Nikon

DIGITAL CAMERA

COOLPIX B600

Reference Manual

Quick Topic Search

- Read this manual thoroughly before using the camera.
- To ensure proper use of the camera, be sure to read “For Your Safety” (page vi).
- After reading this manual, keep it in a readily accessible place for future reference.

En

Quick Topic Search

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Introduction

Read This First

Symbols and Conventions Used in This Manual

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

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

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

Information and Precautions

Life-Long Learning

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

- For users in the U.S.A.: https://www.nikonusa.com/
- For users in Europe: https://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.

https://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, AC adapters, and USB cables) certified by Nikon specifically for use with this Nikon digital camera are engineered and proven to operate within the operational and safety requirements of this electronic circuitry.

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

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

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

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

Before Taking Important Pictures

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

About the Manuals

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

Comply with Copyright Notices

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

Disposing of Data Storage Devices

Please note that deleting images or formatting 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, make sure to reset all of the camera's settings in **Reset all** in the setup menu (📖97). After resetting, erase all data in the device using commercial deletion software, or format the device in **Format memory** or **Format card** in the setup menu (📖97), then completely refill it with images containing no private information (for example, images of empty sky).

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

Conformity Marking

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

Press the MENU button ➔ select (setup) ➔ Conformity marking ➔ OK button

For Your Safety

To prevent damage to property or injury to yourself or to others, read "For Your Safety" in its entirety before using this product.
Keep these safety instructions where all those who use this product will read them.

DANGER	**Failure to observe the precautions marked with this icon carries a high risk of death or severe injury.**
WARNING	**Failure to observe the precautions marked with this icon could result in death or severe injury.**
CAUTION	**Failure to observe the precautions marked with this icon could result in injury or property damage.**

WARNING

- **Do not use while walking or operating a vehicle.** Failure to observe this precaution could result in accidents or other injury.
- **Do not disassemble or modify this product. Do not touch internal parts that become exposed as the result of a fall or other accident.** Failure to observe these precautions could result in electric shock or other injury.
- **Should you notice any abnormalities such as the product producing smoke, heat, or unusual odors, immediately disconnect the battery or power source.** Continued operation could result in fire, burns or other injury.
- **Keep dry. Do not handle with wet hands. Do not handle the plug with wet hands.** Failure to observe these precautions could result in fire or electric shock.
- **Do not let your skin remain in prolonged contact with this product while it is on or plugged in.** Failure to observe this precaution could result in low-temperature burns.
- **Do not use this product in the presence of flammable dust or gas such as propane, gasoline or aerosols.** Failure to observe this precaution could result in explosion or fire.
- **Do not aim the flash at the operator of a motor vehicle.** Failure to observe this precaution could result in accidents.

- **Keep this product out of reach of children.** Failure to observe this precaution could result in injury or product malfunction. In addition, note that small parts constitute a choking hazard. Should a child swallow any part of this product, seek immediate medical attention.
- **Do not entangle, wrap or twist the straps around your neck.** Failure to observe this precaution could result in accidents.
- **Do not use batteries, chargers, AC adapters, or USB cables not specifically designated for use with this product. When using batteries, chargers, AC adapters, and USB cables designated for use with this product, do not:**
  - **Damage, modify, forcibly tug or bend the cords or cables, place them under heavy objects, or expose them to heat or flame.**
  - **Use travel converters or adapters designed to convert from one voltage to another or with DC-to-AC inverters.**

  Failure to observe these precautions could result in fire or electric shock.
- **Do not handle the plug when charging the product or using the AC adapter during thunderstorms.** Failure to observe this precaution could result in electric shock.
- **Do not handle with bare hands in locations exposed to extremely high or low temperatures.** Failure to observe this precaution could result in burns or frostbite.

⚠ CAUTION

- **Do not leave the lens pointed at the sun or other strong light sources.** Light focused by the lens could cause fire or damage to product's internal parts. When shooting backlit subjects, keep the sun well out of the frame.
- **Turn this product off when its use is prohibited. Disable wireless features when the use of wireless equipment is prohibited.** The radio-frequency emissions produced by this product could interfere with equipment onboard aircraft or in hospitals or other medical facilities.
- **Remove the battery and disconnect the AC adapter if this product will not be used for an extended period.** Failure to observe this precaution could result in fire or product malfunction.
- **Do not touch moving parts of the lens or other moving parts.** Failure to observe this precaution could result in injury.
- **Do not fire the flash in contact with or in close proximity to the skin or objects.** Failure to observe this precaution could result in burns or fire.

- **Do not leave the product where it will be exposed to extremely high temperatures, for an extended period such as in an enclosed automobile or in direct sunlight.** Failure to observe this precaution could result in fire or product malfunction.
- **Do not transport the camera with a tripod or similar accessory attached.** Failure to observe this precaution could result in injury or product malfunction.

DANGER for Batteries

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

WARNING for Batteries

- **Keep batteries out of reach of children.** Should a child swallow a battery, seek immediate medical attention.
- **Do not immerse batteries in water or expose to rain.** Failure to observe this precaution could result in fire or product malfunction. Immediately dry the product with a towel or similar object should it become wet.
- **Discontinue use immediately should you notice any changes in the batteries, such as discoloration or deformation. Cease charging EN-EL12 rechargeable batteries if they do not charge in the specified period of time.** Failure to observe these precautions could result in the batteries leaking, overheating, rupturing, or catching fire.
- **When batteries are no longer needed, insulate the terminals with tape.** Overheating, rupture, or fire may result should metal objects come into contact with the terminals.

- **If battery liquid comes into contact with a person's skin or clothing, immediately rinse the affected area with plenty of clean water.** Failure to observe this precaution could result in skin irritation.

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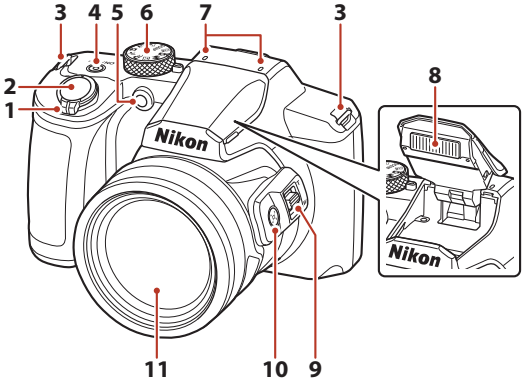
The Camera Body



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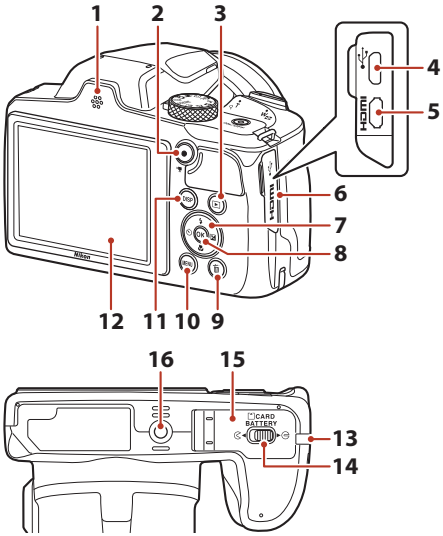

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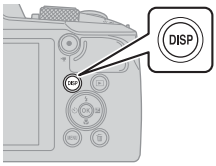
* In this manual, pressing up, down, left, or right on the multi selector is expressed as ▲, ▼, ◀, or ▶.

The Monitor

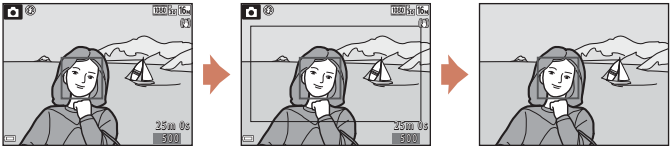
The information that is displayed on the shooting or playback screen changes depending on the camera's settings and state of use.

Switching the Information Displayed on the Screen (DISP Button)

To switch the information displayed on the screen during shooting or playback, press the **DISP** (display) button.



For Shooting

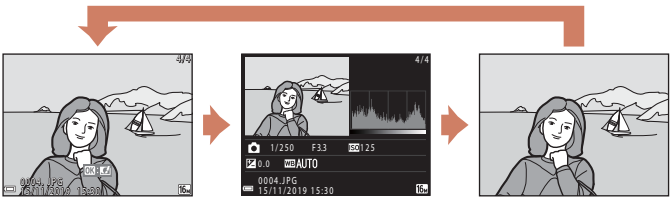


Show information

Movie frame
Display the range of a movie in a frame.

Hide information

For Playback

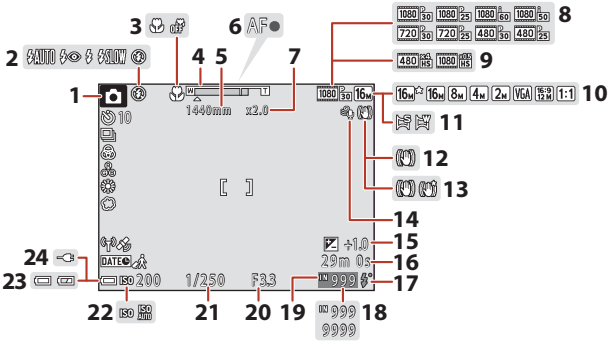


Show information

Tone level information (except movies)
Display a histogram, tone level and shooting information (📖9).

Hide information

For Shooting



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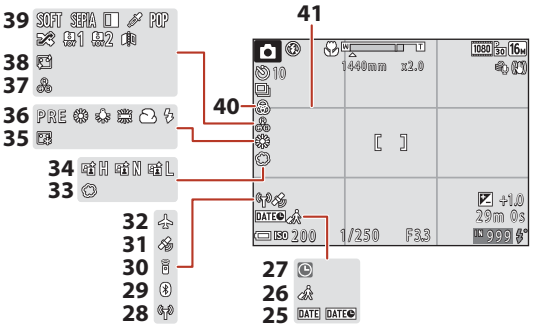

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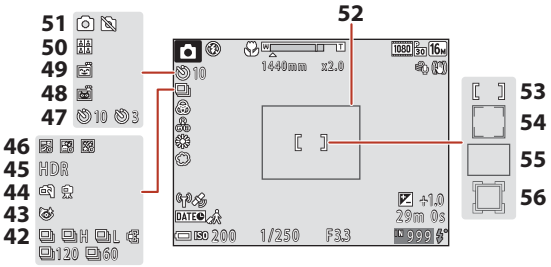

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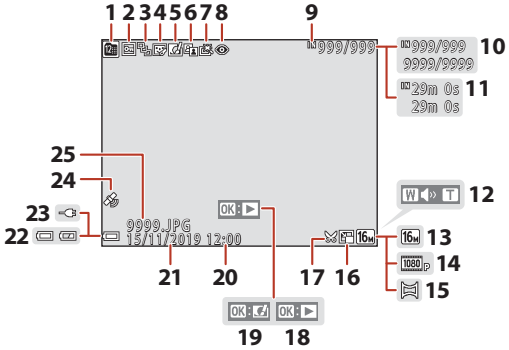

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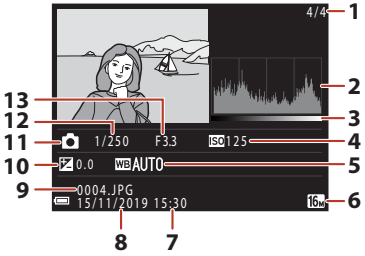
Tone Level Information Display

You can check for loss of contrast detail in highlights and shadows from the histogram that is displayed, or the display for the tone level. These provide guidelines when adjusting the image brightness with functions such as exposure compensation.



1	Current image number/ total number of images	**8**	Date of recording 14, 133
2	Histogram[1]	**9**	File number and type 171
3	Tone level[2]	**10**	Exposure compensation value 51
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[1] A histogram is a graph showing the distribution of tones in the image. 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.

[2] The tone level indicates the brightness level.

Getting Started

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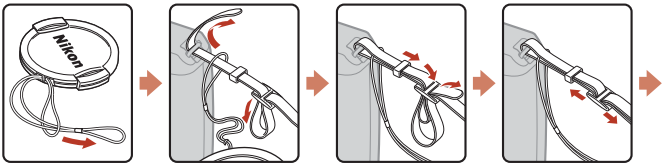
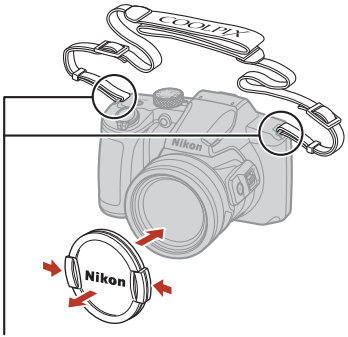
How to Attach the Strap and Lens Cap

Attach the lens cap to the strap, and then attach the strap to the camera.



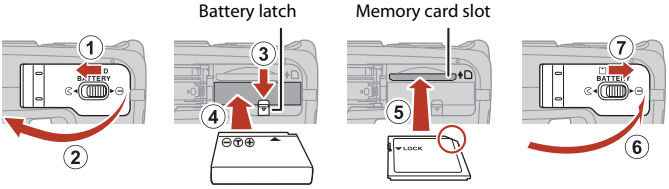


Attach the strap at two places.

Lens Cap

When the camera is not in use, attach the lens cap to the lens to protect it.

Inserting the Battery and Memory Card



- With the battery's positive and negative terminals oriented correctly, move the orange battery latch (③), and fully insert the battery (④).
- Slide the memory card in until it clicks into place (⑤).
- Be careful not to insert the battery or memory card upside-down or backward, as this could cause a malfunction.
- If the write-protect switch of the memory card is locked, you cannot shoot, delete images, or format the memory card.
- Camera data, including images and movies, can be saved either on a memory card or in the internal memory. To use the internal memory, remove the memory card.

Formatting a Memory Card

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

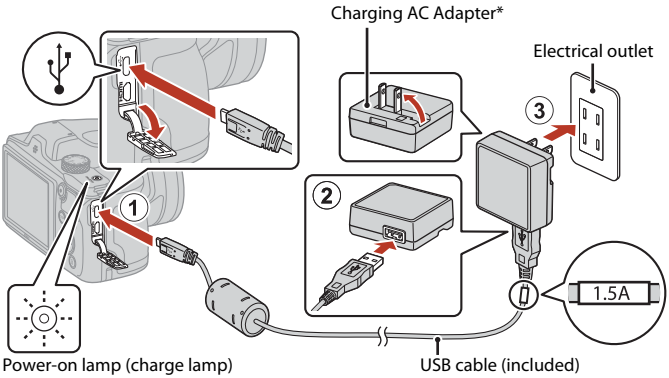
- **Note that formatting a memory card permanently deletes all images and other data on the memory card.** Be sure to make copies of any images you wish to keep before formatting the memory card.
- Insert the memory card into the camera, press the MENU button, and select **Format card** in the setup menu (📖97).

Removing the Battery or Memory Card

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

- Move the battery latch to eject the battery.
- Gently push the memory card into the camera to partially eject the memory card.
- Be careful when handling the camera, battery, and memory card immediately after using the camera, as they may be hot.
- During communication with a smart device through **Bluetooth** in the network menu (📖97) ➔ **Send while off**, the power-on lamp turns on even though the camera is off.

Charging the Battery



* A plug adapter is attached depending on the country or region of purchase. The shape of the plug adapter varies with the country or region of purchase.

- Charging starts when the camera is connected to an electrical outlet while the battery is inserted, as shown in the illustration. The power-on lamp (charge lamp) slowly flashes while the battery is charging.
- When charging is complete, the power-on lamp (charge lamp) turns off. Unplug the Charging AC Adapter from the electrical outlet, and disconnect the USB cable. Charging time is about 2 hours for a fully exhausted battery.
- The battery cannot be charged when the power-on lamp (charge lamp) quickly flashes, possibly due to one of the reasons described below.
  - The ambient temperature is not suited to charging.
  - The USB cable or Charging AC Adapter is not properly connected.
  - The battery is damaged.

Notes About the USB Cable

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

Notes About Charging the Battery

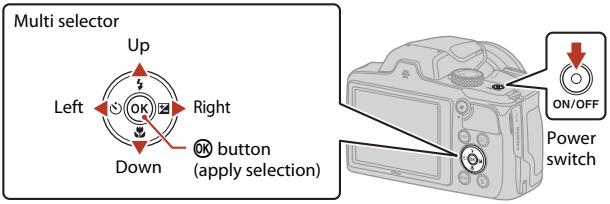
- The camera can be operated while the battery is charging, but the charging time increases. The power-on lamp (charge lamp) turns off while the camera is being operated.
- Do not, under any circumstances, use another make or model of AC adapter other than the EH-73P/EH-73PCH Charging AC Adapter, and 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.

Camera Setup

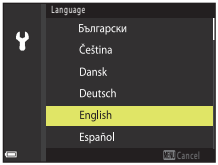
When the camera is turned on for the first time, screens to set the display language and camera clock are displayed.

1 Turn on the camera.

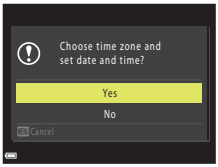
- Use the multi selector to select and adjust settings.



- A language selection screen will be displayed. Use the multi selector ▲▼ to highlight a language and press the OK button to select. The displayed languages vary depending on the country or region.

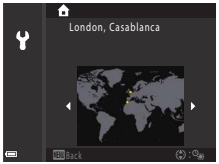


2 Select **Yes** and press the OK button.



3 Highlight your home time zone and press the OK button.

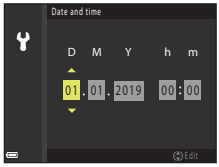
- Press ▲ to set daylight saving time. When it is on, the time is one hour earlier and is displayed. When you press ▼ to turn it off, the time goes back one hour.



4 Press ▲▼ to select a date format and press the OK button.

5 Enter the current date and time for the camera clock and press the OK button.

- Press ◀▶ to highlight items and press ▲▼ to change.
- Select the minute field and press the OK button to confirm the setting.



6 When prompted, select **Yes** and press the OK button.

- The camera switches to the shooting screen when setup is complete.

Setting the Language

The language can be set at any time in **Language** in the setup menu (97).

To Change the Time Zone and Date Setting

Set in **Time zone and date** in the setup menu.

In **Time zone**, the time is one hour earlier when daylight saving time is on, and goes back one hour when it is off.

Basic Shooting and Playback Operations

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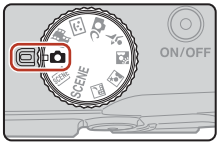
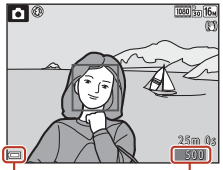
Shooting Images

(auto) mode is used here as an example. (auto) mode enables you to perform general shooting in a variety of shooting conditions.

1 Rotate the mode dial to .



- 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.
- Press the **DISP** (display) button to switch the information displayed on the screen each time.

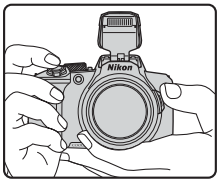


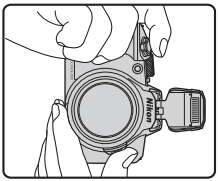
Battery level indicator

Number of exposures remaining

2 Hold the camera steady.

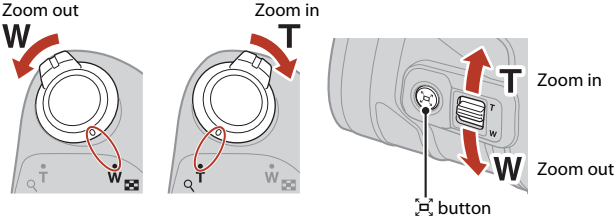
- Keep fingers and other objects away from the lens, flash, AF-assist illuminator, microphone, and speaker.





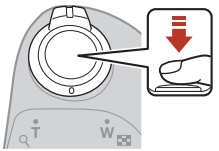
3 Frame the picture.

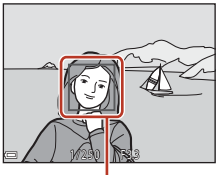
- Move the zoom control or the side zoom control to change the zoom lens position.
- If you lose sight of the subject while shooting with the lens in telephoto position, press the ⊡ (snap-back zoom) button to temporarily widen the visible area so that you can frame the subject more easily.



4 Press the shutter-release button halfway.

- To press the shutter-release button "halfway" means to press and hold the button at the point where you feel a slight resistance.
- 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.





5 Without lifting your finger, press the shutter-release button all 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, or **Please wait for the camera to finish recording.** is displayed 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 screen 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 screen back on while the camera is in standby mode, perform an operation such as pressing the power switch or shutter-release button.

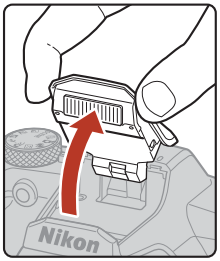
When Using a Tripod

- We recommend using a tripod to stabilize the camera in the following situations:
  - When the flash is lowered in dark locations or when using a shooting mode in which the flash does not fire
  - 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 (📖97) to prevent potential errors caused by this function.

Using the Flash

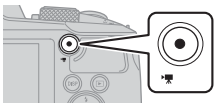
In situations where a flash is needed, such as in dark locations or when the subject is backlit, raise the flash with your hand.

- When the shooting screen is displayed, you can press the multi selector ▲ (ϟ) to set the flash mode. To set the flash to always fire, select ϟ (fill flash).
- When not using the flash, gently push to lower the flash.



Recording Movies

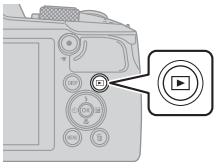
Display the shooting screen and press the ● (movie-record) button to start recording a movie. Press the ● (movie-record) button again to end recording.



Playing Back Images

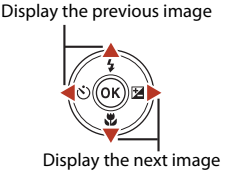
1 Press the ▶ (playback) button to enter playback mode.

- 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.

- Press and hold down ▲▼◀▶ to scroll through the images quickly.
- Press the **DISP** (display) button to switch the information displayed on the screen each time.
- To play back a recorded movie, press the ⓞ button.
- To return to shooting mode, press the ▶ button or shutter-release button.
- When **OK**: is displayed in full-frame playback mode, you can press the ⓞ button to apply an effect to the image.

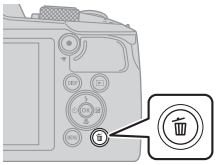


- Move the zoom control toward **T** (Q) in full-frame playback mode to zoom in on an image.

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

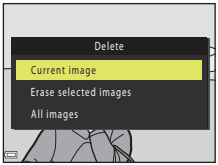
Deleting Images

1 In playback mode, press the 🗑 (delete) button to delete the image currently displayed on the screen.



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

- To exit without deleting, press the **MENU** button.

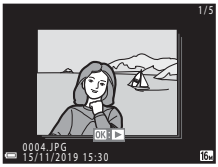


3 Select **Yes** and press the OK button.

- Deleted images cannot be recovered.

Deleting Images Captured Continuously (Sequence)

- Images captured continuously, or with the multiple exp. lighten, creative mode, or self-collage function, are saved as a sequence, and only one image in 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.



- To delete individual images in a sequence, press the OK 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.

The Image Selection Screen for Deletion

1 Use the multi selector ◀▶ to select the image that you want to delete.

- Move the zoom control (📖2) toward **T** (🔍) to switch to full-frame playback, or **W** (▦) to switch to thumbnail playback.

2 Use ▲▼ to select **ON** or **OFF**.

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

3 Press the OK button to apply the image selection.

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

Shooting Features

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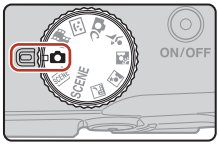
Selecting a Shooting Mode



You can rotate the mode dial to align the desired shooting mode with the indicator mark on the camera body.

- **(Auto) mode**
  Select this mode to perform general shooting in a variety of shooting conditions.
- **SCENE, , , , , (Scene) modes**
  Select any one of scene modes based on the shooting conditions, and you can take pictures with the appropriate settings for those conditions.
  - SCENE: Press the **MENU** button and select a scene mode.
  - (scene auto selector): The camera recognizes the shooting conditions when you frame a picture, and you can take pictures in accordance with the conditions.
  - (night landscape): Use this mode to shoot night landscapes.
  - (night portrait): Use this mode to shoot evening and night portraits that include background scenery.
  - (backlighting): Use this mode to shoot backlit subjects.
  - (sports): Use this mode to shoot sports photos.
- **(Creative) mode**
  The camera saves four images with effects and one image without effects simultaneously in one shot.
- **(Smart portrait) mode**
  Use glamour retouch to enhance human faces during shooting, and use the smile timer or self-collage function to take pictures.
- **(Short movie show) mode**
  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.

Help Display

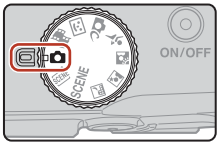
The descriptions of functions are displayed while changing the shooting mode or while the setting screen is displayed.

Press the shutter-release button halfway to quickly switch to shooting mode. You can show or hide the descriptions using **Help display** in **Monitor settings** in the setup menu (97).

(Auto) Mode

Select this mode to perform general shooting in a variety of shooting conditions.

- The focus area for autofocus varies depending on the setting of **AF area mode** (111). The default setting is **Target finding AF** (55).



Functions Available in (Auto) Mode

- Creative slider (25)
- Flash mode (47)
- Self-timer (49)
- Macro mode (50)
- Shooting menu (104, 106)

Using the Creative Slider

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

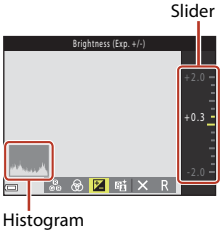
1 Press the multi selector ▶ ( ).

2 Use ◀▶ to select an item.

- **Hue**: Adjust the hue (reddish/bluish) of the entire image.
- **Vividness**: Adjust the vividness of the entire image.
- **Brightness (Exp. +/-)**: Adjust the brightness of the entire image.
- **Active D-Lighting**: Reduce the loss of details in highlights and shadows. Select H (High), N (Normal), L (Low) for the amount of effect.

3 Use ▲▼ to adjust the level.

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



4 Press the OK button when setting is complete.

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

Creative Slider Settings

- When using **Active D-Lighting**, noise (randomly-spaced bright pixels, fog, lines) may be emphasized, dark shadows may appear around bright subjects, or bright areas may appear around dark subjects under some shooting conditions.
- When using **Active D-Lighting**, gradation skipping may occur depending on the subject.
- This function may not be available to use in combination with other functions (📖61).
- The following settings are saved in the camera's memory even after the camera is turned off.
  - **Hue**
  - **Vividness**
  - **Brightness (Exp. +/-)**
  - **Active D-Lighting**
- See "Using the Histogram" (📖51) for more information.

Active D-Lighting Versus D-Lighting

- The **Active D-Lighting** option captures images while reducing loss of details in highlights, and adjusts the tone when saving images.
- The **D-Lighting** (📖70) option in the playback menu adjusts the tone of saved images.

Scene Mode (Shooting Suited to the Shooting Conditions)

Select any one of scene modes based on the shooting conditions, and you can take pictures with the appropriate settings for those conditions.

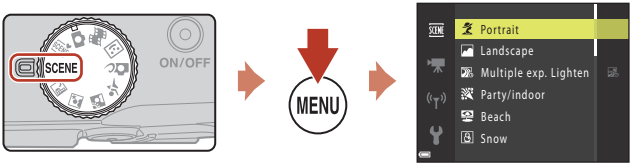
(scene auto selector) (📖28)

The camera recognizes the shooting conditions when you frame a picture, and you can take pictures in accordance with the conditions.

Night landscape[1, 2] (📖28), Night portrait (📖29), Backlighting[2] (📖30), Sports[2] (📖30)

Rotate the mode dial to , , , or and take pictures.

SCENE



Press the **MENU** button to display the scene menu and select one of the following scene modes using the multi selector.

Portrait (default setting)	Close-up (📖32)
Landscape[1, 2]	Food (📖33)
Multiple exp. Lighten[3] (📖31)	Fireworks show[4, 5] (📖33)
Party/indoor[2] (📖32)	Easy panorama[2] (📖36)
Beach[2]	Pet portrait (📖34)
Snow[2]	Moon[2] (📖35)
Sunset[2, 4]	Bird-watching[2] (📖35)
Dusk/dawn[1, 2, 4]	

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.
4 Use of a tripod is recommended because the shutter speed is slow. Set **Photo VR** (📖138) to **Off** in the setup menu when using a tripod to stabilize the camera during shooting.
5 The focus is fixed at infinity.

Tips and Notes About Scene Mode

Scene auto selector

- The camera recognizes the shooting conditions when you frame a picture, and you can take pictures in accordance with the conditions.

	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)
	Other shooting conditions

* One image is captured at a slow shutter speed.

- Under some shooting conditions, the camera may not select the desired settings. In this case, select another shooting mode (24).
- When the digital zoom is in effect, the shooting mode icon changes to .

Night landscape

- Press the MENU button to select **Hand-held** or **Tripod** in **Night landscape**.
- **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.
  - While the icon on the shooting screen is displayed in white, press the shutter-release button all the way to capture one image.
  - 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 screen switches to the shooting screen.
  - The angle of view (i.e., the area visible in the frame) seen in the saved image may be narrower than that seen on the shooting screen.
  - Continuous shooting may not be possible in certain shooting conditions.
- **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** (138) in the setup menu is set to **On**.

Night portrait

- Raise the flash before shooting.
- Press the MENU button to select **Hand-held** or **Tripod** in **Night portrait**.
- **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.
  - While the icon on the shooting screen is displayed in white, press the shutter-release button all the way to capture one image.
  - 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 screen switches to the shooting screen.
  - If the subject moves while the camera is shooting continuously, the image may be distorted, overlapped, or blurred.
  - Continuous shooting may not be possible in certain shooting conditions.
- **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** (138) in the setup menu is set to **On**.

Backlighting

- Press the MENU button to select **On** or **Off** to enable or disable the high dynamic range (HDR) function in **HDR** based on the shooting conditions.
- **Off** (default setting): The flash fires to prevent the subject from being hidden in shadow. Raise the flash before shooting.
  - Press the shutter-release button all the way to capture one image.
- **On**: Use when taking pictures with very bright and dark areas in the same frame.
  - When there is a big difference between the bright and dark areas, the HDR icon on the shooting screen changes to green.
  - When the shutter-release button is pressed all the way, the camera shoots images continuously 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
  - 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 screen switches to the shooting screen.
  - The angle of view (i.e., the area visible in the frame) seen in the saved image may be narrower than that seen on the shooting screen.
  - Under some shooting conditions, dark shadows may appear around bright subjects or bright areas may appear around dark subjects.
  - If HDR compositing could not be performed, the camera saves a non-HDR composite image and an image in which dark areas are corrected by D-Lighting (📖70).
  - If there is only enough memory to save one image, an image processed by D-Lighting at the time of shooting, in which dark areas of the image are corrected, is the only image saved.

Notes About HDR

Use of a tripod is recommended. Set **Photo VR** (📖138) to **Off** in the setup menu when using a tripod to stabilize the camera during shooting.

Sports

- While the shutter-release button is held all the way down, images are captured continuously.
- The camera can capture up to about 7 images continuously at a rate of about 7.7 fps (when **Image mode** is set to **16M 4608×3456**).
- The frame rate for continuous shooting may become slow depending on the current image mode setting, the memory card used, or shooting conditions.
- Focus, exposure, and hue for the second and subsequent images are fixed at the values determined with the first image.

SCENE ➔ Multiple exp. Lighten

- The camera automatically captures moving subjects at regular intervals, compares each image and composites only their bright areas, and then saves them as one image. Light trails such as the flow of car lights or motion of stars are captured.
- On the screen displayed when **Multiple exp. Lighten** is selected, select **Nightscape + light trails**, **Nightscape + star trails**, or **Star trails**.

Option	Description
Nightscape + light trails	Use to capture the flow of car lights against a night landscape background. • The camera focuses on the area in the center of the frame. • Shots are taken at a shutter speed of 4 seconds. When 50 shots are taken, the camera automatically stops shooting. • For every 10 shots taken, one composite image with trails overlapped from the start of shooting is automatically saved.
Nightscape + star trails	Use to capture the motion of stars with a night landscape in the frame. • The focus is fixed at infinity. • Shots are taken at a shutter speed of 20 seconds about every 5 seconds. When 300 shots are taken, the camera automatically stops shooting. • For every 30 shots taken, one composite image with trails overlapped from the start of shooting is automatically saved.
Star trails	Use to capture the motion of stars. • The focus is fixed at infinity. • Shots are taken at a shutter speed of 25 seconds about every 5 seconds. When 300 shots are taken, the camera automatically stops shooting. • For every 30 shots taken, one composite image with trails overlapped from the start of shooting is automatically saved.

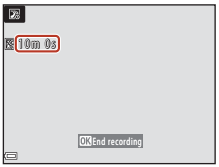
- The screen may turn off during the shooting interval. The power-on lamp turns on while the screen is off.
- To end shooting before it automatically ends, press the OK button while the screen is on.
- When you have obtained the desired trails, end shooting. If you continue shooting, details in the composited areas may be lost.
- The images automatically saved during shooting and the image composited when shooting ends are grouped as a sequence, and the first image saved is used as the key picture (📖67).

Notes About Multiple Exp. Lighten

- The camera cannot capture images if a memory card is not inserted.
- Do not rotate the mode dial or remove the memory card until shooting ends.
- Use a sufficiently charged battery to prevent the camera from turning off unexpectedly.
- Exposure compensation cannot be used (📖51).
- When using **Nightscape + star trails** or **Star trails**, the telephoto zoom position is restricted to the angle of view equivalent to that of approx. 500 mm lens (in 35mm [135] format).
- Vibration reduction is disabled regardless of the **Photo VR** setting (📖138) in the setup menu.

Time Remaining

You can check the time remaining until shooting automatically ends on the screen.



SCENE ➔ Party/indoor

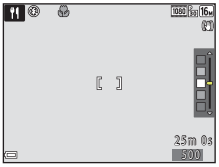
- To avoid the effects of camera shake, hold the camera steady. Set **Photo VR** (📖138) to **Off** in the setup menu when using a tripod to stabilize the camera during shooting.

SCENE ➔ Close-up

- Macro mode (📖50) is enabled and the camera automatically zooms to the closest position at which it can focus.
- You can move the focus area. Press the OK button, use the multi selector ▲▼◀▶ to move the focus area, and press the OK button to apply the setting.

SCENE ➔ Food

- Macro mode (📖50) 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 OK button, use the multi selector ▲▼◀▶ to move the focus area, and press the OK button to apply the setting.



SCENE ➔ Fireworks show

- The shutter speed is fixed at 4 seconds.
- The telephoto zoom position is restricted to the angle of view equivalent to that of approx. 500 mm lens (in 35mm [135] format).
- Exposure compensation cannot be used (📖51).

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

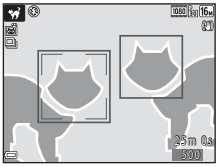
Pet Portrait Auto Release

The following settings can be set when you press the multi selector ◀ (⏲).

- **Pet portrait auto release**: The camera automatically releases the shutter when it detects the face of a dog or cat.
  - Pet portrait auto release is set to OFF after five bursts have been taken.
  - You can also release the shutter by pressing the shutter-release button. When **Continuous** is selected, images are captured continuously while the shutter-release button is held all the way down.
- OFF: The camera releases the shutter when the shutter-release button is pressed all the way down.
  - The camera focuses on the face of a dog, cat, or human when detected.
  - When **Continuous** is selected, images are captured continuously while the shutter-release button is held all the way down.

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 face of a dog, cat, or human may not be detected and other subjects may be displayed inside a border.



SCENE ➔ Moon

- At the wide-angle zoom position, the framing border is displayed to indicate the angle of view equivalent to that of a 1440 mm lens (in 35mm [135] format). When you frame the moon inside the framing border and press the OK button, the angle of view becomes equivalent to that of a 1440 mm lens.
- 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.
- Adjust the brightness with exposure compensation (📖51) according to shooting conditions such as the waxing and waning of the moon and shooting requirements.

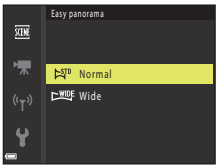
SCENE ➔ Bird-watching

- On the screen displayed when **Bird-watching** is selected, select **Single** or **Continuous**.
- **Single**: One image is captured each time the shutter-release button is pressed.
- **Continuous**: While the shutter-release button is held all the way down, images are captured continuously.
  The camera can capture up to about 7 images continuously at a rate of about 7.7 fps (when **Image mode** is set to **4608×3456**).
- At the wide-angle zoom position, the framing border is displayed to indicate the angle of view equivalent to that of a 800 mm lens (in 35mm [135] format). When you frame a bird inside the framing border and press the OK button, the angle of view becomes equivalent to that of a 800 mm lens.

Shooting with Easy Panorama

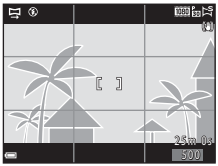
Rotate the mode dial to SCENE ➔ MENU button ➔ (easy panorama) ➔ OK button

1 Select **Normal** or **Wide** as the shooting range and press the OK button.



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.
- The camera focuses in the center of the frame.

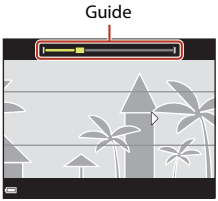


3 Press the shutter-release button all the way, and then remove your finger from the shutter-release button.

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

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

- 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.

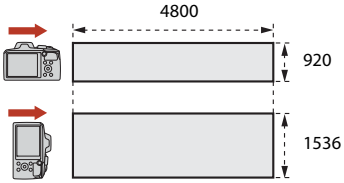
Notes About Easy Panorama Shooting

- The range of the image seen in the saved image is narrower than that seen on the screen 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.

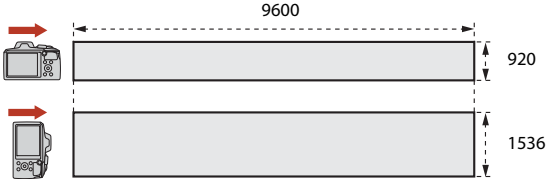
Image Size of Easy Panorama

There are four different maximum image sizes (in pixels), as described below. If more than half of the panorama range is captured but shooting ends before reaching the edge of the range, the image size becomes smaller than as described below.

When STD Normal is set

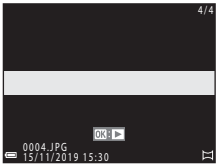


When WIDE Wide is set



Playback with Easy Panorama

Switch to playback mode (📖20), display an image captured using easy panorama in full-frame playback mode, and then press the OK button to scroll the image in the direction that was used when shooting.



Playback controls are displayed on the screen during playback. Use the multi selector ◀▶ to select a control, and then press the OK button to perform the operations described below.

Function	Icon	Description	
Rewind	◀◀	Hold down the OK button to rewind scroll playback.	
Fast-forward	▶▶	Hold down the OK button to fast-forward scroll playback.	
Pause	❚❚	Pause playback. The operations listed below can be performed while paused.	
	◀❚❚	Hold down the OK button to rewind.	
	❚❚▶	Hold down the OK button to scroll.	
	▶	Resume automatic scrolling.	
End	■	Return to full-frame playback mode.	

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.

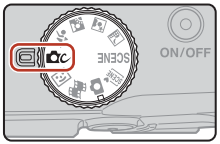
Notes About Printing Panorama Images

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.

Creative Mode (Applying Effects When Shooting)

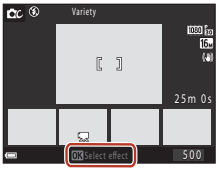
The camera saves four images with effects and one image without effects simultaneously in one shot.

- The camera focuses in the center of the frame.

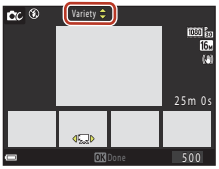


1 Press the OK button.

- The effect group selection screen is displayed.



2 Use the multi selector ▲▼ to select the desired effect group, and press the OK button.



- You can select **Variety**, **Selective color (red)**, **Selective color (green)**, **Selective color (blue)**, **Light** (default setting), **Depth**, **Memory**, **Classic**, or **Noir**.
- When you select an effect group, the image without effects is displayed on the upper part of the screen. Four types of images with effects are displayed on the lower part of the screen.
- Only one type of effect can be applied to a movie. Press ◀▶ to select the desired effect, and then press the OK button.

3 Press the shutter-release button or ● (movie-record) button to shoot.

- The five saved images are treated as a sequence. One image with an applied effect is used as the key picture (📖67).

Notes About Creative Mode

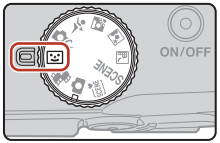
When **Variety** is selected as the effect group, certain **Movie options** (📖117) are not available depending on the effect to be applied to a movie.

Functions Available in Creative Mode

- Flash mode (📖47)
- Self-timer (📖49)
- Macro mode (📖50)
- Exposure compensation (📖51)
- Shooting menu (common across shooting modes) (📖104)

Smart Portrait Mode (Enhancing Human Faces When Shooting)

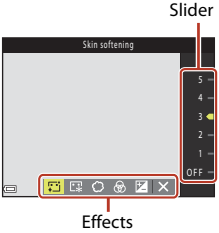
You can take a picture with the glamour retouch function to enhance human faces.



1 Press the multi selector ▶.

2 Apply an effect.

- Use ◀▶ to select the desired effect.
- Use ▲▼ to select the amount of effect.
- You can simultaneously apply multiple effects. **Skin softening**, **Foundation makeup**, **Soft**, **Vividness**, **Brightness (Exp. +/-)**
- Select ✕ **Exit** to hide the slider.
- After configuring the desired effects, press the OK button or select ✕ **Exit**.



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.
- When **Soft** is set, some **Movie options** (117) are not available.

Glamour Retouch Settings

A histogram is displayed when you select **Brightness (Exp. +/-)**.

See "Using the Histogram" (51) for more information.

Functions Available in Smart Portrait Mode

- Glamour retouch (📖41)
- Smile timer (📖43)
- Self-Collage (📖44)
- Flash mode (📖47)
- Self-timer (📖49)
- Smart portrait menu (📖115)

Using Skin Softening and Foundation Makeup

In the following shooting modes, if human faces are detected, the camera processes the image to soften facial skin tones before saving the image (up to three faces).

- If **Skin softening** or **Foundation makeup** is set in smart portrait mode, the camera processes the image to soften facial skin tones or adjust facial colors before saving the image (up to three faces) when human faces are detected.
- The effects of **Skin softening** are applied even when shooting in SCENE (scene auto selector) mode, (night portrait) scene mode, or **Portrait** scene mode. The amount of effect cannot be adjusted.
- You can also apply the effects of **Skin softening** or **Foundation makeup** in **Glamour retouch** in the playback menu after shooting (📖71).

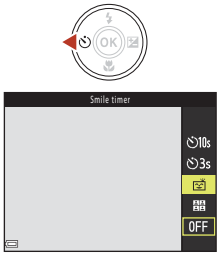
Notes About Skin Softening and Foundation Makeup

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

Using Smile Timer

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

- Set the glamour retouch function before selecting smile timer (📖41).
- 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 (📖56). 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.

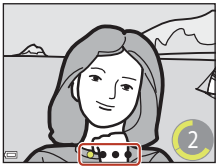
Using Self-Collage

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

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** (📖115).
- If you want to apply glamour retouch when shooting, set the effect before selecting self-collage (📖41).

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 ○ on the screen. It is displayed in yellow during shooting and it changes to white after shooting.

3 On the screen displayed when the camera finishes taking the number of shots that is set in **Number of shots**, select **Yes** and press the ⓞ button.

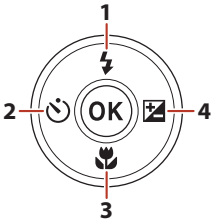
- The collage image is saved.
- Each captured image is saved as an individual image separate from the collage image. The images are grouped as a sequence, and a one-frame collage image is used as the key picture (📖67).
- When **No** is selected, the collage image is not saved.

Notes About Self-Collage

- Exposure and hue for the second and subsequent images are fixed at the values determined with the first image.
- If you perform the operations listed below 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.
  - Press the shutter-release button
  - Raise or lower the flash
  - Rotate the mode dial
  - Press the power switch
- If images are captured using **Date stamp** (136), the date and time are stamped only at the bottom right of the aggregated image. The date and time cannot be stamped on each image within the aggregated image.
- This function may not be available to use in combination with other functions (61).

Setting the Flash Mode, Self-timer, Macro Mode, and Exposure Compensation

When the shooting screen is displayed, you can press the multi selector ▲ (ϟ) ◀ (⏲) ▼ (❀) ▶ (±) to set the functions described below.



1	**Flash mode** When the flash is raised, the flash mode can be set according to shooting conditions. When ϟ (fill flash) is selected, the flash always fires.
2	**Self-timer** The camera releases the shutter when the set number of seconds elapses after you press the shutter-release button.
3	**Macro mode** Use macro mode when you take close-up pictures.
4	• **Creative slider** When the shooting mode is set to 📷 (auto) mode, you can adjust the brightness (exposure compensation), vividness, hue, and Active D-Lighting. • **Exposure compensation** When the shooting mode is set to modes other than 📷 (auto) mode, you can adjust the brightness (exposure compensation).

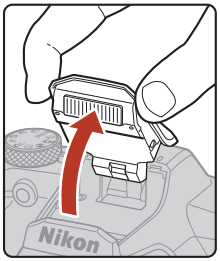
The functions that can be set vary depending on the shooting mode.

Flash Mode

When the flash is raised, the flash mode can be set according to shooting conditions.

1 Raise the flash with your hand.

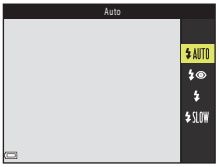
- When the flash is lowered, flash operation is disabled and ⊗ is displayed.



2 Press the multi selector ▲ (ϟ).

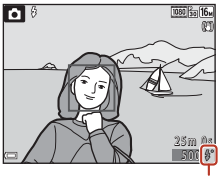
3 Select the desired flash mode (📖48) and press the ⓞ button.

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



The Flash-ready Indicator

While the flash is charging, ϟ flashes. The camera cannot shoot images. If charging is complete, ϟ is displayed steadily when you press the shutter-release button halfway.



Flash-ready indicator

Available Flash Modes

AUTO	Auto
	The flash fires when necessary, such as in dim lighting. • The flash mode indicator is only displayed immediately after setting on the shooting screen.
	Auto with red-eye reduction
	Reduce red-eye in portraits caused by the flash.
	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.

Notes About Shooting with the Flash

When you use the flash at the wide-angle zoom position, the edge of the image may be dark depending on the shooting distance.

This may be improved by adjusting the zoom slightly to a telephoto position.

The Flash Mode Setting

- The setting may not be available with some shooting modes (📖59).
- For (auto) mode, the applied setting is saved in the camera’s memory even after the camera is turned off.

Red-eye Reduction

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:

- 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 to areas of an image unnecessarily. In these cases, select another flash mode and take the picture again.

Self-timer

The camera releases the shutter when the set number of seconds elapses after you press the shutter-release button.
Set **Photo VR** (138) to **Off** in the setup menu when using a tripod to stabilize the camera during shooting.

1 Press the multi selector ◀ (⏲).

2 Select the number of seconds until the shutter is released, and press the OK button.

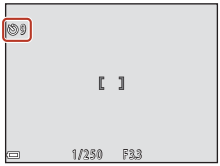
- ⏲**10s** (10 seconds): Use on important occasions, such as weddings.
- ⏲**3s** (3 seconds): Use to prevent camera shake.
- If the setting is not applied by pressing the OK button, the selection will be canceled.

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

- Confirm that the subject is in focus.

4 Press the shutter-release button all the way down.

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



The Self-timer Setting

- The setting may not be available with some shooting modes (59).
- You can use **Self-timer: after release** (137) in the setup menu to set whether to cancel the self-timer after using it to shoot.

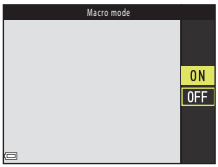
Macro Mode (Taking Close-up Pictures)

Use macro mode when you take close-up pictures.

1 Press the multi selector ▼ (🌷).

2 Select ON and press the OK button.

- If the setting is not applied by pressing the OK button, the selection will be canceled.



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 🌷 and the zoom indicator are 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 a position more wide-angled than where ⛰ is displayed, the camera can focus on subjects as close as approximately 1 cm (0.4 in.) from the lens.

The Macro Mode Setting

- The setting may not be available with some shooting modes (📖59).
- For 📷 (auto) mode, the applied setting is saved in the camera's memory even after the camera is turned off.

Exposure Compensation (Adjusting Brightness)

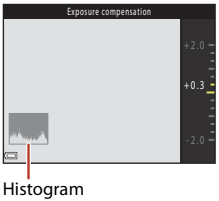
You can adjust overall image brightness.

1 Press the multi selector ▶ (⊠).

- When the shooting mode is smart portrait mode, the glamour retouch screen is displayed instead of the exposure compensation screen (📖41).
- When the shooting mode is 📷 (auto) mode, the creative slider is displayed instead of the exposure compensation screen (📖25).

2 Select a compensation value and press the ⓞ 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 ⓞ button.



Histogram

The Exposure Compensation Setting

Exposure compensation cannot be used in the following scene modes:

- **Multiple exp. Lighten**
- **Fireworks show**

Using the Histogram

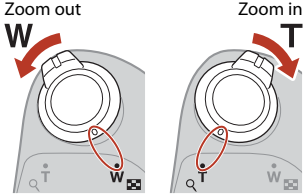
A histogram is a graph showing the distribution of tones in the image. Use as a guide when using exposure compensation and shooting without the flash.

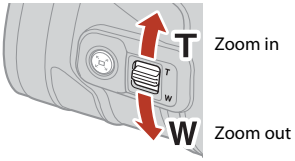
- The horizontal axis corresponds to pixel brightness, with dark tones to the left and bright tones to the right. The vertical axis shows the number of pixels.
- Increasing the exposure compensation value shifts the tone distribution to the right, and decreasing it shifts the tone distribution to the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

Using the Zoom

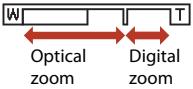
When you move the zoom control or side zoom control, the zoom lens position changes.

- 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.





- A zoom indicator, focal length (in 35mm [135] format), and digital zoom magnification are displayed on the shooting screen when the zoom control or side zoom control is moved.



- 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 or side zoom control toward **T** when the camera is zoomed in to the maximum optical zoom position.
- Moving the zoom control all the way in either direction adjusts the zoom quickly (the zoom does not adjust quickly even if you move the side zoom control all the way).
- When using the ML-L7 Remote Control (available separately), the camera zooms in when the + button on the remote control is pressed and zooms out when the – button is pressed.

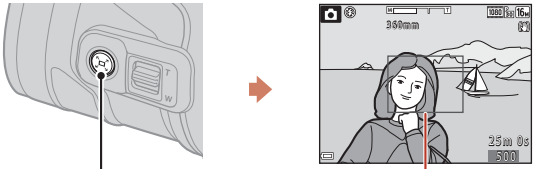
Digital Zoom and Dynamic Fine Zoom

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 compared to cases when the zoom indicator is blue.
- The indicator remains blue across a wider area when the image size is smaller.
- The zoom indicator may not change to blue when using certain continuous shooting settings or other settings.

Using the Snap-back Zoom

If you lose sight of the subject while shooting with the lens in telephoto position, press the ⊡ (snap-back zoom) button to temporarily widen the visible area so that you can frame the subject more easily.



⊡ button　　Framing border

- While pressing the ⊡ button, frame the subject inside the framing border of the shooting screen. To change the visible area, move the zoom control or side zoom control while pressing the ⊡ button.
- Release the ⊡ button to return to the original zoom position.
- Snap-back zoom is not available in the following situations.
  - While pressing the shutter-release button halfway
  - During movie recording

Focusing

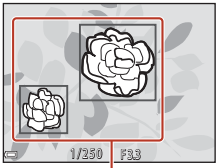
The Shutter-release Button

Press halfway		To press the shutter-release button “halfway” means to press and hold the button at the point where you feel a slight resistance. • Focus and exposure (shutter speed and f-number) are set when you press the shutter-release button halfway. Focus and exposure remain locked while the button is pressed halfway. • The focus area varies depending on the shooting mode.
Press all the way		To press the shutter-release button “all the way” means to press the button down completely. • The shutter is released when the shutter-release button is pressed all the way. • Do not use force when pressing the shutter-release button, as this may result in camera shake and blurred images. Press the button gently.

Using Target Finding AF

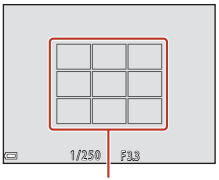
When **AF area mode** (111) is set to **Target finding AF** in (auto) mode, the camera focuses in the manner described below when you press the shutter-release button halfway.

- 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

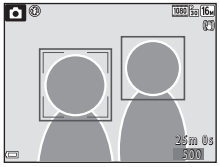
Notes About Target Finding AF

- Depending on shooting conditions, the subject that the camera determines to be the main subject may vary.
- The 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 on the edge of the screen
  - When the main subject is composed of a repeating pattern
- This function may not be available to use in combination with other functions (61).

Using Face Detection

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

- SCENE (scene auto selector) mode (28)
- (night portrait) or **Portrait** scene mode (27)
- Smart portrait mode (41)
- When **AF area mode** (111) is set to **Face priority** in (auto) mode (25)



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-release button is pressed halfway when no faces are detected:

- In SCENE (scene auto selector) mode, the focus area changes depending on the shooting conditions that the camera recognizes.
- In (night portrait) and **Portrait** scene modes or in smart portrait mode, the camera focuses in the center of the frame.
- In (auto) mode, the camera selects the focus area containing the subject closest to the camera.

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

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 shooting conditions (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)
- Point sources of light such as illuminations and night views, or subjects in which brightness changes such as neon lights
- 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

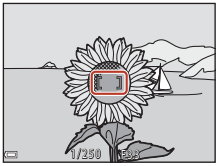
In the situations noted above, try pressing the shutter-release button halfway to refocus several times, or focus on another subject positioned at the same distance from the camera as the actual desired subject, and use focus lock (📖58).

Focus Lock

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

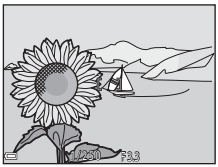
1 Set **AF area mode** to **Center** in (auto) mode (111).

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 all the way down to take the picture.

Default Settings (Flash Mode, Self-timer, and Macro Mode)

The default settings for each shooting mode are listed below.

	Flash mode (📖47)	Self-timer (📖49)	Macro mode (📖50)
(auto)	AUTO	OFF	OFF
(scene auto selector)	AUTO[1]	OFF	OFF[2]
(night landscape)	[3]	OFF	OFF[3]
(night portrait)	[4]	OFF	OFF[3]
(backlighting)	/[5]	OFF	OFF[3]
(sports)	[3]	OFF[3]	OFF[3]
Scene modes			
(portrait)		OFF	OFF[3]
(landscape)	[3]	OFF	OFF[3]
(multiple exp. lighten)	[3]	3s	OFF[3]
(party/indoor)	[6]	OFF	OFF[3]
(beach)	AUTO	OFF	OFF[3]
(snow)	AUTO	OFF	OFF[3]
(sunset)	[3]	OFF	OFF[3]
(dusk/dawn)	[3]	OFF	OFF[3]
(close-up)	AUTO	OFF	ON[3]
(food)	[3]	OFF	ON[3]
(fireworks show)	[3]	OFF[3]	OFF[3]
(easy panorama)	[3]	OFF[3]	OFF[3]
(pet portrait)	[3]	[7]	OFF
(moon)	[3]	3s	OFF[3]
(bird-watching)	[3]	OFF	OFF
(creative mode)	AUTO	OFF	OFF
(smart portrait)	AUTO[8]	OFF[9]	OFF[3]
(short movie show)	[3]	OFF	OFF

[1] The camera automatically selects the flash mode appropriate for the shooting conditions 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 set to **Hand-held**, the flash mode setting is fixed at auto with red-eye reduction. When set to **Tripod**, the flash mode setting is fixed at auto and slow sync with red-eye reduction.
[5] When **HDR** is set to **Off**, the flash mode is fixed at (fill flash). The flash does not fire when **HDR** is set to **On**.
[6] May switch to slow sync with red-eye reduction flash mode.
[7] **Pet portrait auto release** can be used (📖34). **10s** or **3s** cannot be used.
[8] When **Blink proof** is set to **On**, the flash cannot be used.
[9] **Smile timer** (📖43) and **Self-Collage** (📖44) can be used in addition to **10s** or **3s**.

Functions That Cannot Be Used Simultaneously When Shooting

Some functions cannot be used with other menu settings.

Restricted function	Setting	Description
Flash mode	Continuous (📖108)	When a setting other than **Single** is selected, the flash cannot be used.
	Blink proof (📖116)	When **Blink proof** is set to **On**, the flash cannot be used.
Self-timer	AF area mode (📖111)	When **Subject tracking** is selected, the self-timer cannot be used.
Macro mode	AF area mode (📖111)	When **Subject tracking** is selected, macro mode cannot be used.
Image mode	Continuous (📖108)	**Image mode** is set as follows depending on the continuous shooting setting: • **Pre-shooting cache**: 2M (image size: 1600 × 1200 pixels) • **Continuous H: 120 fps**: VGA (image size: 640 × 480 pixels) • **Continuous H: 60 fps**: 1M (image size: 1280 × 960 pixels)
White balance	Hue (using the creative slider) (📖25)	When hue is adjusted using the creative slider, **White balance** in the shooting menu cannot be set. To set **White balance**, select R in the creative slider setting screen to reset the brightness, vividness, hue, and Active D-Lighting.
Continuous Shooting	Self-timer (📖49)	• If the shutter-release button is released after the self-timer countdown starts, the camera does not shoot continuously even when **Continuous H** or **Continuous L** is selected. • The camera does not shoot continuously even when **Pre-shooting cache** is selected.
ISO sensitivity	Continuous (📖108)	When **Pre-shooting cache**, **Continuous H: 120 fps**, or **Continuous H: 60 fps** is selected, **ISO sensitivity** is fixed at **Auto**.

Restricted function	Setting	Description
AF area mode	Hue (using the creative slider) (📖25)	When hue is adjusted using the creative slider in **Target finding AF** mode, the camera does not detect the main subject aside from human faces. To detect the main subject, select R in the creative slider setting screen to reset the brightness, vividness, hue, and Active D-Lighting.
	White balance (📖106)	When a setting other than **Auto** is selected for **White balance** in **Target finding AF** mode, the camera does not detect the main subject aside from human faces.
Blink proof	Self-Collage (📖44)	When **Self-Collage** is selected, **Blink proof** is disabled.
Date stamp	Continuous (📖108)	When **Pre-shooting cache**, **Continuous H: 120 fps**, or **Continuous H: 60 fps** is selected, date and time cannot be stamped on images.
Digital zoom	AF area mode (📖111)	When **Subject tracking** is selected, digital zoom cannot be used.

Notes About Digital Zoom

- Depending on the shooting mode or the current settings, digital zoom may not be available (📖139).
- When digital zoom is in effect, the camera focuses in the center of the frame.

Playback Features

Playback Zoom 64
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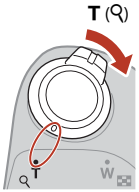
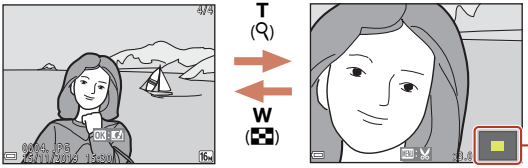
Playback Zoom

Moving the zoom control toward **T** (playback zoom) in full-frame playback mode (20) zooms in on the image.





Full-frame Playback

Image is zoomed in.

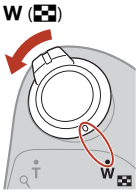
- You can change the magnification rate by moving the zoom control toward **W** or **T**.
- To view a different area of the image, press the multi selector ▲▼◀▶.
- When a zoomed image is displayed, press the OK button to return to full-frame playback mode.

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 (74).

Thumbnail Playback/Calendar Display

Moving the zoom control toward **W** (▪ thumbnail playback) in full-frame playback mode (📖20) displays images as thumbnails.



Full-frame Playback | Thumbnail Playback | Calendar Display

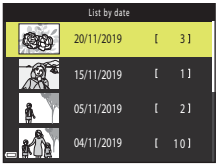
- You can change the number of thumbnails displayed by moving the zoom control toward **W** (▪) or **T** (🔍).
- While using thumbnail playback mode, press the multi selector ▲▼◀▶ to select an image, and then press the ⓞ button to display that image in full-frame playback mode.
- While using calendar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

Notes About Calendar Display

Images captured when the camera's date is not set are treated as images captured on January 1, 2019.

List by Date Mode

Press the ▶ button to enter playback mode ➔ MENU button ➔ select MODE (playback mode) ➔ List by date ➔ OK button



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

- Functions in the playback menu (📖124) 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.
  - MENU button: The functions listed below are available.
    - Slide show
    - Protect*

    * The same setting 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, 2019.

Viewing and Deleting Images in a Sequence

Viewing Images in a Sequence

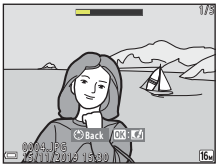
Images captured continuously, or with the multiple exp. lighten, creative mode, or self-collage function, are saved as a sequence.

One image in a sequence is used as the key picture to represent the sequence when displayed in full-frame playback mode or thumbnail playback mode.

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

After pressing the OK 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** (📖128) to **Individual pictures** in the playback menu.



Sequence Display Options

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

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 (📖124).
- If you select a key picture on the image selection screen in the following playback menu options, the option is applied to all images in the sequence.
  - Mark for upload, Protect, Copy

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 (📖22), 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.

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.

Restrictions on Image Editing

- An image can be edited up to 10 times. A still image created by editing a movie can be edited up to 9 times.
- You may not be able to edit images of a certain size or with certain editing functions.

Quick Effects: Changing Hue or Mood

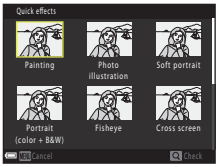
Process images with a variety of effects.

You can select **Painting**, **Photo illustration**, **Soft portrait**, **Portrait (color + B&W)**, **Fisheye**, **Cross screen**, or **Miniature effect**.

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

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

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



3 Select **Yes** and press the OK button.

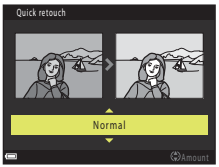
- An edited copy is created.

Quick Retouch: Enhancing Contrast and Saturation

Press the ▶ button to enter playback mode ➔ Select an image ➔ MENU button ➔ Quick retouch ➔ OK button

Use the multi selector ▲▼ to select the desired effect level and press the OK button.

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

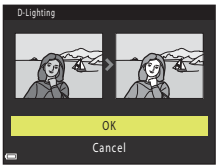


D-Lighting: Enhancing Brightness and Contrast

Press the ▶ button to enter playback mode ➔ Select an image ➔ MENU button ➔ D-Lighting ➔ OK button

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

- The edited version is displayed on the right.
- To exit without saving the copy, select **Cancel** and press the OK button.

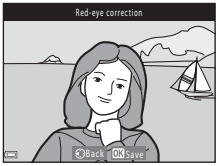


Red-eye Correction: Correcting Red-eye When Shooting with the Flash

Press the ▶ button to enter playback mode ➔ Select an image ➔ MENU button ➔ Red-eye correction ➔ OK button

Preview the result and press the OK button.

- To exit without saving the copy, press the multi selector ◀.



Notes About Red-eye Correction

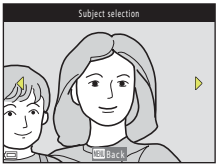
- If no red-eye is detected, a warning is displayed and the screen returns to the playback menu.
- Red-eye correction can be applied to pets (dogs or cats) even if their eyes are not red.
- Red-eye correction may not produce the desired results in some images.
- In rare cases, red-eye correction may be applied unnecessarily to other areas of the image.

Glamour Retouch: Enhancing Human Faces

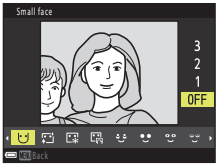
Press the ▶ button to enter playback mode ➔ Select an image ➔ MENU button ➔ Glamour retouch ➔ OK button

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

- When only one face is detected, proceed to step 2.

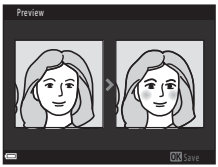


2 Use ◀▶ to select the effect, use ▲▼ to select the effect level, and press the OK button.



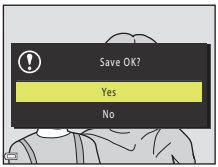
- You can simultaneously apply multiple effects. Adjust or check the settings for all effects before pressing the OK button.
  Small face, **Skin softening**, **Foundation makeup**, **Glare reduction**, **Hide eye bags**, **Big eyes**, **Whiten eyes**, **Eye shadow**, **Mascara**, **Whiten teeth**, **Lipstick**, **Redden cheeks**
- Press the MENU button to return to the screen for selecting a person.

3 Preview the result and press the OK 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 OK button.



- An edited copy is created.

Notes About Glamour Retouch

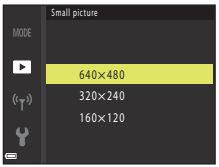
- Only one face at a time can be edited. To apply glamour retouch to another face, edit the edited image again.
- Depending on the direction in which faces are looking, or the brightness of faces, the camera may be unable to accurately detect faces, or the glamour retouch function may not perform as 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, and the image size of 640 × 480 or larger.

Small Picture: Reducing the Size of an Image

Press the ▶ button to enter playback mode ➔ Select an image ➔ MENU button ➔ Small picture ➔ OK button

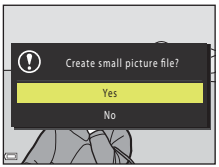
1 Use the multi selector ▲▼ to select the desired copy size and press the OK button.

- For images captured at an image mode setting of 16:9 **4608×2592**, only **640×360** is displayed, and for those of 1:1 **3456×3456**, only **480×480** is displayed.



2 Select **Yes** and press the OK button.

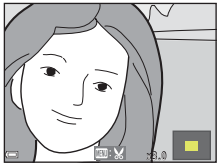
- An edited copy is created (compression ratio of approximately 1:8).



Crop: Creating a Cropped Copy

1 Move the zoom control to enlarge the image (64).

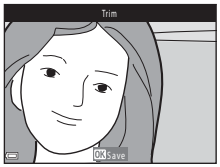
2 Adjust the image so that only the portion that you want to keep is displayed, and then press the MENU (menu) button.



- Move the zoom control toward **T** (Q) or **W** (▪▪) to adjust the magnification rate. Set a magnification rate at which MENU: ✂ 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 OK button.

- To set the area again, press ◀.



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

- An edited copy is created.

Notes About Cropping

Easy panorama images cannot be edited.

Image Size

The aspect ratio (horizontal to vertical) of the cropped copy is the same as the original.

Movies

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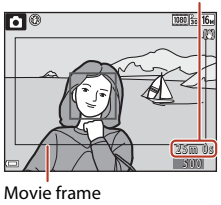
Basic Operations of Movie Recording and Movie Playback

1 Display the shooting screen.

- Check the remaining amount of movie recording time.
- It is recommended that you display the movie frame that indicates the area that will be recorded in a movie (🕮77).

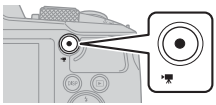


2 Lower the flash (🕮19).

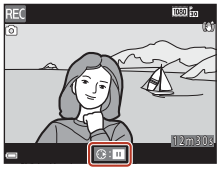
- Recording movies while the flash is raised may cause the audio to be muffled.

3 Press the ● (movie-record) button to start movie recording.

- The camera focuses in the center of the frame.



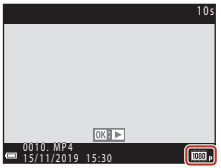
- Press the multi selector ▶ to pause recording, and press ▶ again to resume recording (except when an HS movie option is selected in **Movie options**). Recording automatically ends if it remains paused for about five minutes.
- You can capture a still image by pressing the shutter-release button while recording a movie (🕮79).



4 Press the ● (movie-record) button again to end recording.

5 Select a movie in full-frame playback mode and press the OK button to play it back.

- An image with a movie icon is a movie.



Movie Frame

- Press the **DISP** button to display the movie frame (📖4). Check the range of a movie in a frame before movie recording.
- The area that is recorded in a movie varies depending on the **Movie options** or **Movie VR** settings in the movie menu.

Maximum Movie Recording Time

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

If a file exceeds 4 GB even when you record for less than 29 minutes, recording ends.

- 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 (Video Speed Class V6) or faster are recommended for recording movies (📖181). Movie recording may stop unexpectedly when a memory card with a lower Speed Class rating is used.

Camera Temperature

- The camera may become hot when recording movies for an extended period of time or when the camera is used in a hot area.
- If the inside of the camera becomes extremely hot when recording movies, the camera will automatically stop recording. The amount of time remaining until the camera stops recording (10s) is displayed and a countdown starts.
  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, or **Please wait for the camera to finish recording.** is displayed 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, saving movies may take some time.

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 on the screen 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** (📖122) 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 recording, set **Movie VR** to **Off** to prevent potential errors caused by this function.

Notes About Autofocus for Movie Recording

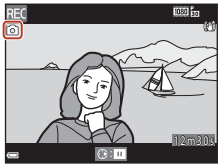
Autofocus may not perform as expected (📖57). Should this occur, try the following:

1. Set **Autofocus mode** in the movie menu to **Single AF** (default setting) 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.

- A still image can be captured when 📷 is displayed on the screen. When 🚫 is displayed, a still image cannot be captured.
- The size of the captured still image is the same as the movie image size (📖117).

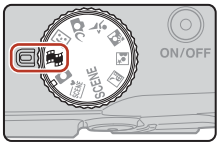


Notes About Capturing Still Images During Movie Recording

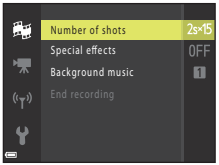
- Still images cannot be saved during movie recording in the following situations:
  - When the remaining movie recording time is less than five seconds
  - When **Movie options** (📖117) is set to **1080/60i**, **1080/50i**, **480/30p**, **480/25p**, or HS movie
- The sounds of operating the shutter-release button when saving a still image may be heard in the recorded movie.
- If the camera moves when the shutter-release button is pressed, the image may be blurred.

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 60p **1080/30p** or 1080 25p **1080/25p**) by recording and automatically combining multiple movie clips that are several seconds long.

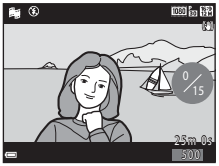


1 Press the MENU (menu) button and configure the settings for recording movies.



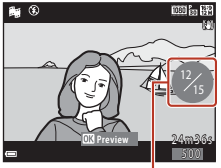
- **Number of shots**: Set the number of movie clips that the camera records and the recording time for each movie clip. By default, the camera records 15 movie clips that are 2 seconds each to create a 30-second short movie.
- **Special effects** (📖81): Apply various effects to movies when shooting. Effects can be changed for each movie clip.
- **Background music**: Select the background music. Move the zoom control (📖2) toward **T** (🔍) to preview it.
- 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" (📖82).

3 Check the recorded movie clip, or delete it.



Number of movie clips recorded

- To check it, press the OK 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.

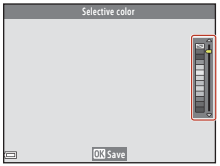
4 Save the short movie show.

- 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.

Special Effects

Type	Description
SOFT Soft	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 mono.	Creates a black-and-white photograph with a strong contrast.
Selective color	Keeps only a selected color and makes other colors black-and-white.
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.
TOY1 Toy camera effect 1	Gives the entire image a yellowish hue and darkens the image periphery.
TOY2 Toy camera effect 2	Decreases the color saturation of the entire image and darkens the image periphery.
Mirror	Reflects the left half of the image from the center to create a symmetric image.
OFF Off (default setting)	No effect is applied to the image.

- When **Selective color** or **Cross process** is selected, use the multi selector ▲▼ to select the desired color, and press the OK button to apply the color.



Operations During Movie Clip Playback

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

Playback controls are displayed on the screen.

The operations described below can be performed by using the multi selector ◀▶ to select a control and then pressing the OK button.

Playback controls

Function	Icon	Description	
Rewind	◀◀	Hold down the OK button to rewind the movie.	
Fast-forward	▶▶	Hold down the OK button to fast-forward the movie.	
Pause	❚❚	Pause playback. The operations listed below can be performed while paused.	
	◀❚	Rewind the movie one frame. Hold down the OK button for continuous rewinding.	
	❚▶	Advance the movie one frame. Hold down the OK 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.

Pausing Movie Recording

- A still image (16:9 **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 (📖49)
- Macro mode (📖50)
- Exposure compensation (📖51)
- Short movie show menu (📖80)
- Movie options menu (📖117)

Operations During Movie Playback

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

Volume indicator

Playback controls are displayed on the screen.

The operations described below can be performed by using the multi selector ◀▶ to select a control and then pressing the OK button.

When paused

Function	Icon	Description	
Rewind	◀◀	Hold down the OK button to rewind the movie.	
Fast-forward	▶▶	Hold down the OK button to fast-forward the movie.	
Pause	❚❚	Pause playback. The operations listed below can be performed while paused.	
		◀❚	Rewind the movie one frame. Hold down the OK button for continuous rewinding.
		❚▶	Advance the movie one frame. Hold down the OK button for continuous advancing.
			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.
		▶	Resume playback.
End	■	Return to full-frame playback mode.	

Editing Movies

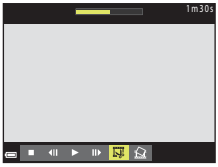
When editing movies, use a sufficiently charged battery to prevent the camera from turning off during editing. When the battery level indicator is , movie editing is not possible.

Extracting Only the Desired Portion of a Movie

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

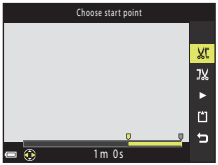
1 Play back a desired movie and pause at the start point of the portion that you want to extract (83).

2 Use the multi selector ◀▶ to select the control, and then press the OK button.



3 Use ▲▼ to select (choose start point).

- Use ◀▶ to move the start point.
- To cancel editing, select (back), and press the OK button.



4 Use ▲▼ to select (choose end point).

- Use ◀▶ to move the end point.
- To preview the specified portion, select and then press the OK button. Press the OK button again to stop previewing.

5 Use ▲▼ to select [save] (save) and press the OK button.

- Follow the instructions on the screen to save the movie.

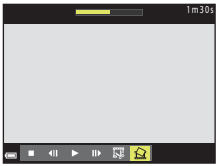
Notes About Movie Extracting

- A movie that was created by editing cannot be edited 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 (83).
- Use the multi selector ◀▶ to select the control and press the OK button.



- Select **Yes** when a confirmation dialog is displayed, and press the OK button to save the image.
- The image quality of the still images to be saved is normal (compression ratio of approximately 1:8). The image size is determined by the original movie image size (117).

Restrictions on Extracting Still Images

Still images cannot be extracted from a movie recorded with **1080/60i**, **1080/50i**, **480/30p**, **480/25p**, or an HS movie option.

Connecting the Camera to a TV, Printer, or Computer

Utilizing Images 87

Viewing Images on a TV 88

Printing Images Without a Computer 89

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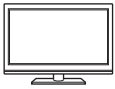
Utilizing Images

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

Viewing Images on a TV



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

Printing Images Without a Computer

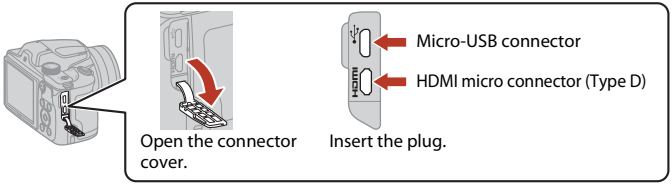
If you connect the camera to a PictBridge-compatible printer, you can print images without using a computer.
Connection method: Connect the camera directly to the printer's USB port with the USB cable.

Transferring Images to a Computer (ViewNX-i)

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

- Before connecting to a computer, install ViewNX-i on the computer.

Notes About Connecting Cables to the Camera

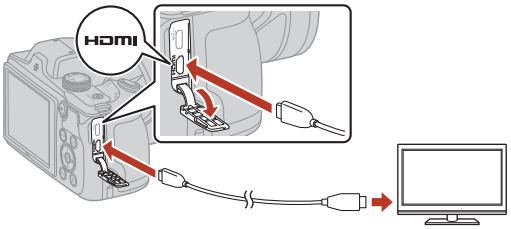


- Make sure to turn the camera off before connecting or disconnecting cables. Check the shape and direction of the plugs and do not insert or remove the plugs at an angle.
- Make sure that the camera battery is sufficiently charged. If the EH-62F AC Adapter (available separately) is used, this camera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

Viewing Images on a TV

1 Turn off the camera and connect it to the TV with a commercially available HDMI cable.

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



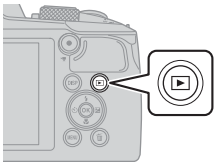
HDMI micro connector (Type D) To HDMI jack

2 Set the TV's input to external input.

- See the documentation provided with your TV for details.

3 Press and hold down the ▶ (playback) button to turn on the camera.

- Images are displayed on the TV.
- The camera screen does not turn on.



Printing Images Without a Computer

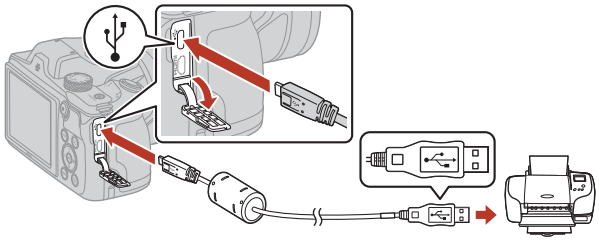
Users of PictBridge-compatible printers can connect the camera directly to the printer and print images without using a computer.

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.

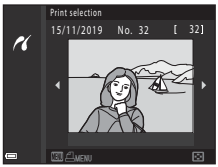
- Check the shape and direction of the plugs and do not insert or remove the plugs at an angle.



3 The camera is automatically turned on.

- The **PictBridge** startup screen (①) is displayed on the camera screen, followed by the **Print selection** screen (②).

①

② 

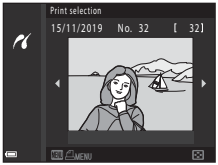
If the PictBridge Startup Screen Is Not Displayed

When **Auto** is selected for **Charge by computer** (145), 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

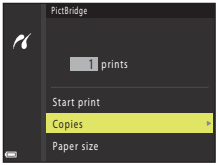
1 Use the multi selector ◀▶ to select the desired image and press the OK button.

- Move the zoom control toward **W** (▦) to switch to thumbnail playback or **T** (🔍) to switch to full-frame playback.



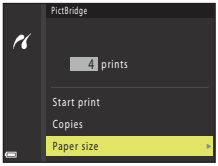
2 Use ▲▼ to select **Copies** and press the OK button.

- Use ▲▼ to set the desired number of copies (up to nine) and press the OK button.



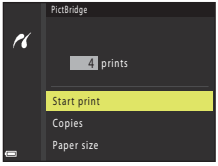
3 Select **Paper size** and press the OK button.

- Select the desired paper size and press the OK 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.



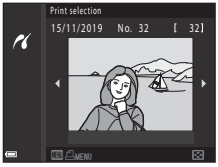
4 Select **Start print** and press the OK button.

- Printing starts.



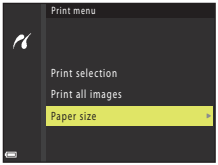
Printing Multiple Images

1 When the **Print selection** screen is displayed, press the MENU (menu) button.

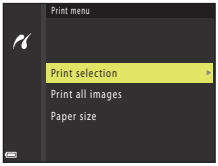


2 Use the multi selector ▲▼ to select **Paper size** and press the OK button.

- Select the desired paper size and press the OK 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 OK 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 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 OK button when setting is complete. When the screen for confirming the number of print copies is displayed, select **Start print** and press the OK 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 OK button to start printing.

Transferring Images to a Computer (ViewNX-i)

Installing ViewNX-i

ViewNX-i is Nikon software that enables you to transfer images and movies to your computer for viewing and editing.

To install ViewNX-i, download the latest version of the ViewNX-i installer from the following website and follow the on-screen instructions to complete installation.

https://downloadcenter.nikonimglib.com

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

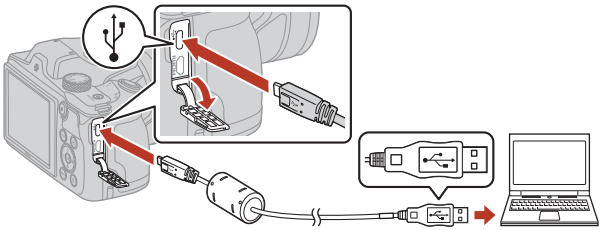
Transferring Images to a Computer

The items displayed on your computer screen may change when you update the version of your operating system or software.

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.



Notes About Connecting the Camera to a Computer

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

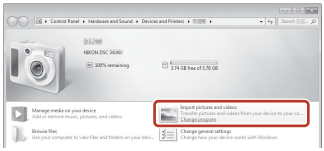
If a message is displayed prompting you to choose a program, select Nikon Transfer 2.

- **When using Windows 7**

  If the dialog shown on the right is displayed, follow the steps below to select Nikon Transfer 2.

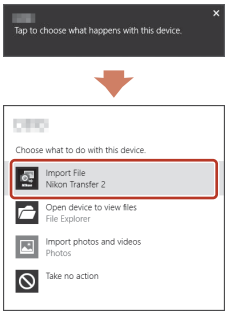
  1 Under **Import pictures and videos**, click **Change program**. A program selection dialog will be displayed; select Nikon Transfer 2 and click **OK**.

  2 Double-click the Nikon Transfer 2 icon.



- **When using Windows 10 or Windows 8.1**

  If the dialog shown on the right is displayed, click the dialog and then click **Import File/Nikon Transfer 2**.



- **When using OS X or macOS**

  If Nikon Transfer 2 does not automatically start, launch the **Image Capture** application that comes bundled with Mac while the camera and your computer are connected, and select Nikon Transfer 2 as the default application to open when the camera is connected to your computer.

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.

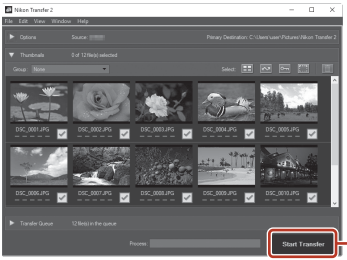
Notes About Connecting the USB Cable

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

Using ViewNX-i

Consult online help for more information.

2 After Nikon Transfer 2 starts, click **Start Transfer**.



- Image transfer begins. When image transfer is complete, ViewNX-i starts and the transferred images are displayed.

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.

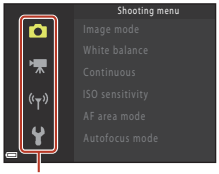
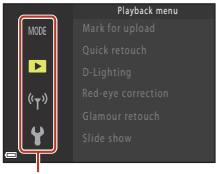
Using the Menu

Menu Operations 97
Menu Lists 100
The Shooting Menu (Common Across Shooting Modes) 104
The Shooting Menu (for (Auto) Mode) 106
The Smart Portrait Menu 115
The Movie Menu 117
The Playback Menu 124
The Network Menu 129
The Setup Menu 133

Menu Operations

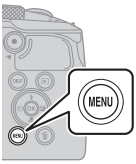
You can press the MENU (menu) button to display the menu screen and change the camera's settings.

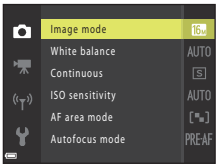
- The displayed menu varies depending on the status of the camera (during shooting or playback).
- Menu items are categorized by the icons on the left side of the screen.

When shooting	During playback
 Menu categories	 Menu categories
• **Shooting menu**[1] • **Movie menu** • **Network menu** • **Setup menu**	• **MODE Playback mode menu** • **Playback menu**[2] • **Network menu** • **Setup menu**

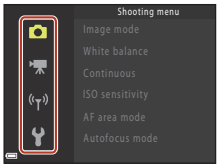
1 Icons vary depending on the shooting mode.
2 Icons vary depending on the playback mode.

1 Press the MENU (menu) button to display the menu screen.

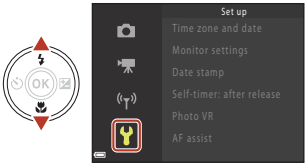




2 Press the multi selector ◀ to move to the menu category selection area.

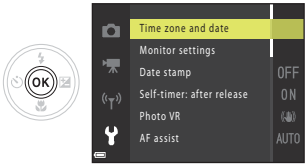


3 Press ▲▼ to change menu categories.



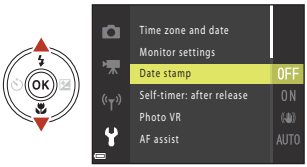
4 Press the OK button to confirm the menu category.

- Menu items corresponding to the selected menu category are displayed.



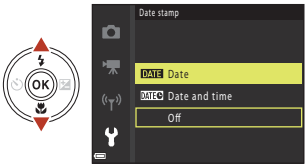
5 Press ▲▼ to select a menu option, and press the OK button to confirm the selection.

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



6 Press ▲▼ to select a setting, and press the OK button to confirm the selection.

- When you are finished using the menu, press the MENU button.
- When a menu is displayed, you can return to shooting mode by pressing the shutter-release button or ● (movie-record) button.



To Change the Flash Mode, Self-timer, Micro Mode, and Exposure Compensation Settings

When the shooting screen is displayed, you can press one of the multi selector ▲▼◀▶ to change settings such as the flash mode or self-timer (46).

The Image Selection Screen

When an image selection screen such as the one shown on the right is displayed while operating the camera menu, follow the procedures described below to select the images.

1 Use the multi selector ◀▶ to select the desired 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 **ON** or **OFF**.

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

3 Press the OK button to apply the image selection.

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

Menu Lists

The Shooting Menu

Enter shooting mode ➔ MENU button

Common Options

Option	Default setting	🕮
Image mode	**16M 4608×3456**	104

For (Auto) Mode

Option	Default setting	🕮
White balance	**Auto**	106
Continuous	**Single**	108
ISO sensitivity	**Auto**	110
AF area mode	**Target finding AF**	111
Autofocus mode	**Pre-focus**	114

For Smart Portrait Mode

Option	Default setting	🕮
Self-Collage	• **Number of shots**: **4** • **Interval**: **Medium** • **Shutter sound**: **Magic**	115
Blink proof	**Off**	116

The Movie Menu

Enter shooting mode ➔ MENU button ➔ select (movie menu) ➔ OK button

Option	Default setting	🕮
Movie options	**1080/30p** or **1080/25p**	117
Autofocus mode	**Single AF**	121
Movie VR	**On (hybrid)**	122
Wind noise reduction	**Off**	123
Frame rate	–	123

The Playback Menu

Press the ▶ button to enter playback mode ➔ MENU button

Option	🕮
Mark for upload[1]	124
Quick retouch[2]	70
D-Lighting[2]	70
Red-eye correction[2]	71
Glamour retouch[2]	71
Slide show	125
Protect[1]	126
Rotate image[1]	126
Small picture[2]	73
Copy[1]	127
Sequence display	128

[1] Select an image on the image selection screen. See "The Image Selection Screen" (🕮99) for more information.
[2] Edited images are saved as separate files. Some images may not be edited.

The Network Menu

Press the MENU button ➔ select (network menu) ➔ OK button

Option	🕮
Airplane mode	130
Choose connection	130
Connect to smart device	130
Connection to remote	130
Send while shooting	130
Wi-Fi	130
Bluetooth	131
Restore default settings	131

The Setup Menu

Press the MENU button ➔ select (setup) ➔ OK button

Option	🕮
Time zone and date	133
Monitor settings	135
Date stamp	136
Self-timer: after release	137
Photo VR	138
AF assist	138
Digital zoom	139
Sound settings	139
Auto off	140
Format card/Format memory	141
Language	141
Image comment	142
Copyright information	143
Location data display	144
Charge by computer	145
Reset all	146
Conformity marking	146
Firmware version	146

The Shooting Menu (Common Across Shooting Modes)

Image Mode (Image Size and Quality)

Enter shooting mode ➔ MENU button ➔ Image mode ➔ OK button

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.
The setting is also applied to other shooting modes.

Option*	Compression ratio	Aspect ratio (horizontal to vertical)
16M* 4608×3456★	Approx. 1:4	4:3
16M 4608×3456 (default setting)	Approx. 1:8	4:3
8M 3264×2448	Approx. 1:8	4:3
4M 2272×1704	Approx. 1:8	4:3
2M 1600×1200	Approx. 1:8	4:3
VGA 640×480	Approx. 1:8	4:3
16:9 12M 4608×2592	Approx. 1:8	16:9
1:1 3456×3456	Approx. 1:8	1:1

* The numerical values indicate the number of pixels that are captured.
Example: 16M **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

- Image mode cannot be set in the following shooting modes:
  - **Easy panorama** scene mode
  - Short movie show mode
- This function may not be available to use in combination with other functions (📖61).

Number of Images That Can Be Saved

- The approximate number of images that can be saved can be checked on the screen when shooting (17).
- 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."

The Shooting Menu (for (Auto) Mode)

White Balance (Adjusting Hue)

Rotate the mode dial to → MENU button → select (shooting menu) → White balance → OK 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. (📖107).
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

- Lower the flash when white balance is set to any setting other than **Auto** or **Flash** (📖19).
- This function may not be available to use in combination with other functions (📖61).

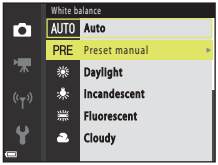
Using Preset Manual

Follow the procedures described 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.

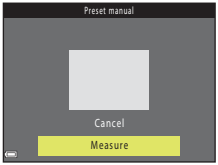
2 Use the multi selector ▲▼ to select **Preset manual**, and press the ⓞ button.

- The lens extends to the zoom position for measurement.



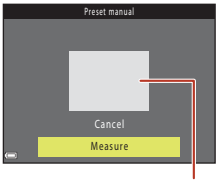
3 Select **Measure**.

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



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).



Notes About Preset Manual

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

Continuous Shooting

Rotate the mode dial to 📷 ➔ MENU button ➔ select 📷 (shooting menu) ➔ Continuous ➔ OK button

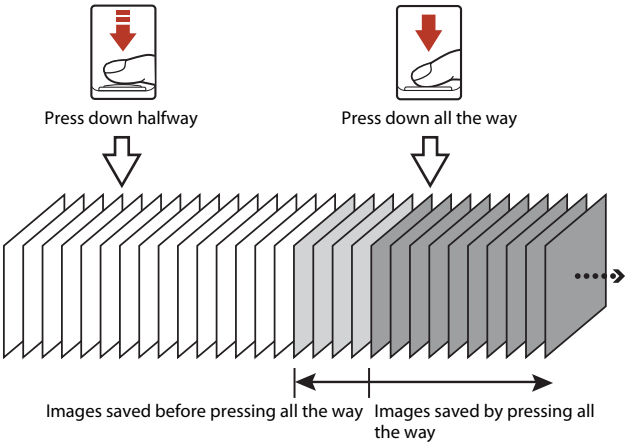
Option	Description
S Single (default setting)	One image is captured each time the shutter-release button is pressed.
H Continuous H	While the shutter-release button is held all the way down, images are captured continuously. • The camera can capture up to about 7 images continuously at a rate of about 7.7 fps (when image mode is set to 16M **4608×3456**).
L Continuous L	While the shutter-release button is held all the way down, images are captured continuously. • The camera can capture up to about 14 images continuously at a rate of about 2 fps (when image mode is set to 16M **4608×3456**). If the shutter-release button is continued to be held all the way down, the frame rate becomes slower.
Pre-shooting cache	Pre-shooting cache shooting begins when the shutter-release button is pressed halfway. When the shutter-release button is pressed all the way down, the camera saves the current image as well as the images captured immediately before the button is pressed (📖109). Pre-shooting cache makes it easy to capture perfect moments. • The camera can capture up to about 25 images continuously at a rate of about 15 fps (including a maximum of 4 images captured in the pre-shooting cache). • **Image mode** is fixed at 2M (image size: 1600 × 1200 pixels).
120 Continuous H: 120 fps	Each time the shutter-release button is pressed all the way down, images are captured continuously at a high speed rate. • The camera can capture up to about 50 images continuously at a rate of about 120 fps. • **Image mode** is fixed at VGA (image size: 640 × 480 pixels).
60 Continuous H: 60 fps	Each time the shutter-release button is pressed all the way down, images are captured continuously at a high speed rate. • The camera can capture up to about 25 images continuously at a rate of about 60 fps. • **Image mode** is fixed at 1M (image size: 1280 × 960 pixels).

Notes About Continuous Shooting

- Focus, exposure and white balance are fixed at the values determined with the first shot 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 may become slower depending on the current image mode setting, memory card type or shooting conditions.
- 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 flashes quickly 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 (📖61).

Pre-shooting Cache

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



- The pre-shooting cache icon (📷) on the shooting screen changes to green while the shutter-release button is pressed halfway.

ISO Sensitivity

Rotate the mode dial to 📷 ➔ MENU button ➔ select 📷 (shooting menu) ➔ ISO sensitivity ➔ OK 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	The range in which the camera automatically adjusts ISO sensitivity can be selected from **ISO 125-400** or **ISO 125-800**.
125, 200, 400, 800, 1600, 3200, 6400	ISO sensitivity is fixed at the specified value.

Notes About ISO Sensitivity

This function may not be available to use in combination with other functions (📖61).

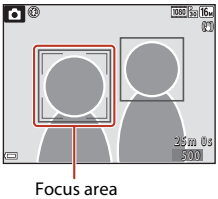
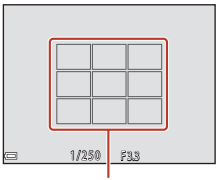
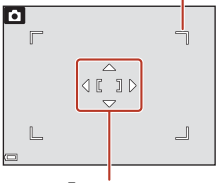
ISO Sensitivity Display on the Shooting Screen

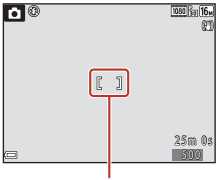
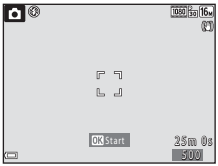
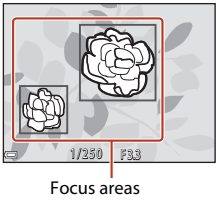
- When **Auto** is selected, ISO is displayed when the ISO sensitivity increases.
- When **Fixed range auto** is selected, the maximum value for ISO sensitivity is displayed.

AF Area Mode

Rotate the mode dial to 📷 ➔ MENU button ➔ select 📷 (shooting menu) ➔ AF area mode ➔ OK button

Set how the camera selects the focus area for autofocus.

Option	Description
Face priority	When the camera detects a human face, it focuses on that face. See "Using Face Detection" (📖56) 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 OK button. To return to moving the focus area, press the OK 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" (113) 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" (55).	

Notes About AF Area Mode

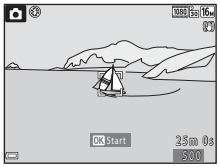
- When digital zoom is in effect, the camera focuses on the area in the center of the frame regardless of the **AF area mode** setting.
- This function may not be available to use in combination with other functions (61).

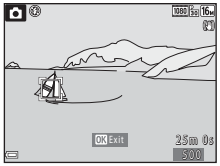
Using Subject Tracking

Rotate the mode dial to 📷 ➔ MENU button ➔ select 📷 (shooting menu) ➔ AF area mode ➔ OK button ➔ Subject tracking ➔ OK button ➔ MENU button

1 Register a subject.

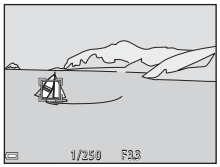
- Align the subject that you want to track with the border in the center of the frame and press the OK button.
- When the subject is registered, a yellow border (focus area) is displayed around it and the camera begins tracking the subject.
- If the subject cannot be registered, the border is displayed in red.
  Change the composition and try registering the subject again.
- To cancel subject registration, press the OK 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 all the way 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

Rotate the mode dial to 📷 ➔ MENU button ➔ select 📷 (shooting menu) ➔ Autofocus mode ➔ OK 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 always focuses even if 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 if the shutter-release button is not pressed halfway, the camera focuses when subject movement is detected or when 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** (📖121) in the movie menu.

The Smart Portrait Menu

- See "Image Mode (Image Size and Quality)" (📖104) for information about **Image mode**.

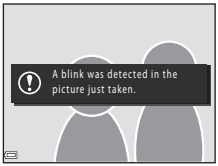
Self-Collage

Rotate the mode dial to 🙂 ➔ MENU button ➔ select 🙂 (smart portrait) ➔ Self-Collage ➔ OK 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 setting that is specified for **Shutter sound** in **Sound settings** in the setup menu is not applied to this setting.

Blink Proof

Rotate the mode dial to 🙂 ➔ MENU button ➔ select 🙂 (smart portrait) ➔ Blink proof ➔ OK 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 (📖61).

The Movie Menu

Movie Options

Enter shooting mode ➔ MENU button ➔ select (movie menu) ➔ Movie options ➔ OK button

Select the desired movie option to record. Select normal speed movie options to record at normal speed, or HS movie options (📖118) to record in slow or fast motion. The movie options that can be selected vary depending on the **Frame rate** setting (📖123).

- Memory cards with an SD Speed Class rating of 6 (Video Speed Class V6) or faster are recommended for recording movies (📖181).

Normal Speed Movie Options

Option (Image size/Frame rate[1], File format)	Image size	Aspect ratio (horizontal to vertical)
1080 60p 1080/30p 1080 50p 1080/25p (default setting)	1920 × 1080	16:9
1080 60i 1080/60i[2] 1080 50i 1080/50i[2]	1920 × 1080	16:9
720 60p 720/30p 720 50p 720/25p	1280 × 720	16:9
480 60p 480/30p 480 50p 480/25p	640 × 480	4:3

[1] Interlaced format uses Fields per second.
[2] The setting is not available when using certain effects in creative mode (📖39) or glamour retouch (📖41).

HS Movie Options

Recorded movies are played back in fast or slow motion.
See "Recording Movies in Slow Motion and Fast Motion (HS Movie)" (📖120).

Option	Image size Aspect ratio (horizontal to vertical)	Description
HS 480/4×[1]	640 × 480 4:3	1/4-speed slow motion movies • Max. recording time[2]: 10 seconds (playback time: 40 seconds)
HS 1080/0.5×[1]	1920 × 1080 16:9	2× speed fast motion movies • Max. recording time[2]: 2 minutes (playback time: 1 minute)

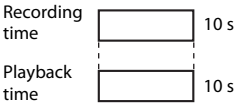
[1] The setting is not available when using certain effects in creative mode (📖39) or glamour retouch (📖41).
[2] While recording movies, the camera can be switched between normal speed movie recording and slow motion or fast motion movie recording.
The maximum recording time shown here refers to the case when recording continues without being switched to normal speed.

Notes About HS Movie

- Sound is not recorded.
- Still images cannot be saved during movie recording.
- Movie recording cannot be paused.
- Zoom position and focus are locked when movie recording starts.

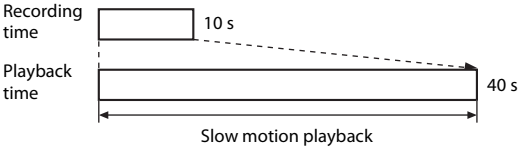
Playing Back in Slow Motion and Fast Motion

When recording at normal speed:



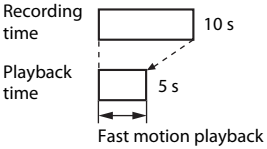
When recording at 480 HS 480/4×:

Movies are recorded at 4× normal speed.
They are played back in slow motion at 4× slower speed.



When recording at 1080 HS 1080/0.5×:

Movies are recorded at 1/2 normal speed.
They are played back in fast motion at 2× faster speed.



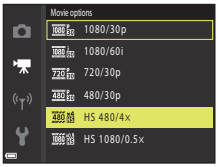
Recording Movies in Slow Motion and Fast Motion (HS Movie)

Enter shooting mode ➔ MENU button ➔ select (movie menu) ➔ Movie options ➔ OK button

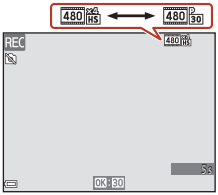
Movies recorded using HS movie can be played back in slow motion at 1/4 of the normal playback speed, or in fast motion at twice the normal playback speed.

1 Use the multi selector ▲▼ to select an HS movie option (📖118) and press the OK button.

- After applying the option, press the MENU button to return to the shooting screen.



2 Press the ● (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 OK 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 (📖118) is reached, the camera automatically switches to normal speed movie recording.

3 Press the ● () button to end recording.

Autofocus Mode

Enter shooting mode ➔ MENU button ➔ select (movie menu) ➔ Autofocus mode ➔ OK button

Set how the camera focuses when recording movies.

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 the subject will remain fairly consistent.
AF-F Full-time AF	The camera focuses continuously. 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.

Notes About Autofocus Mode

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

Movie VR

Enter shooting mode ➔ MENU button ➔ select (movie menu) ➔ Movie VR ➔ OK button

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

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

Notes About Movie VR

- When an HS movie option is selected in **Movie options**, the setting is fixed at **Off**.
- The effects of camera shake may not be completely eliminated in some situations.

Wind Noise Reduction

Enter shooting mode ➔ MENU button ➔ select (movie menu) ➔ Wind noise reduction ➔ OK button

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

Notes About Wind Noise Reduction

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

Frame Rate

Enter shooting mode ➔ MENU button ➔ select (movie menu) ➔ Frame rate ➔ OK 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** (117) 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.

- See "Editing Images (Still Images)" (📖69) for information about image editing functions.

Mark for Upload

Press the ▶ button to enter playback mode ➔ MENU button ➔ Mark for upload ➔ OK button

Select still images on the camera's playback screen to automatically upload them to a smart device.

For connections with smart devices or use of the SnapBridge app, see the included "SnapBridge Connection Guide" and SnapBridge online help.

1 On the image selection screen (📖99), select still images to upload them to a smart device.

2 Use the SnapBridge app to establish a Bluetooth connection between the camera and smart device.

3 📷 tab of the SnapBridge app ➔ **Auto link** ➔ Enable **Auto download**

- The selected still images are uploaded to the smart device.

Notes About Mark for Upload

- Still images are uploaded at an image size of 2 megapixels.
- Movies cannot be uploaded.
- To upload still images at their original size or to upload movies, use **Download pictures** in the SnapBridge app.
- When you select **Reset all** (📖146) in the setup menu or **Restore default settings** (📖131) in the network menu, the Mark for upload settings that you made are canceled.

Send While Shooting

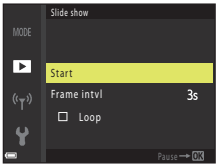
When you use **Send while shooting** (📖130) in the network menu, still images can be sent automatically to a smart device every time they are captured with the camera.

Slide Show

Press the ▶ button to enter playback mode ➔ MENU button ➔ Slide show ➔ OK 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 OK button.



- The slide show begins.
- To change the interval between images, select **Frame intvl**, press the OK button, and specify the desired interval time before selecting **Start**.
- To repeat the slide show automatically, select **Loop** and press the OK 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 OK button. To resume the slide show, select ▶ and then press the OK button.

Operations During Playback

- Use the multi selector ▲▼◀▶ to display the previous/next image. Press and hold them down to rewind/fast-forward images quickly.
- Press the OK button to pause or end the slide show.

Protect

Press the ▶ button to enter playback mode ➔ MENU button ➔ Protect ➔ OK 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 (📖141).

Rotate Image

Press the ▶ button to enter playback mode ➔ MENU button ➔ Rotate image ➔ OK 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 OK button to finalize display orientation, and save orientation information with the image.

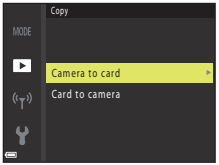
Copy (Copy Between the Memory Card and Internal Memory)

Press the ▶ button to enter playback mode ➔ MENU button ➔ Copy ➔ OK button

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

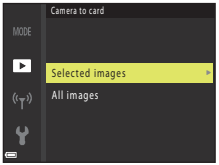
- When a memory card that contains no images is inserted and the camera is switched to playback mode, **Memory contains no images.** is displayed. In that case, press the MENU button to select **Copy**.

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



2 Select a copy option and press the OK button.

- When you choose **Selected images**, use the image selection screen to specify images (📖99).



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.
- When images in a sequence are displayed in full-frame playback mode, **Camera to card** cannot be selected.
- When images in a sequence are displayed in full-frame playback mode, all images in the sequence are copied if you select **Current sequence** in **Card to camera**.

Sequence Display

Press the ▶ button to enter playback mode ➔ MENU button ➔ Sequence display ➔ OK button

Select the method used to display images in the sequence (📖67).

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 after the camera is turned off.

The Network Menu

Press the MENU button ➔ select (network menu) ➔ OK button

Configure settings when establishing a wireless connection between the camera and a smart device, or the camera and ML-L7 Remote Control (available separately).

Connecting to a Smart Device

When you connect to a smart device, you can upload images captured with the camera to the smart device or operate the camera remotely with the smart device.

Install the SnapBridge app on the smart device.

Set **Choose connection** (📖130) in the network menu to **Smart device** (default setting) in advance.

- The connection methods are as follows.
  - Bluetooth connection: You can automatically upload still images (uploaded at an image size of 2 megapixels). When establishing a Bluetooth connection for the first time, use **Connect to smart device** (📖130) in the network menu to pair the camera and smart device.
    You can also switch to a Wi-Fi connection after establishing a Bluetooth connection.
  - Wi-Fi connection: You can download still images (2 megapixels or original size) and movies to the smart device or perform remote photography.
- For connections or use of the SnapBridge app, see the included "SnapBridge Connection Guide" and SnapBridge online help.

Connecting to the Remote Control

Set **Choose connection** (📖130) in the network menu to **Remote control** in advance.

The camera and remote control are connected through Bluetooth. When connecting to the remote control for the first time, pair the camera and remote control.

See "ML-L7 Remote Control" (📖173) for more information about the remote control.

Network Menu List

Some options cannot be set while a wireless connection is established. To set them, disconnect the wireless connection.

Option		Description
Airplane mode		Select **On** to turn off all wireless connections.
Choose connection		Select whether to connect the camera to **Smart device** (default setting) or **Remote control**.
Connect to smart device		Pair when connecting to a smart device through Bluetooth for the first time. For more information, see the included "SnapBridge Connection Guide" and SnapBridge online help.
Connection to remote		Pair when connecting to the ML-L7 Remote Control (available separately) for the first time (📖175).
Send while shooting	Still images	When set to **Yes**, still images can be sent automatically to a smart device connected through Bluetooth every time they are captured. • To send automatically, the SnapBridge app must also be configured. In the 📷 tab of the SnapBridge app ➔ **Auto link** ➔ enable **Auto download**. • Still images are uploaded at an image size of 2 megapixels. To upload at their original size, use **Download pictures** in the SnapBridge app. • If you use **Mark for upload** (📖124) in the playback menu, you can select still images on the camera's playback screen to automatically upload them to a smart device.
	Upload (photos)	Set the conditions for automatically sending still images.
Wi-Fi	Network settings	**SSID***: Set a 1- to 32-character alphanumeric SSID.
		Auth./encryp.: Select whether to encrypt communications. Communications are not encrypted when **Open** is selected.
		Password*: Set an 8- to 36-character alphanumeric password. • For protection of privacy, changing the password periodically is recommended.
		Channel: Select the channel used for the Wi-Fi connection. If the communication quality is poor or the image upload speed is extremely slow when using a Wi-Fi connection, try changing the channel.
	Current settings	Confirm the current **Network settings** in a list.

Option		Description
Bluetooth	Connection	Select **Enable** or **Disable** for Bluetooth communication.
	Paired devices	Display smart devices that have been paired. You can change the smart device to connect with, or delete paired smart devices. • This camera can be paired with up to five smart devices (only one device can be connected at a time).
	Send while off	Select **On** or **Off** to set whether the camera communicates with the smart device when the camera is off or in standby mode (📖19). • During communication through **Send while off**, the power-on lamp turns on even though the camera is off.
Restore default settings		Restore all network menu settings to their default values.

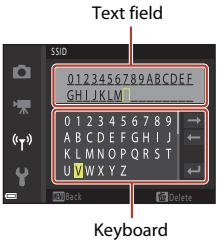
* See "Operating the Text Input Keyboard" (📖132) for information about the input method.

Bluetooth Communication Indicator and Wi-Fi Communication Indicator on the Shooting Screen

- About the Bluetooth communication indicator
  - When the camera is connected to a smart device via Bluetooth, ✱ is displayed.
  - When the camera is waiting for the connection to a smart device to be reestablished, ✱ flashes. It also flashes when Bluetooth communication is disconnected while uploading images (📖155).
- About the Wi-Fi communication indicator
  - When the camera is preparing to connect to a smart device via Wi-Fi, flashes.
  - When the camera is connected to a smart device via Wi-Fi, is displayed.

Operating the Text Input Keyboard

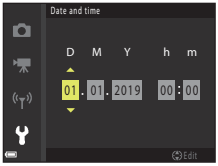
- Use the multi selector ▲▼◀▶ to select alphanumeric characters. Press the OK button to enter the selected character in the text field and move the cursor to the next space.
- To move the cursor in the text field, select ← or → on the keyboard, and press the OK button.
- To delete one character, press the 🗑 button.
- To apply the setting, select ↵ on the keyboard and press the OK button.



Time Zone and Date

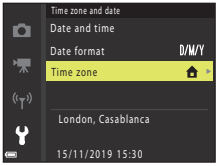
Press the MENU button ➔ select (setup) ➔ Time zone and date ➔ OK button

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 field setting and press the OK button. 
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.

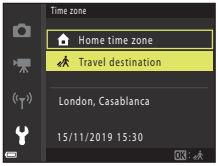
Setting the Time Zone

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

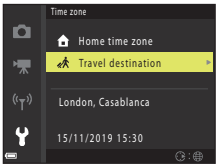


2 Select **Home time zone** or **Travel destination** and press the ⓞ button.

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

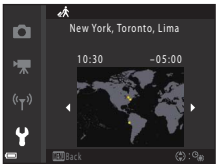


3 Press ▶.



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 ⓞ 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**.



Monitor Settings

Press the MENU button ➔ select (setup) ➔ Monitor settings ➔ OK button

Option	Description
Help display	The descriptions of functions are displayed while changing the shooting mode or while the setting screen is displayed. • Default setting: **On**
Image review	Set whether or not to display the captured image immediately after shooting. • Default setting: **On**
Brightness	Adjust the brightness. • Default setting: **3**
View/hide framing grid	Set whether or not to display a boxed guide for framing on the shooting screen. • Default setting: **Off**

Date Stamp

Press the MENU button ➔ select (setup) ➔ Date stamp ➔ OK button

The shooting date and time can be stamped on images when shooting.

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 date and time 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 the scene mode is set to **Night landscape** (when set to **Hand-held**), **Night portrait** (when set to **Hand-held**), **Backlighting** (when **HDR** is set to **On**), **Multiple exp. Lighten**, or **Easy panorama**
  - When the continuous shooting setting (📖108) is set to **Pre-shooting cache**, **Continuous H: 120 fps**, or **Continuous H: 60 fps**
  - When recording movies
  - When saving still images during movie recording
  - When creating still images by editing movies
- The stamped date and time may be difficult to read when using a small image size.

Self-timer: After Release

Press the MENU button ➔ select (setup) ➔ Self-timer: after release ➔ OK button

Set whether to cancel the self-timer after using it to shoot (49).

Option	Description
Exit self-timer mode (default setting)	The self-timer is canceled after shooting. • After shooting in **Multiple exp. Lighten** or **Moon** scene mode, self-timer is set to **3s** (3 seconds). To end self-timer, manually set the self-timer setting to OFF. • **Pet portrait auto release** and **Smile timer** are not canceled.
Stay in self-timer mode	The self-timer photography continues after shooting. • When the camera is turned off, self-timer is canceled. • **Self-Collage** is canceled.

Photo VR

Press the MENU button ➔ select (setup) ➔ Photo VR ➔ OK 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 (default setting)	Performs compensation for camera shake 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 until the shooting screen is ready before taking pictures.
- Images on the screen may be displayed blurry immediately after shooting.
- Vibration reduction may be unable to completely eliminate the effects of camera shake in some situations.

AF Assist

Press the MENU button ➔ select (setup) ➔ AF assist ➔ OK 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 1.5 m (4 ft 11 in.) at the maximum wide-angle position and about 3.0 m (9 ft 10 in.) at the maximum telephoto position. • The AF-assist illuminator may not light depending on the position of the focus area or the shooting mode.
Off	The AF-assist illuminator does not light.

Digital Zoom

Press the MENU button ➔ select (setup) ➔ Digital zoom ➔ OK 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:
  - **Night landscape**, **Night portrait**, **Backlighting** (when **HDR** is set to **On**), **Portrait**, **Multiple exp. Lighten** (when **Nightscape + star trails** or **Star trails** is set), **Fireworks show**, **Easy panorama**, or **Pet portrait** scene mode
  - Creative mode
  - Smart portrait mode
- Digital zoom cannot be used in other shooting modes when using certain settings (62).

Sound Settings

Press the MENU button ➔ select (setup) ➔ Sound settings ➔ OK 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 welcome screen sound is also produced. • Sounds are disabled when using **Pet portrait** or **Bird-watching** 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 recording movies or when using **Easy panorama**, **Pet portrait**, or **Bird-watching** scene mode.

Auto Off

Press the MENU button ➔ select (setup) ➔ Auto off ➔ OK button

Set the amount of time that elapses before the camera enters standby mode (📖19). 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 an HDMI cable is connected: 30 minutes
- When the AC adapter is connected: 30 minutes
- When waiting to connect to a smart device: 30 minutes

Format Card/Format Memory

Press the MENU button ➔ select (setup) ➔ Format card/Format memory ➔ OK 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.

- You may not be able to select this setting while a wireless connection is established.

Formatting a Memory Card

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

Formatting the Internal Memory

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

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

- Do not turn the camera off or open the battery-chamber/memory card slot cover during formatting.

Language

Press the MENU button ➔ select (setup) ➔ Language ➔ OK button

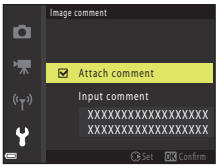
Select a language for display of camera menus and messages.

Image Comment

Press the MENU button ➔ select (setup) ➔ Image comment ➔ OK button

Attach a comment that was previously registered to images that will be captured.

- You can imprint the attached comment to images that will be sent to a smart device using the SnapBridge app. You must configure the SnapBridge app in advance. See SnapBridge app online help for more information.
- You can also check the attached comment using ViewNX-i metadata.

Option	Description
Attach comment	A comment registered with **Input comment** is attached to images. • Select **Attach comment**, press ▶, and set the check box to on (✔). When you press the OK button, the setting is enabled, and the comment will be attached to the images captured afterwards. 
Input comment	You can register a comment of up to 36 alphanumeric characters. • Select **Input comment**, press ▶, and the input screen is displayed. See "Operating the Text Input Keyboard" (📖132) for information about the input method.

Notes About Image Comments

Image comments cannot be attached to movies.

Image Comments Display

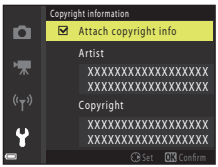
Image comments are not displayed even if images are played back on the camera.

Copyright Information

Press the MENU button ➔ select (setup) ➔ Copyright information ➔ OK button

Attach the copyright information that was previously registered to images that will be captured.

- You can imprint the attached copyright information to images that will be sent to a smart device using the SnapBridge app. You must configure the SnapBridge app in advance. See SnapBridge app online help for more information.
- You can also check the attached copyright information using ViewNX-i metadata.

Option	Description
Attach copyright info	Copyright information registered with **Artist** and **Copyright** is attached to images. • Select **Attach copyright info**, press ▶, and set the check box to on (✔). When you press the OK button, the setting is enabled, and the copyright information will be attached to the images captured afterwards. 
Artist	You can register an artist name of up to 36 alphanumeric characters. • Select **Artist**, press ▶, and the input screen is displayed. See "Operating the Text Input Keyboard" (📖132) for information about the input method.
Copyright	You can register a copyright owner name of up to 54 alphanumeric characters. • Select **Copyright**, press ▶, and the input screen is displayed. See "Operating the Text Input Keyboard" (📖132) for information about the input method.

Notes About Copyright Information

- Copyright information cannot be attached to movies.
- To prevent illegal use of artist names and copyright owner names when lending or transferring ownership of the camera, make sure to disable the **Attach copyright info** setting. Also, make sure that the artist name and copyright owner name are blank.
- Nikon is not responsible for any kind of trouble or damage resulting from the use of **Copyright information**.

Copyright Information Display

- Copyright information is not displayed even if images are played back on the camera.
- If you input both **Artist** and **Copyright**, only the copyright owner name is imprinted to images in the SnapBridge app.

Location Data Display

Press the MENU button ➔ select (setup) ➔ Location data display ➔ OK button

Use this option to display the location information obtained from the smart device.

Obtaining Location Information from a Smart Device

For connections with smart devices or use of the SnapBridge app, see the included "SnapBridge Connection Guide" and SnapBridge online help.

1 Use the SnapBridge app to establish a Bluetooth connection between the camera and smart device.

2 In the tab of the SnapBridge app ➔ **Auto link** ➔ enable **Synchronize location data**.

- When obtaining location information, is displayed on the shooting screen of the camera.
- When is displayed, location information is recorded on captured images.
- To stop obtaining location information, disable **Synchronize location data**.

Charge by Computer

Press the MENU button ➔ select (setup) ➔ Charge by computer ➔ OK button

Option	Description
AUTO Auto (default setting)	When the camera is connected to a computer that is running (93), the battery inserted into the camera is automatically charged using power supplied by the computer. • The power-on lamp (charge lamp) slowly flashes while the battery is charging. When charging is complete, the power-on lamp (charge lamp) changes from flashing to on.
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 5 hours 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 Power-on Lamp (Charge Lamp) Quickly Flashes

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

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

Reset All

Press the MENU button ➔ select (setup) ➔ Reset all ➔ OK button

When **Reset** is selected, the camera's settings are restored to their default values.
- The network menu settings are also restored to their default values.
- Some settings, such as **Time zone and date** or **Language**, are not reset.
- You may not be able to select this setting while a wireless connection is established.

Resetting File Numbering

To reset file numbering to "0001", delete all images saved on the memory card or in the internal memory (21) before selecting **Reset all**.

Conformity Marking

Press the MENU button ➔ select (setup) ➔ Conformity marking ➔ OK button

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

Firmware Version

Press the MENU button ➔ select (setup) ➔ Firmware version ➔ OK button

View the current camera firmware version.
- You may not be able to select this setting while a wireless connection is established.

If There Is a Problem

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Troubleshooting

If the camera fails to function as expected, check the following before consulting your retailer or Nikon-authorized service representative.

- Turning off the camera once may solve the issue.
- If you cannot find a relevant entry, also check "Error Messages" (📖157) or the Nikon website for your region.

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.	12, 13, 167
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 or the battery has become hot. Leave the camera off until the inside of the camera has cooled, and then try turning it on again.	19 167 –
The monitor is blank.	• The camera is off. • The battery is exhausted. • The camera automatically turns off to save power (auto off function). • The camera is connected to a TV or computer. • **Multiple exp. Lighten** scene mode shooting is in progress.	14 17 19 – –
The camera becomes hot.	The camera may become hot when used for an extended period of time such as to shoot movies, or when used in a hot environment; this is not a malfunction.	–

Problem	Cause/Solution	🕮
The battery inserted in the camera cannot be charged.	• Confirm all connections. • When connected to a computer, the camera may not charge for any of the reasons described below. - **Off** is selected for **Charge by computer** in the setup menu. - 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. - Battery charging may stop when the computer enters sleep mode. - Depending on the computer specifications, settings, and status, battery charging may not be possible.	13 145 – 14 – –
The monitor is hard to see.	• The surrounding area is too bright. - Move to a darker place. • Adjust the screen brightness.	– 135
🕒 flashes on the screen. Date and time of recording are not correct.	• If the camera clock has not been set, 🕒 flashes on the shooting screen, and images and movies saved before the clock is set are dated "00/00/0000 00:00" and "01/01/2019 00:00" respectively. Set the correct time and date for **Time zone and date** in the setup menu. • The camera clock is not as accurate as ordinary watches or clocks. Periodically compare the time of the camera clock with that of a more accurate timepiece and reset as required.	4, 133
No information displayed on the screen.	Shooting and photo information may be hidden. Press the **DISP** button until information is displayed.	4
Date stamp not available.	**Time zone and date** has not been set in the setup menu.	133
Date not stamped on images even when **Date stamp** is enabled.	• The date cannot be stamped with certain shooting modes or when using certain settings in other functions. • The date cannot be stamped on movies.	61, 136

Problem	Cause/Solution	🕮
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. Configure the camera settings again. • The internal clock battery is used to power the camera clock and to retain certain settings. Charging time of the clock battery takes about 10 hours when you insert the battery into the camera or connect the AC adapter (available separately) to the camera, and the clock battery operates for several days even after the camera battery is removed.	–
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.	24, 114, 121

Shooting Issues

Problem	Cause/Solution	🕮
Cannot switch to shooting mode.	Disconnect the HDMI cable or USB cable.	87
Cannot take pictures or record movies.	• When the camera is in playback mode, press the ▶ button, shutter-release button, or ● (🎥) button. • When menus are displayed, press the MENU button. • The flash is charging while ⚡ (flash-ready indicator) is flashing. Wait until charging is finished. • Insert a memory card with sufficient free space into the camera. • The battery is exhausted.	2, 20 97 47 12 12, 13, 167
The camera cannot focus.	• The subject is too close. Try shooting using scene auto selector mode, **Close-up** scene mode, or macro mode. • The subject is hard to focus on. • Set **AF assist** in the setup menu to **Auto**. • Turn the camera off and then on again.	24, 28, 32, 46, 50 57 138 –

Problem	Cause/Solution	🕮
Images are blurred.	• Use the flash. • Increase the ISO sensitivity value. • Enable **Photo VR** when shooting still images. Enable **Movie VR** when recording movies. • Use a tripod to stabilize the camera (using the self-timer at the same time is more effective).	47 110 122, 138 49
Bright specks appear in images captured with flash.	Flash is reflecting off particles in the air. Lower the flash.	19, 47
Flash does not fire.	• The flash is lowered. • The flash does not fire with certain shooting modes or when using certain settings in other functions.	19, 47 59, 61
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.	139 62, 139
Image mode not available.	**Image mode** cannot be selected with certain shooting modes or when using certain settings in other functions.	61, 104
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, even when **On** is selected. • Do not block the speaker.	139 3
AF-assist illuminator does not light.	**Off** is selected for the **AF assist** option in the setup menu. AF-assist illuminator may not light depending on the position of the focus area or the current shooting mode, even when **Auto** is selected.	138
Images appear smeared.	The lens is dirty. Clean the lens.	170
Colors are unnatural.	White balance or hue is not adjusted properly.	33, 106
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	 47 110

Problem	Cause/Solution	🕮
Images are too dark (underexposed).	• The flash is lowered, or a shooting mode that restricts the flash is selected. • 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 raise the flash and set the flash mode to ϟ (fill flash).	19, 47, 59 17 178 51 110 30, 47
Images are too bright (overexposed).	Adjust exposure compensation.	51
Areas other than red eyes are corrected.	Use any shooting mode other than **Night portrait**, and change the flash mode to any setting other than ϟ◉ (auto with red-eye reduction) and try taking the picture again.	47, 59
Skin tones are not softened.	• Under some shooting conditions, facial skin tones may not be softened. • For images containing four or more faces, try using **Skin softening** in **Glamour retouch** in the playback menu.	42 71
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 ϟ◉ (auto with red-eye reduction) • When shooting in **Night landscape**, **Night portrait**, or **Backlighting** (when **HDR** is set to **On**) scene mode • When the skin softening function is applied while shooting • When using continuous shooting mode	– 48 28, 29 41, 42 108

Playback Issues

Problem	Cause/Solution	🕮
File cannot be played back.	• This camera may not be able to play back images saved with another make or model of digital camera. • This camera may not be able to play back movies saved 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 magnification rate shown on the screen may differ from the actual magnification rate 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 image.	• 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.	38, 69 – – –
Cannot rotate image.	This camera cannot rotate images captured with another make or model of digital camera.	–

External Device Issues

Problem	Cause/Solution	🕮
Cannot select **Connect to smart device**.[1]/Cannot pair with a smart device using **Connect to smart device**.[1]	• When establishing a wireless connection for the first time, see the included "SnapBridge Connection Guide". • Use a sufficiently charged battery. • Insert a memory card with sufficient free space into the camera. • Disconnect the HDMI cable or USB cable. • Set the following in **Network menu** in the camera. - **Airplane mode**: **Off** - **Choose connection**: **Smart device** - **Bluetooth** ➔ **Connection**: **Enable** • Enable Bluetooth on the smart device.	– – 12 87 129 –
Paired smart devices are not connected through Bluetooth automatically.[1]	• Set the following in **Network menu** in the camera. - **Airplane mode**: **Off** - **Choose connection**: **Smart device** - **Bluetooth** ➔ **Connection**: **Enable** • If the camera is paired with multiple smart devices, select the smart device you want to connect in **Network menu** ➔ **Bluetooth** ➔ **Paired devices** in the camera. • If multiple cameras are registered in the SnapBridge app, switch to the camera you want to connect using the SnapBridge app.	129 131 –

Problem	Cause/Solution	🕮
Cannot upload images to a smart device that is connected with the SnapBridge app.[1]	• You can upload automatically through the auto link feature only when connected through Bluetooth. To upload automatically, set the following. - **Network menu ➔ Send while shooting ➔ Still images** in the camera: **Yes** - 📷 tab of the SnapBridge app ➔ **Auto link ➔ Auto download**: Enable - If **Network menu ➔ Bluetooth ➔ Send while off** in the camera is set to **Off**, change the setting to **On** or turn on the camera. • When there is a large number of images to upload during Bluetooth communication, communication may be disconnected while uploading. If you turn the camera off and then on again, it is reconnected to the smart device. Uploading resumes after the camera is reconnected in the following situations. - When **Network menu ➔ Send while shooting ➔ Still images** in the camera is set to **Yes** - When images are marked for upload in **Playback menu ➔ Mark for upload** in the camera • You may not be able to upload images or uploading may be canceled while the camera is being operated.	130 – 131 – –
Cannot download still images at the original size on the smart device that is connected with the SnapBridge app.[1]	For **Send while shooting** and **Mark for upload** in the camera, still images are uploaded at an image size of 2 megapixels. To upload at their original size, use **Download pictures** in the SnapBridge app.	–
Cannot perform remote photography from a smart device that is connected with the SnapBridge app.[1]	• You cannot perform remote photography when there is no free space in the internal memory or memory card. Delete unnecessary images or insert a memory card with sufficient free space. • You may not be able to perform remote photography while the camera is being operated.	–
Communication quality is poor or image upload speed is extremely slow when using a Wi-Fi connection with the SnapBridge app.	On the camera, try changing the channel in **Network menu ➔ Wi-Fi ➔ Network settings ➔ Channel**.	130

Problem	Cause/Solution	🕮
Cannot select **Connection to remote**.[2]/ Cannot use **Connection to remote** to pair with the ML-L7 Remote Control.[2]	• Use a sufficiently charged battery. • Set the following in **Network menu** in the camera. - **Airplane mode**: **Off** - **Choose connection**: **Remote control** - **Bluetooth ➔ Connection**: **Enable**	– 129
The camera does not respond when operating the ML-L7 Remote Control.[2]	• The camera is not connected to the ML-L7 Remote Control (available separately). Press the power button on the remote control to establish the connection. If is not displayed on the shooting screen, perform pairing again. • The remote control can be used only for shooting operations. • The Fn1/Fn2 buttons on the remote control cannot be used with this camera.	175 173 173
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.	– – 12
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-i.	– 87 87, 93 – –
The PictBridge 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.	145
Images to be printed are not displayed.	• The memory card contains no images. • Remove the memory card to print images in the internal memory.	– 12
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.	–

[1] See the included "SnapBridge Connection Guide" and SnapBridge online help.
[2] Refer to the User's Manual provided with the ML-L7 Remote Control (available separately).

Error Messages

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

- If you cannot find a relevant entry, also check "Troubleshooting" (📖148).

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 locked. Unlock it.	169
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.	12, 181
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 OK button to format the memory card.	169
Out of memory.	Delete images or insert a new memory card.	12, 21
Image cannot be saved.	An error occurred while saving the image. Insert a new memory card or format the memory card or internal memory.	12, 141
	The camera has run out of file numbers. Insert a new memory card or format the memory card or internal memory.	12, 141
	There is insufficient space to save the copy. Delete images from the destination.	21
Image cannot be modified.	Check that the images can be edited.	69, 153

Display	Cause/Solution	🕮
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.	77, 181
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.	12 127
File contains no image data.	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.	–
Cannot select this image.	Images captured with other cameras cannot be marked for upload.	–
All images are hidden.	There are no images available for a slide show, etc.	125
This image cannot be deleted.	The image is protected. Disable protection.	126
Raise the flash.	The flash is lowered. Raise the flash before shooting in **Night portrait** or **Backlighting** (when **HDR** is set to **Off**) scene mode.	29, 47
Turn the camera off and then on again.	An error occurred in lens operation. Do not apply excessive force on the lens. If you turn the camera off and then on again, lens operation will return to normal. If the error persists even after turning the camera off and then on again, contact your retailer or Nikon-authorized service representative.	148
Communications error	An error occurred while communicating with the printer. Turn the camera off and reconnect the USB cable.	89
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.	148
Printer error: check printer status.	After solving the problem, select **Resume** and press the OK button to resume printing.*	–
Printer error: check paper.	Load the specified size of paper, select **Resume**, and press the OK button to resume printing.*	–

Display	Cause/Solution	🕮
Printer error: paper jam.	Remove the jammed paper, select **Resume**, and press the OK button to resume printing.*	–
Printer error: out of paper.	Load the specified size of paper, select **Resume**, and press the OK 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 OK button to resume printing.*	–
Printer error: out of ink.	Replace the ink cartridge, select **Resume**, and press the OK button to resume printing.*	–
Printer error: file corrupt.	There is a problem with the image file to be printed. Select **Cancel** and press the OK button to cancel printing.	–

* See the documentation provided with your printer for further guidance and information.

Technical Notes

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Notices

Notices for Customers in the U.S.A.

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

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

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

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

Federal Communications Commission (FCC) Radio Frequency Interference Statement

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

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

CAUTIONS

Modifications

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

Interface Cables

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

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

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

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.

DISPOSE OF USED BATTERIES ACCORDING TO THE INSTRUCTIONS.

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

The following apply only to users in European countries:

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

Notes About Wireless Communication Functions

Restrictions on Wireless Devices

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

Security

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

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

Personal Information Management and Disclaimer

- User information registered and configured on the product, including wireless LAN connection settings and other personal information, is susceptible to alteration and loss resulting from operational error, static electricity, accident, malfunction, repair or other handling. Always keep separate copies of important information. Nikon is not responsible for any direct or indirect damages or lost profits resulting from alteration or loss of content that is not attributable to Nikon.
- Before discarding this product or transferring it to another owner, perform **Reset all** in the setup menu (📖97) to delete all user information registered and configured with the product, including wireless LAN connection settings and other personal information.
- Nikon is not responsible for any damages resulting from unauthorized use of this product by third parties in the event that the product is stolen or lost.

Precautions when Exporting or Carrying This Product Abroad

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

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

Federal Communications Commission (FCC) and Innovation, Science and Economic Development Canada (ISED)

Declaration of Conformity

This device complies with part 15 of FCC Rules and Innovation, Science and Economic Development Canada's licence-exempt RSSs. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

FCC/ISED 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.

This product has been tested and found to comply with FCC/ISED radiation exposure limits set forth for an uncontrolled environment and meets the FCC radio frequency (RF) Exposure Guidelines and RSS-102 of the ISED radio frequency (RF) Exposure rules. Please refer to the SAR test report that was uploaded to FCC website.

Notice for Customers in Europe

Declaration of Conformity (Europe)

Hereby, Nikon Corporation declares that the radio equipment type COOLPIX B600 is in compliance with Directive 2014/53/EU.

The full text of the EU declaration of conformity is available at the following internet address: https://imaging.nikon.com/support/pdf/DoC_N1811.pdf.

- Maximum output power:
  - Wi-Fi: 11.3 dBm (EIRP)
  - Bluetooth: 3.1 dBm (EIRP)
  - Bluetooth Low Energy: 2.12 dBm (EIRP)
- Operating frequency:
  - Wi-Fi: 2412–2462 MHz (1–11 channels)
  - Bluetooth: 2402–2480 MHz
  - Bluetooth Low Energy: 2402–2480 MHz

Notice for Customers in Singapore

This device complies with radio-frequency regulations.

Complies with IMDA Standards DA103423

Caring for the Product

Observe the precautions described below in addition to the warnings in "For Your Safety" (📖vi–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.

Keep Dry

The device will be damaged if immersed in water or subjected to high humidity.

Avoid Sudden Changes in Temperature

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

Keep Away from Strong Magnetic Fields

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

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

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

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

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

Notes About the Monitor

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

The Battery

Precautions for Use

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

Charging the Battery

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

- Charge the battery indoors with an ambient temperature of 5°C to 35°C (41°F to 95°F) before use.
- A high battery temperature may prevent the battery from charging properly or completely, and may reduce battery performance. Note that the battery may become hot after use; wait for the battery to cool before charging.
  When charging the battery inserted into this camera using the Charging AC Adapter or a computer, the battery is not charged at battery temperatures below 0°C (32°F) or above 50°C (122°F).
- Do not continue charging once the battery is fully charged as this will result in reduced battery performance.
- The battery temperature may increase during charging. However, this is not a malfunction.

Carrying Spare Batteries

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

Using the Battery When Cold

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

Battery Terminals

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

Charging an Exhausted Battery

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

Storing the Battery

- Always remove the battery from the camera or optional battery charger when it is not being used. Minute amounts of current are drawn from the battery while it is in the camera, even when not in use. This may result in excessive battery drain and complete loss of function.
- Charging a used battery within six months is recommended. When storing the battery for long periods, recharge it at least once every six months and use the camera until the battery level indicator is ▭ 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

Recycle rechargeable batteries in accord with local regulations, being sure to first insulate the terminals with tape.

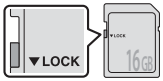
The Charging AC Adapter

- The EH-73P/EH-73PCH Charging AC Adapter is for use only with compatible devices. Do not use with another make or model of device.
- Do not use any USB cable other than the UC-E21. Using a USB cable other than the UC-E21 could result in overheating, fire or electric shock.
- Do not, under any circumstances, use another make or model of AC adapter other than the EH-73P/EH-73PCH Charging AC Adapter, 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-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 (181).
- Be sure to follow the precautions described in the documentation included with the memory card.
- If the write-protect switch of the memory card is locked, you cannot shoot, delete images, or format the memory card.
- Do not put labels or stickers on memory cards.



Write-protect switch

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 OK 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. After using the camera at the beach or other sandy or dusty environment, wipe off any sand, dust, or salt with a dry cloth lightly dampened with fresh water and dry thoroughly. **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" (📖167) in "Caring for the Product" (📖166).

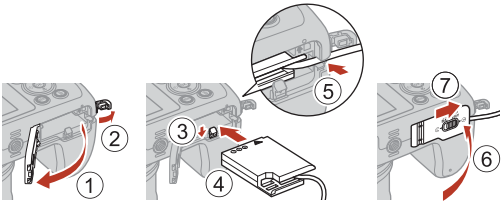
File Names

Images or movies are assigned file names as follows.

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

(1) Identifier	Not shown on the screen of the camera. • DSCN: Original still images, movies, still images created by the movie editing function • 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 • .MP4: Movies

Accessories

Battery charger	**MH-65 Battery Charger** Charging time is about 2 hours and 30 minutes for a fully exhausted battery.
AC adapter	**EH-62F AC Adapter** (connect as shown)  Make sure that the power connector cable is fully inserted in the power connector slot before inserting the AC adapter into the battery chamber. In addition, make sure that the power connector cable is fully inserted in the battery chamber slot before closing the battery-chamber/memory card slot cover. If part of the cable protrudes from the slots, the cover or cable may be damaged when the cover is closed.
Remote control accessories	**ML-L7 Remote Control** See "ML-L7 Remote Control" (📖173) for information on how to use it.
Hand strap	**AH-CP1 Hand Strap**

Availability may vary with country or region.

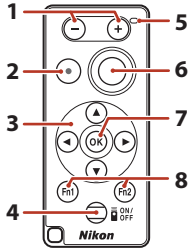
See our website or brochures for the latest information.

ML-L7 Remote Control

You can pair (📖175) the separately available ML-L7 Remote Control with the camera, and use it to operate the camera. The operations described in "Parts and Functions of the Remote Control (for COOLPIX B600)" (📖173) can be performed when shooting with this camera.

- The camera can only be paired with one remote control at a time. When the camera is paired with a different remote control, only the most recent paired remote control is enabled.
- Refer to the User's Manual provided with the ML-L7 Remote Control.

Parts and Functions of the Remote Control (for COOLPIX B600)



	Control	Function
1	– button/+ button	While the shooting screen is displayed, zooms out when the – button is pressed and zooms in when the + button is pressed.
2	Movie recording button	Starts recording a movie when the button is pressed, and stops recording when pressed again.
3	Multi selector	Functions similarly to the multi selector on the camera, enabling you to configure settings on the shooting screen, such as the creative slider (📖25), flash mode (📖47), self-timer (📖49), macro mode (📖50), and exposure compensation (📖51).

	Control	Function
4	Power button	Press the button to turn on the remote control and search for a camera that has already been paired. Press and hold the button (for at least 3 seconds) to search for a new pairing camera. To turn off the remote control, press the button again.
5	Status lamp	Indicates the remote control status or shooting session status, based on the color and behavior of the lamp. See "Status Lamp on the Remote Control (for COOLPIX B600)" (📖174) for more information.
6	Shutter-release button	Functions similarly to the shutter-release button on the camera. • Half-press and press-and-hold operations are not available. • When using the self-timer, you can press the button during the countdown to cancel shooting.
7	Ⓚ (apply selection) button	Applies the selected item.
8	Fn1 (Function 1) / Fn2 (Function 2) buttons	Cannot be used with this camera.

Status Lamp on the Remote Control (for COOLPIX B600)

Color	Status	Description
Green	Flashing about every second	Remote control is searching for a camera that has already been paired.
Green	Flashing quickly (about every 0.5 seconds)	Pairing process is being performed.
Green	Flashing about every 3 seconds	Connection is established between remote control and camera.
Orange	Flashes once	Still image shooting starts.
Orange	Flashes twice	Still image shooting ends (**Multiple exp. Lighten**).
Red	Flashes once	Movie recording starts.
Red	Flashes twice	Movie recording ends.

Pairing the Camera and Remote Control

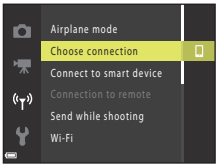
Before using the remote control for the first time, it must be paired with the camera.

- Make sure that the remaining battery level is sufficient.

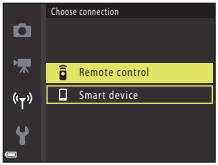
1 Press the MENU button on the camera.

2 Press the multi selector ◀, use ▲▼ to select (network menu), and press the OK button.

3 Select **Choose connection**, and press the OK button.

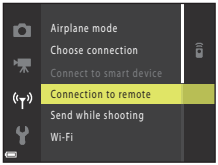


4 Select **Remote control**, and press the OK button.



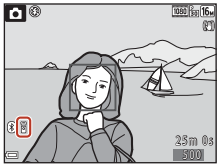
5 Select **Connection to remote**, and press the OK button.

- Pairing is enabled and the camera waits for the connection to be established.
- If you cannot select **Connection to remote**, set the following in the network menu.
  - **Airplane mode**: **Off**
  - **Bluetooth** ➔ **Connection** ➔ **Enable**



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

- Pairing starts for the camera and remote control. During the process, the status lamp on the remote control flashes about every 0.5 seconds.
- When pairing is complete, a connection is established between the camera and the remote control. When you enter shooting mode, is displayed on the shooting screen.
- If a pairing failure message is displayed, perform the procedure again from step 5.



Switching the Connection to a Smart Device

- Switch **Choose connection** (130) in the network menu from **Remote control** to **Smart device**.
- Paired smart devices are connected to the camera through Bluetooth when the SnapBridge app is launched. is displayed on the shooting screen of the camera.
- For connections with smart devices, see the included "SnapBridge Connection Guide" and SnapBridge online help.

Specifications

Nikon COOLPIX B600 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 60× optical zoom
	Focal length	4.3–258 mm (angle of view equivalent to that of 24–1440 mm lens in 35mm [135] format)
	f/-number	f/3.3–6.5
	Construction	16 elements in 11 groups (4 ED lens elements and 1 super ED lens element)
Digital zoom magnification		Up to 4× (angle of view equivalent to that of approx. 5760 mm lens in 35mm [135] format)
Vibration reduction		Lens shift (still images) Combination of lens shift and electronic VR (movies)
Autofocus (AF)		Contrast-detect AF
	Focus range	• [W]: Approx. 50 cm (1 ft 8 in.)–∞, [T]: Approx. 2.0 m (6 ft 7 in.)–∞ • Macro mode: [W]: Approx. 1 cm (0.4 in.)–∞, [T]: Approx. 2.0 m (6 ft 7 in.)–∞ (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		7.6 cm (3-in.), approx. 921k-dot, wide viewing angle TFT LCD with anti-reflection coating and 5-level brightness adjustment
	Frame coverage (shooting mode)	Approx. 99% horizontal and vertical (compared to actual picture)
	Frame coverage (playback mode)	Approx. 99% horizontal and vertical (compared to actual picture)
Storage		
	Media	Internal memory (approx. 83 MB), SD/SDHC/SDXC memory card
	File system	DCF and Exif 2.3 compliant
	File formats	Still images: JPEG Movies: MP4 (Video: H.264/MPEG-4 AVC, Audio: AAC stereo)

Image size		
	Still images	16 M (High) **4608×3456★**, 16 M **4608×3456**, 8 M **3264×2448**, 4 M **2272×1704**, 2 M **1600×1200**, VGA **640×480**, 16:9 12 M **4608×2592**, 1:1 **3456×3456**
	Movies	1080/30p, 1080/25p, 1080/60i, 1080/50i, 720/30p, 720/25p, 480/30p, 480/25p, HS 480/4×, HS 1080/0.5×
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	• 1/1600–1 s • 1/4000 s (maximum speed during high-speed continuous shooting) • 25 s (**Star trails** in **Multiple exp. Lighten** scene mode)
Aperture		Electromagnetic 6-blade iris diaphragm
	Range	8 steps of 1/3 EV (W)
Self-timer		10 s, 3 s
Flash		
	Range (approx.) (ISO sensitivity: Auto)	[W]: 0.5–6.8 m (1 ft 8 in.–22 ft) [T]: 2.0–3.4 m (6 ft 7 in.–11 ft)
	Flash control	TTL auto flash with monitor preflashes
Interface		
	USB connector	Micro-USB connector (Do not use any USB cable other than the included UC-E21 USB Cable.), Hi-Speed USB • Supports Direct Print (PictBridge)
	HDMI output connector	HDMI micro connector (Type D)
Wi-Fi (Wireless LAN)		
	Standards	IEEE 802.11b/g (standard wireless LAN protocol)
	Operating frequency	2412–2462 MHz (1-11 channels)
	Maximum output power	11.3 dBm (EIRP)
	Authentication	Open system, WPA2-PSK

Bluetooth	
Communication protocols	Bluetooth Specification Version 4.1
Operating frequency	Bluetooth: 2402–2480 MHz Bluetooth Low Energy: 2402–2480 MHz
Maximum output power	Bluetooth: 3.1 dBm (EIRP) Bluetooth Low Energy: 2.12 dBm (EIRP)
Power sources	One EN-EL12 Rechargeable Li-ion Battery (included) EH-62F AC Adapter (available separately)
Charging time	Approx. 2 h (when using EH-73P/EH-73PCH Charging AC Adapter and when no charge remains)
Battery life[1]	
Still images	Approx. 280 shots when using EN-EL12
Movie recording (actual battery life for recording)[2]	Approx. 1 h 5 min (when using EN-EL12)
Tripod socket	1/4 (ISO 1222)
Dimensions (W × H × D)	Approx. 121.6 × 81.5 × 99.2 mm (4.8 × 3.3 × 4.0 in.) (excluding projections)
Weight	Approx. 500 g (17.7 oz) (including battery and memory card)
Operating environment	
Temperature	0°C–40°C (32°F–104°F)
Humidity	85% or less (no condensation)

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

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

[2] Individual movie files cannot exceed 29 minutes in length, even when there is sufficient free space on the memory card for longer recording. The maximum size of a single movie file is 4 GB. If a file exceeds 4 GB even when you record for less than 29 minutes, recording ends.

EN-EL12 Rechargeable Li-ion Battery

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

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

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

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

- Nikon will not be held liable for any errors this manual may contain.
- The appearance of this product and its specifications are subject to change without notice.
- The sample images displayed on the camera and the images and illustrations in the manual are for illustrative purposes only.

Memory Cards That Can Be Used

The camera supports SD, SDHC, and SDXC memory cards.

- Memory cards with an SD Speed Class rating of 6 (Video Speed Class V6) or faster are recommended for recording movies. When using a memory card with a lower Speed Class rating, movie recording may stop unexpectedly.
- If you use a card reader, make sure that it is compatible with your memory card.
- Contact the manufacturer for information on features, operation, and limitations on use.

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See http://www.mpegla.com.

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