

Nikon

DIGITAL CAMERA

COOLPIX A1000

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

You can return to this page by tapping or clicking  in the lower right of any page.

Main Topics

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Common Topics



For Your Safety



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Introduction

Read This First

Thank you for purchasing the Nikon COOLPIX A1000 digital camera.

Symbols and Conventions Used in This Manual

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

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

- 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/>

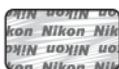
Use Only Nikon Brand Electronic Accessories

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 (📖120). 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 (📖120), 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 → **Y** menu icon → 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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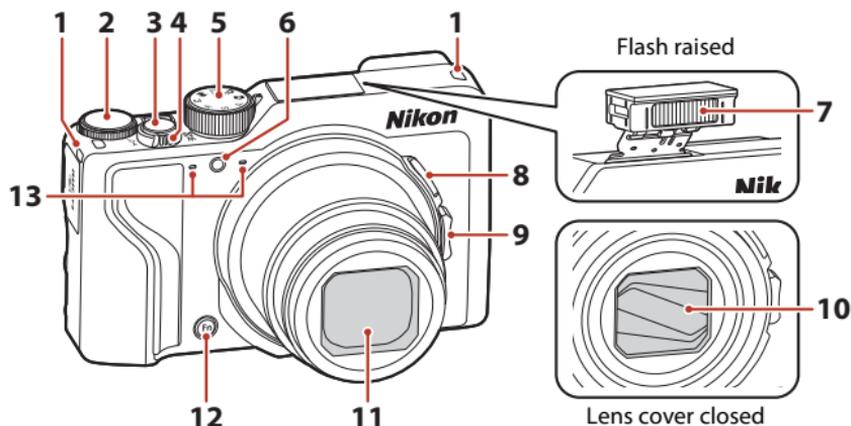


Parts of the Camera

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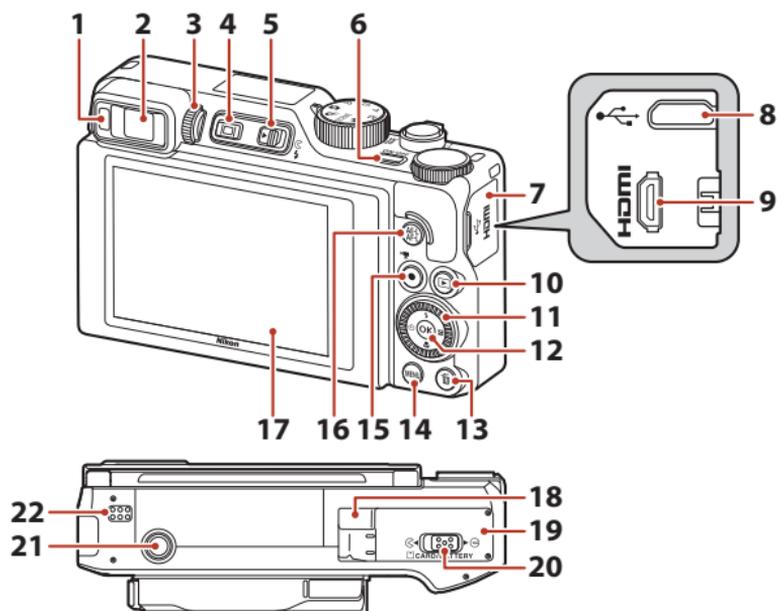


The Camera Body



1	Eyelet for strap.....	15	7	Flash	25, 58
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	Zoom control	70	9	W : Wide-angle	70
	W : Wide-angle	70		T : Telephoto	70
4	T : Telephoto.....	70	10	Lens cover	
	: Thumbnail playback.....	85	11	Lens	
	: Playback zoom.....	84	12	Fn (function) button	69
5	Mode dial.....	23, 31	13	Microphone (stereo)	
6	Self-timer lamp	61			
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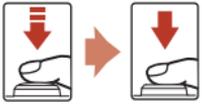


1	Eye sensor	26	12	OK (apply selection) button	120
2	Electronic viewfinder.....	26	13	⌫ (delete) button	28
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8	Micro-USB connector.....	17, 110	19	Battery-chamber/memory card slot cover.....	16
9	HDMI micro connector (Type D)	110	20	Lock lever	16
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11	Rotary multi selector (multi selector)*	57, 120	22	Speaker	

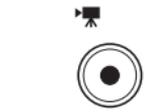
* In this manual, pressing up, down, left, or right on the multi selector is expressed as ▲, ▼, ◀, or ▶.



Principle Functions of the Controls

Control	Main Function	
 <p>Mode dial</p>	For shooting	Select a shooting mode (📖31).
 <p>Zoom control</p>	For shooting	Move toward T (📞) (telephoto) to zoom in closer to the subject, and move toward W (📐) (wide-angle) to zoom out and view a larger area.
	For playback	<ul style="list-style-type: none"> • Move toward T (📞) to zoom in on the image, and move toward W (📐) to display images as thumbnails or the calendar. • Adjust the volume for movie playback.
 <p> (Snap-back) zoom button</p>	For shooting	Widen the angle of view temporarily.
 <p>Side zoom control</p>	For shooting	Use the function assigned in Assign side zoom control . <ul style="list-style-type: none"> • Zoom (default setting): Move toward T (telephoto) to zoom in closer to the subject, and move toward W (wide-angle) to zoom out and view a larger area. • Manual focus: When the focus mode is set to MF (manual focus), adjust the focus. • Set the f-number, ISO sensitivity, exposure compensation, or white balance.
 <p>Shutter-release button</p>	For shooting	When the button is pressed halfway: Set focus and exposure. When the button is pressed all the way: Release the shutter.
	For playback	Return to shooting mode.



Control	Main Function	
 ● (▶) movie-record button	For shooting	Start and stop movie recording.
	For playback	Return to shooting mode.
 Multi selector	For shooting	<ul style="list-style-type: none"> While the shooting screen is displayed: Display the following setting screens by pressing: <ul style="list-style-type: none"> Up (▲): ⚡ (flash mode) Left (◀): ⌚ (self-timer) Down (▼): 🌱 (focus mode) Right (▶): 📷 (exposure compensation/ brightness, vividness, hue, Active D-Lighting) When the shooting mode is P (📖53): Rotate the multi selector to set the flexible program. When the shooting mode is S (📖53): Rotate the multi selector to set the shutter speed. When the shooting mode is A or M: Rotate the multi selector to set the f-number.
	For playback	<ul style="list-style-type: none"> While the playback screen is displayed: Change the displayed image using up (▲), left (◀), down (▼), right (▶), or by rotating the multi selector. While a zoomed image is displayed: Move the display area.
	For setting	<ul style="list-style-type: none"> Select an item using ▲▼◀▶ or by rotating the multi selector, and then apply the selection by pressing the OK button.
 OK (apply selection) button	For playback	<ul style="list-style-type: none"> Display individual images of a sequence in full-frame playback mode (📖28). Scroll an image shot with Easy panorama. Play back movies. Switch from thumbnail playback or zoomed image display to full-frame playback.
	For setting	Apply the item that you selected by using the multi selector.



Control	Main Function	
 Command dial	For shooting	<ul style="list-style-type: none"> When the shooting mode is P (📖53): Set the flexible program. When the shooting mode is S or M (📖53): Set the shutter speed. When the shooting mode is A (📖53): Set the f-number.
	For playback	<ul style="list-style-type: none"> While the playback screen is displayed: Change the displayed image. When a zoomed image is displayed: Change the magnification rate.
	For setting	Select an item.
 MENU (menu) button	For shooting/ playback	Display or close the menu (📖120).
 Fn (function) button	For shooting	When the shooting mode is P , S , A , or M : Display or close the setting menus such as Continuous or Photo VR .
 ^{AE-L} _{AF-L} (AE-L/AF-L) button	For shooting	Fix the exposure and/or focus according to the AE/AF lock button setting.
  (monitor) button	For shooting/ playback	Switch between the monitor and viewfinder (📖26).
  (playback) button	For shooting	Play back images (📖27).
	For playback	<ul style="list-style-type: none"> When the camera is turned off, press and hold down this button to turn the camera on in playback mode (📖27). Return to shooting mode.
  (delete) button	For shooting	Delete the last image that was saved (📖28).
	For playback	Delete images (📖28).



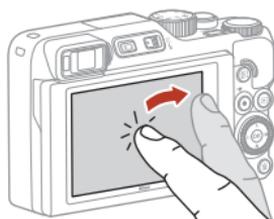
Operating the Touch Panel

The monitor of this camera is a touch panel, and can be operated by touching it with your fingers.

Tapping

Briefly touch the touch panel.

- Tap to select items in the shooting screen and menus.
- Tap to select images in thumbnail playback mode.
- Quickly tap twice in full-frame playback mode to zoom in on images. Quickly tap twice in zoomed images to cancel playback zoom.
- Tap to use the touch shooting function.
- Tap to input characters using the keyboard.



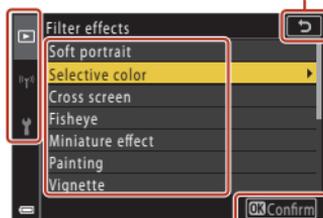
You can tap the following items (varies depending on the settings and status of the camera).

- Shooting screen: Areas with a gray frame, etc.
- Menus: Menu icons, menu items, areas with a gray frame, etc.



Shooting screen

Return to the previous screen without changing settings



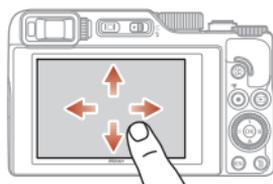
Menu



Flicking

Sweep your finger up, down, left, or right on the touch panel.

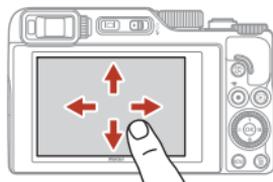
- Displays the previous or next image during playback (full-frame playback).
- Scrolls the screen in menus and thumbnail playback.



Sliding

Touch the touch panel, move your finger up, down, left, or right, and then release.

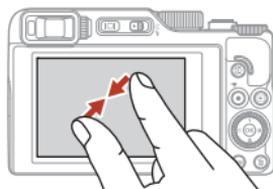
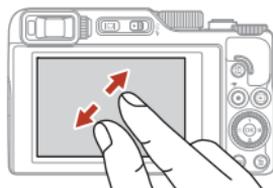
- Scrolls the screen in menus and thumbnail playback.
- Moves the display range while a zoomed image is displayed.
- Operates sliders such as those in the creative slider.
- Adjusts the start or end point when editing movies.



Spreading/pinching

Touch the touch panel with two fingers, and spread them apart or pinch them together.

- Changes the number of thumbnails displayed in thumbnail playback.
- Zooms in or out on an image during playback.



Notes About the Touch Panel

- The touch panel of this camera is a capacitive type. It may not respond when you touch it with your fingernails or with gloves on.
- Do not press the touch panel with sharp-pointed, hard objects.
- Do not press or rub the touch panel with excessive force.
- The touch panel may not respond when you apply a commercially-available protective film.

Notes About Operating the Touch Panel

- The camera may not operate properly if your fingers are still touching the touch panel or something touches another part of the touch panel when you tap.
- The camera may not operate properly if you do the following when sliding/spreading/pinching.
 - Hit the touch panel
 - The distance over which your fingers move is too short
 - Lightly touch the touch panel when moving your fingers
 - The speed at which you move your fingers is too fast
 - The difference in timing between your two fingers when spreading/pinching is too large

Enabling or Disabling Touch Operation

You can enable or disable touch operation using **Touch-screen controls** in the setup menu (📖120).

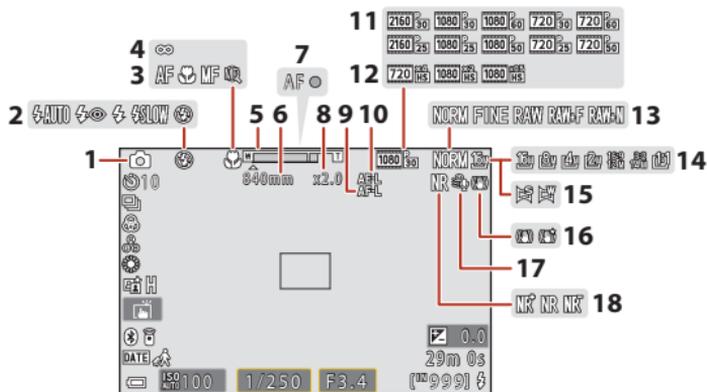


The Monitor/Viewfinder

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

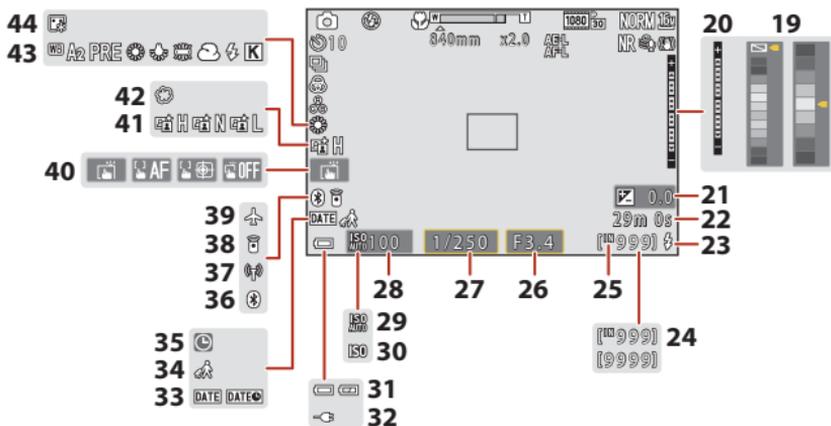
By default, information is displayed when the camera is turned on and when you operate the camera, and turns off after a few seconds (when **Photo info** is set to **Auto info** in **Monitor settings** (📖163)).

For Shooting



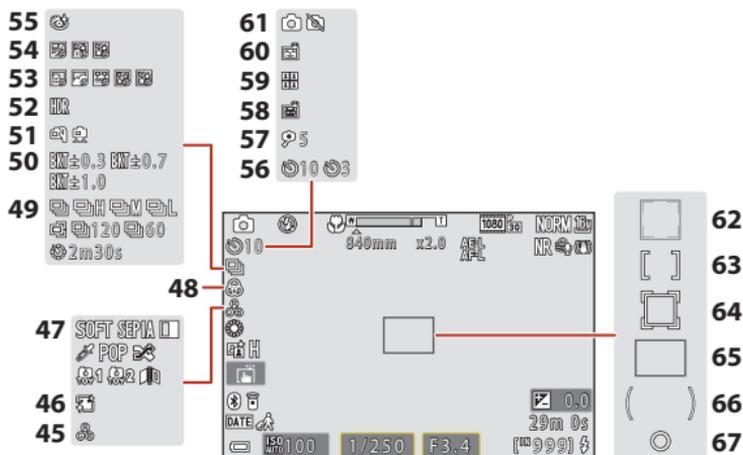
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29	ISO sensitivity auto indicator	138	43	White balance	130
30	ISO sensitivity indicator	138	44	Foundation makeup	45
31	Battery level indicator	23			
32	Charging AC Adapter connection indicator				
	AC Adapter connection indicator				

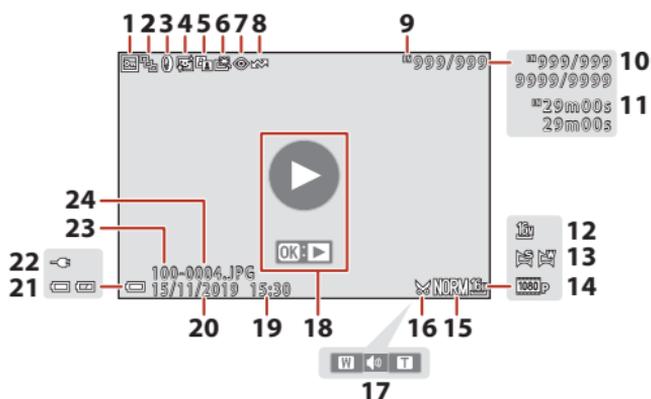




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12	Image size.....	129	22	AC Adapter connection indicator	
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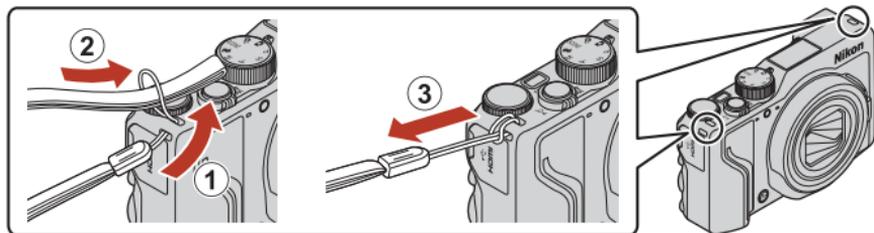


Getting Started

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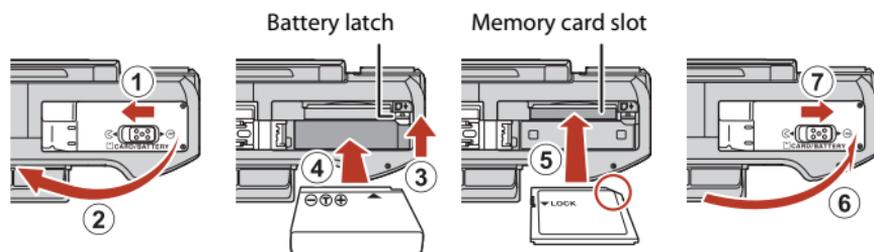
How to Attach the Strap



- The strap can be attached to the eyelet on either side (left and right) of the camera body.



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 (📖120).

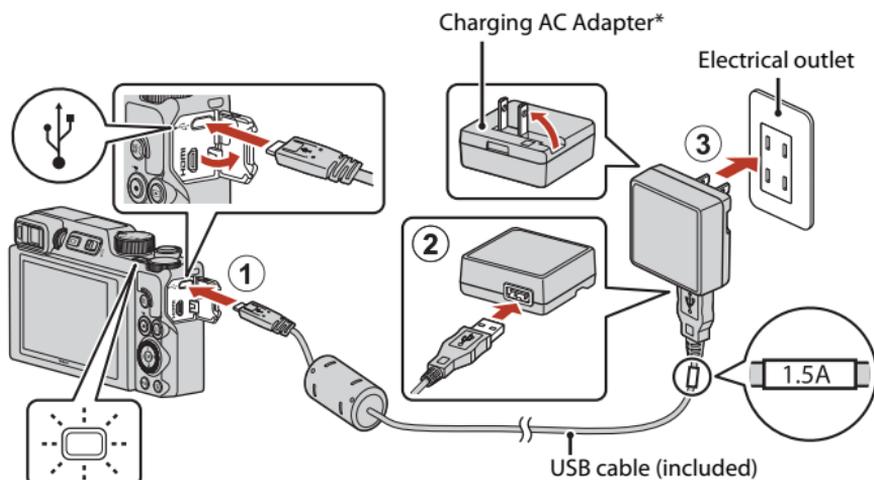
Removing the Battery or Memory Card

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.



Charging the Battery



Power-on lamp (charge lamp)

- * 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 and 30 minutes 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.
 - Movies cannot be recorded while the battery is charging.
- 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.



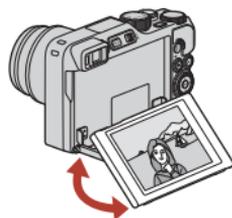
Changing the Angle of the Monitor

You can adjust the direction and angle of the monitor.

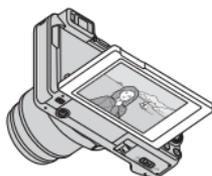
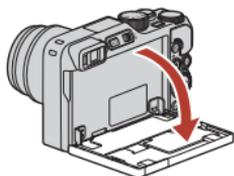
For normal shooting



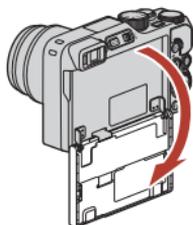
When shooting in a low position



When shooting in a high position

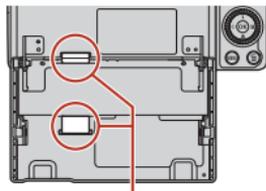


When taking self-portraits



✓ Notes About the Monitor

- When moving the monitor, do not apply excessive force and move slowly within the monitor's adjustable range so that the connection will not be damaged.
- Do not touch the rear side of the monitor. Failure to observe this precaution could cause product malfunction.



Be particularly careful not to touch these areas.

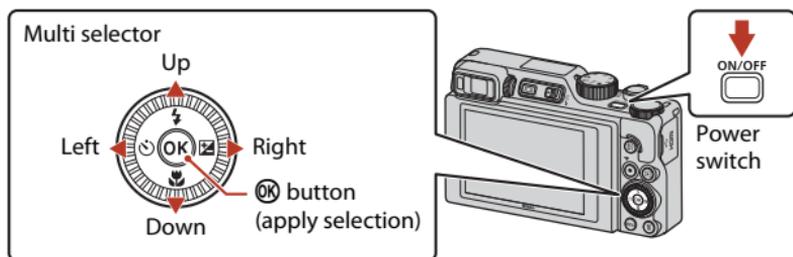


Camera Setup

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.

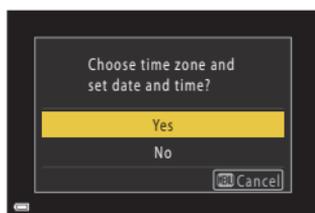
- Use the multi selector to select and adjust settings.



- 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.

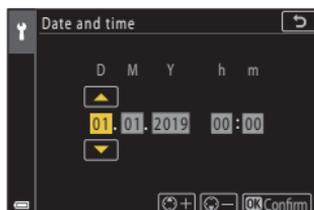
- Press **▲** to set daylight saving time. When it is on, the time is one hour earlier and  is displayed. When you press **▼** to turn it off, the time goes back one hour.



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 **Y** setup menu (120).

To Change the Time Zone and Date Setting

Set in **Time zone and date** in the **Y** 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

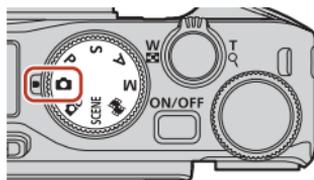
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Shooting Images

 (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.

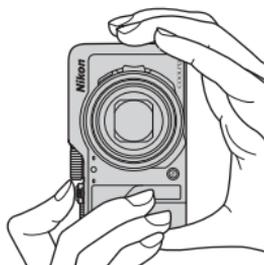
Number of exposures remaining



Battery level indicator

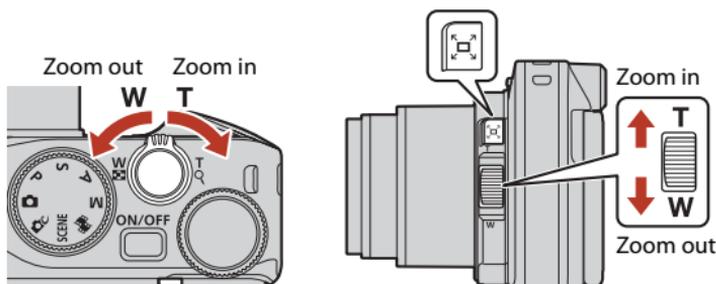
2 Hold the camera steady.

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



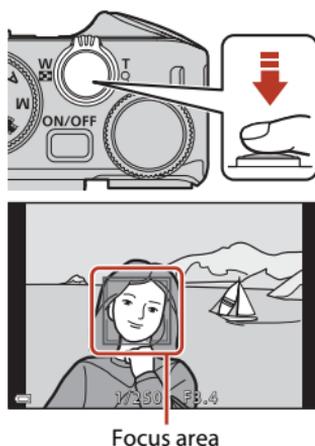
3 Frame the picture.

- 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.

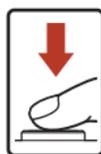


4 Press the shutter-release button halfway.

- 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 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.

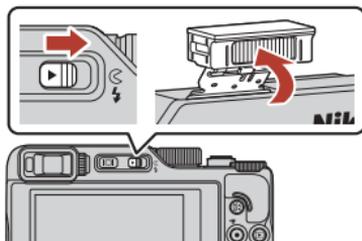
📎 When Using a Tripod

- We recommend using a tripod to stabilize the camera in the following situations:
 - When shooting in dim lighting with the flash mode set to  (off)
 - When the zoom is at a telephoto position
- When using a tripod to stabilize the camera during shooting, set **Photo VR** to **Off** in the setup menu ( 120) to prevent potential errors caused by this function.

Using the Flash

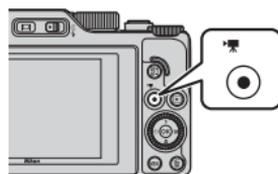
In situations where a flash is needed, such as in dark locations or when the subject is backlit, move the   (flash pop-up) control to raise the flash.

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



Recording Movies

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



Touch Shooting

You can switch the touch shooting feature by tapping the touch shooting icon on the shooting screen.

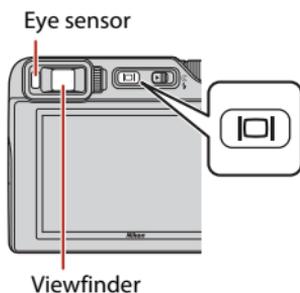
- At the default setting  **Touch shutter**, the shutter is released when you simply tap the subject on the screen without using the shutter-release button.



Switching Between the Monitor and Viewfinder

It is recommended that you use the viewfinder when bright conditions make it difficult to see the monitor, such as when outdoors in sunlight.

- When you bring your face close to the viewfinder, the eye sensor responds to it and the viewfinder turns on, and the monitor turns off (default setting).
- You can also press the  (monitor) button to switch the display between the monitor and viewfinder.



Diopter Adjustment of the Viewfinder

When the display in the viewfinder is difficult to see, adjust by rotating the diopter adjustment control while looking through the viewfinder.

- Take care not to scratch your eye with your fingertips or nails.



Notes About Checking and Adjusting Image Colors

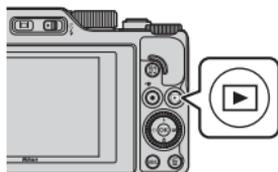
Use the monitor on the back of the camera because the monitor has higher color reproducibility than the viewfinder.



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.
- Images can also be selected by rotating the multi selector or command dial.
- To play back a recorded movie, press the  button.
- To return to shooting mode, press the  button or shutter-release button.
- Move the zoom control toward **T** () in full-frame playback mode to zoom in on an image.

Display the previous image



Display the next 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.



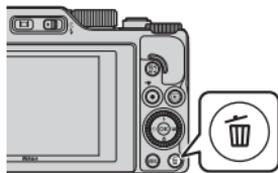
Operating the Touch Panel on the Playback Screen

You can use the touch panel to operate the playback screen ()7).

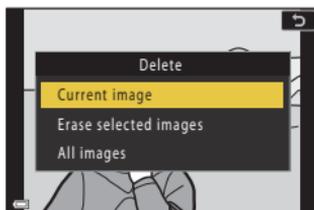


Deleting Images

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



- 3 Select **Yes** and press the  button.
 - Deleted images cannot be recovered.



Notes About Deleting Images Simultaneously Saved in RAW and JPEG

When using this camera to delete images captured using **RAW + Fine** or **RAW + Normal** in the **Image quality** (📖123) setting, both of the simultaneously saved RAW and JPEG images are deleted. You cannot delete only one format.

Deleting Images Captured Continuously (Sequence)

- Images captured continuously or with the 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  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 ◀▶ or rotate it 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.



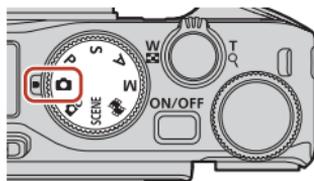
Shooting Features

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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.
- **📷C (Creative) mode**
Apply effects to images during shooting.
- **SCENE (Scene) modes**
You can press the **MENU** button and select a scene mode to shoot using settings suited for the conditions.
When **Scene auto selector** (default setting) is selected, the camera recognizes the shooting conditions when you frame a picture, and you can take pictures in accordance with the conditions.
- **🎥 (Short movie show) mode**
The camera creates a short movie that is up to 30 seconds long (**1080p 1080/30p** or **1080p 1080/25p**) by recording and automatically combining multiple movie clips that are several seconds long.
- **P, S, A, and M modes**
Select these modes for greater control over shutter speed and f-number.

📄 Help Display

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

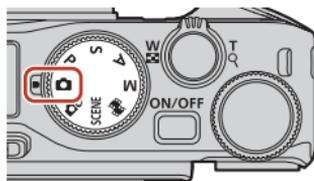
Press the shutter-release button halfway to quickly switch to shooting mode. You can show or hide the descriptions using **Help display** in **Monitor settings** (📖 126) in the setup menu.



(Auto) Mode

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

- When the camera detects a human face, it focuses on that face (75).



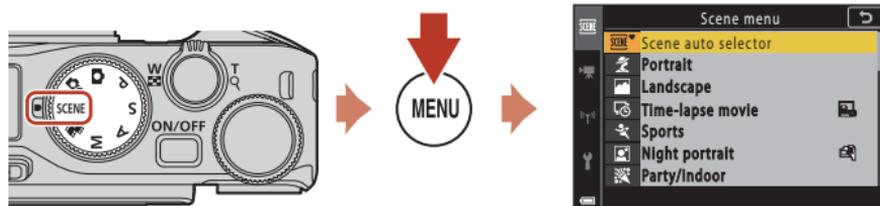
Functions Available in (Auto) Mode

- Flash mode (58)
- Self-timer (61)
- Focus mode (63)
- Exposure compensation (68)
- Shooting menu (common across shooting modes) (127)



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.



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

Scene auto selector (default setting) (📖34)	Night landscape (📖36) ¹
Portrait	Close-up (📖36)
Landscape ¹	Food (📖36)
Time-lapse movie (📖101)	Fireworks show (📖37) ^{3,4}
Sports (📖34) ²	Backlighting (📖37) ¹
Night portrait (📖35)	Easy panorama (📖42) ¹
Party/indoor (📖35) ¹	Pet portrait (📖38)
Beach ¹	SOFT Soft (📖39) ¹
Snow ¹	Selective color (📖39) ¹
Sunset ^{1,3}	Multiple exp. Lighten (📖40) ⁵
Dusk/dawn ^{1,3}	Smart portrait (📖45)

¹ The camera focuses on the area in the center of the frame.

² The camera focuses on the area in the center of the frame (during autofocus).

³ Use of a tripod is recommended because the shutter speed is slow. Set **Photo VR** (📖168) to **Off** in the setup menu when using a tripod to stabilize the camera during shooting.

⁴ The camera focuses at infinity (during autofocus).

⁵ Use of a tripod is recommended because the shutter speed is slow.



Tips and Notes About Scene Mode

SCENE → 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

- Under some shooting conditions, the camera may not select the desired settings. In this case, select another shooting mode (31).
- When the digital zoom is in effect, the shooting mode icon changes to .

SCENE → Sports

- While the shutter-release button is held all the way down, images are captured continuously.
- The camera can capture up to about 10 images continuously at a rate of about 10 fps (when set to **Normal** (image quality) and  **4608x3456** (image size)).
- The frame rate for continuous shooting may become slow depending on the current image quality setting, image size 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 → Night portrait

- Raise the flash before shooting.
- On the screen displayed when  **Night portrait** is selected, select  **Hand-held** or  **Tripod**.
-  **Hand-held:**
 - 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.
 - The angle of view (i.e., the area visible in the frame) seen in the saved image is 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 regardless of the **Photo VR** setting ( 168) in the setup menu.

SCENE → Party/indoor

- To avoid the effects of camera shake, hold the camera steady. Set **Photo VR** ( 168) to **Off** in the setup menu when using a tripod to stabilize the camera during shooting.



SCENE → 🌃 Night landscape

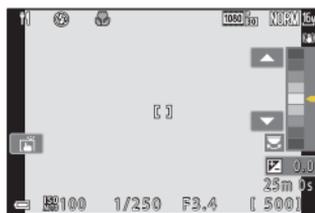
- On the screen displayed when 🌃 **Night landscape** is selected, select 📵 **Hand-held** or 📵 **Tripod**.
- 📵 **Hand-held:**
 - While the 🌃 icon on the shooting screen is displayed in green, press the shutter-release button all the way to capture a series of images which are combined into a single image 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 is 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 regardless of the **Photo VR** setting (📖168) in the setup menu.

SCENE → 📷 Close-up

- The focus mode (📖63) setting is changed to 📷 (macro close-up) 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 ▲▼◀▶ or rotate it to move the focus area, and press the **OK** button to apply the setting.

SCENE → 🍴 Food

- The focus mode (📖63) setting is changed to 📷 (macro close-up) and the camera automatically zooms to the closest position at which it can focus.
- You can rotate the command dial or multi selector to adjust the hue. 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 ▲▼◀▶ or rotate it to move the focus area, and press the **OK** button to apply the setting.



SCENE → Fireworks show

- You can press the  button when the shooting screen is displayed to focus using manual focus. See step 2 in “Using Manual Focus” (64) for more information.
- The shutter speed is fixed at 4 seconds.
- Exposure compensation cannot be used (68).

SCENE → Backlighting

- On the screen displayed when  **Backlighting** is selected, select **On** or **Off** to enable or disable the high dynamic range (HDR) function based on the shooting conditions.
- **Off:** The flash fires to prevent the subject from being hidden in shadow. Shoot images with the flash raised.
 - 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 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
 - If there is only enough memory to save one image, an image processed by D-Lighting (89) at the time of shooting, in which dark areas of the image are corrected, is the only image saved.
 - Once the shutter-release button is pressed all the way, hold the camera still until a still image is displayed. After taking a picture, do not turn the camera off before the screen switches to the shooting screen.
 - The angle of view (i.e., the area visible in the frame) seen in the saved image is narrower than that seen on the shooting screen.
 - Under some shooting conditions, dark shadows may appear around bright subjects or bright areas may appear around dark subjects.

Notes About HDR

Use of a tripod is recommended. Set **Photo VR** (168) in the setup menu to **Off** when using a tripod to stabilize the camera.



SCENE → 🐾 Pet portrait

- 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.

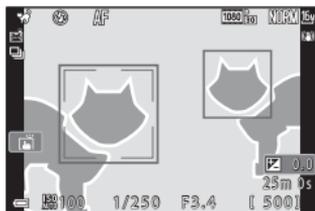
✔ **Pet Portrait Auto Release and Self-portrait Timer**

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.
-  **5s Self-portrait timer**: The shutter is released 5 seconds after you press the shutter-release button all the way down. Frame the picture after you press the shutter-release button all the way down.
 - See “Self-timer” (📖61) for more information.
 - The camera focuses on the face of a dog, cat, or human when detected.
 - The camera cannot shoot images continuously.
- **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 → SOFT Soft

- Applies a slight soft-focus effect over the entire frame for a softer image.
- Certain **Movie options** (📖145) are not available.

SCENE → 🖌️ Selective color

- Keeps only a selected color and makes other colors black-and-white.
- Rotate the command dial to select the desired color.



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	<p>Use to capture the flow of car lights against a night landscape background.</p> <ul style="list-style-type: none"> • The camera focuses on the area in the center of the frame. • You can rotate the command dial or multi selector to set the desired interval between the shots. The set interval becomes the shutter speed. You can also set the shutter speed by tapping the shutter speed indicator on the shooting screen. 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	<p>Use to capture the motion of stars with a night landscape in the frame.</p> <ul style="list-style-type: none"> • The focus is fixed at infinity.  is displayed on the shooting screen. • The zoom moves to the maximum wide-angle position automatically. • Shots are taken at a shutter speed of 20 seconds at 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	<p>Use to capture the motion of stars.</p> <ul style="list-style-type: none"> • The focus is fixed at infinity.  is displayed on the shooting screen. • The zoom moves to the maximum wide-angle position automatically. • Shots are taken at a shutter speed of 25 seconds at 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  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.



✓ 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 (📖168).
- When using 📷 **Nightscape + star trails** or 📷 **Star trails**, the telephoto zoom position is restricted to the angle of view equivalent to that of approx. 300 mm lens (in 35mm [135] format).
- Vibration reduction is disabled regardless of the **Photo VR** setting (📖168) in the setup menu.

📌 Time Remaining

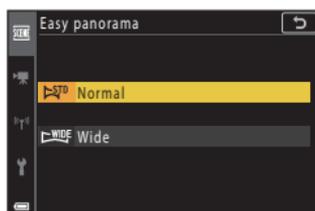
You can check the time remaining until shooting automatically ends on the screen.



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.

- $\triangle \nabla \leftarrow \rightarrow$ 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.



Guide



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 ($\triangle \nabla \langle \rangle$).

- Shooting stops if the guide does not reach the edge within about 15 seconds (when $\triangle \nabla \langle \rangle$ STD is selected)

Normal is selected) or within about 30 seconds (when $\triangle \nabla \langle \rangle$ WIDE Wide is selected) after shooting starts.



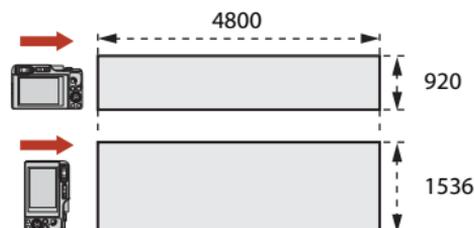
Notes About Easy Panorama Shooting

- 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.

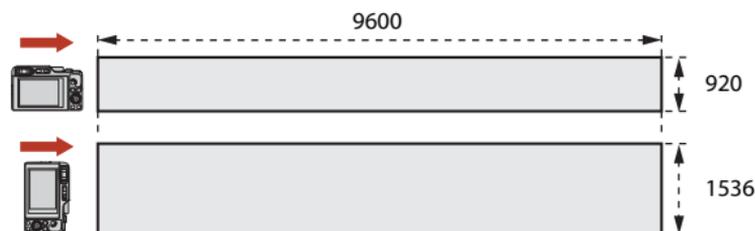
Image Size of Easy Panorama

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 $\triangle \nabla \langle \rangle$ STD Normal is set



When $\triangle \nabla \langle \rangle$ WIDE Wide is set



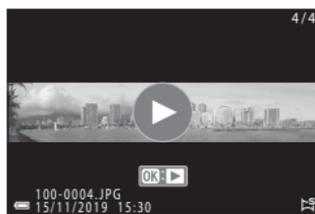
Playback with Easy Panorama

Switch to playback mode (📖27), 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.

- Rotate the multi selector or command dial to fast-forward or rewind scroll playback.

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.

* These operations can also be performed by rotating the multi selector or command dial.

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.



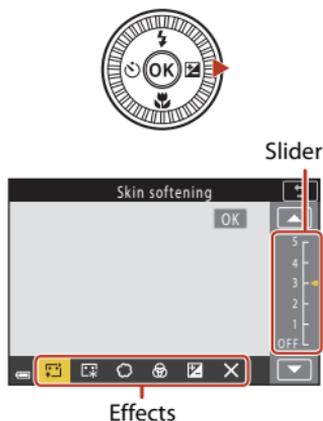
Shooting with Smart Portrait (Enhancing Human Faces When Shooting)

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

Rotate the mode dial to **SCENE** → **MENU** button →  Smart portrait →  button → **MENU** button

1 Press the multi selector to 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  button or select  **Exit**.



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

Notes About Smart Portrait

- When **Soft** is set, some **Movie options** ( 145) are not available.
- The amount of effect may differ between the image on the shooting screen and the saved image.

Glamour Retouch Settings

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

See "Using the Histogram" ( 68) for more information.



Functions Available in Smart Portrait

- Glamour retouch (📖45)
- Self-Collage (📖47)
- Blink proof (📖49)
- Smile timer (📖50)
- Flash mode (📖58)
- Self-timer (📖61)
- Shooting menu (common across shooting modes) (📖127)

Using Skin Softening and Foundation Makeup

- When **Smart portrait** scene mode is set to **Skin softening** or **Foundation makeup** and the camera detects a human face, it processes the image to soften facial skin tones or adjust facial colors before saving the image (up to three faces).
- You can also save images with the **Skin softening** effect applied when shooting in **Scene auto selector**, **Portrait**, or **Night 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 (📖90).

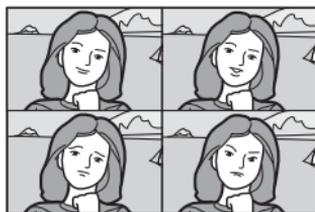
✔ Notes About Skin Softening

- 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 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).



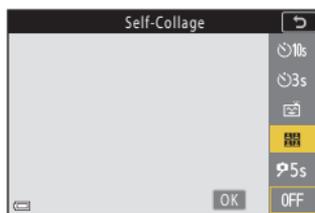
Rotate the mode dial to **SCENE** → **MENU** button → Smart portrait → button → Self-Collage → button

1 Set self-collage.

- **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. If you set other than **Off**, countdown sound is produced.
The setting that is specified for **Shutter sound** in **Sound settings** in the setup menu is not applied to this setting.
- After the settings are complete, press the **MENU** button or shutter-release button to exit the menu.

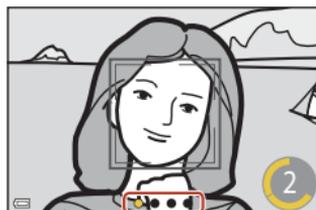
2 Press the multi selector to select **Self-Collage**, and press the button.

- A confirmation dialog is displayed.
- If you want to apply glamour retouch when shooting, set the effect before selecting self-collage (45).



3 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.



4 On the screen displayed when the camera finishes taking the specified 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 (86).
- When **No** is selected, the collage image is not saved.

Notes About Self-Collage

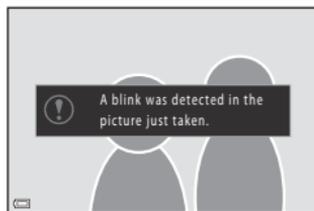
- If you perform the operations listed below before the camera takes the specified number of shots, shooting is canceled and the collage image is not saved. The pictures that were taken before shooting was canceled are saved as individual images.
 - Press the shutter-release button
 - Raise or lower the flash
- If images are captured using **Date stamp** (166), 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 (80).



Using Blink Proof

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.



Rotate the mode dial to **SCENE** → **MENU** button →  Smart portrait →  button → **Blink proof** →  button

Select **On** or **Off** (default setting) in **Blink proof** and press the  button.

Notes About Blink Proof

This function may not be available to use in combination with other functions (80).



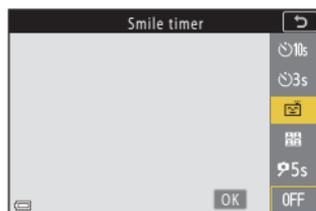
Using Smile Timer

The camera automatically releases the shutter whenever a smiling face is detected.

Rotate the mode dial to SCENE → MENU button →  Smart portrait →  button → MENU button

Press the multi selector  to select  **Smile timer** and press the  button.

- Set the glamour retouch function before selecting smile timer (45).
- 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 (75). The shutter-release button can also be used for shooting.
- This function may not be available to use in combination with other functions (80).

When the Self-timer Lamp Flashes

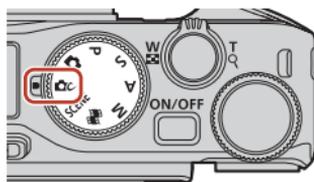
When using smile timer, the self-timer lamp flashes when the camera detects a face and flashes quickly immediately after the shutter is released.



Creative Mode (Applying Effects When Shooting)

Apply effects to images during shooting.

- Five effect groups are available: **Light** (default setting), **Depth**, **Memory**, **Classic**, and **Noir**.

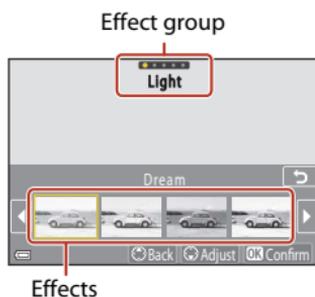


1 Press the **OK** button.

- The effect selection screen is displayed.

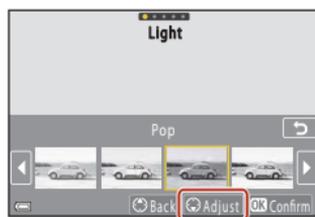
2 Use the multi selector **◀▶** to select an effect.

- The effect group can be changed by rotating the command dial.
- To exit without saving the selection, press **▲**.



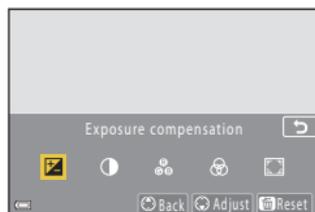
3 To adjust the effect, press **▼**.

- If you do not want to adjust the effect, press the **OK** button to proceed to step 6.

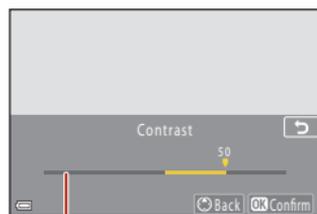


4 Use **◀▶** to highlight the desired option and then press **▼**.

- Select **Exposure compensation**, **Contrast**, **Hue**, **Saturation**, or **Peripheral illumination**. The options that can be selected vary depending on the group.



- 5** Use ◀▶ to adjust the effect level and press the **OK** button.



Slider

- 6** Press the shutter-release button or the **MOVIE** (▶) button to shoot.

- The camera detects the main subject and focuses on it (target finding AF) (📖74). If a human face is detected, the camera automatically sets focus priority on it.

Selecting an Effect Group

You can also select an effect group by pressing the **MENU** button when the screen in step 1 is displayed.

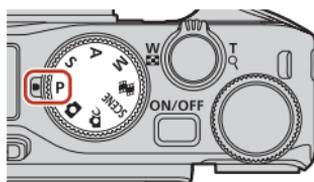
Functions Available in Creative Mode

- Flash mode (📖58)
- Self-timer (📖61)
- Focus mode (📖63)
- Exposure compensation (📖68)
- Shooting menu (common across shooting modes) (📖127)



P, S, A, and M Modes (Setting the Exposure for Shooting)

In **P**, **S**, **A**, and **M** modes, you can set exposure (combination of shutter speed and f-number) according to the shooting conditions. Also, you can achieve greater control when shooting images by setting the shooting menu options (📖120).

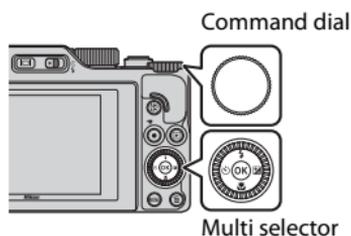


Shooting mode	Description
P Programmed auto	<p>You can let the camera adjust the shutter speed and f-number.</p> <ul style="list-style-type: none"> The combination of shutter speed and f-number can be changed by rotating the command dial or multi selector (flexible program). While the flexible program is in effect,  (flexible program mark) is displayed on the upper left of the screen. To cancel the flexible program, rotate the command dial or multi selector in the opposite direction than when you set it until  is no longer displayed, change the shooting mode, or turn off the camera.
S Shutter-priority auto	Rotate the command dial or multi selector to set the shutter speed. ¹ The camera automatically determines the f-number.
A Aperture-priority auto	Rotate the command dial or multi selector to set the f-number. ² The camera automatically determines the shutter speed.
M Manual ³	Set both the shutter speed and f-number. Rotate the command dial to set the shutter speed. ¹ Rotate the multi selector to set the f-number. ²

¹ You can also set this function by tapping the shutter speed indicator on the shooting screen.

² You can also set this function by tapping the f-number indicator on the shooting screen.

³ The allocations of the controls for setting the exposure can be changed using **Toggle Av/Tv selection** in the setup menu (📖120).



 Flexible program is in effect.



Shutter speed F-number



Tips for Setting Exposure

The sense of dynamism and amount of background defocus in subjects vary by changing the combinations of shutter speed and f-number even if the exposure is the same.

Effect of the Shutter Speed

The camera can make a fast-moving subject appear static at a fast shutter speed, or highlight the motion of a moving subject at a slow shutter speed.



Faster
1/1000 s



Slower
1/30 s

Effect of the F-number

The camera can bring the subject, foreground and background into focus, or blur the subject's background intentionally.



Small f-number
(larger aperture)
f/3.4



Large f-number
(smaller aperture)
f/8

Shutter Speed and F-number

- The control range of the shutter speed differs depending on the zoom position, f-number, or ISO sensitivity setting.
- The f-number of this camera also changes depending on the zoom position.
- When zooming is performed after the exposure is set, exposure combinations or the f-number may be changed.
- Large apertures (expressed by small f-numbers) let more light into the camera, and small apertures (large f-numbers) let less light. The smallest f-number represents the largest aperture, and the largest f-number represents the smallest aperture.



✓ Notes About Setting Exposure

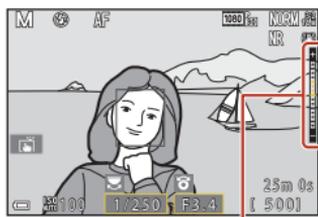
When the subject is too dark or too bright, it may not be possible to obtain the appropriate exposure. In such cases, the shutter speed indicator or f-number indicator flashes (in **P**, **S**, and **A** modes), or the exposure indicator is displayed in red (in **M** mode) when the shutter-release button is pressed halfway. Change the shutter speed setting or f-number.

✓ Setting Exposure During Movie Recording

When recording movies in **P**, **S**, **A**, or **M** mode, the shutter speed and f-number settings are not applied.

Exposure Indicator (When in **M** Mode)

The degree of deviation between the adjusted exposure value and the optimal exposure value measured by the camera is displayed in the exposure indicator on the screen. The degree of deviation in the exposure indicator is displayed in terms of EV (-2 to +2 EV in increments of 1/3 EV).



Exposure indicator

✓ Notes About ISO Sensitivity

When **ISO sensitivity** (📖123) is set to **Auto** (default setting) or **Fixed range auto**, the ISO sensitivity in **M** mode is fixed at ISO 100.

Functions Available in **P**, **S**, **A**, and **M** Modes

- Flash mode (📖57)
- Self-timer (📖57)
- Focus mode (📖57)
- Creative slider (📖57)
- Shooting menu (📖120)
- Functions that can be set using the **Fn** (function) button (📖121)

📎 Focus Area

The focus area for autofocus varies depending on the setting of **AF area mode** (📖123) in the shooting menu. When set to **Target finding AF** (default setting), the camera detects the main subject and focuses on it. If a human face is detected, the camera automatically sets focus priority on it.



The Control Range of the Shutter Speed (P, S, A, and M Modes)

The control range of the shutter speed differs depending on the zoom position, f-number, or ISO sensitivity setting. Additionally, the control range changes in the following continuous shooting settings.

Setting		Control range (second)			
		P mode	S mode	A mode	M mode
ISO sensitivity ¹ ( 138)	Auto ²	1/2000–1 s	1/2000–8 s		
	ISO 100–400 ²				
	ISO 100–800 ²				
	ISO 100, 200, 400, 800, 1600, 3200, 6400				
Continuous ( 134)	Continuous H, Continuous M, Continuous L	1/2000–1 s			
	Pre-shooting cache	1/4000–1/125 s			
	Continuous H: 120 fps	1/4000–1/125 s			
	Continuous H: 60 fps	1/4000–1/60 s			
	Intvl timer shooting	Same as when Single is set			

¹ The ISO sensitivity setting is restricted depending on the continuous shooting setting (81).

² In **M** mode, the ISO sensitivity is fixed at ISO 100.



Setting Shooting Functions with the Multi Selector (⚡/⌚/🌸/📷)

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



- **⚡ Flash mode**

When the flash is raised, the flash mode can be set according to shooting conditions. The flash always fires when ⚡ (fill flash) or ⚡ (standard flash) is selected.

- **⌚ Self-timer/Self-portrait timer**

The camera releases the shutter when the set number of seconds elapses after you press the shutter-release button.

- **🌸 Focus mode**

According to the distance to the subject, **AF** (autofocus) or 🌸 (macro close-up) can be set. **MF** (manual focus) can also be set when the shooting mode is **P**, **S**, **A**, or **M**, or when the scene mode is **Sports** or **Fireworks show**.

- **📷 Creative slider/Exposure compensation**

- **Creative slider:** When the shooting mode is set to **P**, **S**, **A**, or **M** 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 **P**, **S**, **A**, or **M** mode, you can adjust the brightness (exposure compensation).

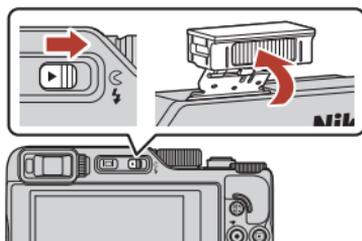
The functions that can be set vary depending on the shooting mode.



Flash Mode

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

- 1 Move the  (flash pop-up) control to raise the flash.
 - When the flash is lowered, flash operation is disabled and  is displayed.



- 2 Press the multi selector  (⚡).



- 3 Select the desired flash mode ( 59) and press the  button.

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



The Ready Light

While the flash is charging,  flashes. The camera cannot shoot images. If charging is complete,  is displayed steadily.



Ready light



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+red-eye reduction/Red-eye reduction

Reduce red-eye in portraits caused by the flash (📖60).

- When **Red-eye reduction** is selected, the flash fires whenever a picture is taken.

Fill flash/Standard flash

The flash fires whenever a picture is taken.

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 available flash modes differ depending on the shooting mode.

Flash mode		SCENE		P ¹	S ¹	A ¹	M ¹
 AUTO Auto	✓	2	-	-	-	-	-
 Auto+red-eye reduction	✓		-	-	-	-	-
Red-eye reduction	-		-	✓	✓	✓	✓
 Fill flash	✓		-	-	-	-	-
Standard flash	-		-	✓	✓	✓	✓
 SLOW Slow sync	✓		-	✓	-	✓	-

¹ For shooting modes **P**, **S**, **A** and **M**, the setting is saved in the camera's memory even after the camera is turned off.

² Availability depends on the setting. See "Default Settings (Flash Mode, Self-timer, and Focus Mode)" (📖78) for more information.



Auto+Red-eye Reduction/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

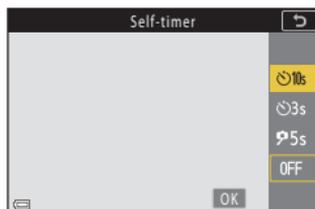
The camera releases the shutter when the set number of seconds elapses after you press the shutter-release button. Set **Photo VR** (📖168) to **Off** in the setup menu when using a tripod to stabilize the camera during shooting.

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.
- **👁5s** (5 seconds, self-portrait timer): Use for self-portraits.
- If the setting is not applied by pressing the **OK** button, the selection will be canceled.

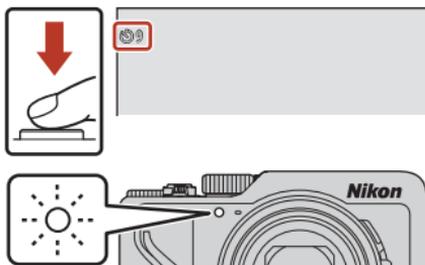


3 Frame the picture and press the shutter-release button halfway.

- When using **👁10s** (10 seconds) or **👁3s** (3 seconds), make sure that the subjects are in focus.
- When using **👁5s** (5 seconds, self-portrait timer), press the shutter-release button all the way down in step 4, and then frame the picture.

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.



Focus and Exposure When Shooting with the Self-timer

-  **10s**/ **3s**: The focus and exposure are locked when you press the shutter-release button all the way down.
-  **5s**: The focus and exposure are set right before the shutter is released.

The Self-timer Setting

- The setting may not be available with some shooting modes ( 78).
- You can use **Self-timer: after release** ( 167) in the setup menu to set whether to cancel the self-timer after using it to shoot.



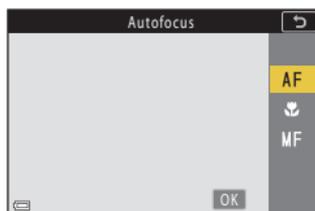
Focus Mode

You can select the focus mode that is appropriate for the shooting distance.

- 1 Press the multi selector ▼ (🌸).



- 2 Select the desired focus mode (📖63) and press the (OK) button.
 - If the setting is not applied by pressing the (OK) button, the selection will be canceled.



Available Focus Modes

AF Autofocus

Use when the distance from the subject to the lens is 50 cm (1 ft 8 in.) or more, or 2.0 m (6 ft 7 in.) or more at the maximum telephoto zoom position.

🌸 Macro close-up

Set when taking close-up pictures.

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.

At the maximum telephoto zoom position, the camera can focus on subjects as close as approximately 2.0 m (6 ft 7 in.) from the lens.

MF Manual focus

The focus can be adjusted on any subject at a distance from approximately 1 cm (0.4 in.) to infinity (∞) from the lens (📖64). The closest distance at which the camera can focus varies depending on the zoom position.

📌 The Focus Mode Setting

- The setting may not be available with some shooting modes (📖78).
- For shooting modes **P**, **S**, **A**, and **M**, the setting is saved in the camera's memory even after the camera is turned off.

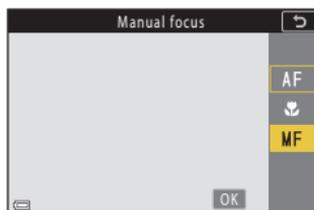


Using Manual Focus

Available in the following shooting modes.

- P, S, A, and M modes
- **Sports** or **Fireworks show** scene mode

- 1 Press the multi selector ▼ (👉), select MF (manual focus), and then press the OK button.



- 2 Use the multi selector to adjust the focus while checking the enlarged view.

- An enlarged view of the center area of the image is displayed. Press ▶ to switch the view between 2x, 4x, and 1x.
- Rotate the multi selector clockwise to focus on near subjects, or counterclockwise to focus on far subjects. The focus can be adjusted in higher detail by rotating the multi selector slowly. The focus can also be adjusted by rotating the command dial.
- When ◀ is pressed, the camera focuses on the subject in the center of the frame with autofocus. The manual focus can be operated after the camera focuses with autofocus.
- Focusing is assisted by highlighting areas that are in focus in white (peaking) (📖65). Press ▲▼ to adjust the peaking level.
- Press the shutter-release button halfway to confirm the composition of the picture. Press the shutter-release button all the way to take the picture.



Peaking level

- 3 Press the OK button.

- The set focus is locked.
- Press the shutter-release button all the way to take the picture.
- To readjust the focus, press the OK button to display the screen in step 2.



MF (Manual Focus)

- The digits displayed for the gauge on the right of the screen in step 2 serve as a guideline for the distance to a subject that is in focus when the gauge is near the center.
- The closest distance at which the camera can focus varies depending on the zoom position. At the maximum wide-angle zoom position, the camera can focus on subjects as close as approximately 1 cm (0.4 in.) from the lens. At the maximum telephoto zoom position, the camera can focus on subjects as close as approximately 2.0 m (6 ft 7 in.) from the lens.
- The actual range at which the subject can be in focus varies depending on the f-number and zoom position. To see whether the subject is in focus, check the image after shooting.
- Set **Assign side zoom control** ( 126) in the setup menu to **Manual focus** to focus by using the side zoom control instead of the multi selector in step 2.

Manual Focus During Movie Recording

If you set the focus mode to **MF** and press the  (movie-record) button, you can focus while recording movies by using the command dial or multi selector.

Peaking

- The range of the contrast level considered to be in focus can be changed by adjusting the peaking level. It is effective to set the level low for high contrast subjects, and high for low contrast subjects.
- Peaking highlights high contrast areas of the image in white. Under some shooting conditions, highlighting may not work properly or areas that are not in focus may be highlighted.
- You can disable the peaking display using **MF peaking** ( 126) in the setup menu.
- When **Movie options** ( 124) in the movie menu is set to an HS movie option, peaking cannot be displayed while recording movies.

Operating the Touch Panel on the Manual Focus Shooting Screen

You can use the touch panel to operate the monitor ( 7).

- Spread/pinch while a zoomed image is displayed to change the magnification rate.
- Slide while a zoomed image is displayed to view a different area of the image. When you tap , the display area returns to the center of the frame.

To Focus Using the ML-L7 Remote Control (Available Separately)

- You can press the multi selector   on the remote control to adjust the focus with the remote control when using manual focus.
- If you press the  button on the remote control, you can lock the camera to the set focus.



Using the Creative Slider

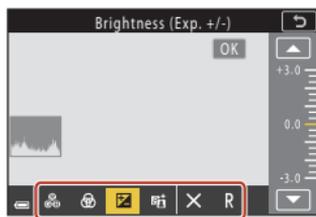
When the shooting mode is set to **P**, **S**, **A**, or **M** mode, you can adjust the brightness (exposure compensation), vividness, hue, and Active D-Lighting when shooting.

- 1 Press the multi selector ► (📷).



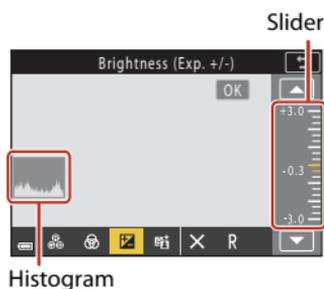
- 2 Use ◀▶ to select an item.

- 🎨 **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 暗H (High), 暗N (Normal), 暗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 Ⓞ button. Return to step 2 and adjust the settings again.



- 4 Press the Ⓞ button when setting is complete.

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



Creative Slider Settings

- When the shooting mode is set to **M** mode, **Brightness (Exp. +/-)** cannot be used.
- **Active D-Lighting** is not applied to movies recorded with **Movie options** set to  **HS 720/4x**.
- 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 (80).
- 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" (68) for more information.

Active D-Lighting Versus D-Lighting

- The **Active D-Lighting** option in the shooting menu captures images while reducing loss of details in highlights, and adjusts the tone when saving images.
- The **D-Lighting** (89) option in the playback menu adjusts the tone of saved images.



Exposure Compensation (Adjusting Brightness)

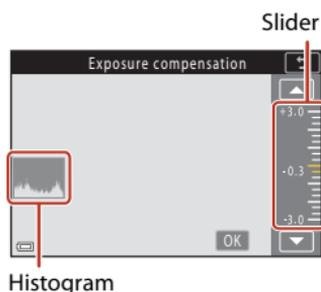
When the shooting mode is set to  (auto) mode, scene mode, creative mode, or short movie show mode, you can adjust the brightness (exposure compensation).

- 1 Press the multi selector .



- 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.
- When the shooting mode is **Smart portrait** scene mode, the glamour retouch screen is displayed instead of the exposure compensation screen (45).



Exposure Compensation Value

- Exposure compensation cannot be used in the following scene modes:
 - **Time-lapse movie** (during **Night sky (150 minutes)** or **Star trails (150 minutes)**)
 - **Fireworks show**
 - **Multiple exp. Lighten**
- When the exposure compensation is set while using a flash, the compensation is applied to both the background exposure and the flash output.

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 Fn (Function) Button

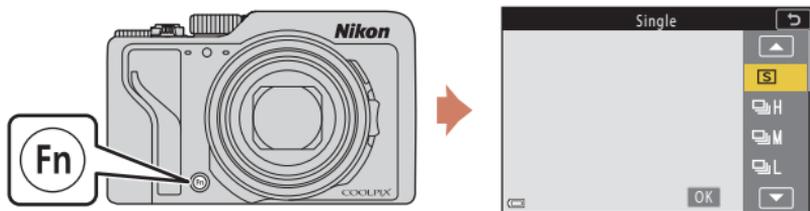
If you press the **Fn** button in **P**, **S**, **A**, or **M** mode, you can quickly configure the pre-saved menu options.

- The menu options listed below can be saved.

Image quality (📖127)	Continuous (📖134)
Image size (📖129)	ISO sensitivity (📖138)
White balance (📖130)	AF area mode (📖140)
Metering (📖133)	Photo VR (📖168)

1 Press the **Fn** (function) button when the shooting screen is displayed.

- The setting options of the menu that was set (default setting is **Continuous**) and **Fn** **Fn** button can be selected.



2 Use the multi selector to select a setting and press the **OK** button.

- If the setting is not applied by pressing the **OK** button, the selection will be canceled.
- To return to the shooting screen without changing the setting, press the **Fn** button or shutter-release button.
- To set a different menu option, select **Fn** **Fn** button and press the **OK** button. Select the desired menu option and press the **OK** button to set it.

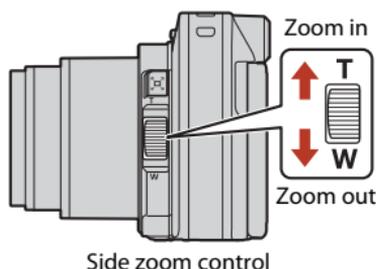
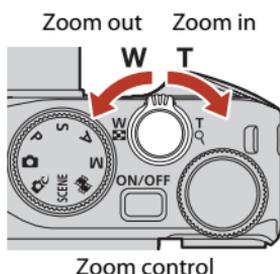


Using the Zoom

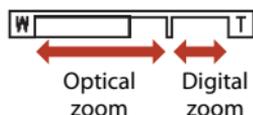
When you move the zoom control or side zoom control, the zoom lens position changes.

- 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 and focal length (in 35mm [135] format) 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 4x 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.
- Rotating the zoom control all the way in either direction adjusts the zoom quickly (except while recording movies).
- The function of the side zoom control can be set in the **Assign side zoom control** (p.170) in the setup menu.
- 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

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

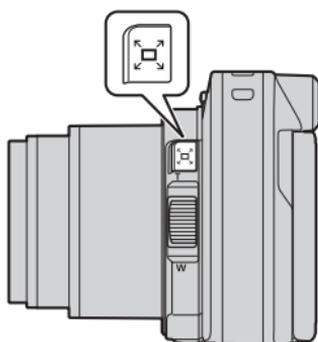
- Zoom indicator is blue: Image quality is not noticeably reduced by using the Dynamic Fine Zoom.
- Zoom indicator is yellow: There may be cases in which image quality is noticeably reduced.
- The indicator remains blue across a wider area when the image size is smaller.
- The zoom indicator does not change to blue in the following situations.
 - When **Exposure bracketing** is set
 - When recording movies
- 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 (angle of view) so that you can frame the subject more easily.

- While pressing the  button, frame the subject inside the framing border of the shooting screen. To widen the visible area, move the zoom control or side zoom control toward **W** while pressing the  button.
- Release the  button to return to the original zoom position.
- Snap-back zoom is not available during movie recording.



Framing border



Using Touch Shooting

You can switch the touch shooting feature by tapping the touch shooting icon on the shooting screen.



Option	Description
 Touch shutter (default setting)	The camera focuses on the tapped subject with autofocus and releases the shutter. <ul style="list-style-type: none">When the camera recognizes faces (📖75), it focuses on the subject displayed with a double-framed AF area.The shutter-release button can also be used for shooting.
 AF Touch AF	Tap to select the AF area for autofocus in the following situations: <ul style="list-style-type: none">In P, S, A, or M mode, AF area mode (📖140) is set to Manual (spot), Manual (normal), or Manual (wide)Close-up or Food scene mode
 Touch subject tracking	In P , S , A , or M mode, when AF area mode is set to Subject tracking , you can register the subject that you want to track by tapping it.
 Touch shooting off	Disables touch shooting.

✓ Notes About Touch Shooting

- The displayed items vary depending on the shooting mode and settings.
- The AF area that can be set by tapping varies depending on the shooting mode and settings.
- When the focus mode is **MF** (manual focus), the camera does not adjust the focus even when you tap.
- While **AF-L** is displayed, the camera does not adjust the focus even when you tap because the focus is locked.
- Only one image is captured even when continuous shooting is set. To capture images continuously, press the shutter-release button.
- You cannot use touch shooting while recording movies.



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.

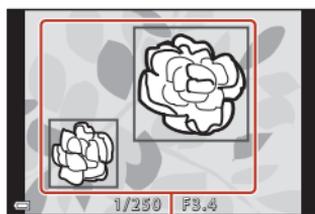
- The shutter is released when the shutter-release button is pressed all the way.
- Do not use force when pressing the shutter-release button, as this may result in camera shake and blurred images. Press the button gently.



Using Target Finding AF

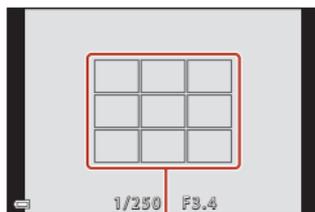
When **AF area mode** (📖 140) is set to **Target finding AF** in **P**, **S**, **A**, or **M** mode, or when in creative mode, the camera focuses in the manner described below when you press the shutter-release button halfway.

- 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

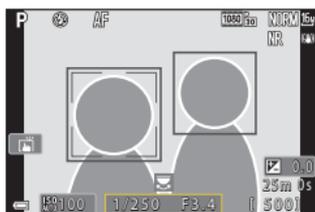
- Depending on shooting conditions, the subject that the camera determines to be the main subject may vary.
- The main subject may not be detected when using certain settings in **White balance** or creative mode effect groups.
- The camera may not detect the main subject appropriately in the following 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



Using Face Detection

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

-  (auto) mode (📖31)
- **Scene auto selector, Portrait, Night portrait,** or **Smart portrait** scene mode (📖33)
- Short movie show mode (📖103)
- When **AF area mode** (📖140) is set to **Face priority**



If the camera detects more than one face, a double border is displayed around the face that the camera focuses on, and single borders are displayed around the other faces.

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

- In  (auto) mode, short movie show mode, or when **AF area mode** is set to **Face priority**, the camera selects the focus area containing the subject closest to the camera.
- When **Scene auto selector** is selected, the focus area changes depending on the shooting conditions that the camera recognizes.
- In **Portrait, Night portrait,** or **Smart portrait**, the camera focuses on the area in the center of the frame.

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)
- 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 (📖77).

The camera can also focus using manual focus (📖63, 64).

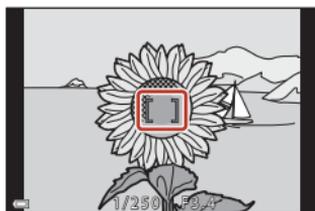


Focus Lock

Use focus lock to capture creative compositions even when the focus area is set to the center of the frame.

- 1** 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.



- 2** Without lifting your finger, recompose the picture.

- Make sure to maintain the same distance between the camera and the subject.



- 3** Press the shutter-release button all the way down to take the picture.



Moving the Focus Area to the Desired Position

In **P**, **S**, **A**, or **M** shooting mode, the focus area can be moved using the multi selector by setting **AF area mode** (📖140) in the shooting menu to one of the manual options.

Using the AE-L/AF-L (AE-L/AF-L) Button

You can also use the AE-L/AF-L button to lock the exposure or focus instead of pressing and holding the shutter-release button halfway (📖171).



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

The default settings for each shooting mode are listed below.

	Flash mode (📖57)	Self-timer (📖57)	Focus mode (📖57)
📷 (auto)	⚡AUTO	OFF	AF ¹
📷 (creative mode)	⚡AUTO	OFF	AF ¹
SCENE (scene mode)			
📷 (scene auto selector)	⚡AUTO ²	OFF	AF ³
👤 (portrait)	⚡👁	OFF	AF ³
🏞 (landscape)	🕒 ³	OFF ⁴	AF ³
🎞 (time-lapse movie)	🕒 ³	OFF	AF ³
🏃 (sports)	🕒 ³	OFF ³	AF ⁵
🌃 (night portrait)	⚡👁 ³	OFF	AF ³
🎉 (party/indoor)	⚡👁 ⁶	OFF	AF ³
🏖 (beach)	⚡AUTO	OFF	AF ¹
❄ (snow)	⚡AUTO	OFF	AF ¹
🌅 (sunset)	🕒 ³	OFF	AF ³
🌄 (dusk/dawn)	🕒 ³	OFF ⁴	AF ³
🌃 (night landscape)	🕒 ³	OFF ⁴	AF ³
🌸 (close-up)	⚡AUTO	OFF	🌸 ³
🍴 (food)	🕒 ³	OFF	🌸 ³
🎆 (fireworks show)	🕒 ³	OFF ³	MF ³
📷 (backlighting)	⚡🕒 ⁷	OFF	AF ³
🏠 (easy panorama)	🕒 ³	OFF ³	AF ³
🐕 (pet portrait)	🕒 ³	📷 ⁸	AF ¹
SOFT (soft)	⚡AUTO	OFF	AF ¹
🖌 (selective color)	⚡AUTO	OFF	AF ¹
🎞 (multiple exp. lighten)	🕒 ³	🕒3s	AF ³
😊 (smart portrait)	⚡AUTO ⁹	OFF ¹⁰	AF ³
🎞 (short movie show)	🕒 ³	OFF	AF ¹
P, S, A, and M	⚡	OFF	AF



- 1 **MF** (manual focus) cannot be selected.
- 2 The camera automatically selects the flash mode appropriate for the shooting conditions it has selected.  (off) can be selected manually.
- 3 Cannot be changed.
- 4  **5s Self-portrait timer** cannot be used.
- 5 **AF** (autofocus) or **MF** (manual focus) can be selected.
- 6 May switch to slow sync with red-eye reduction flash mode.
- 7 When **HDR** is set to **Off**, the flash mode is fixed at  (fill flash). When **HDR** is set to **On**, the flash mode is fixed at  (off).
- 8  **Pet portrait auto release** and  **5s Self-portrait timer** can be used.  **10s** or  **3s** cannot be used.
- 9 Cannot be used when **Blink proof** is set to **On**.
- 10  **Smile timer** and  **Self-Collage** can be used in addition to  **10s**,  **3s**, or  **5s Self-portrait timer**.



Functions That Cannot Be Used Simultaneously When Shooting

Some functions cannot be used with other menu settings.

Restricted function	Option	Description
Flash mode	Image quality (📖127)	When saving RAW images, red-eye is not reduced even when  (auto+red-eye reduction/red-eye reduction) is set (including simultaneously saved JPEG images).
	Continuous (📖134)	When Continuous H , Continuous M , Continuous L , Pre-shooting cache , Continuous H: 120 fps , or Continuous H: 60 fps is selected, the flash cannot be used.
	Exposure bracketing (📖139)	The flash cannot be used.
	Blink proof (📖49)	When Blink proof is set to On , the flash cannot be used.
Self-timer	AF area mode (📖140)	When Subject tracking is selected, the self-timer cannot be used.
Hue/vividness (using the creative slider)	Image quality (📖127)	When RAW , RAW + Fine , or RAW + Normal is selected, hue and vividness cannot be set using the creative slider.
Image quality	Continuous (📖134)	<ul style="list-style-type: none"> When Pre-shooting cache is selected, Image quality is fixed at Normal. When Continuous H: 120 fps or Continuous H: 60 fps is selected, RAW, RAW + Fine, or RAW + Normal cannot be used.
	Image quality (📖127)	<ul style="list-style-type: none"> When RAW is selected, Image size is fixed at  4608×3456. When RAW + Fine or RAW + Normal is selected, Image size of JPEG images can be set. However,  4608×2592,  4608×3072, or  3456×3456 cannot be selected.
Image size	Continuous (📖134)	Image size is set as follows depending on the continuous shooting setting: <ul style="list-style-type: none"> Pre-shooting cache:  1600×1200 Continuous H: 120 fps:  1600×1200 Continuous H: 60 fps:  1600×1200



Restricted function	Option	Description
White balance	Hue (using the creative slider) (📖66)	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.
Metering	Active D-Lighting (using the creative slider) (📖66)	When using Active D-Lighting , Metering is reset to Matrix .
Continuous	Self-timer (📖61)	If the self-timer is used when Pre-shooting cache is selected, the setting is fixed at Single .
	Image quality (📖127)	When RAW , RAW + Fine , or RAW + Normal is selected, Pre-shooting cache , Continuous H: 120 fps , or Continuous H: 60 fps cannot be used.
	Exposure bracketing (📖139)	Cannot be used at the same time.
ISO sensitivity	Continuous (📖134)	When Pre-shooting cache , Continuous H: 120 fps , or Continuous H: 60 fps is selected, the ISO sensitivity setting is automatically specified according to the brightness.
Exposure bracketing	Self-timer (📖61)	Exposure bracketing cannot be used.
	Continuous (📖134)	Cannot be used at the same time.
AF area mode	Focus mode (📖63)	When MF (manual focus) is set, AF area mode cannot be set.
	Hue (using the creative slider) (📖66)	When hue is adjusted using the creative slider in Target finding AF mode, the camera does not detect the main subject. 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 (📖130)	When a setting other than Auto is selected for White balance in Target finding AF mode, the camera does not detect the main subject.
Autofocus mode	Focus mode (📖63)	When MF (manual focus) is set, Autofocus mode cannot be set.



Restricted function	Option	Description
Blink proof	Self-Collage (📖47)	When Self-Collage is set, Blink proof cannot be used.
	Smile timer (📖50)	When Smile timer is set, Blink proof cannot be used.
Date stamp	Image quality (📖127)	When RAW , RAW + Fine , or RAW + Normal is selected, date and time cannot be stamped on images.
	Continuous (📖134)	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	Image quality (📖127)	When RAW , RAW + Fine , or RAW + Normal is selected, digital zoom cannot be used.
	AF area mode (📖140)	When Subject tracking is selected, digital zoom cannot be used.
Shutter sound	Exposure bracketing (📖139)	Shutter sound is disabled.

✔ Notes About Digital Zoom

- Depending on the shooting mode or the current settings, digital zoom may not be available (📖169).
- When digital zoom is in effect, the camera focuses in the center of the frame.



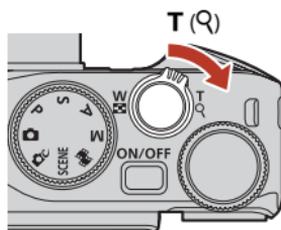
Playback Features

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Playback Zoom

Moving the zoom control toward **T** (Q playback zoom) in full-frame playback mode (📖27) zooms in on the image.



Full-frame Playback

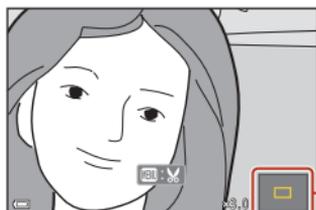
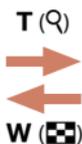


Image is zoomed in.

- You can change the magnification rate by moving the zoom control toward **W** (📐) or **T** (Q). The zoom can also be adjusted by rotating the command dial.
- To view a different area of the image, press the multi selector ▲▼◀▶.
- When a zoomed image is displayed, press the **OR** 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 (📖94).



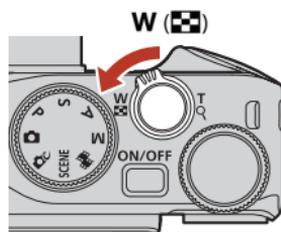
Operating the Touch Panel on the Playback Screen

You can use the touch panel to operate the playback screen (📖7).



Thumbnail Playback/Calendar Display

Moving the zoom control toward **W** (📷) thumbnail playback) in full-frame playback mode (📖27) displays images as thumbnails.



Full-frame Playback

W (📷)



T (📷)



Thumbnail Playback

W (📷)



T (📷)



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 ▲▼◀▶ or rotate it to select an image, and then press the **OK** button to display that image in full-frame playback mode.
- While using calendar display mode, press ▲▼◀▶ or rotate it to select a date, and then press the **OK** button to display the images captured on that day.
- You can also select an image by rotating the command dial.

✓ Notes About Calendar Display

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

📎 Operating the Touch Panel on the Playback Screen

You can use the touch panel to operate the playback screen (📖7).



Viewing and Deleting Images in a Sequence

Viewing Images in a Sequence

Images captured continuously or with the 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, rotate the multi selector or press **◀▶**.
- 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 (📖157) 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 (📖153).
- If you press the **MENU** button when a key picture is displayed, the following settings can be applied to all images in the sequence:
 - Mark for 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 (29), 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

- RAW images cannot be edited.
- A JPEG 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.

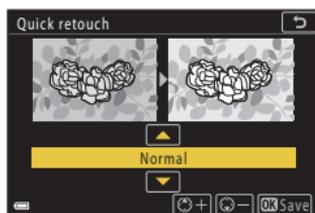


Quick Retouch: Enhancing Contrast and Saturation

Press the  button (playback mode) → Select an image → MENU button → Quick retouch →  button

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

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

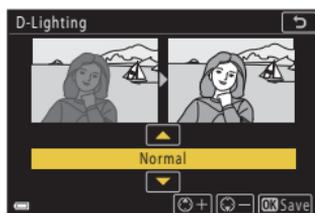


D-Lighting: Enhancing Brightness and Contrast

Press the  button (playback mode) → Select an image → MENU button → D-Lighting →  button

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

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



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

Press the  button (playback mode) → Select an image → MENU button → Red-eye correction →  button

Preview the result and press the  button.

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



Notes About Red-eye Correction

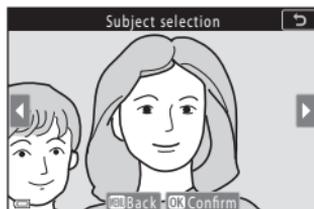
- Red-eye correction can only be applied to images when red-eye is detected.
- Red-eye correction can be applied to pets (dogs or cats) even if their eyes are not red.
- Red-eye correction may not produce the desired results in some images.
- In rare cases, red-eye correction may be applied unnecessarily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

Glamour Retouch: Enhancing Human Faces

Press the  button (playback mode) → Select an image → MENU button → Glamour retouch →  button

1 Use the multi selector     to select the face that you want to retouch and press the  button.

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



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

- You can simultaneously apply multiple effects. Adjust or check the settings for all effects before pressing the **OK** button.

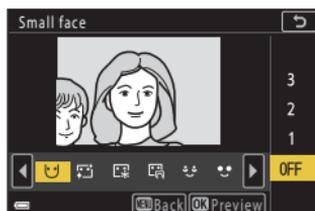
😊 **Small face**, 🗑️ **Skin softening**,

🖌️ **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.



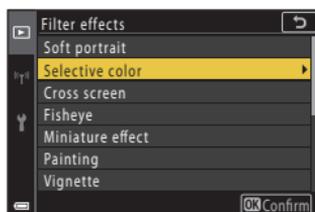
Filter Effects: Applying Digital Filter Effects

Press the  button (playback mode) → Select an image → MENU button → Filter effects →  button

Option	Description
Soft portrait	Blurs the background of human subjects. When no human subjects are detected, keeps the area in the center of the frame in focus and blurs the surrounding area.
Selective color	Keeps only a selected color and makes other colors black-and-white.
Cross screen	Produces star-like rays of light that radiate outward from bright objects such as sunlight reflections and city lights. Suitable for night scenes.
Fisheye	Creates images that look like they were shot with a fisheye lens. Suitable for images shot in macro mode.
Miniature effect	Creates images that look like close-up photos of a diorama. Suitable for images shot while looking down from a high location, with the main subject near the center of the frame.
Painting	Creates images with the ambience of paintings.
Vignette	Lowers the peripheral light intensity from the center to the edges of an image.
Photo illustration	Emphasizes outlines and reduces the number of colors to create images with the ambience of illustrations.
Portrait (color + B&W)	Makes colors of the background of human subjects black-and-white. When no human subjects are detected, keeps colors of the area in the center of the frame and makes the surrounding area black-and-white.

1 Use the multi selector   to select the desired filter effect and press the  button.

- When effects other than **Selective color** are selected, proceed to step 3.



- 2 Use ▲▼ to select the color to keep and press the Ⓚ button.



- 3 Preview the result and press the Ⓚ button.

- An edited copy is created.
- To exit without saving the copy, press ◀.



Crop: Creating a Cropped Copy

1 Move the zoom control to enlarge the image (📖84).

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** (🔍) 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 reselect a cropping area, press **◀** to return to step 2.
- To exit without saving the cropped image, press the **MENU** button.



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.
- When the image size of the cropped copy is 320 × 240 or smaller, the image is displayed at a smaller size during playback.



Movies

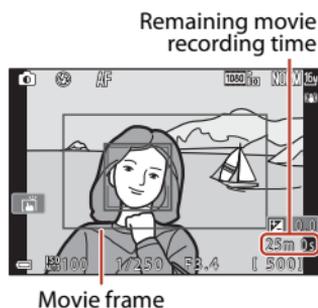
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Basic Operations of Movie Recording and Movie Playback

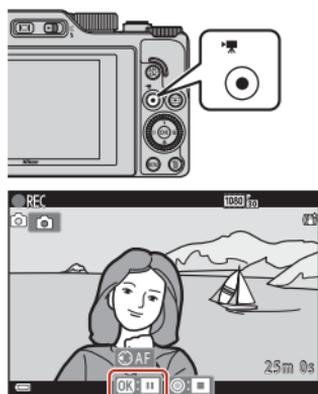
1 Display the shooting screen.

- 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 (📖97).



2 Press the movie-record) button to start movie recording.

- The camera focuses in the center of the frame.
- Press the  button to pause recording, and press the  button 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 (📖100).



3 Press the button again to end recording.

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

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



Movie Frame

- Set **Photo info** in **Monitor settings** (📖163) in the setup menu to **Movie frame+auto info** to display the movie frame. 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.

Focus and Exposure While Recording Movies

- The focus can be adjusted during movie recording in the following manner in accordance with the **Autofocus mode** (📖143) setting of the movie menu.
 - **AF-S Single AF** (default setting): The focus is locked when movie recording starts. To perform the autofocus function during movie recording, press the multi selector ◀.
 - **AF-F Full-time AF**: The focus is adjusted repeatedly even during movie recording. When you press the AE/L button during movie recording, the exposure or focus is locked. To unlock, press the AE/L button again.
- When the focus mode (📖63) is **MF** (manual focus), adjust the focus manually. The focus can be adjusted while recording movies by rotating the multi selector counterclockwise to focus on far subjects or clockwise to focus on near subjects. The focus can also be adjusted by rotating the command dial. Set **Assign side zoom control** (📖170) in the setup menu to **Manual focus** to focus by using the side zoom control.
- The camera continues to set the exposure while recording movies. When you press the AE/L button, the exposure or focus is locked.
- The function of the ▶ button when it is pressed while recording movies differs depending on the **AE/AF lock button** (📖171) setting in the setup menu.
 - When set to **AE lock only** or **AE lock (Hold)**: Pressing ▶ locks the focus. To unlock, press ▶ again.
 - When set to **AF lock only**: Pressing ▶ locks the exposure. To unlock, press ▶ again.



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, it is split into multiple files and cannot be played back continuously (📖145).

- The remaining recording time for a single movie is displayed on the shooting screen.
- Recording may end before either limit is reached if camera temperature becomes elevated.
- 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. When **Movie options** is set to $\frac{2160}{30}$ **2160/30p** (4K UHD) or $\frac{2160}{25}$ **2160/25p** (4K UHD), memory cards with a UHS Speed Class rating of 3 (Video Speed Class V30) or faster are recommended. When using a memory card with a lower Speed Class rating, movie recording may stop unexpectedly.

✔ 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.
After the camera stops recording, it turns itself off.
Leave the camera off until the inside of the camera has cooled.

Notes About Movie Recording

✔ Notes About Saving Images or Movies

- The indicator showing the number of exposures remaining or the indicator showing the remaining recording time flashes while images or movies are being saved. **Do not open the battery-chamber/memory card slot cover or remove the battery or memory card** while an indicator is flashing. Doing this could result in loss of data, or in damage to the camera or the memory card.
- When using the camera's internal memory, saving movies may take some time.
- When using certain **Movie options** settings, it may not be possible to save the movie in the internal memory or copy it from a memory card to the internal memory.



✓ Notes About Recorded Movies

- There may be some degradation in image quality when digital zoom is used.
- The sounds of zoom control operation, zoom, autofocus lens drive movement, movie vibration reduction, and aperture operation when brightness changes may be recorded.
- The following phenomena may be seen 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** (📖151) 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 (📖76). Should this occur, focus using manual focus (📖63, 64) or 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 **● (📷)** 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 (JPEG 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 ( 146). The image quality is fixed at **Normal**.

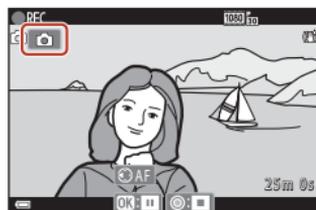


✓ Notes About Capturing Still Images During Movie Recording

- 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** ( 145) is set to an HS movie option
- The frames of a movie that were recorded when a still image was being captured may not play back smoothly.
- 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.

Capturing Still Images with Touch-screen Controls

You can also capture still images while recording movies by tapping  on the screen.



Shooting Time-lapse Movies

The camera can automatically capture still images at a specified interval to create time-lapse movies that are approximately 10 seconds long.

- When the **Frame rate** setting of the movie menu is set to **30 fps (30p/60p)**, 300 images are captured and saved with  **1080/30p**. When set to **25 fps (25p/50p)**, 250 images are captured and saved with  **1080/25p**.

Rotate the mode dial to **SCENE** → **MENU** button →  Time-lapse movie →  button

Type (required shooting time)	Interval time	
	30 fps (30p/60p)	25 fps (25p/50p)
 Cityscape (10 minutes) ¹	2 s	2.4 s
 Landscape (25 minutes) ²	5 s	6 s
 Sunset (50 minutes) ²	10 s	12 s
 Night sky (150 minutes) ^{3,4}	30 s	36 s
 Star trails (150 minutes) ^{4,5}	30 s	36 s

¹ The camera focuses on the area in the center of the frame.

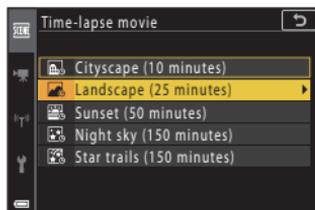
² The camera focuses at infinity.

³ Suited for recording the movement of stars. The focus is fixed at infinity.

⁴ The zoom moves to the maximum wide-angle position automatically. The telephoto zoom position is restricted to the angle of view equivalent to that of approx. 300 mm lens (in 35mm [135] format).

⁵ Star movement appears as lines of light due to image processing. The focus is fixed at infinity.

- Use the multi selector   to select a type, and press the  button.



2 Select whether or not to fix exposure (brightness), and press the **OK** button (except **Star trails (150 minutes)** and **Night sky (150 minutes)**).

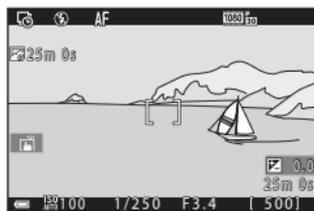
- When **AE-L on** is selected, the exposure used for the first image is used for all images. When the brightness changes drastically like at dusk, **AE-L off** is recommended.



3 Stabilize the camera by using a tool such as a tripod.

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

- Set exposure compensation (📖68) before releasing the shutter for the first image. Exposure compensation cannot be changed after the first image is captured. Focus and hue are fixed when the first image is captured.
- The shutter is automatically released for the second and subsequent images.
- The screen may turn off while the camera is not capturing images. The power-on lamp flashes while the screen is off.
- Shooting ends automatically when 300 or 250 images are captured.
- Press the **OK** button to end shooting before the required shooting time elapses and create a time-lapse movie.
- Sound and still images cannot be saved.



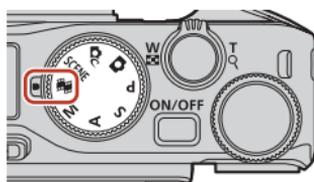
✓ Notes About Time-lapse Movie

- The camera cannot capture images if a memory card is not inserted.
- Do not 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.
- Time-lapse movies cannot be recorded by pressing the **Q** button.
- Vibration reduction is disabled regardless of the **Photo VR** setting (📖168) in the setup menu.



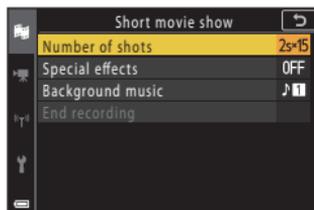
Short Movie Show Mode (Combining Movie Clips to Create Short Movies)

The camera creates a short movie that is up to 30 seconds long (1080p 1080/30p or 1080p 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** (📖104): 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.



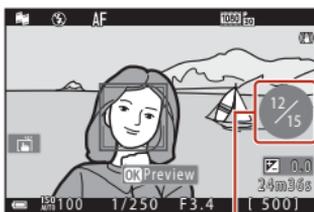
2 Press the movie-record button to record a movie clip.

- 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" (📖105).



3 Check the recorded movie clip, or delete it.

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



Number of movie clips recorded



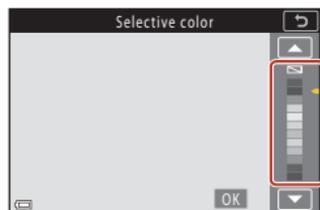
4 Save the short movie show.

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

Special Effects

Function	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.
 Toy camera effect 1	Gives the entire image a yellowish hue and darkens the image periphery.
 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  button to apply the color.

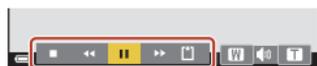


Operations During Movie Clip Playback

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

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 with **Normal** in image quality and $16:9$ **4608x2592** in image size 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 (📖61)
- Focus mode (📖63)
- Exposure compensation (📖68)
- Short movie show menu (📖103)
- Movie options menu (📖145)



Operations During Movie Playback

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

Rotate the multi selector or the command dial to fast-forward or rewind.



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.*
		▶ Resume playback.
		📄 Extract the desired portion of a movie and save it as a separate file.
		🖼️ Extract a single frame of a movie and save it as a still image.
End	■	Return to full-frame playback mode.

* The movie can also be advanced or rewound by one frame by rotating the multi selector or command dial.

Operating the Touch Panel During Movie Playback

Tap the screen during movie playback to pause the movie (📖7). Tap the screen while the movie is paused to resume playback.



Editing Movies

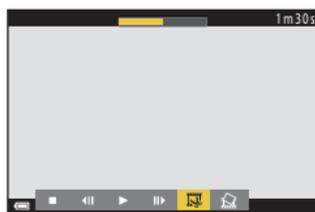
When editing movies, use a sufficiently charged battery to prevent the camera from turning off during editing. When the battery level indicator is , movie editing is not possible.

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 (106).

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



3 Use  to select  (choose start point).

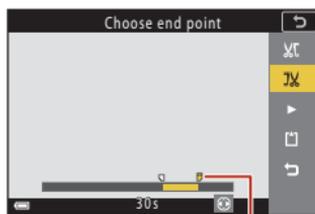
- Use  or rotate the command dial to move the start point. You can also adjust it by sliding the start point icon (7).
- To cancel editing, select  (back), and press the  button.



Start point

4 Use  to select  (choose end point).

- Use  or rotate the command dial to move the end point. You can also adjust it by sliding the end point icon.
- To preview the specified portion, use  to select  and then press the  button. Press the  button again to stop previewing.



End point



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

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



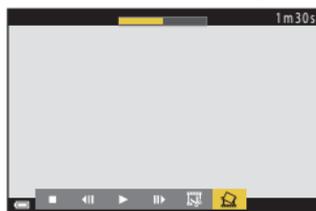
✓ Notes About Movie Extracting

- 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 (📖106).
- 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 still image is saved with **Normal** as the image quality. The image size is determined by the original movie image size (📖146).



✓ Restrictions on Extracting Still Images

Still images cannot be extracted from a movie recorded with an HS movie option.



Connecting the Camera to a TV, Printer, or Computer

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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.

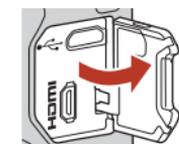
Transferring Images to a Computer (ViewNX-i)



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



Open the connector cover.



Insert the plug.

Micro-USB connector

HDMI micro connector (Type D)

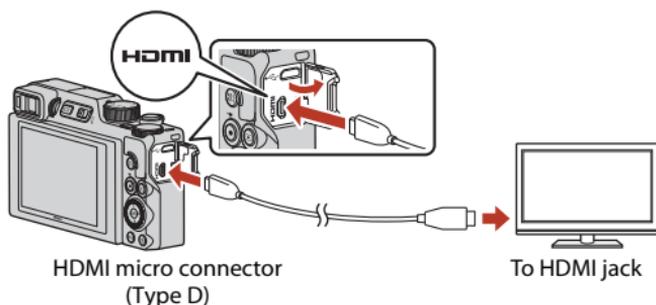
- Make sure to turn the camera off before connecting or disconnecting cables. Check the shape and direction of the plugs and do not insert or remove the plugs at an angle.
- Make sure that the camera battery is sufficiently charged. If the EH-62F AC Adapter (available separately) is used, this camera 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.

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

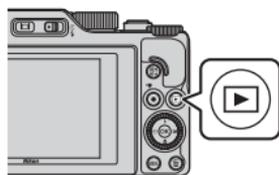


2 Set the TV's input to external input.

- 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.
- To play back movies that were saved using  **2160/30p** (4K UHD) or  **2160/25p** (4K UHD) in 4K UHD quality, use a TV and HDMI cable that support 4K.



Notes When an HDMI Cable Is Connected

- When you switch the camera to shooting mode, the shooting screen is displayed, but you cannot shoot while connected with an HDMI cable.
- The shooting screen of the camera is displayed on the screen for HDMI output, but audio is not output.
- Shooting and photo information is not displayed on the screen for HDMI output.
- You cannot perform touch operations when an HDMI cable is connected.
- The network menu cannot be selected when an HDMI cable is connected.

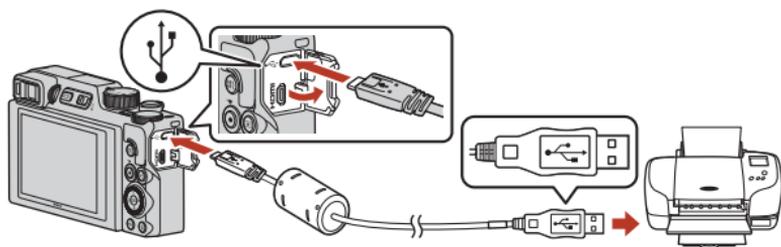


Printing Images Without a Computer

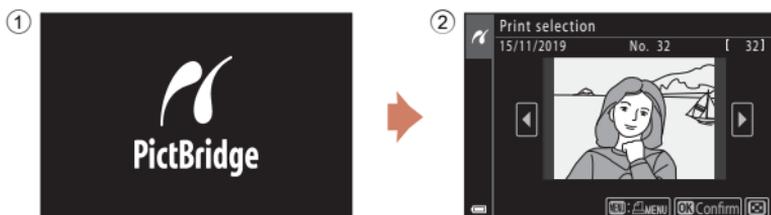
Users of PictBridge-compatible printers can connect the camera directly to the printer and print images without using a computer.

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).



✓ If the PictBridge Startup Screen Is Not Displayed

When **Auto** is selected for **Charge by computer** (175), 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

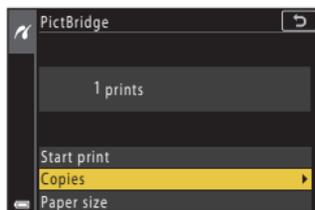
1 Use the multi selector ◀▶ to select the desired image and press the **OK** button.

- 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.



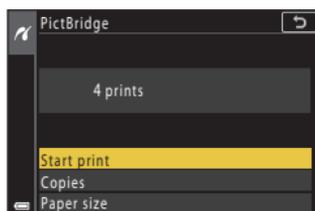
3 Select **Paper size** and press the **OK** button.

- 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.



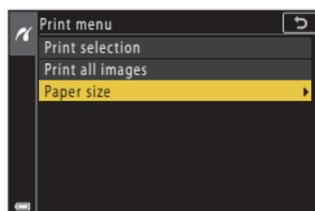
Printing Multiple Images

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

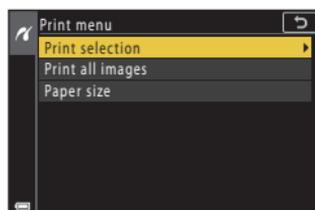


- 2 Use the multi selector ▲▼ to select **Paper size** and press the **OK** button.

- 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.



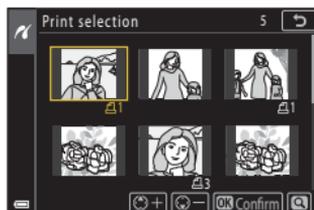
- 3 Select **Print selection** or **Print all images**, and press the **OK** button.



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** (🔍) 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

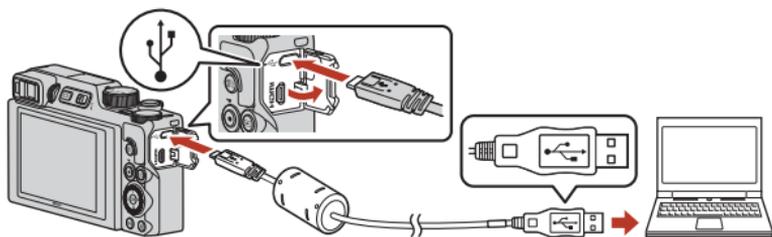
The items displayed on your computer screen may change when you update the version of your operating system or software.

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.

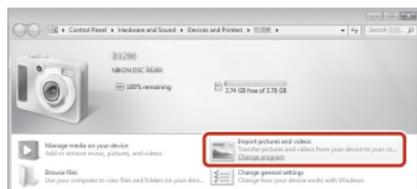


If a message is displayed prompting you to choose a program, select Nikon Transfer 2.

- **When using Windows 7**

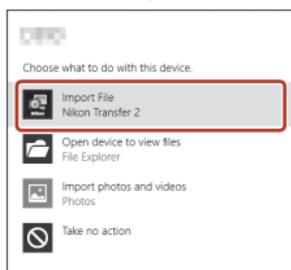
If the dialog shown on the right is displayed, follow the steps below to select Nikon Transfer 2.

- 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

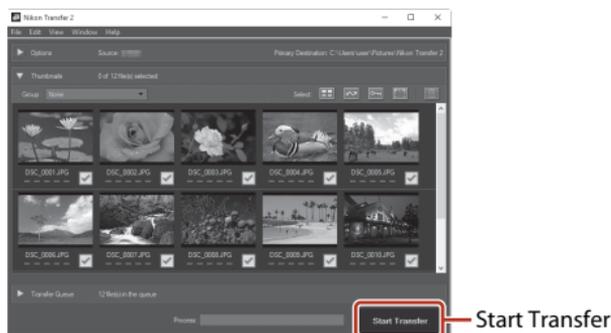
Operation is not guaranteed if the camera is connected to the computer via a USB hub.

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.

Capture NX-D

Use Nikon's Capture NX-D software to fine-tune photos or to change settings for RAW pictures and save them in other formats. It is available for download from the following website:

<https://downloadcenter.nikonimglib.com>



Using the Menu

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Menu Operations

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

-  **Shooting menu**^{1,2}
-  **Movie menu**¹
-  **Playback menu**³
-  **Network menu**
-  **Setup menu**

¹ Press the **MENU** button when the shooting screen is displayed.

² Menu icons and available setting options vary depending on the shooting mode.

³ Press the **MENU** button when the playback screen is displayed.

1 Press the **MENU** (menu) button.

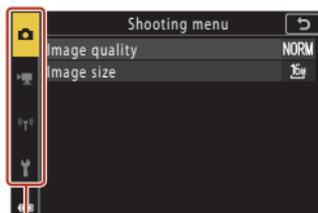
- The menu is displayed.



2 Press the multi selector



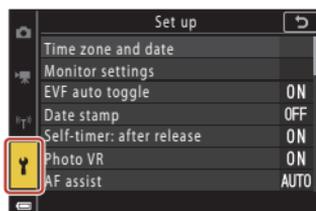
- The current menu icon is displayed in yellow.



Menu icons

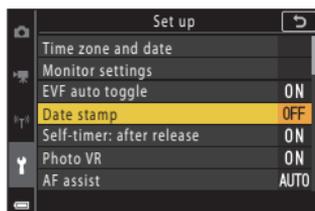
3 Select a menu icon and press the **OK** button.

- The menu options become selectable.



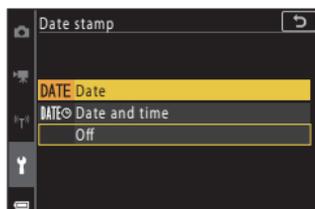
4 Select a menu option and press the **OK** button.

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



5 Select a setting and press the **OK** button.

- The setting you selected is applied.
- When you are finished using the menu, press the **MENU** button.
- When a menu is displayed, you can switch to shooting mode by pressing the shutter-release button or **Q** (**▶**) button.



Command Dial or Multi Selector Operation When a Menu Is Displayed

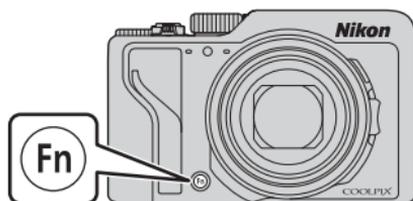
When a menu or setting items are displayed, you can select a menu option also by rotating the command dial or multi selector.

Operating the Touch Panel on Menus

You can use the touch panel to operate menus (7).

Using the **F_n** (Function) Button

If you press the **F_n** button in **P**, **S**, **A**, or **M** mode, you can quickly configure the pre-saved menu options (default setting is **Continuous**). To set a different menu option, select  **F_n button** and select the desired menu option.



The Image Selection Screen

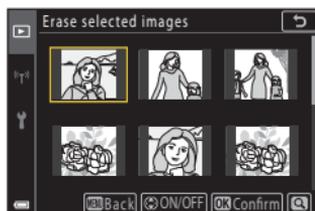
When an image selection screen such as the one shown on the right is displayed while operating the camera menu, follow the procedures described below to select the images.



1 Use the multi selector ◀▶ or rotate it 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 quality*	Normal	127
Image size*	 4608×3456	129

* Also can be set by pressing the **Fn** (function) button ( 121).

For P, S, A, and M Modes

Option	Default setting	
White balance*	Auto (normal)	130
Metering*	Matrix	133
Continuous*	Single	134
ISO sensitivity*	Auto	138
Exposure bracketing	<ul style="list-style-type: none">• Number of shots: Bracketing off• Bracketing increment: ±0.3	139
AF area mode*	Target finding AF	140
Autofocus mode	Pre-focus	143
Noise reduction filter	Normal	144
M exposure preview	On	144

* Also can be set by pressing the **Fn** (function) button ( 121).



The Movie Menu

Enter shooting mode → MENU button →  menu icon →  button

Option	Default setting	
Movie options	 1080/30p or  1080/25p	145
Autofocus mode	Single AF	150
Movie VR	On (hybrid)	151
Wind noise reduction	Off	152
Frame rate	–	152

The Playback Menu

Press the  button (playback mode) → MENU button

Option	
Mark for upload ¹	153
Quick retouch ²	89
D-Lighting ²	89
Red-eye correction ²	90
Glamour retouch ²	90
Filter effects ²	92
Slide show	154
Protect ¹	155
Rotate image ¹	155
Copy ¹	156
Sequence display	157

¹ Select an image on the image selection screen. See “The Image Selection Screen” ( 122) for more information.

² Edited images are saved as separate files. Some images may not be edited.



The Network Menu

Press the **MENU** button → «☰» menu icon → **OK** button

Option	
Airplane mode	158
Choose connection	158
Connect to smart device	158
Connection to remote	158
Send while shooting	158
Wi-Fi	159
Bluetooth	159
Restore default settings	159



The Setup Menu

Press the **MENU** button → **Y** menu icon → **OK** button

Option	
Time zone and date	161
Monitor settings	163
EVF auto toggle	165
Date stamp	166
Self-timer: after release	167
Photo VR*	168
AF assist	169
Digital zoom	169
Assign side zoom control	170
AE/AF lock button	171
Sound settings	172
Auto off	172
Format card/Format memory	173
Language	174
HDMI output	174
Charge by computer	175
Image comment	176
Copyright information	177
Location data	178
Toggle Av/Tv selection	178
MF peaking	179
Reset all	179
Touch-screen controls	179
Conformity marking	180
Firmware version	180

* Also can be set by pressing the **Fn** (function) button ( 121).



The Shooting Menu (Common Across Shooting Modes)

Image Quality

Enter shooting mode → MENU button → Image quality → OK button

Set the image quality (compression ratio) used when saving images.

Lower compression ratios result in higher quality images, but the number of images that can be saved is reduced.

The setting is also applied to other shooting modes.

Option	Description
FINE Fine	Finer image quality than Normal . Compression ratio of about 1:4
NORM Normal (default setting)	Normal image quality, suitable for most applications. Compression ratio of about 1:8
RAW RAW	Raw data from the image sensor are saved without additional processing. You can use a computer to change settings that were set during shooting such as white balance and contrast. • Image size is fixed at  4608x3456 File format: RAW (NRW), Nikon's own format
RAW+FINE RAW + Fine	Two images are recorded at the same time, one RAW image and one fine-quality JPEG image.
RAW+N RAW + Normal	Two images are recorded at the same time, one RAW image and one normal-quality JPEG image.

Notes About Image Quality

- Image quality cannot be set in the following shooting modes:
 - **Time-lapse movie** and **Easy panorama** scene modes
 - Short movie show mode
- RAW images cannot be captured in the following shooting modes:
 - Scene modes
 - Creative mode
 - Short movie show mode

If you change the shooting mode to any of the above shooting modes when a RAW image quality has been selected, the image quality will change to **Fine** or **Normal**.

- This function may not be available to use in combination with other functions (80).



RAW Images of This Camera

- RAW images cannot be processed on this camera.
- ViewNX-i (📖116) needs to be installed on the computer to be able to view RAW images on the computer.
- RAW images cannot be edited or printed directly. You can adjust images or process RAW images if you transfer RAW images to a computer, and then use software such as Capture NX-D (📖118).

Saving of RAW and JPEG Images at the Same Time

- The RAW image and the JPEG image that are saved at the same time have the same file number but with their own extensions, “.NRW” and “.JPG” respectively (📖206).
- When playing back on the camera, only the JPEG image is displayed.
- Note that when the JPEG image is deleted, the RAW image that was saved at the same time is also deleted.

Number of Images That Can Be Saved

- The approximate number of images that can be saved can be checked on the screen when shooting (📖23).
- 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 quality and image size settings. 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.”



Image Size

Enter shooting mode → MENU button → Image size →  button

Set the image size (number of pixels) used when saving JPEG images.

The larger the image size, the larger the size at which it can be printed, but the number of images that can be saved is reduced.

The setting is also applied to other shooting modes.

Option*	Aspect ratio (horizontal to vertical)
 4608×3456 (default setting)	4:3
 3264×2448	4:3
 2272×1704	4:3
 1600×1200	4:3
 4608×2592	16:9
 4608×3072	3:2
 3456×3456	1:1

* The numerical values indicate the number of pixels that are captured.

Example:  **4608×3456** = approx. 16 megapixels, 4608×3456 pixels

Notes About Printing Images at 1:1 Aspect Ratio

Change the printer setting to “Border” when printing images at a 1:1 aspect ratio.

Some printers may not be able to print images at a 1:1 aspect ratio.

Notes About Image Size

- Image size cannot be set in the following shooting modes:
 - Time-lapse movie** and **Easy panorama** scene modes
 - Short movie show mode
- This function may not be available to use in combination with other functions (80).



The Shooting Menu (P, S, A, or M Mode)

- See “Image Quality” (📖127) and “Image Size” (📖129) for information about **Image quality** and **Image size**.

White Balance (Adjusting Hue)

Rotate the mode dial to **P, S, A, or M** → MENU button → **P, S, A, or M** menu icon → 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 (normal) (default setting)	White balance is automatically adjusted.
AUTO2 Auto (warm lighting)	When set to Auto (warm lighting) , the images are preserved with warm colors if they are shot under an incandescent light source. When using the flash, white balance is adjusted according to the flash lighting condition.
PRE Preset manual	Use when the desired result is not achieved with Auto (normal) , Auto (warm lighting) , Incandescent , etc. (📖132).
 Daylight*	Use under direct sunlight.
 Incandescent*	Use under incandescent lighting.
 Fluorescent	Use under most types of fluorescent lighting. Choose one of 1 (cool-white fluorescent), 2 (day white fluorescent), and 3 (daylight fluorescent).
 Cloudy*	Use under overcast skies.
 Flash*	Use with the flash.
 Choose color temp.	Use to directly specify color temperature (📖131).

* Fine adjustments in seven steps are available. Apply positive (+) to increase blue hue and negative (-) to increase red hue.

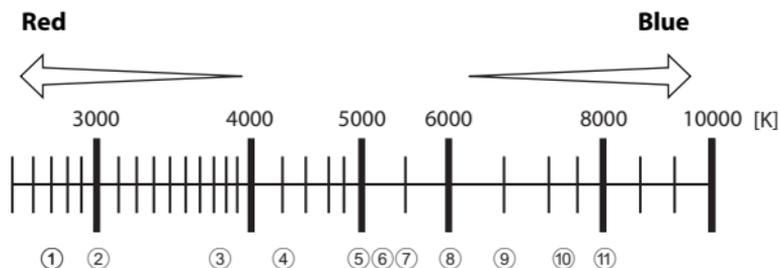
Notes About White Balance

- Lower the flash when white balance is set to any setting other than **Auto (normal)**, **Auto (warm lighting)**, or **Flash** (📖25).
- This function may not be available to use in combination with other functions (📖80).



Color Temperature

Color temperature is an objective measure of colors of light sources which are expressed in the unit of absolute temperature (K: Kelvin). Light sources with lower color temperatures appear more reddish, while light sources with higher color temperatures appear more bluish.



- | | |
|--|-----------------------------------|
| ① Sodium-vapor lamps: 2700K | ⑦ Flash: 5400K |
| ② Incandescent/
Warm-white fluorescent: 3000K | ⑧ Cloudy: 6000K |
| ③ White fluorescent: 3700K | ⑨ Daylight fluorescent: 6500K |
| ④ Cool-white fluorescent: 4200K | ⑩ High temp. mercury-vapor: 7200K |
| ⑤ Day white fluorescent: 5000K | ⑪ Shade: 8000K |
| ⑥ Direct sunlight: 5200K | |



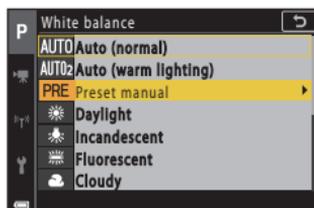
Using Preset Manual

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.

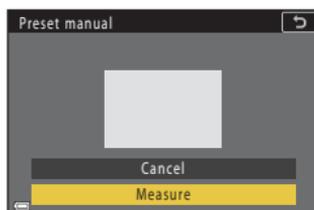
2 Use the multi selector ▲▼ to select **Preset manual**, and press the **OK** button.

- The lens extends to the zoom position for measurement.



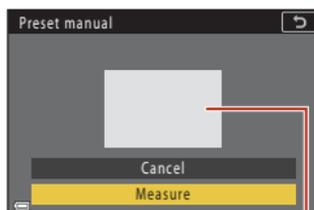
3 Select **Measure**.

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



4 Frame the white or gray reference object in the measuring window, and press the **OK** button to measure the value.

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



Measuring window

✓ 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 (normal)**, **Auto (warm lighting)**, or **Flash**.



Metering

Rotate the mode dial to **P, S, A, or M** → **MENU** button → **P, S, A, or M** menu icon → Metering → **OK** button

The process of measuring the brightness of the subject to determine the exposure is known as "metering."

Use this option to set the method of how the camera meters exposure.

Option	Description
 Matrix (default setting)	The camera uses a wide area of the screen for metering. Recommended for typical shooting.
 Center-weighted	The camera meters the entire frame but assigns greatest weight to the subject in the center of the frame. The classic metering for portraits; it preserves background details while letting lighting conditions in the center of the frame determine exposure.*
 Spot	The camera meters the area shown by the circle in the center of the frame. This can be used when the subject is much lighter or darker than the background. Ensure that the subject is within the area shown by the circle when shooting.*

* To set focus and exposure for off-center subjects, change **AF area mode** to manual and set the focus area to the center of the frame, and then use focus lock (📖77).

Notes About Metering

- When digital zoom is in effect, **Center-weighted** or **Spot** is selected depending on the zoom ratio.
- This function may not be available to use in combination with other functions (📖80).

Display on the Shooting Screen

When **Center-weighted** or **Spot** is selected, the metering range guide (📖12) is displayed.



Continuous Shooting

Rotate the mode dial to **P, S, A, or M** → **MENU** button → **P, S, A, or M** menu icon → **Continuous** → **OK** button

Option	Description
 Single (default setting)	One image is captured each time the shutter-release button is pressed.
 Continuous H	While the shutter-release button is held all the way down, images are captured continuously. <ul style="list-style-type: none"> The camera can capture up to about 10 images continuously at a rate of about 10 fps (when set to Normal (image quality) and  4608x3456 (image size)).
 Continuous M	While the shutter-release button is held all the way down, images are captured continuously. <ul style="list-style-type: none"> The camera can capture up to about 200 images continuously at a rate of about 7 fps (when set to Fine or Normal (image quality) and  4608x3456 (image size)).
 Continuous L	While the shutter-release button is held all the way down, images are captured continuously. <ul style="list-style-type: none"> The camera can capture up to about 200 images continuously at a rate of about 3 fps (when set to Fine or Normal (image quality) and  4608x3456 (image size)).
 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 ( 135). Pre-shooting cache makes it easy to capture perfect moments. <ul style="list-style-type: none"> The camera can capture up to about 10 images continuously at a rate of about 15 fps (including a maximum of 5 images captured in the pre-shooting cache). The image quality is fixed at Normal and the image size is fixed at  1600x1200.
 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. <ul style="list-style-type: none"> The camera can capture up to about 60 images continuously at a rate of about 120 fps. The image size is fixed at  1600x1200.
 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. <ul style="list-style-type: none"> The camera can capture up to about 60 images continuously at a rate of about 60 fps. The image size is fixed at  1600x1200.
 Intvl timer shooting	The camera automatically captures still images continuously at the specified interval ( 136).

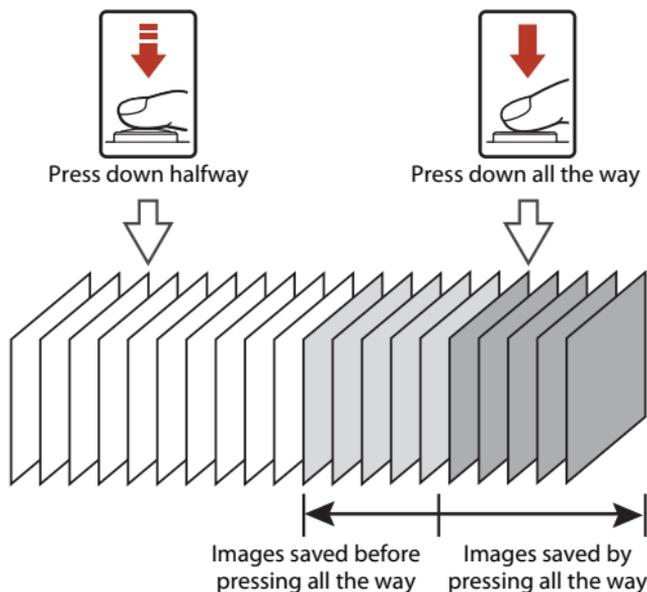


✓ Notes About Continuous Shooting

- Focus, exposure and white balance are fixed at the values determined with the first shot in each series (except **Intvl timer shooting**).
- 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 image quality, image size, memory card type or shooting conditions (such as when saving RAW images).
- 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 (📖80).

📎 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.

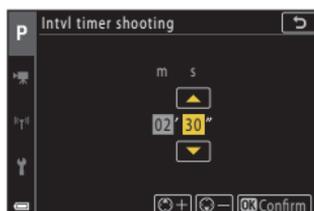


Interval Timer Shooting

Rotate the mode dial to **P**, **S**, **A**, or **M** → MENU button → **P**, **S**, **A**, or **M** menu icon → Continuous → OK button → Intvl timer shooting → OK button

1 Set the desired interval between each shot.

- Use ◀▶ to select an item, and use ▲▼ to set the time.
- Press the OK button when setting is complete.



2 Press the MENU (menu) button to display the shooting screen.

3 Press the shutter-release button to shoot the first image.

- The shutter is automatically released at the specified interval to shoot second and subsequent images.
- The screen turns off and the power-on lamp flashes during the intervals between shots.



4 When the desired number of images have been captured, press the shutter-release button.

- Shooting ends.
- Shooting ends automatically in the following situations:
 - When the memory card becomes full
 - When the number of images captured continuously reaches 9999



Notes About Interval Timer Shooting

- To prevent the camera from turning off unexpectedly during shooting, use a sufficiently charged battery.
- If the EH-62F AC Adapter (available separately;  207) 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.
- Do not rotate the mode dial to a different setting while interval timer shooting is in progress. Shooting will end.
- If the shutter speed is slow and saving an image takes time compared to the specified interval, some of the shots during Interval timer shooting may be canceled.
- You can also use the shutter-release button on the ML-L7 Remote Control (available separately) to start shooting, but not to end shooting. To end shooting, press the shutter-release button on the camera.



ISO Sensitivity

Rotate the mode dial to **P, S, A, or M** → **MENU** button → **P, S, A, or M** menu icon → 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 100 to 1600.
ISO AUTO Fixed range auto	The range in which the camera automatically adjusts ISO sensitivity can be selected from ISO 100-400 or ISO 100-800 .
100, 200, 400, 800, 1600, 3200, 6400	ISO sensitivity is fixed at the specified value.

Notes About ISO Sensitivity

- In **M** (manual) mode, when set to **Auto, ISO 100-400, or ISO 100-800**, the ISO sensitivity is fixed at ISO 100.
- This function may not be available to use in combination with other functions (80).

ISO Sensitivity Display on the Shooting Screen

- When **Auto** or **Fixed range auto** is selected, the value for ISO sensitivity automatically specified is displayed.
- You can also set this function by tapping the ISO sensitivity display on the shooting screen.



Exposure Bracketing

Rotate the mode dial to **P**, **S**, or **A** → **MENU** button → **P**, **S**, or **A** menu icon → Exposure bracketing →  button

The exposure (brightness) can be changed automatically during continuous shooting. This is effective for shooting when it is difficult to adjust the picture brightness.

Option	Description
Number of shots	Select Bracketing off (default setting), 3 , or 5 for the number of images to capture continuously.
Bracketing increment	Select ±0.3 (default setting), ±0.7 , or ±1.0 for the step width used in exposure compensation.

The relationships between the settings and shooting order are listed below.

Number of shots	Bracketing increment	Shooting order
3	±0.3	0, -0.3, +0.3
	±0.7	0, -0.7, +0.7
	±1.0	0, -1.0, +1.0
5	±0.3	0, -0.7, -0.3, +0.3, +0.7
	±0.7	0, -1.3, -0.7, +0.7, +1.3
	±1.0	0, -2.0, -1.0, +1.0, +2.0

Notes About Exposure Bracketing

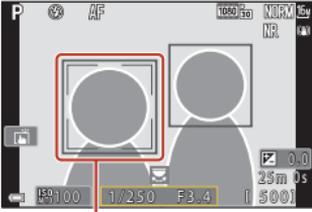
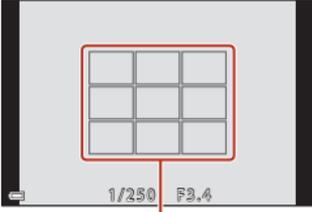
- **Exposure bracketing** is not available in **M** (manual) mode.
- When exposure compensation ( 66) and **±0.3**, **±0.7**, or **±1.0** in **Bracketing increment** are set simultaneously, the combined exposure compensation values are applied.
- This function may not be available to use in combination with other functions ( 80).



AF Area Mode

Rotate the mode dial to **P**, **S**, **A** or **M** → **MENU** button → **P**, **S**, **A** or **M** menu icon → AF area mode → **OK** button

Set how the camera selects the focus area for autofocus.

Option	Description
 Face priority	<p>When the camera detects a human face, it focuses on that face. See "Using Face Detection" (📖75) for more information.</p>  <p>Focus area</p> <p>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.</p>  <p>Focus area</p>



Option	Description
<p>[] Manual (spot)</p> <p>[] Manual (normal)</p> <p>[] Manual (wide)</p>	<p>Use the multi selector  to move the focus area to where you want to focus.</p> <p>To use the multi selector to configure the flash mode or other settings, press the  button. To return to moving the focus area, press the  button again.</p> <p>Scope of movable focus area</p> <div style="display: flex; justify-content: space-around;"> <div data-bbox="288 300 601 507"> <p data-bbox="334 520 555 544">Focus area (centered)</p> </div> <div data-bbox="629 300 943 507"> <p data-bbox="629 520 835 544">Focus area (moving)</p> </div> </div>
<p> Subject tracking</p>	<p>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” (📖142) for more information.</p> <div data-bbox="636 587 948 799"> <p data-bbox="656 810 767 834">Focus area</p> </div>
<p>[] Target finding AF (default setting)</p>	<p>When the camera detects the main subject, it focuses on that subject. See “Using Target Finding AF” (📖74) for more information.</p> <div data-bbox="636 871 948 1083"> <p data-bbox="741 1094 862 1118">Focus areas</p> </div>

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 (📖80).



Using Subject Tracking

Rotate the mode dial to **P**, **S**, **A** or **M** → MENU button → **P**, **S**, **A** or **M** menu icon → 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 **P, S, A** or **M** → **MENU** button → **P, S, A** or **M** menu icon → 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.

Notes About Autofocus Mode

This function may not be available to use in combination with other functions (📖80).

Autofocus Mode for Short Movie Show Mode or Movie Recording

Autofocus mode for short movie show mode or movie recording can be set with **Autofocus mode** (📖150) in the movie menu.



Noise Reduction Filter

Rotate the mode dial to **P, S, A, or M** → **MENU** button → **P, S, A, or M** menu icon → Noise reduction filter → **OK** button

Set the strength of the noise reduction function that is normally performed when saving images.

Option	Description
NR⁺ High	Performs noise reduction at a level higher than the standard strength.
NR Normal (default setting)	Performs noise reduction at the standard strength.
NR⁻ Low	Performs noise reduction at a level lower than the standard strength.

M Exposure Preview

Rotate the mode dial to **P, S, A or M** → **MENU** button → **P, S, A or M** menu icon → M exposure preview → **OK** button

Set whether or not to reflect the brightness to the shooting screen when the exposure is changed in **M** (manual) mode.

Option	Description
On (default setting)	Reflects the brightness to the shooting screen.
Off	Does not reflect the brightness to the shooting screen.



The Movie Menu

Movie Options

Enter shooting mode → MENU button →  menu icon → Movie options →  button

Select the desired movie option to record. Select normal speed movie options to record at normal speed, or HS movie options ( 147) to record in slow or fast motion. The movie options that can be selected vary depending on the **Frame rate** setting ( 152).

- Memory cards with an SD Speed Class rating of 6 (Video Speed Class V6) or faster are recommended for recording movies ( 216). When **Movie options** is set to  **2160/30p** (4K UHD) or  **2160/25p** (4K UHD), memory cards with a UHS Speed Class rating of 3 (Video Speed Class V30) or faster are recommended.



Normal Speed Movie Options

Option (Image size/ Frame rate, File format)	Image size	Aspect ratio (horizontal to vertical)	Max. recording time per file (approx.)
$\frac{2160}{2160} \frac{P}{60}$ 2160/30p (4K UHD) ^{1,2} $\frac{2160}{2160} \frac{P}{25}$ 2160/25p (4K UHD) ^{1,2}	3840 × 2160	16:9	9 min
$\frac{1080}{1080} \frac{P}{60}$ 1080/30p $\frac{1080}{1080} \frac{P}{25}$ 1080/25p (default setting)	1920 × 1080	16:9	25 min
$\frac{1080}{1080} \frac{P}{60}$ 1080/60p ² $\frac{1080}{1080} \frac{P}{50}$ 1080/50p ²	1920 × 1080	16:9	13 min
$\frac{720}{720} \frac{P}{60}$ 720/30p $\frac{720}{720} \frac{P}{25}$ 720/25p	1280 × 720	16:9	29 min
$\frac{720}{720} \frac{P}{60}$ 720/60p $\frac{720}{720} \frac{P}{50}$ 720/50p	1280 × 720	16:9	27 min

¹ Cannot be selected when you are using the internal memory.

² Cannot be selected in **Soft** or **Smart portrait** (when **Soft** is set) scene mode.

- 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, it is split into multiple files and cannot be played back continuously.
- The actual remaining recording time may vary depending on the movie content, subject movement, or type of memory card.



HS Movie Options

Recorded movies are played back in fast or slow motion.

See "Recording Movies in Slow Motion and Fast Motion (HS Movie)" (📖149).

Option	Image size Aspect ratio (horizontal to vertical)	Description
 HS 720/4x ¹	1280 × 720 16:9	1/4-speed slow motion movies • Max. recording time ² : 7 minutes and 15 seconds (playback time: 29 minutes)
 HS 1080/2x ¹	1920 × 1080 16:9	1/2-speed slow motion movies • Max. recording time ² : 14 minutes and 30 seconds (playback time: 29 minutes)
 HS 1080/0.5x	1920 × 1080 16:9	2x speed fast motion movies • Max. recording time ² : 29 minutes (playback time: 14 minutes and 30 seconds)

¹ Cannot be selected in **Soft** or **Smart portrait** (when **Soft** is set) scene mode.

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.

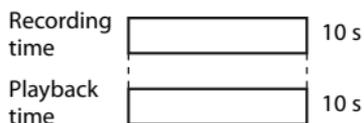
Notes About HS Movie

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



Playing Back in Slow Motion and Fast Motion

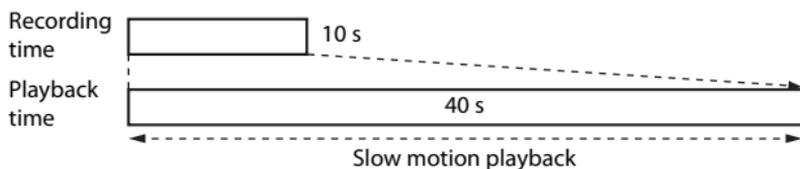
When recording at normal speed:



When recording at $\frac{720}{1080}$ HS 720/4x:

Movies are recorded at 4x normal speed.

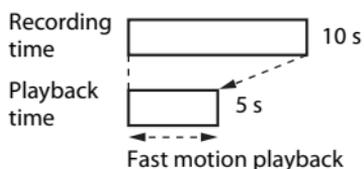
They are played back in slow motion at 4x slower speed.



When recording at $\frac{1080}{720}$ HS 1080/0.5x:

Movies are recorded at 1/2 normal speed.

They are played back in fast motion at 2x faster speed.



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

Enter shooting mode → MENU button →  menu icon → Movie options →  button

Movies recorded using HS movie can be played back in slow motion at 1/4 or 1/2 of the normal playback speed, or in fast motion at twice the normal playback speed.

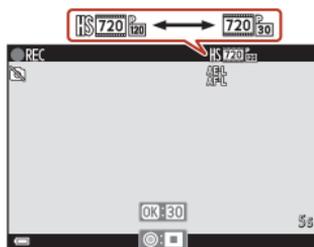
1 Use the multi selector  to select an HS movie option (147) and press the  button.

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



2 Press the  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  button is pressed.
- The movie options icon changes when switching between HS movie recording and normal speed movie recording.



3 Press the  button to end recording.



Autofocus Mode

Enter shooting mode → MENU button →  menu icon → Autofocus mode →  button

Set how the camera focuses in short movie show mode or 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 →  menu icon → Movie VR →  button

Select the vibration reduction setting used in short movie show mode or 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 →  menu icon → Wind noise reduction →  button

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

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 →  menu icon → Frame rate →  button

Select the frame rate used in time-lapse movie, short movie show mode, or when recording movies. When the frame rate setting is switched, options that can be set in **Movie options** ( 145) change.

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



The Playback Menu

See “Editing Images (Still Images)” (📖88) for information about image editing functions.

Mark for Upload

Press the  button (playback mode) → MENU button → Mark for upload →  button

Select still images in the camera and upload them to a smart device that has a wireless connection established with the SnapBridge app.

On the image selection screen (📖122), select or deselect images to upload.

- The size of images that are uploaded is restricted to 2 megapixels. To upload still images at their original size, use **Download pictures** in the SnapBridge app.
- RAW images and movies cannot be selected. To upload movies to a smart device, use **Download pictures** in the SnapBridge app.
- Note that when you select **Reset all** (📖179) in the setup menu or **Restore default settings** (📖159) in the network menu, the Mark for upload settings that you made are canceled.



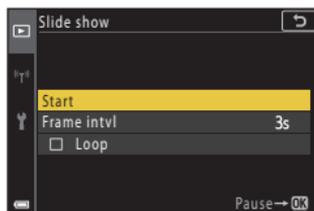
Slide Show

Press the  button (playback mode) → MENU button → Slide show →  button

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

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

- The slide show begins.
- To change the interval between images, select **Frame intvl**, press the  button, and specify the desired interval time before selecting **Start**.
- To repeat the slide show automatically, select **Loop** and press the  button before selecting **Start**.
- The maximum playback time is up to about 30 minutes even if **Loop** is enabled.



2 End or restart the slide show.

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



Operations During Playback

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



Protect

Press the  button (playback mode) → MENU button → Protect →  button

The camera protects selected images from accidental deletion.

Select images to protect or cancel protection from the image selection screen (122).

Note that formatting the memory card or the camera's internal memory permanently deletes all data including protected files (173).

Rotate Image

Press the  button (playback mode) → MENU button → Rotate image →  button

Specify the orientation in which saved still images are displayed during playback.

Select an image from the image selection screen (122). When the rotate image screen is displayed, use the multi selector  or rotate it to rotate the image 90 degrees.



Rotate 90 degrees
counterclockwise



Rotate 90 degrees
clockwise

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



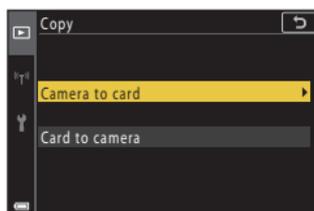
Copy (Copy Between the Memory Card and Internal Memory)

Press the  button (playback mode) → MENU button → Copy →  button

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

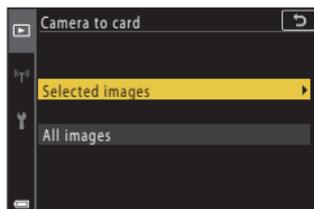
- When a memory card that contains no images is inserted and the camera is switched to playback mode, **Memory contains no images.** is displayed. In that case, press the MENU button to select **Copy**.

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



- 2 Select a copy option and press the  button.

- When you choose **Selected images**, use the image selection screen to specify images (122).



Notes About Copying Images

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

Copying Images in a Sequence

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



Sequence Display

Press the  button (playback mode) → MENU button → Sequence display →  button

Select the method used to display images in the sequence (86).

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 → “**T**” menu icon → **OK** button

Configure the wireless network settings to connect the camera to a smart device or the ML-L7 Remote Control (available separately).

- When you establish a wireless connection between the camera and a smart device with the SnapBridge app installed, you can upload images captured with the camera to the smart device or perform remote photography. See the included “SnapBridge Connection Guide” for the connection procedure.
- Some settings cannot be changed while a wireless connection is established. To change 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 a smart device or the ML-L7 Remote Control (available separately).
Connect to smart device	Select when using the SnapBridge app to connect the camera and a smart device. See the included “SnapBridge Connection Guide” for more information. <ul style="list-style-type: none">• Select Smart device in Choose connection before selecting this option.
Connection to remote	Select when connecting the ML-L7 Remote Control (available separately) with the camera. The camera waits for the connection to be established (📖210). <ul style="list-style-type: none">• Select Remote control in Choose connection before selecting this option.
Send while shooting	Set the conditions for automatically sending images to a smart device. <ul style="list-style-type: none">• The size of images that are uploaded is restricted to 2 megapixels. To upload still images at their original size, use Download pictures in the SnapBridge app.



Option		Description
Wi-Fi	Network settings	SSID* : Change the SSID. Set a 1- to 32-character alphanumeric SSID.
		Auth./encryp. : Select whether or not to encrypt the communications between the camera and the connected smart device. Communications are not encrypted when Open is selected.
		Password* : Set the password. Set an 8- to 36-character alphanumeric password.
		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	Display the current settings.
Bluetooth	Connection	Select Disable to turn off Bluetooth communication.
	Paired devices	Change the smart device to connect with, or delete the connected smart device. This camera can be paired with up to five smart devices, but can connect to only one device at a time.
	Send while off	Set whether or not to allow the camera to communicate with the smart device when the camera is off or in standby mode (📖25).
Restore default settings		Restore all network menu settings to their default values.

* See “Operating the Text Input Keyboard” (📖160) for information on how to enter alphanumeric characters.

Bluetooth Communication Indicator on the Shooting Screen

- On: The camera is connected to a smart device via Bluetooth.
- Flashing: The camera is waiting for the connection to a smart device to be reestablished. It also flashes when Bluetooth communication is disconnected while uploading images (📖203).



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.
- Select the change character type icon and press the **OK** button to change the character type.
- To move the cursor in the text field, rotate the command dial.
- To delete characters, move the cursor to the text field you want to delete and press the **Delete** button.
- To apply the setting, select ↵ on the keyboard and press the **OK** button.



Operating the Touch Panel on the Text Input Keyboard

You can input characters by tapping the text field, keyboard, or change character type icon.

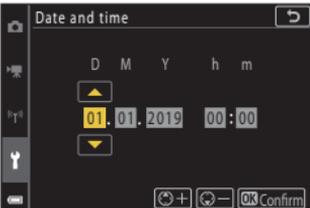


The Setup Menu

Time Zone and Date

Press the **MENU** button → **Y** menu icon → Time zone and date → **OK** button

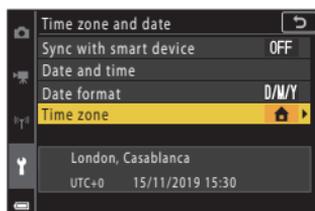
Set the camera clock.

Option	Description
Sync with smart device	Select On to synchronize the date and time setting with a smart device. Enable the clock synchronization function of the SnapBridge app.
Date and time*	<ul style="list-style-type: none">Select a field: Press the multi selector ◀▶.Edit the date and time: Press ▲▼. Date and time can also be changed by rotating the multi selector or command dial.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. <ul style="list-style-type: none">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.

* Can be set only when **Sync with smart device** is set to **Off**.

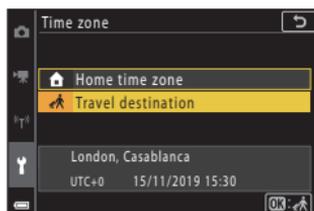
Setting the Time Zone

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

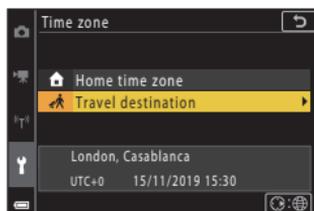


2 Select  **Home time zone** or  **Travel destination** and press the  button.

- 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

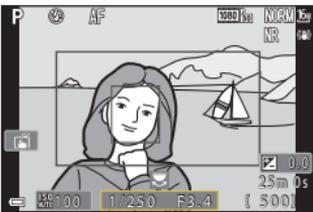
Press the MENU button →  menu icon → Monitor settings →  button

Option	Description
Photo info	Set whether or not to display information on the screen.
Monitor brightness	Adjust the monitor brightness. <ul style="list-style-type: none"> • Default setting: 3
EVF brightness	Adjust the viewfinder brightness. <ul style="list-style-type: none"> • Default setting: 3
Help display	The descriptions of functions are displayed while changing the shooting mode or while the setting screen is displayed. <ul style="list-style-type: none"> • Default setting: On
Image review	Set whether or not to display the captured image immediately after shooting. <ul style="list-style-type: none"> • Default setting: On

Photo Info

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



	Shooting mode	Playback mode
Framing grid+auto info	 <p>In addition to the information shown in Auto info, a framing grid is displayed to help frame pictures. The framing grid is not displayed while recording movies.</p>	 <p>Same as Auto info.</p>
Movie frame+auto info	 <p>In addition to the information shown in Auto info, a frame is displayed before movie recording begins that represents the area that will be captured when recording movies. The movie frame is not displayed while recording movies.</p>	 <p>Same as Auto info.</p>



EVF Auto Toggle (Automatically Switching the Display to the Viewfinder)

Press the MENU button →  menu icon → EVF auto toggle →  button

Option	Description
On (default setting)	When you bring your face close to the viewfinder, the eye sensor responds to it and the display is automatically switched from the monitor to viewfinder.
Off	Even when you bring your face close to the viewfinder, the display is not switched to the viewfinder.



Date Stamp

Press the **MENU** button → **Y** menu icon → 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 portrait** (when set to **Hand-held**), **Night landscape** (when set to **Hand-held**), **Backlighting** (when **HDR** is set to **On**), **Easy panorama**, or **Multiple exp. Lighten**
 - When **Image quality** ( 127) is set to **RAW**, **RAW + Fine**, or **RAW + Normal**
 - When **Continuous** ( 134) 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 extracting still images from a movie during movie playback
- The stamped date and time may be difficult to read when using a small image size.



Self-timer: After Release

Press the MENU button →  menu icon → Self-timer: after release →  button

Set whether to cancel the self-timer after using it to shoot (61).

Option	Description
ON Exit self-timer mode (default setting)	The self-timer is canceled after shooting. <ul style="list-style-type: none">• After shooting in Multiple exp. Lighten scene mode, self-timer is not canceled. To end self-timer, manually set the self-timer setting to OFF.• Pet portrait auto release and Smile timer are not canceled.
OFF Stay in self-timer mode	The self-timer photography continues after shooting. <ul style="list-style-type: none">• When the camera is turned off, self-timer is canceled.• Self-Collage is canceled.



Photo VR

Press the **MENU** button → **Y** menu icon → 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 →  menu icon → AF assist →  button

Option	Description
AUTO Auto (default setting)	The AF-assist illuminator automatically lights up when you press the shutter-release button under dim lighting. The illuminator has a range of about 3.5 m (11 ft) at the maximum wide-angle position and about 5.0 m (16 ft) at the maximum telephoto position. <ul style="list-style-type: none">• 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 →  menu icon → Digital zoom →  button

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

Notes About Digital Zoom

- Digital zoom cannot be used in the following scene modes:
 - **Portrait, Night portrait, Night landscape, Backlighting** (when **HDR** is set to **On**), **Easy panorama, Pet portrait, Smart portrait**
- Digital zoom cannot be used in other shooting modes when using certain settings (82).



Assign Side Zoom Control

Press the **MENU** button → **Y** menu icon → Assign side zoom control → **OK** button

Choose the function to be performed during shooting when the side zoom control is moved.

Option	Description
ZOOM Zoom (default setting)	Adjust the zoom (📖70).
MF Manual focus ¹	When the focus mode is set to MF (manual focus), use the side zoom control to focus (📖64). <ul style="list-style-type: none">• Move the side zoom control toward T to focus on distant subjects.• Move the side zoom control toward W to focus on near subjects.
Aperture ²	Set the f-number (📖53).
ISO ISO sensitivity ³	Display the ISO sensitivity setting screen (📖138). Move the side zoom control while the setting screen is displayed to select an item.
Exposure compensation ⁴	Display the exposure compensation setting screen (📖66, 68). Move the side zoom control while the setting screen is displayed to select a compensation value.
WB White balance ⁵	Display the white balance setting screen (📖130). Move the side zoom control while the setting screen is displayed to select an item.
OFF None	The side zoom control does not operate even if it is moved.

¹ When the focus mode is set to modes other than **MF**, operation of the side zoom control is disabled.

² In shooting modes where the f-number cannot be set, operation of the side zoom control is disabled.

³ When the ISO sensitivity cannot be set, operation of the side zoom control is disabled.

⁴ When the exposure compensation cannot be set, operation of the side zoom control is disabled.

⁵ When the white balance cannot be set, operation of the side zoom control is disabled.



AE/AF Lock Button

Press the MENU button →  menu icon → AE/AF lock button →  button

Choose the function to be performed during shooting when the  (AE-L/AF-L) button ( 3) is pressed.

Option	Description
 AE/AF lock (default setting)	Hold down the  button to lock both the focus and exposure. ¹
 AE lock only	Hold down the  button to lock the exposure. ²
 AE lock (Hold)	Press the  button to lock the exposure. Exposure lock is not released even if you press the shutter-release button. ³ Press the  button again to release the exposure lock.
 AF lock only	Hold down the  button to lock the focus. ⁴

- ¹ When the exposure compensation setting screen is displayed, the focus and exposure locks are released.
- ² When the exposure compensation setting screen is displayed, the exposure lock is released.
- ³ When the exposure compensation is changed, the exposure lock is released.
- ⁴ When the exposure compensation setting screen is displayed, the focus lock is released.

Notes About AE/AF Lock Button

- The exposure is not locked even if you press the  button in the following shooting modes.
 - M** (manual) mode
 - Time-lapse movie** (during **Night sky (150 minutes)** or **Star trails (150 minutes)**), **Fireworks show**, or **Multiple exp. Lighten** scene mode
- When the focus mode ( 63) is **MF** (manual focus), the focus is not locked even if you press the  button.



Sound Settings

Press the **MENU** button → **Y** menu icon → 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. <ul style="list-style-type: none">• Sounds are disabled when using Pet portrait scene mode.
Shutter sound	When On (default setting) is selected, the shutter sound is produced when the shutter is released. <ul style="list-style-type: none">• The shutter sound is not produced when recording movies or when using Easy panorama or Pet portrait scene mode.

Auto Off

Press the **MENU** button → **Y** menu icon → Auto off → **OK** button

Set the amount of time that elapses before the camera enters standby mode (📖25). You can select **30 s**, **1 min** (default setting), **5 min**, or **30 min**.

Setting the Auto Off Function

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

- When a menu is displayed: 3 minutes (when auto off is set to **30 s** or **1 min**)
- When shooting using **Pet portrait auto release**: 5 minutes (when auto off is set to **30 s** or **1 min**)
- When shooting using **Smile timer**: 5 minutes (when auto off is set to **30 s** or **1 min**)
- When the AC adapter is connected: 30 minutes
- When waiting for connecting with **Connect to smart device**: 30 minutes



Format Card/Format Memory

Press the **MENU** button → **Y** menu icon → 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 → **Y** menu icon → Language → **OK** button

Select a language for display of camera menus and messages.

HDMI Output

Press the **MENU** button → **Y** menu icon → HDMI output → **OK** button

Select the image resolution when outputting through HDMI.

When **Auto** (default setting) is selected, **2160p**, **1080p**, or **720p** is selected automatically for the resolution supported by the connected TV.



Charge by Computer

Press the MENU button → Y menu icon → Charge by computer → OK button

Option	Description
AUTO Auto (default setting)	When the camera is connected to a computer that is running (110), the battery inserted into the camera is automatically charged using power supplied by the computer. <ul style="list-style-type: none">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.



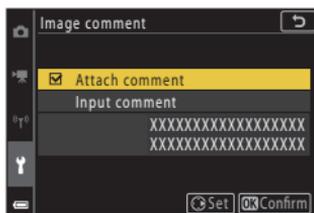
Image Comment

Press the **MENU** button → **Y** menu icon → 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	<p>A comment registered with Input comment is attached to images.</p> <ul style="list-style-type: none">• 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	<p>You can register a comment of up to 36 alphanumeric characters.</p> <ul style="list-style-type: none">• Select Input comment, press ▶, and the input screen is displayed. See "Operating the Text Input Keyboard" (📖160) 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.



Location Data

Press the **MENU** button → **Y** menu icon → Location data → **OK** button

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

Option	Description
Download from device	Select Yes to add location information from the smart device to the images that you take. Enable the location information function of the SnapBridge app.
Position	Display the obtained location information. <ul style="list-style-type: none">The information is not updated while it is being displayed. To update it, perform Position again.

Toggle Av/Tv Selection

Press the **MENU** button → **Y** menu icon → Toggle Av/Tv selection → **OK** button

Change which controls to use for setting the exposure in **M** mode.

Option	Description
OFF Do not toggle selection (default setting)	Use the command dial to set the shutter speed (Tv), and the multi selector to set the f-number (Av).
ON Toggle selection	Use the multi selector to set the shutter speed (Tv), and the command dial to set the f-number (Av).



MF Peaking

Press the **MENU** button → **Y** menu icon → MF peaking → **OK** button

Option	Description
On (default setting)	When operating MF (manual focus), focusing is assisted by highlighting areas that are in focus in white on the image displayed on the screen (📖64, 65).
Off	Peaking is disabled.

Reset All

Press the **MENU** button → **Y** menu icon → 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 before selecting **Reset all**.

Touch-screen Controls

Press the **MENU** button → **Y** menu icon → Touch-screen controls → **OK** button

Set whether to enable touch controls (📖7).

Default setting: **Enable**



Conformity Marking

Press the **MENU** button → **Y** menu icon → Conformity marking → **OK** button

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

Firmware Version

Press the **MENU** button → **Y** menu icon → 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.



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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 (📖120) 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 A1000 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_N1721.pdf.

- Maximum output power:
 - Wi-Fi: 9.98 dBm (EIRP)
 - Bluetooth: 3.54 dBm (EIRP)
 - Bluetooth Low Energy: 2.98 dBm (EIRP)
- Operating frequency:
 - Wi-Fi: 2412–2462 MHz (channels 1–11)
 - 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 or lens cover.

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

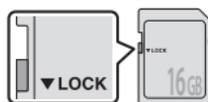
- The EH-73P/EH-73PCH Charging AC Adapter is for use only with compatible devices. Do not use with another make or model of device.
- Do not use any USB cable other than the UC-E21. Using a USB cable other than the UC-E21 could result in overheating, fire or electric shock.
- Do not, under any circumstances, 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 (📖216).
- 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/ viewfinder	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” (📖188) in “Caring for the Product” (📖187).



Error Messages

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

Display	Cause/Solution	
Battery temperature is elevated. The camera will turn off. The camera will turn off to prevent overheating.	The camera turns off automatically. Wait until the camera or battery temperature has cooled before resuming use.	–
Memory card is write protected.	The write-protect switch is locked. Unlock it.	190
This card cannot be used.	An error occurred while accessing the memory card. <ul style="list-style-type: none"> • Use an approved memory card. • Check that the terminals are clean. • Confirm that the memory card is correctly inserted. 	16, 216
This card cannot be read.		
Card is not formatted. Format card?	The memory card has not been formatted for use in the camera. Formatting deletes all data saved on the memory card. If you need to keep copies of any images, make sure to select No and save the copies to a computer or other medium before formatting the memory card. Select Yes and press the  button to format the memory card.	16, 190
Out of memory.	Delete images or insert a new memory card.	16, 28
Image cannot be saved.	An error occurred while saving the image. Insert a new memory card or format the memory card or internal memory.	16, 173
	The camera has run out of file numbers. Insert a new memory card or format the memory card or internal memory.	16, 173
	There is insufficient space to save the copy. Delete images from the destination.	28
Image cannot be modified.	Check that the images can be edited.	88, 201
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.	98, 216



Display	Cause/Solution	
Memory contains no images.	<p>There are no images in the internal memory or on the memory card.</p> <ul style="list-style-type: none"> 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. 	16 120
File contains no image data.	<p>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.</p>	–
Cannot select this image.	RAW images and images captured with other cameras cannot be marked for upload.	–
All images are hidden.	There are no images available for a slide show, etc.	–
This image cannot be deleted.	<p>The image is protected. Disable protection.</p>	155
The flash is lowered.	When the scene mode is Scene auto selector , you can take a picture even if the flash is lowered but the flash will not fire.	34
Raise the flash.	When the scene mode is Night portrait or Backlighting with HDR set to Off , you must raise the flash to take a picture.	35, 37
No card present.	When shooting in Time-lapse movie or Multiple exp. Lighten scene mode, or when the shooting mode is set to short movie show mode, insert a memory card.	–
Turn the camera off and then on again.	<p>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.</p>	–
Communications error	<p>An error occurred while communicating with the printer. Turn the camera off and reconnect the USB cable.</p>	112
System error	<p>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.</p>	195



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

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



Troubleshooting

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

Power, Display, Settings Issues

Problem	Cause/Solution	
The camera is on but does not respond.	<ul style="list-style-type: none"> • 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.	<ul style="list-style-type: none"> • The battery is exhausted. • The power switch is enabled a few seconds after the battery is inserted. Wait a few seconds before pressing the power switch. 	16, 17, 188 –
The camera turns off without warning.	<ul style="list-style-type: none"> • The camera automatically turns off to save power (auto off function). • The camera and battery may not work properly at low temperatures. • The inside of the camera has become hot. Leave the camera off until the inside of the camera has cooled, and then try turning it on again. 	25 188 –
The monitor or viewfinder is blank.	<ul style="list-style-type: none"> • The camera is off. • The battery is exhausted. • The camera automatically turns off to save power (auto off function). • You cannot turn on both the monitor and viewfinder at the same time. It may take a while to switch between the monitor and viewfinder. • The camera is connected to a computer. • Interval timer shooting, or Time-lapse movie or Multiple exp. Lighten scene mode shooting is in progress. 	20 23 25 – – –
The camera becomes hot.	The camera may become hot when used for an extended period of time to record movies or send images, or when used in a hot environment; this is not a malfunction.	–



Problem	Cause/Solution	
<p>The battery inserted in the camera cannot be charged.</p>	<ul style="list-style-type: none"> • Confirm all connections. • When connected to a computer, the camera may not charge for any of the reasons described below. <ul style="list-style-type: none"> - 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. 	<p>17</p> <p>175</p> <p>–</p> <p>20</p> <p>–</p> <p>–</p>
<p>The monitor is hard to see.</p>	<ul style="list-style-type: none"> • The surrounding area is too bright. <ul style="list-style-type: none"> - Move to a darker place. - Use the viewfinder. • Adjust the screen brightness. 	<p>26</p> <p>163</p>
<p>The viewfinder is hard to see.</p>	<ul style="list-style-type: none"> • Adjust the diopter of the viewfinder. • Adjust the viewfinder brightness. 	<p>26</p> <p>163</p>
<p>The camera does not switch between the monitor and viewfinder.</p>	<ul style="list-style-type: none"> • The display does not switch in the following situations: <ul style="list-style-type: none"> - While operating the zoom when recording movies - During movie playback - When editing movies • The display may not switch while the camera is being operated. 	<p>–</p>
<p> flashes on the screen.</p> <hr/> <p>Date and time of recording are not correct.</p>	<ul style="list-style-type: none"> • 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. 	<p>11, 161</p>



Problem	Cause/Solution	
No information displayed on the screen.	Hide info is selected for Photo info in Monitor settings in the setup menu.	163
Date stamp not available.	Time zone and date has not been set in the setup menu.	161
Date not stamped on images even when Date stamp is enabled.	<ul style="list-style-type: none"> • The date cannot be stamped with certain shooting modes or when using certain settings in other functions. • The date cannot be stamped on movies. 	80, 166
Screen for setting time zone and date is displayed when the camera is turned on.	<p>The clock battery is exhausted; all settings were restored to their default values. Configure the camera settings again.</p> <ul style="list-style-type: none"> • 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.	Depending on the Autofocus mode setting or the shooting mode, the camera may produce an audible focusing sound.	31, 143, 150
Unable to select a menu.	<ul style="list-style-type: none"> • Some functions cannot be used with other menu settings. • Some menus are not available while a wireless connection is established. Disconnect the wireless connection. • The network menu cannot be selected when an HDMI cable is connected. 	80 - -



Shooting Issues

Problem	Cause/Solution	
Cannot switch to shooting mode.	Disconnect the USB cable.	110
Cannot take pictures or record movies.	<ul style="list-style-type: none"> 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  is flashing. Movies cannot be recorded when the camera is connected to the Charging AC Adapter. You cannot shoot while connected with an HDMI cable. Insert a memory card with sufficient free space into the camera. The battery is exhausted. 	<p>2, 27</p> <p>121</p> <p>58</p> <p>18</p> <p>111</p> <p>16</p> <p>16, 17, 188</p>
The camera cannot focus.	<ul style="list-style-type: none"> The subject is too close. Try shooting using the Scene auto selector or Close-up scene mode, or the macro close-up focus mode. Incorrect focus mode setting. Check or change the setting. The subject is hard to focus on. Set AF assist in the setup menu to Auto. The focus mode is set to MF (manual focus). Turn the camera off and then on again. 	<p>33, 34, 36, 63</p> <p>63</p> <p>76</p> <p>169</p> <p>63, 64</p> <p>–</p>
Colored stripes appear on the screen when shooting.	Colored stripes may appear when shooting subjects with repeating patterns (such as window blinds); this is not a malfunction.	–



Problem	Cause/Solution	
Images are blurred.	<ul style="list-style-type: none"> • 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). 	58 138 151, 168 61
Bright specks appear in images captured with flash.	Flash is reflecting off particles in the air. Lower the flash, and set the flash mode setting to  (off).	58
Flash does not fire.	<ul style="list-style-type: none"> • The flash is lowered. • The flash does not fire with certain shooting modes or when using certain settings in other functions. 	25, 58 78, 80
Digital zoom cannot be used.	<ul style="list-style-type: none"> • 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. 	169 82, 169
Image size not available.	Image size cannot be selected with certain shooting modes or when using certain settings in other functions.	80, 129
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 or settings, even when On is selected.	172
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.	169
Images appear smeared.	The lens is dirty. Clean the lens.	191
Colors are unnatural.	White balance or hue is not adjusted properly.	36, 66, 130
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: <ul style="list-style-type: none"> • Using the flash • Specifying a lower ISO sensitivity setting 	25, 58 138



Problem	Cause/Solution	
Images are too dark (underexposed).	<ul style="list-style-type: none"> 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  (fill flash/standard flash). 	25, 58, 78 23 213 66, 68 138 37, 58
Images are too bright (overexposed).	Adjust exposure compensation.	66, 68
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  (auto+red-eye reduction/red-eye reduction) and try taking the picture again.	58, 78
Skin tones are not softened.	<ul style="list-style-type: none"> 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. 	46 90
Saving images takes time.	<p>It may take more time to save images in the following situations:</p> <ul style="list-style-type: none"> When the noise reduction function is in operation, such as when shooting in a dark environment When the flash mode is set to  (auto+red-eye reduction/red-eye reduction) When capturing images in the following scene modes: <ul style="list-style-type: none"> Hand-held in Night portrait Hand-held in Night landscape HDR is set to On in Backlighting Easy panorama When Image quality is set to RAW, RAW + Fine, or RAW + Normal When the skin softening function is applied while shooting When using continuous shooting mode 	– 59 35 36 37 42 127 46 134



Problem	Cause/Solution	
A ring-shaped belt or rainbow-colored stripe appears on the screen or images.	When shooting with backlighting or when a very strong light source (such as sunlight) is in or out of the frame, a ring-shaped belt or rainbow-colored stripe (ghosting) may occur. Change the position of the light source, or frame the picture so that the light source does not enter the frame, and try again.	–

Playback Issues

Problem	Cause/Solution	
File cannot be played back.	• This camera may not be able to play back images saved with another make or model of digital camera.	–
	• This camera cannot play back RAW images or movies saved with another make or model of digital camera.	–
	• This camera may not be able to play back data edited on a computer.	–
	• Files cannot be played back during interval timer shooting.	134
Cannot zoom in on image.	• Playback zoom cannot be used with movies.	–
	• This camera may not be able to zoom in on images captured with another make or model of digital camera.	–
	• 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.	–
Cannot edit image.	• Some images cannot be edited. Images that have already been edited may not be edited again.	44, 88
	• 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.	–
Cannot rotate image.	This camera cannot rotate images captured with another make or model of digital camera.	–



External Device Issues

Problem	Cause/Solution	
Cannot establish a wireless connection with a smart device. ¹	<ul style="list-style-type: none"> • When establishing a wireless connection for the first time, refer to the instructions in the included “SnapBridge Connection Guide”. 	–
	<ul style="list-style-type: none"> • If a wireless connection is established, perform the following operations. <ul style="list-style-type: none"> - Turn the camera off and then on again. - Restart the SnapBridge app. - Cancel the connection and then establish a connection again. 	–
	<ul style="list-style-type: none"> • Check the Network menu settings in the camera. <ul style="list-style-type: none"> - Set Airplane mode to Off. - Set Bluetooth → Connection to Enable. - Set Choose connection to Smart device. 	158
	<ul style="list-style-type: none"> • If the camera is registered with two or more smart devices, select the smart device you want to connect in Network menu → Bluetooth → Paired devices in the camera. If two or more cameras are registered in the SnapBridge app, switch the connection on the app. 	159
	<ul style="list-style-type: none"> • Use a sufficiently charged battery. 	–
	<ul style="list-style-type: none"> • Insert a memory card with sufficient free space into the camera. 	16
	<ul style="list-style-type: none"> • Disconnect the HDMI cable or USB cable. 	110
	<ul style="list-style-type: none"> • Enable Bluetooth, Wi-Fi, and the location data functions on the smart device. • In the  tab of the SnapBridge app → Auto link options → turn on Auto link. If it is off, Download pictures and Remote photography can be used, but images cannot be downloaded automatically. 	–



Problem	Cause/Solution	
<p>Cannot upload images to a smart device that has a wireless connection established with the SnapBridge app.¹</p>	<ul style="list-style-type: none"> • Perform the operations described below when uploading automatically. <ul style="list-style-type: none"> - Set Network menu → Send while shooting → Still images in the camera to Yes. - In the  tab of the SnapBridge app → Auto link options → turn on Auto link. - In the  tab of the SnapBridge app → Auto link options → turn on Auto download. - If Network menu → Bluetooth → Send while off in the camera is set to Off, turn on the camera or change the setting to On. • When there is a large number of images to upload during Bluetooth communication, communication may be disconnected while uploading images. If you turn the camera off and then on again, it is reconnected to the smart device. Image upload resumes if the camera is reconnected to the smart device in the following situations. <ul style="list-style-type: none"> - 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. 	<p>158</p> <p>–</p> <p>–</p> <p>159</p> <p>–</p>
<p>Cannot perform remote photography from a smart device that has a wireless connection established with the SnapBridge app.¹</p>	<ul style="list-style-type: none"> • 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. 	<p>–</p> <p>–</p>
<p>Cannot download still images at the original size in the SnapBridge app.¹</p>	<p>For Send while shooting and Mark for upload in the camera, the size of images that are downloaded is restricted to 2 megapixels. To download still images at their original size, use Download pictures in the SnapBridge app.</p>	<p>–</p>
<p>Communication quality is poor or image upload speed is extremely slow when using wireless connection with the SnapBridge app.¹</p>	<p>On the camera, try changing the channel in Network menu → Wi-Fi → Network settings.</p>	<p>159</p>



Problem	Cause/Solution	
The camera does not respond when operating the ML-L7 Remote Control. ²	<ul style="list-style-type: none"> 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. 	210 208 208
Cannot be paired with the ML-L7 Remote Control. ²	<p>Check the Network menu settings in the camera.</p> <ul style="list-style-type: none"> Set Choose connection to Remote control. Set Airplane mode to Off. Set Bluetooth → Connection to Enable. 	158
Images saved in the camera are not displayed on a connected smart device or computer.	<p>If the number of images saved on a memory card in the camera exceeds 10,000, images captured thereafter may not be displayed in a connected device.</p> <ul style="list-style-type: none"> Reduce the number of images saved on the memory card. Copy the necessary images to a computer, etc. 	–
Images are not displayed on TV.	<ul style="list-style-type: none"> 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. 	– – 16
Nikon Transfer 2 does not start when the camera is connected to a computer.	<ul style="list-style-type: none"> 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. 	– 16, 17, 188 110, 116 – –
The PictBridge screen is not displayed when the camera is connected to a printer.	<p>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.</p>	175
Images to be printed are not displayed.	<ul style="list-style-type: none"> The memory card contains no images. Remove the memory card to print images in the internal memory. 	– 16



Problem	Cause/Solution	
Cannot select paper size with the camera.	<p>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.</p> <ul style="list-style-type: none"> • 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).



File Names

Images or movies are assigned file names as follows.

File name: DSCN 0001.JPG

(1) (2) (3)

(1) Identifier	<p>Not shown on the screen of the camera.</p> <ul style="list-style-type: none">• DSCN: Original still images, movies, still images created by the movie editing function• RSCN: Cropped copies• FSCN: Images created by an image editing function other than crop, movies created by the movie editing function
(2) File number	<p>Assigned in ascending order, starting with "0001" and ending with "9999."</p> <ul style="list-style-type: none">• A new folder is created each time a series of images are captured using interval timer shooting, and the images are saved in that folder with file numbers starting with "0001."
(3) Extension	<p>Indicates file format.</p> <ul style="list-style-type: none">• .JPG: JPEG still images• .NRW: RAW still images• .MP4: Movies

Notes

When images are captured with the **Image quality** ( 127) setting set to **RAW + Fine** or **RAW + Normal**, the RAW and JPEG images that are saved at the same time are assigned the same identifier and file number. The pair of images is saved in the same folder, and is counted as one file.

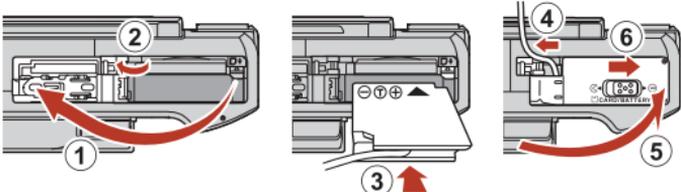
Folders for Storing Files

Still images and movies shot or recorded with this camera are saved in folders of the memory card or internal memory.

- Sequential numbers are added to folder names in ascending order, starting with "100" and ending with "999".
- A new folder is created in the following situations:
 - When the number of files in a folder reaches 999
 - When a file in a folder is numbered "9999"



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)  <p>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.</p>
Remote control accessories	ML-L7 Remote Control See "ML-L7 Remote Control" (📖208) for information on how to use it.

Availability may vary with country or region.

See our website or brochures for the latest information.

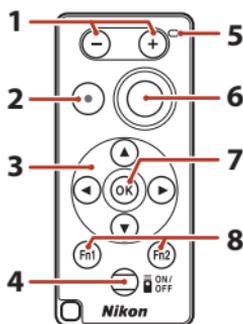


ML-L7 Remote Control

You can pair (📖210) 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 A1000)” (📖208) 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 A1000)



	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	<ul style="list-style-type: none">• Functions similarly to the multi selector on the camera, enabling you to configure settings on the shooting screen, such as the flash mode (📖58), self-timer (📖61), focus mode (📖63), creative slider (📖66), and exposure compensation (📖68).• When using manual focus, the focus can be adjusted with ▲▼ (📖64).



	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 A1000)" (📖209) for more information.
6	Shutter-release button	Functions similarly to the shutter-release button on the camera. <ul style="list-style-type: none"> • 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	OK (apply selection) button	Applies the selected item. When adjusting manual focus, press this button to stop focusing.
8	F \bar{n} 1 (Function 1) / F \bar{n} 2 (Function 2) buttons	Cannot be used with this camera.

Status Lamp on the Remote Control (for COOLPIX A1000)

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 (Time-lapse movie, Multiple exp. Lighten).
Red	Flashes once	Movie recording starts.
Red	Flashes twice	Movie recording ends.



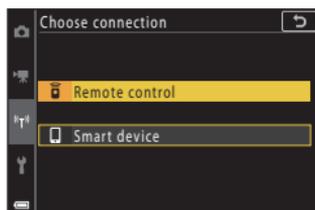
Pairing the Camera and Remote Control

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

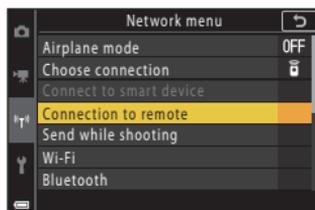
- 1 Press the **MENU** button on the camera.
- 2 Press the multi selector ◀, use ▲▼ to select the “T” menu icon, and press the Ⓞ button.
- 3 Select **Choose connection**, and press the Ⓞ button.



- 4 Select **Remote control**, and press the Ⓞ button.



- 5 Select **Connection to remote**, and press the Ⓞ button.
 - Pairing is enabled and the camera waits for the connection to be established.



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 the connection from **Remote control** to **Smart device** in **Choose connection** in the camera network menu ( 158, 210).
- When the SnapBridge app is launched on your smart device, and a connection is established between the camera and smart device,  is displayed on the shooting screen.
- When establishing a wireless connection with a smart device for the first time, see the included "SnapBridge Connection Guide".



Specifications

Nikon COOLPIX A1000 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. 16.79 million total pixels
Lens	NIKKOR lens with 35x optical zoom
Focal length	4.3–151 mm (angle of view equivalent to that of 24–840 mm lens in 35mm [135] format)
f/-number	f/3.4–6.9
Construction	13 elements in 11 groups (4 ED lens elements)
Digital zoom magnification	Up to 4x (angle of view equivalent to that of approx. 3360 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	<ul style="list-style-type: none">• [W]: Approx. 50 cm (1 ft 8 in.)–∞, [T]: Approx. 2.0 m (6 ft 7 in.)–∞• Macro close-up: [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 (spot), manual (normal), manual (wide), subject tracking, target finding AF
Viewfinder	Electronic viewfinder, 0.5 cm (0.2-in.) approx. 1166k-dot equivalent LCD with the diopter adjustment function (–4 – +4 m ⁻¹)
Frame coverage (shooting mode)	Approx. 98% horizontal and vertical (compared to actual picture)
Frame coverage (playback mode)	Approx. 98% horizontal and vertical (compared to actual picture)
Monitor	7.6 cm (3-in.), approx. 1036k-dot, wide viewing angle TFT LCD (touch panel) with anti-reflection coating and 5-level brightness adjustment, tilting TFT LCD
Frame coverage (shooting mode)	Approx. 98% horizontal and vertical (compared to actual picture)
Frame coverage (playback mode)	Approx. 98% horizontal and vertical (compared to actual picture)



Storage	
Media	Internal memory (approx. 81 MB), SD/SDHC/SDXC memory card
File system	DCF and Exif 2.31 compliant
File formats	Still images: JPEG, RAW (NRW) (Nikon's own format) Movies: MP4 (Video: H.264/MPEG-4 AVC, Audio: AAC stereo)
Image size	
Still images	16 M 4608×3456 , 8 M 3264×2448 , 4 M 2272×1704 , 2 M 1600×1200 , 16:9 12 M 4608×2592 , 3:2 14 M 4608×3072 , 1:1 3456×3456
Movies	2160/30p (4K UHD), 2160/25p (4K UHD), 1080/30p, 1080/25p, 1080/60p, 1080/50p, 720/30p, 720/25p, 720/60p, 720/50p, HS 720/4x, HS 1080/2x, HS 1080/0.5x
ISO sensitivity (Standard output sensitivity)	<ul style="list-style-type: none"> • ISO 100–1600 • ISO 3200, 6400 (available when using P, S, A, or M mode)
Exposure	
Metering mode	Matrix, center-weighted, spot
Exposure control	Programmed auto exposure with flexible program, shutter-priority auto, aperture-priority auto, manual, exposure bracketing, exposure compensation (–3.0 – +3.0 EV in steps of 1/3 EV)
Shutter	
Speed	Mechanical and CMOS electronic shutter <ul style="list-style-type: none"> • 1/2000–1 s • 1/2000–8 s (S, A, or M mode) • 1/4000 s (maximum speed during high-speed continuous shooting) • 25 s (Star trails in Multiple exp. Lighten scene mode)
Aperture	
Range	Electromagnetic 3-blade iris diaphragm 7 steps of 1/3 EV (W) (A , M mode)
Self-timer	
	<ul style="list-style-type: none"> • 10 s, 3 s • 5 s (self-portrait timer)
Flash	
Range (approx.) (ISO sensitivity: Auto)	[W]: 0.5–6.0 m (1 ft 8 in.–19 ft) [T]: 2.0–3.0 m (6 ft 7 in.–9 ft 10 in.)
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 <ul style="list-style-type: none"> • 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 (channels 1-11)
Maximum output power	9.98 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: 3.54 dBm (EIRP) Bluetooth Low Energy: 2.98 dBm (EIRP)
Power sources	One EN-EL12 Rechargeable Li-ion Battery (included) EH-62F AC Adapter (available separately)
Charging time	Approx. 2 h 30 min (when using EH-73P/EH-73PCH Charging AC Adapter and when no charge remains)
Battery life¹	
Still images	Approx. 250 shots when using EN-EL12
Movie recording (actual battery life for recording) ²	Approx. 55 min (when using EN-EL12)
Tripod socket	1/4 (ISO 1222)
Dimensions (W × H × D)	Approx. 114.2 × 71.7 × 40.5 mm (4.5 × 2.9 × 1.6 in.) (excluding projections)
Weight	Approx. 330 g (11.7 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, it is split into multiple files and cannot be played back continuously.



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.

- The camera supports UHS-I.
- Memory cards with an SD Speed Class rating of 6 (Video Speed Class V6) or faster are recommended for recording movies. When **Movie options** is set to  **2160/30p** (4K UHD) or  **2160/25p** (4K UHD), memory cards with a UHS Speed Class rating of 3 (Video Speed Class V30) or faster are recommended. 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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