skin tones may not be softened. • For images containing four or more faces, try using the **Skin softening** effect in **Glamour retouch** in the playback menu.	52 67

Saving images takes time.	It may take more time to save images in the following situations:
	• When the noise reduction function is in operation, such as when shooting in a dark environment
	• When the flash mode is set to $\sharp\circledast$ (auto with red-eye reduction)
	• When taking images in the following scene modes:
	  - **Hand-held** in **Night portrait**
	  - **Hand-held** in **Night landscape**
	  - **HDR** set to **ON** in **Backlighting**
	  - **Easy panorama**
	• When the skin softening function is applied while shooting
	• When using continuous shooting mode
		–
		
		45
		
		24
		25
		26
		30
		52
		84

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	𝕮
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 zoom in on image.	• Playback zoom cannot be used with movies. • When zooming in on a small-sized image, the zoom ratio shown on the screen may differ from the actual zoom ratio of the image. • This camera may not be able to zoom in on images captured with another make or model of digital camera.	–
Cannot edit images.	• Some images cannot be edited. Images that have already been edited may not be edited again. • There is not enough free space on the memory card or in the internal memory. • This camera is unable to edit images captured with other cameras. • Editing functions used for images are not available for movies.	32, 64 – – –
Cannot rotate image.	• This camera cannot rotate images captured with another make or model of digital camera. • Images edited using **Data imprint** cannot be rotated.	– 68
Images are not displayed on TV.	• A computer or printer is connected to the camera. • The memory card contains no images. • Remove the memory card to play back images in the internal memory.	– – 7

Problem	Cause/Solution	🛄
Nikon Transfer 2 does not start when the camera is connected to a computer.	• The camera is off. • The battery is exhausted. • The USB cable is not correctly connected. • The camera is not recognized by the computer. • The computer is not set to start Nikon Transfer 2 automatically. For more information about Nikon Transfer 2, refer to help information contained in ViewNX 2.	– 130, 150 150, 157 – –
The PictBridge startup screen is not displayed when the camera is connected to a printer.	With some PictBridge-compatible printers, the PictBridge startup screen may not be displayed and it may be impossible to print images when **Auto** is selected for **Charge by computer** in the setup menu. Set **Charge by computer** to **Off** and reconnect the camera to the printer.	78, 130
Images to be printed are not displayed.	• The memory card contains no images. • Remove the memory card to print images in the internal memory.	– 7
Cannot select paper size with the camera.	The camera cannot be used to select the paper size in the following situations, even when printing from a PictBridge-compatible printer. Use the printer to select the paper size. • The printer does not support the paper sizes specified by the camera. • The printer automatically selects the paper size.	–

Location Data Functions

Problem	Cause/Solution	☐
Unable to identify the location or it takes time to identify the location.	• The camera may not be able to identify the location in some shooting environments. To use the location data functions, use the camera as much as possible in an open-air area. • When positioning for the first time or when positioning was unable to be performed for about two hours, it takes a few minutes to calculate the location data.	134
Unable to record location data on shot images.	When 🔏 or 📶 is displayed on the shooting screen, the location data is not recorded. Before shooting images, check the location data reception.	132
Difference between the actual shooting location and recorded location data.	The acquired location data may deviate in some shooting environments. When there is a significant difference in the signals from the positioning satellites, there could be a deviation of up to several hundred meters.	134
The recorded location name is different from the intended one or is not displayed.	The desired landmark name may not be registered, or a different landmark name may be registered.	–
Unable to update the A-GPS file.	• Check the following items: 　- Whether the memory card is inserted 　- Whether the A-GPS file is stored on the memory card 　- Whether the A-GPS file saved on the memory card is more recent than the A-GPS file saved in the camera 　- Whether the A-GPS file is still valid • The A-GPS file may be corrupted. Download the file from the website once more.	– 110
Unable to display the map.	Maps cannot be displayed while the camera is being charged with the charging AC adapter, even if the 🌐 (map) button is pressed.	–

Problem	Cause/Solution	⌸
Unable to turn off the altimeter or depth gauge.	When **Altimeter/depth gauge** of **Altitude/depth options** in the location data options menu is set to **On**, the altimeter or depth gauge is always displayed regardless of **Monitor settings** in the setup menu. To turn off the altimeter or depth gauge, set the **Altimeter/depth gauge** to **Off**.	118
The altitude/water depth and atmospheric pressure icons remain displayed on the shooting screen.	Set **Photo info** of **Monitor settings** in the setup menu to **Hide info**.	121
Unable to display the altimeter or depth gauge even when **Altimeter/depth gauge** is set to **On**.	Even when **Altimeter/depth gauge** is set to **On**, the altimeter or depth gauge is not displayed in the following situations: • When the shutter-release button is pressed halfway • During shooting in the **Easy panorama** scene mode • During movie recording • When a subject is registered using **Subject tracking** of **AF area mode** • When a message is being displayed	– 30 71 88 –
Water depth shows 0 m	The water depth will be displayed as 0 m if the camera is not submerged underwater when the **Underwater** scene mode is selected.	27
Unable to select **Use location data** of **Alt./depth correction** in the location data options menu.	• **Record location data** in the location data options menu is set to **Off**. • You cannot select this function unless signals are received from four or more satellites and positioning has been performed. • The camera is submerged underwater. You cannot select this function during underwater shooting.	110 132 –
Unable to select **Create log** in the location data options menu.	• The camera clock has not been set. Set date and time. • **Record location data** in the location data options menu is set to **Off**.	119 110

Problem	Cause/Solution	⬚
Unable to select **Start all logs** or **Start location log**.	The camera is recording log data. To record a new log, select **End all logs** or **End location log**, and end the log currently being recorded.	114, 143
Unable to save log data.	• Make sure that a memory card is inserted in the camera. • Up to 36 log data events for location data logs can be recorded per day whereas up to 34 log data events each for altitude logs and water depth logs can be recorded per day. • The total number of log data events that can be saved on a single memory card is 200, which includes up to 100 log data events for location data logs and up to 100 log data events for a combined total of altitude logs and water depth logs. Delete log data that is no longer required from a memory card or replace the memory card with a new one.	6, 143, 181
Unable to select **Set clock from satellite** in the location data options menu.	**Record location data** in the location data options menu is set to **Off**.	110

File Names

Images or movies are assigned file names as follows.

File name: <u>DSCN</u> <u>0001</u> <u>.JPG</u>

$\qquad\quad$ (1) $\quad$ (2) $\quad$ (3)

(1) Identifier	Not shown on the screen of the camera. • DSCN: Original still images, movies • SSCN: Small picture copies • RSCN: Cropped copies • FSCN: Images created by an image editing function other than crop and small picture, movies created by the movie editing function
(2) File number	Assigned in ascending order, starting with "0001" and ending with "9999."
(3) Extension	Indicates file format. • .JPG: Still images • .MOV: Movies

C **Log Data Saved on Memory Cards**

The log data is saved in the "NCFL" folder.
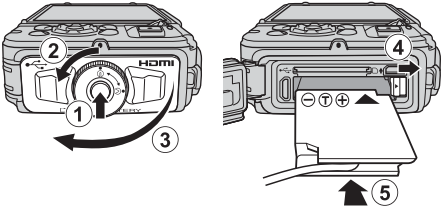
File name : N151115 0 .log
<u>   (1)   </u>   (2) (3)

(1) Date	Date (last two digits of the year, and the month and day in YYMMDD format) on which the log recording was started is assigned automatically.
(2) Identification number	To manage log data events that are recorded on the same date, ID numbers are assigned automatically in an ascending order, starting from "0", in the order in which they are recorded. • Location data logs: A total of 36 alphanumeric characters consisting of the numbers 0 to 9 or the letters A to Z. • Altitude/water depth logs: A total of 34 alphanumeric characters consisting of the numbers 0 to 9 or the letters A to Z except I and O.
(3) Extension	Signifies the file type
	.log	Location data logs
	.lga	Altitude logs
	.lgb	Water depth logs

• Location data logs: Up to 36 files can be recorded a day and up to 100 files can be recorded on a memory card.
• Altitude/water depth logs: Up to 34 files can be recorded each per day and a combined total of 100 files can be recorded on a memory card.

Optional Accessories

Battery charger	**Battery Charger MH-65** It takes about 2 hours and 30 minutes to charge a fully exhausted battery.
AC adapter	**AC Adapter EH-62F** (connect as shown) Make sure that the power connector cable is fully inserted in the power connector slot before inserting the AC adapter into the battery chamber. • 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.
Underwater speedlight	**SB-N10 Underwater Speedlight** To attach it to the COOLPIX AW130, you need an SR-CP10A underwater fiber-optic cable adapter (available separately), an SC-N10A underwater fiber-optic cable (available separately), and an SK-N10A underwater bracket (available separately). See $\square$183 for attachment instructions.

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

Attaching the Underwater Speedlight

You can use an SB-N10 underwater speedlight attached to the COOLPIX AW130 to shoot underwater with flash. Set **Underwater flash** (□126) in the setup menu to **On** when shooting.
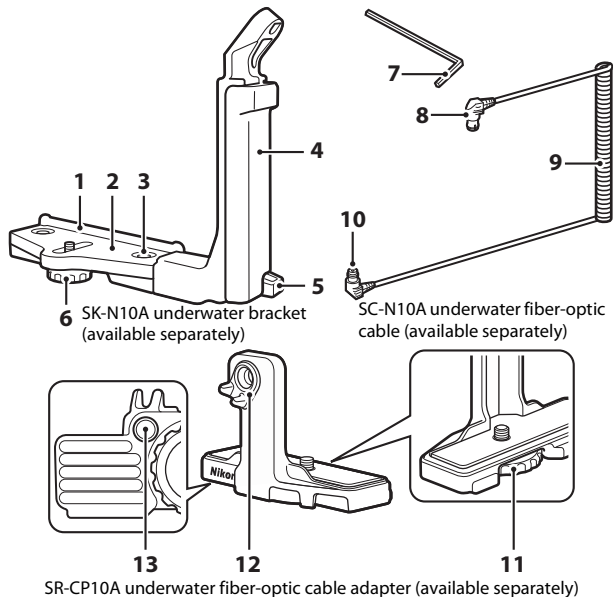
SK-N10A underwater bracket (available separately)

SC-N10A underwater fiber-optic cable (available separately)

SR-CP10A underwater fiber-optic cable adapter (available separately)

1	Mounting guide	**8**	Connector (connects to SB-N10)
2	Stay	**9**	Cable
3	Grip lock screw	**10**	Connector (connects to SR-CP10A)
4	Grip	**11**	Camera lock screw
5	Strap hook	**12**	Fiber-optic connector
6	Case/adapter lock screw	**13**	Adapter lock screw socket
7	M4 hex key		

Make sure to turn off the camera and underwater speedlight before attaching.

1 Attach the camera to the underwater fiber-optic cable adapter.

- Align the camera lock screw of the cable adapter with the tripod socket of the camera, and securely tighten the screw.

M Notes

Make sure to properly thread the camera lock screw of the adapter in the tripod socket of the camera, and do not apply excessive force when tightening. Otherwise, you may damage the tripod socket.
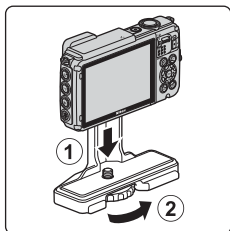
2 Attach the underwater speedlight to the grip of the underwater bracket.

- Securely tighten the mounting bolt of the underwater speedlight.
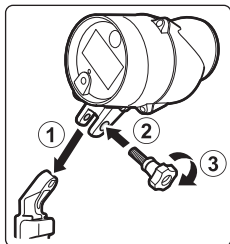
3 With the camera secured, attach the cable adapter to the underwater bracket.

- Align the case/adapter lock screw of the bracket with the cable adapter lock screw socket, and tighten the screw lightly so that the adapter and bracket can move.
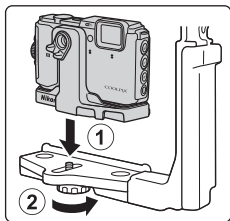
4 Attach the underwater fiber-optic cable to the cable adapter.

- Connect the end of the cable with the longer straight section (the end that connects to SR-CP10A) to the cable adapter's fiber-optic connector.
- After connecting, pass the cable through the adapter's two cable holders.
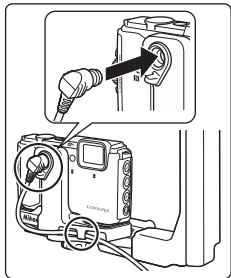
5 Slide the cable adapter that is attached to the camera and cable until it contacts the stay mounting guide.

- Make sure that the cable does not come loose from the cable holders.
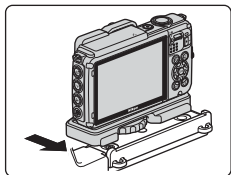
6 Fully tighten the case/adapter lock screw of the bracket to secure the cable adapter.
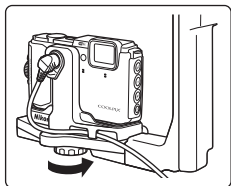
7 Pass the underwater fiber-optic cable through the grip of the bracket, from bottom to top.
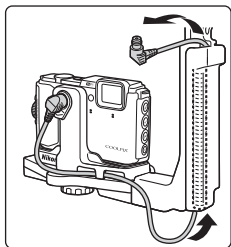
8 Open the sensor cover of the underwater speedlight.
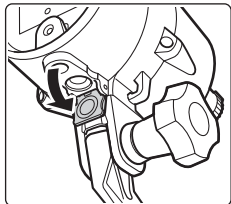
9 Connect one end of the cable (the end that connects to SB-N10) to the underwater speedlight's fiber-optic connector.
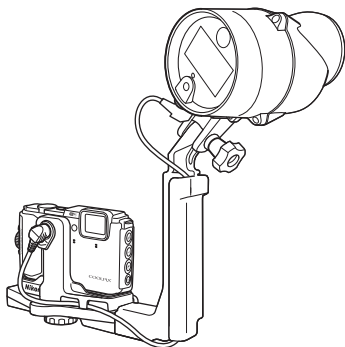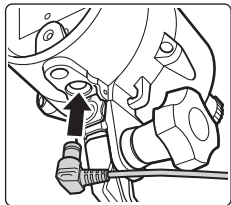
- To detach the underwater speedlight or camera from the underwater bracket, perform the above procedure in reverse.

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Technical Notes

Specifications

Nikon COOLPIX AW130 Digital Camera

Type	Compact digital camera
Number of effective pixels	16.0 million (Image processing may reduce the number of effective pixels.)
Image sensor	^{1}/2.3-in. type CMOS; approx. 16.76 million total pixels
Lens	NIKKOR lens with 5× optical zoom
Focal length	4.3–21.5 mm (angle of view equivalent to that of 24–120 mm lens in 35mm [135] format)
f/-number	f/2.8–4.9
Construction	12 elements in 10 groups (2 ED lens elements)
Digital zoom magnification	Up to 4× (angle of view equivalent to that of approx. 480 mm lens in 35mm [135] format)
Vibration reduction	Lens shift and electronic VR
Autofocus (AF)	Contrast-detect AF
Focus range	• [W]: Approx. 50 cm (1 ft 8 in.)–∞, [T]: Approx. 50 cm (1 ft 8 in.)–∞ • Macro mode: Approx. 1 cm (0.4 in.)–∞ (wide-angle position) (All distances measured from center of front surface of lens)
Focus-area selection	Face priority, manual with 99 focus areas, center, subject tracking, target finding AF
Monitor	7.5 cm (3-in.), approx. 921k-dot, wide viewing angle OLED monitor with anti-reflection coating, and 5-level brightness adjustment
Frame coverage (shooting mode)	Approx. 98% horizontal and vertical (compared to actual picture)
Frame coverage (playback mode)	Approx. 100% horizontal and vertical (compared to actual picture)

Storage		
	Media	Internal memory (approx. 473 MB), SD/SDHC/SDXC memory card
	File system	DCF and Exif 2.3 compliant
	File formats	Still images: JPEG Movies: MOV (Video: H.264/MPEG-4 AVC, Audio: LPCM stereo)
Image size (pixels)		• 16M (High) [4608 × 3456★] • 16M [4608 × 3456] • 8M [3264 × 2448] • 4M [2272 × 1704] • 2M [1600 × 1200] • VGA [640 × 480] • 16:9 (12M) [4608 × 2592] • 1:1 [3456 × 3456]
ISO sensitivity (Standard output sensitivity)		• ISO 125–1600 • ISO 3200, 6400 (available when using Auto mode)
Exposure		
	Metering mode	Matrix, center-weighted (digital zoom less than 2×), spot (digital zoom 2× or more)
	Exposure control	Programmed auto exposure and exposure compensation (–2.0 – +2.0 EV in steps of $^1/_3$ EV)
Shutter		Mechanical and CMOS electronic shutter
	Speed	• $^1/_{1500}$–1 s • $^1/_{4000}$ s (maximum speed during high-speed continuous shooting) • 4 s (**Fireworks show** scene mode)
Aperture		Electronically-controlled preset aperture (–1 AV) and ND filter (–2 AV) selections
	Range	3 steps (f/2.8, f/4.1, f/8.2 [W])
Self-timer		Can be selected from 10 s and 2 s
Flash		
	Range (approx.) (ISO sensitivity: Auto)	[W]: 0.5–5.2 m (1 ft 8 in.–17 ft) [T]: 0.5–4.5 m (1 ft 8 in.–14 ft)
	Flash control	TTL auto flash with monitor preflashes

Interface		
	USB connector	Micro-USB connector (do not use any USB cable other than the UC-E21, Hi-Speed USB • Supports Direct Print (PictBridge)
	HDMI output connector	HDMI micro connector (Type D)
Wi-Fi (Wireless LAN)		
	Standards	IEEE 802.11b/g/n (standard wireless LAN protocol)
	Range (line of sight)	Approx. 10 m (10 yd)
	Operating frequency	2412–2462 MHz (1-11 channels)
	Data rates (actual measured values)	IEEE 802.11b: 5 Mbps IEEE 802.11g: 17 Mbps IEEE 802.11n: 17 Mbps
	Security	OPEN/WPA2
	Access protocols	Infrastructure
Electronic compass		16 cardinal points (position correction using 3-axis acceleration sensor, automatic correction for the deviated angle, and automatic offset adjustment)
Location data		• **GPS** Receiving frequency: 1575.42 MHz Geodetic system: WGS 84 • **GLONASS** Receiving frequency: 1598.0625 - 1605.3750 MHz Geodetic system: WGS 84
Barometer		Display range: Approx. 500 - 4600 hPa
Altimeter		Display range: Approx. −300 - +4500 m (−984 - +14,760 ft)
Depth gauge		Display range: Approx. 0 - 35 m (0 - 114 ft)
Supported languages		Arabic, Bengali, Bulgarian, Chinese (Simplified and Traditional), Czech, Danish, Dutch, English, Finnish, French, German, Greek, Hindi, Hungarian, Indonesian, Italian, Japanese, Korean, Marathi, Norwegian, Persian, Polish, Portuguese (European and Brazilian), Romanian, Russian, Serbian, Spanish, Swedish, Tamil, Telugu, Thai, Turkish, Ukrainian, Vietnamese
Power sources		One Rechargeable Li-ion Battery EN-EL12 (included) AC Adapter EH-62F (available separately)
Charging time		Approx. 2 h 20 min (when using Charging AC Adapter EH-71P/EH-71PCH/EH-73P/EH-73PCH and when no charge remains)

Battery life[1]	
Still images	Approx. 370 shots when using EN-EL12
Movies (actual battery life for recording)[2]	Approx. 1 h 10 min (1080/30p) when using EN-EL12 Approx. 1 h 20 min (1080/25p) when using EN-EL12
Tripod socket	1/4 (ISO 1222)
Dimensions (W × H × D)	Approx. 110.4 × 66.0 × 26.8 mm (4.4 × 2.6 × 1.1 in.) (excluding projections)
Weight	Approx. 221 g (7.8 oz) (including 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	JIS/IEC protection class 8 (IPX8) equivalent (under our testing conditions) Capacity to shoot images underwater up to a depth of 30 m (100 ft) and for 60 minutes
Dustproof	JIS/IEC protection class 6 (IP6X) equivalent (under our testing conditions)
Shockproof	Cleared our testing conditions[3] compliant with MIL-STD 810F Method 516.5-Shock

- Unless otherwise stated, all figures assume a fully-charged battery and an ambient temperature of 23 ±3°C (73.4 ±5.4°F) as specified by the Camera and Imaging Products Association (CIPA).
[1] Battery life may vary depending on conditions of use, such as the interval between shots or the length of time that menus and images are displayed.
[2] Individual movie files cannot exceed 4 GB in size or 29 minutes in length. Recording may end before this limit is reached if camera temperature becomes elevated.
[3] Dropped from a height of 210 cm (7 ft) 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.

Rechargeable Li-ion Battery EN-EL12

Type	Rechargeable lithium-ion battery
Rated capacity	DC 3.7 V, 1050 mAh
Operating temperature	0℃–40℃ (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)

Charging AC Adapter EH-71P/EH-71PCH

Rated input	AC 100–240 V, 50/60 Hz, MAX 0.2 A
Rated output	DC 5.0 V, 1.0 A
Operating temperature	0℃–40℃ (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 Brazil: Approx. 55 × 67 × 59 mm For India: Approx. 55 × 63.5 × 59 mm
Weight	Approx. 48 g (1.7 oz) (excluding plug adapter) For Argentina and India: Approx. 73 g (2.6 oz) For Brazil: Approx. 70 g

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

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℃–40℃ (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 Brazil: Approx. 55 × 67 × 59 mm For India: Approx. 55 × 63.5 × 59 mm
Weight	Approx. 51 g (1.8 oz) (excluding plug adapter) For Argentina and India: Approx. 76 g (2.7 oz) For Brazil: Approx. 73 g

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Approved Memory Cards

The following Secure Digital (SD) memory cards have been tested and approved for use in this camera.

- Memory cards with an SD Speed Class rating of 6 or faster are recommended for recording movies. When using a memory card with a lower Speed Class rating, movie recording may stop unexpectedly.

	SD memory card	SDHC memory card	SDXC memory card
SanDisk	–	4 GB, 8 GB, 16 GB, 32 GB	64 GB, 128 GB
TOSHIBA	–	4 GB, 8 GB, 16 GB, 32 GB	64 GB
Panasonic	2 GB	4 GB, 8 GB, 16 GB, 32 GB	64 GB
Lexar	–	8 GB, 16 GB, 32 GB	64 GB, 128 GB

- Contact the manufacturer for details on the above cards. We cannot guarantee camera performance when using memory cards made by other manufacturers.
- If you use a card reader, make sure that it is compatible with your memory card.

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