Nikon

DIGITAL CAMERA

L/50/
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

Introduction iii

Table of Contents x

Parts of the Camera 1

Getting Started 14

Basic Shooting and Playback Operations 22

Shooting Features 30

Playback Features 83

Movies 95

Connecting the Camera to a TV, Printer, or Computer 109

Using the Menu 119

Technical Notes 178

Common Topics

For Your Safety

Tips for Setting Exposure

Manual Focus

Creative Mode

Functions of the Controls

Functions That Cannot Be Used Simultaneously

Troubleshooting

Index

Introduction

Read This First

Thank you for purchasing the Nikon N1721 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.: http://www.nikonusa.com/
- For users in Europe: http://www.europe-nikon.com/support/
- For users in Asia, Oceania, the Middle East, and Africa: http://www.nikon-asia.com/

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

http://imaging.nikon.com/

Use Only Nikon Brand Electronic Accessories

Nikon N1721 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.
- **Prior to disposal, insulate battery terminals with tape.** Overheating, rupture, or fire may result should metal objects come into contact with the terminals. Recycle or dispose of batteries in accord with local regulations.

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

Table of Contents

Quick Topic Search ii
Main Topics ii
Common Topics ii

Introduction iii
Read This First iii
Symbols and Conventions Used in This Manual iii
Information and Precautions iv
For Your Safety vi

Parts of the Camera 1
The Camera Body 2
Principle Functions of the Controls 4
Operating the Touch Panel 7
The Monitor/Viewfinder 10
For Shooting 10
For Playback 13

Getting Started 14
How to Attach the Strap 15
Inserting the Battery and Memory Card 16
Removing the Battery or Memory Card 16
Charging the Battery 17
Changing the Angle of the Monitor 19
Camera Setup 20

Basic Shooting and Playback Operations 22
Shooting Images 23
Using the Flash 25
Recording Movies 25
Touch Shooting 26
Switching Between the Monitor and Viewfinder 26
Playing Back Images 27
Deleting Images 28
The Image Selection Screen for Deletion 29

Shooting Features 30
Selecting a Shooting Mode 31
(Auto) Mode 32
Scene Mode (Shooting Suited to the Shooting Conditions) 33
Tips and Notes About Scene Mode 34
Shooting with Easy Panorama 42
Playback with Easy Panorama 44
Shooting with Smart Portrait (Enhancing Human Faces When Shooting) 45
Creative Mode (Applying Effects When Shooting) 51
P, S, A, and M Modes (Setting the Exposure for Shooting) 53
Tips for Setting Exposure 54
The Control Range of the Shutter Speed (P, S, A, and M Modes) 56
Setting Shooting Functions with the Multi Selector 57
Flash Mode 58
Self-timer 61
Focus Mode 63
Using Manual Focus 64
Using the Creative Slider 66
Exposure Compensation (Adjusting Brightness) 68
Using the Fn (Function) Button 69
Using the Zoom 70
Using Touch Shooting 72
Focusing 73
The Shutter-release Button 73
Using Target Finding AF 74
Using Face Detection 75
Subjects Not Suitable for Autofocus 76
Focus Lock 77
Default Settings (Flash, Self-timer, and Focus Mode) 78
Functions That Cannot Be Used Simultaneously When Shooting 80

Playback Features 83
Playback Zoom 84
Thumbnail Playback/Calendar Display 85
Viewing and Deleting Images in a Sequence 86
Viewing Images in a Sequence 86
Deleting Images in a Sequence 87

Editing Images (Still Images) 88
Before Editing Images 88
Quick Retouch: Enhancing Contrast and Saturation 89
D-Lighting: Enhancing Brightness and Contrast 89
Red-eye Correction: Correcting Red-eye When Shooting with the Flash 90
Glamour Retouch: Enhancing Human Faces 90
Filter Effects: Applying Digital Filter Effects 92
Crop: Creating a Cropped Copy 94

Movies 95
Basic Operations of Movie Recording and Movie Playback 96
Capturing Still Images While Recording Movies 100
Shooting Time-lapse Movies 101
Short Movie Show Mode (Combining Movie Clips to Create Short Movies) 103
Operations During Movie Playback 106
Editing Movies 107
Extracting Only the Desired Portion of a Movie 107
Saving a Frame from a Movie as a Still Image 108

Connecting the Camera to a TV, Printer, or Computer 109
Utilizing Images 110
Viewing Images on a TV 111
Printing Images Without a Computer 112
Connecting the Camera to a Printer 112
Printing Images One at a Time 113
Printing Multiple Images 114
Transferring Images to a Computer (ViewNX-i) 116
Installing ViewNX-i 116
Transferring Images to a Computer 116

Using the Menu 119
Menu Operations 120
The Image Selection Screen 122
Menu Lists 123
The Shooting Menu 123
The Movie Menu 124
The Playback Menu 124
The Network Menu 125
The Setup Menu 126
The Shooting Menu (The Common Shooting Options) 127
Image Quality 127
Image Size 129

The Shooting Menu (P, S, A, or M Mode) **130**
White Balance (Adjusting Hue) 130
Metering 133
Continuous Shooting 134
ISO Sensitivity 137
Exposure Bracketing 138
AF Area Mode 139
Autofocus Mode 142
Noise Reduction Filter 143
M Exposure Preview 143
The Movie Menu **144**
Movie Options 144
Autofocus Mode 148
Movie VR 149
Wind Noise Reduction 150
Frame Rate 150
The Playback Menu **151**
Mark for Upload 151
Slide Show 152
Protect 153
Rotate Image 153
Copy (Copy Between the Memory Card and Internal Memory) 154
Sequence Display 155
The Network Menu **156**
Operating the Text Input Keyboard 158
The Setup Menu **159**
Time Zone and Date 159
Monitor Settings 161
EVF Auto Toggle (Automatically Switching the Display to the Viewfinder) 163
Date Stamp 164
Self-timer: After Release 165
Photo VR 165
AF Assist 166
Digital Zoom 166
Assign Side Zoom Control 167
AE/AF Lock Button 168
Sound Settings 169
Auto Off 169
Format Card/Format Memory 170
Language 171
HDMI Output 171
Charge by Computer 172

Image Comment 173
Copyright Information 174
Location Data 175
Toggle Av/Tv Selection 175
MF Peaking 176
Reset All 176
Touch-screen Controls 176
Conformity Marking 177
Firmware Version 177

Technical Notes 178
Notices 179
Notes About Wireless Communication Functions 181
Caring for the Product 184
The Camera 184
The Battery 185
The Charging AC Adapter 186
Memory Cards 187
Cleaning and Storage 188
Cleaning 188
Storage 188
Error Messages 189
Troubleshooting 192
File Names 203
Accessories 204
ML-L7 Remote Control 205
Specifications 209
Memory Cards That Can Be Used 213
Index 215

Parts of the Camera

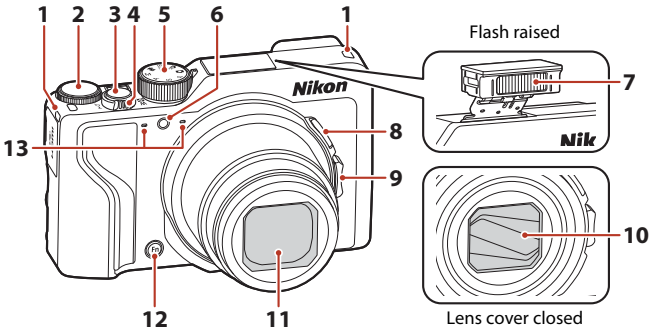
The Camera Body 2

Principle Functions of the Controls 4

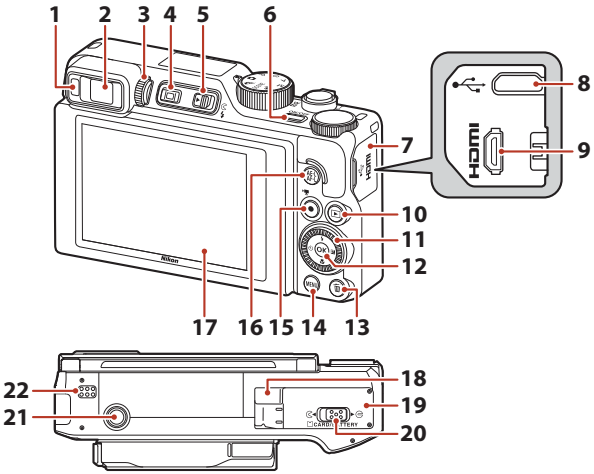
Operating the Touch Panel 7

The Monitor/Viewfinder 10

The Camera Body



1	Eyelet for strap	15
2	Command dial	53
3	Shutter-release button	24, 73
4	Zoom control	70
	W : Wide-angle	70
	T : Telephoto	70
	: Thumbnail playback	85
	: Playback zoom	84
5	Mode dial	23, 31
6	Self-timer lamp	61
	AF-assist illuminator	166
7	Flash	25, 58
8	(snap-back zoom) button	71
9	Side zoom control	70
	W : Wide-angle	70
	T : Telephoto	70
10	Lens cover	
11	Lens	
12	Fn (function) button	69
13	Microphone (stereo)	



1	Eye sensor 26	12	OK (apply selection) button 120
2	Electronic viewfinder 26	13	🗑 (delete) button 28
3	Diopter adjustment control 26	14	MENU (menu) button 120
4	▭ (monitor) button 26	15	● (🎥 movie-record) button 96
5	⚡ (flash pop-up) control 25, 58	16	AE-L/AF-L (AE-L/AF-L) button 6, 168
6	Power switch/power-on lamp (charge lamp) 17, 20	17	Monitor 10, 19
7	Connector cover 17, 110	18	Power connector cover (for optional AC adapter)
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
10	▶ (playback) button 27	21	Tripod socket
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	
Mode dial	For shooting	Select a shooting mode (📖31).
Zoom control	For shooting	Move toward **T** (Q) (telephoto) to zoom in closer to the subject, and move toward **W** (▦) (wide-angle) to zoom out and view a larger area.
	For playback	• Move toward **T** (Q) to zoom in on the image, and move toward **W** (▦) to display images as thumbnails or the calendar. • Adjust the volume for movie playback.
(Snap-back) zoom button	For shooting	Widen the angle of view temporarily.
Side zoom control	For shooting	Use the function assigned in **Assign side zoom control**. • 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.
Shutter-release button	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	• While the shooting screen is displayed: Display the following setting screens by pressing: - 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	• 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	• 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	• 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	• 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	• 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 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	• 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).

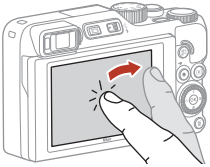
Operating the Touch Panel

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

Tapping

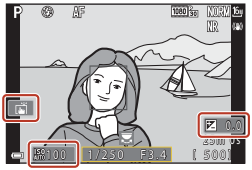
Briefly touch the touch panel.

- Selects items in the shooting screen and menus.
- Selects 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.
- Uses touch shooting.
- Inputs characters using the keyboard.



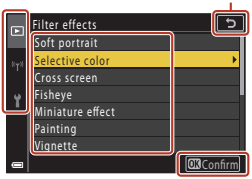
You can tap the following items (varies depending on the settings and status of the camera).

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



Shooting screen

Return to the previous screen without changing settings

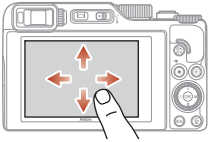


Menu

Flicking

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

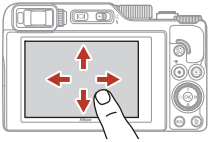
- Displays the previous or next image during playback (full-frame playback).
- Scrolls the screen in menus and thumbnail playback.



Sliding

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

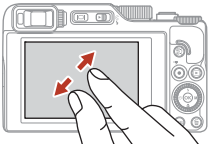
- Scrolls the screen in menus and thumbnail playback.
- Moves the display range while a zoomed image is displayed.
- Adjusts the start or end point when editing movies.

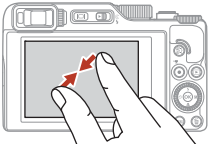


Spreading/pinching

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

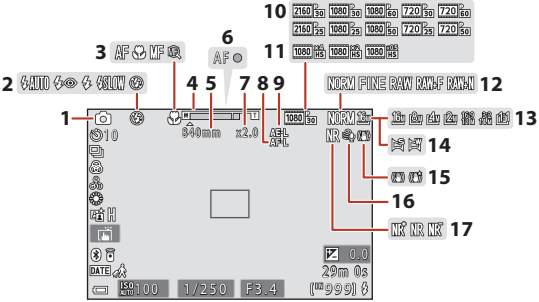
You can enable or disable touch operation using **Touch-screen controls** in the setup menu (📖120).

The Monitor/Viewfinder

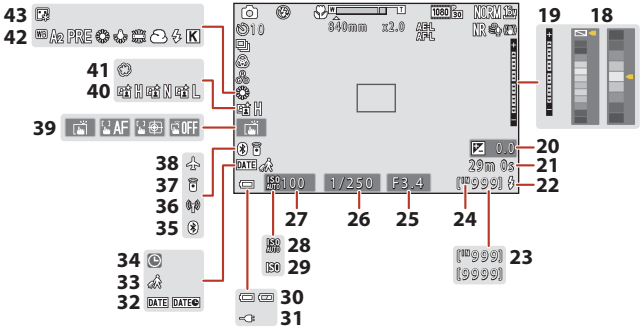
The information that is displayed on the shooting or playback screen changes depending on the camera's settings and state of use.

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** (161)).

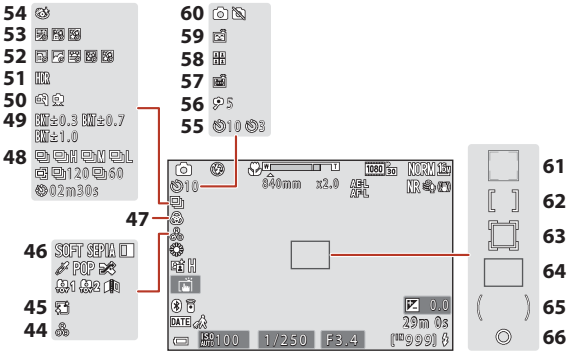
For Shooting



1	Shooting mode ..... 31 Effect group (creative mode) 51		10	Movie options (normal speed movies) 144	
2	Flash mode 58		11	Movie options (HS movies) 145	
3	Focus mode 63		12	Image quality 127	
4	Zoom indicator 63, 70		13	Image size 129	
5	Focal length (in 35mm [135] format) 70		14	Easy panorama 42	
6	Focus indicator 24		15	Vibration reduction icon 149, 165	
7	Digital zoom magnification 70		16	Wind noise reduction 150	
8	AF-L 168		17	Noise reduction filter 143	
9	AE-L 168				

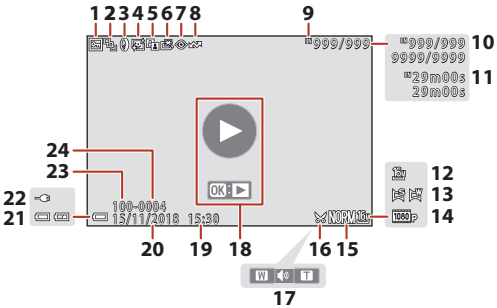


18	Color bar	36, 39, 104	31	Charging AC Adapter connection indicator	
19	Exposure indicator	55	32	Date stamp	164
20	Exposure compensation value	45, 66, 68	33	Travel destination icon	159
21	Remaining movie recording time	96, 98	34	"Date not set" indicator	193
22	Ready light	58	35	Bluetooth communication indicator	157
23	Number of exposures remaining (still images)	23	36	Wi-Fi communication indicator	157
24	Internal memory indicator	23	37	Bluetooth remote control connected	207
25	F-number	53	38	Airplane mode	156
26	Shutter speed	53	39	Touch shooting	72
27	ISO sensitivity	137	40	Active D-Lighting	66
28	ISO sensitivity auto indicator	137	41	Soft	45
29	ISO sensitivity indicator	137	42	White balance	130
30	Battery level indicator	23	43	Foundation makeup	45



44	Hue	45, 66
45	Skin softening	45
46	Special effects	104
47	Vividness	45, 66
48	Continuous shooting mode	38, 134
49	Exposure bracketing	138
50	Hand-held/tripod	35, 36
51	Backlighting (HDR)	37
52	Time-lapse movie	101
53	Multiple exp. Lighten	40
54	Blink proof icon	49
55	Self-timer indicator	61
56	Self-portrait timer	61
57	Pet portrait auto release	38
58	Self-Collage	47
59	Smile timer	50
60	Still image capture (during movie recording)	100
61	Focus area (face detection, pet detection)	38, 50, 75, 139
62	Focus area (manual, center)	77, 140
63	Focus area (subject tracking)	140
64	Focus area (target finding AF)	74, 140
65	Center-weighted area	133
66	Spot metering area	133

For Playback



1	Protect icon	153
2	Sequence display (when **Individual pictures** is selected)	155
3	Filter effects icon	92
4	Glamour retouch icon	90
5	D-Lighting icon	89
6	Quick retouch icon	89
7	Red-eye correction icon	90
8	Marked for upload icon	151
9	Internal memory indicator	23
10	Current image number/total number of images	
11	Movie length or elapsed playback time	
12	Image size	129
13	Easy panorama	44
14	Movie options	144
15	Image quality	127
16	Crop icon	84, 94
17	Volume indicator	106
18	Movie playback guide Sequence playback guide Easy panorama playback guide	
19	Time of recording	
20	Date of recording	
21	Battery level indicator	23
22	Charging AC Adapter connection indicator	
23	Folder name	203
24	File number and type	203

Getting Started

How to Attach the Strap 15

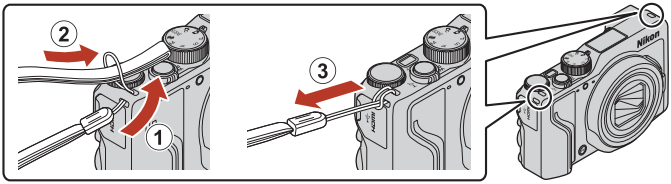
Inserting the Battery and Memory Card.....16

Charging the Battery.....17

Changing the Angle of the Monitor 19

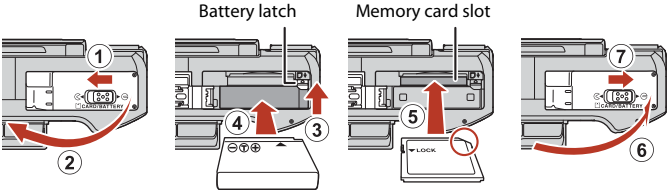
Camera Setup 20

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.

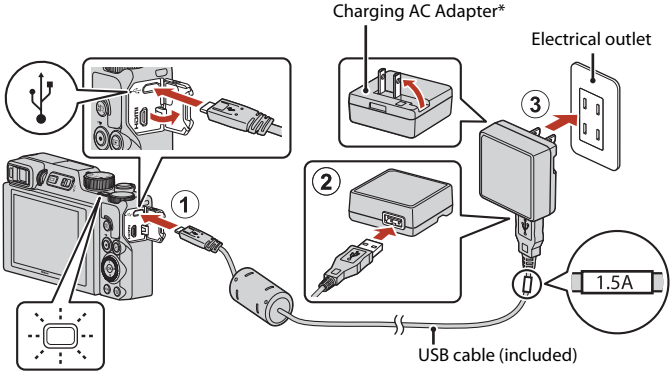
- **Note that formatting a memory card permanently deletes all images and other data on the memory card.** Be sure to make copies of any images you wish to keep before formatting the memory card.
- Insert the memory card into the camera, press the MENU button, and select **Format card** in the setup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



* 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 # hours and ## 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.

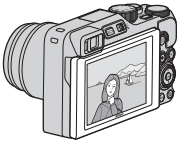
Notes About Charging the Battery

- 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.

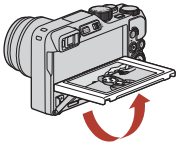
Changing the Angle of the Monitor

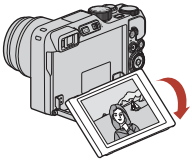
You can adjust the direction and angle of the monitor.

For normal shooting

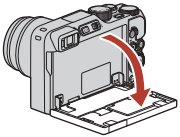


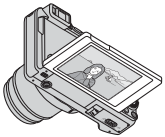
When shooting in a low position



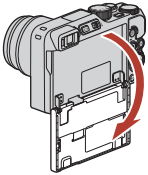


When shooting in a high position



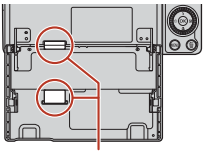


When taking self-portraits



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 area to the rear of the monitor. Failure to observe this precaution could cause product malfunction.

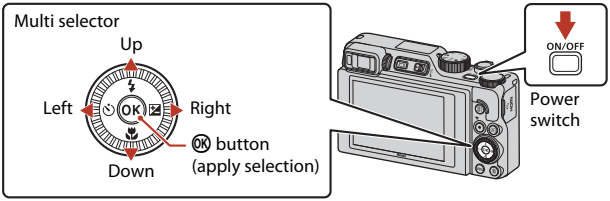


Be particularly careful not to touch these areas.

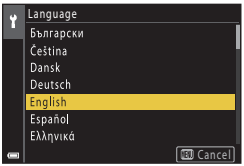
Camera Setup

1 Turn on the camera.

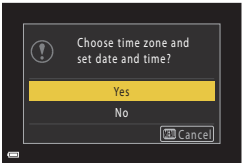
- Use the multi selector to select and adjust settings.



- A language selection dialog 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.

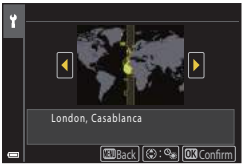


2 Select **Yes** and press the OK button.



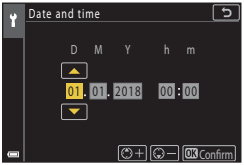
3 Highlight your home time zone and press the OK button.

- 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 and press the OK button.



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

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

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

Setting the Language

The language can be set at any time in **Language** in the setup menu (120).

To Change the Time Zone and Date Setting

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

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

Basic Shooting and Playback Operations

Shooting Images.....23

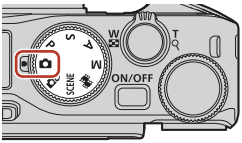
Playing Back Images.....27

Deleting Images.....28

Shooting Images

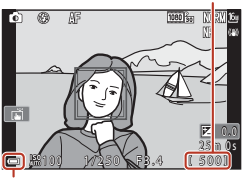
(auto) mode is used here as an example. (auto) mode enables you to perform general shooting in a variety of shooting conditions.

1 Rotate the mode dial to .



- Battery level indicator
  : The battery level is high.
  : The battery level is low.
- Number of exposures remaining
  IN is displayed when no memory card is inserted in the camera, and images are saved in the internal memory.

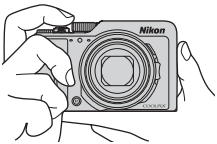
Number of exposures remaining

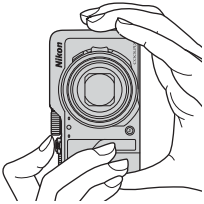


Battery level indicator

2 Hold the camera steady.

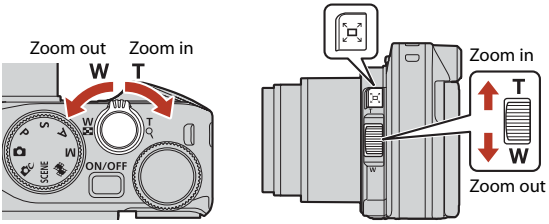
- Keep fingers and other objects away from the lens, flash, AF-assist illuminator, microphone, and speaker.





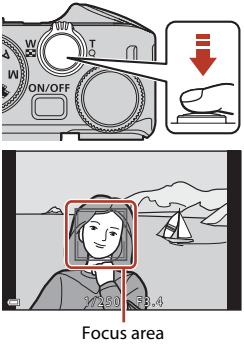
3 Frame the picture.

- 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.

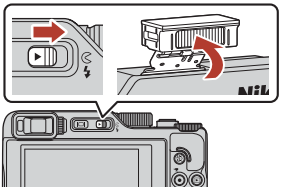
When Using a Tripod

- 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

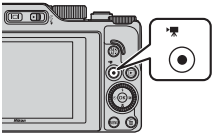
In situations where a flash is needed, such as in dark locations or when the subject is backlit, move the (flash pop-up) control to raise the flash.

- 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

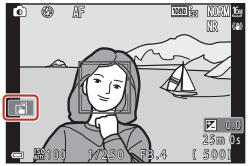
Display the shooting screen and press the ● (movie-record) button to start recording a movie. Press the ● () button again to end recording.



Touch Shooting

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

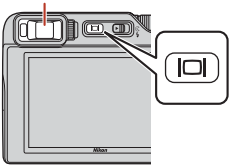
- At the default setting **Touch shutter**, the shutter is released when you simply tap the subject on the screen without using the shutter-release button.



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.

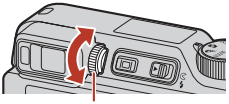
- When you bring your face close to the viewfinder, the eye sensor responds to it and the viewfinder turns on, and the monitor turns off (default setting).
- You can also press the (monitor) button to switch the display between the monitor and viewfinder.



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.



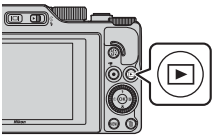
Notes About Checking and Adjusting Image Colors

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 OK button.
- To return to shooting mode, press the ▶ button or shutter-release button.
- Move the zoom control toward **T** (Q) in full-frame playback mode to zoom in on an image.

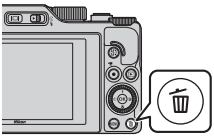
- In full-frame playback mode, move the zoom control toward **W** (▦) to switch to thumbnail playback mode and display multiple images on the screen.

Operating the Touch Panel on the Playback Screen

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

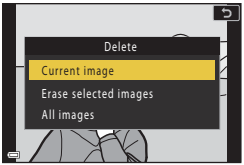
Deleting Images

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 OK button.

- To exit without deleting, press the MENU button.



3 Select **Yes** and press the OK 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 OK button to display them one at a time and press the 🗑 button.

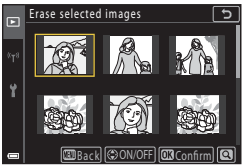
Deleting the Image Captured While in Shooting Mode

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

The Image Selection Screen for Deletion

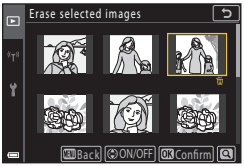
1 Use the multi selector ◀▶ or rotate it to select the image that you want to delete.

- 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

Selecting a Shooting Mode 31

(Auto) Mode.....32

Scene Mode (Shooting Suited to the Shooting Conditions) 33

Creative Mode (Applying Effects When Shooting) 51

P, S, A, and M Modes (Setting the Exposure for Shooting).....53

Setting Shooting Functions with the Multi Selector (///) 57

Flash Mode.....58

Self-timer 61

Focus Mode 63

Using the Creative Slider 66

Exposure Compensation (Adjusting Brightness).....68

Using the Fn (Function) Button 69

Using the Zoom 70

Using Touch Shooting 72

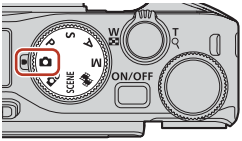
Focusing 73

Default Settings (Flash, Self-timer, and Focus Mode) 78

Functions That Cannot Be Used Simultaneously When Shooting 80

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.
- **(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 (**1080/30p** or **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

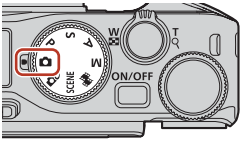
The descriptions of functions are displayed while changing the shooting mode or while the setting screen is displayed.

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).

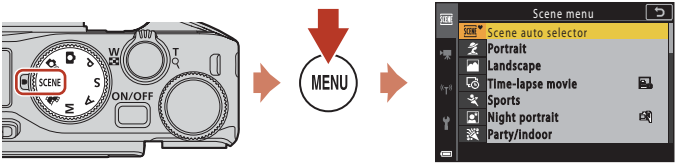


Functions Available in (Auto) Mode

- Flash mode (58)
- Self-timer (61)
- Focus mode (63)
- Exposure compensation (68)
- Shooting menu (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[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** (📖165) 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. When **Nightscape + light trails** is selected, the camera focuses on the area in the center of the frame. When **Nightscape + star trails** or **Star trails** is selected, the camera focuses at infinity.

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 **4608×3456** (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.
  - 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 (📖165) in the setup menu.

SCENE ➔ Party/indoor

- To avoid the effects of camera shake, hold the camera steady. Set **Photo VR** (📖165) to **Off** in the setup menu when using a tripod to stabilize the camera during shooting.

SCENE ➔ Night landscape

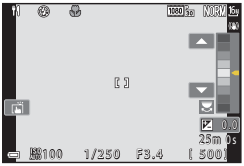
- On the screen displayed when **Night landscape** is selected, select **Hand-held** or **Tripod**.
- **Hand-held**:
  - While the icon on the shooting screen is displayed in green, press the shutter-release button all the way to capture a series of images which are combined into a single image and saved.
  - 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 (165) 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 OK 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** (165) in the setup menu to **Off** when using a tripod to stabilize the camera.

- 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.

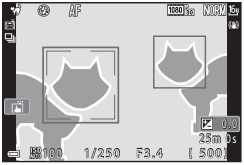
Pet Portrait Auto Release and Self-portrait Timer

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.

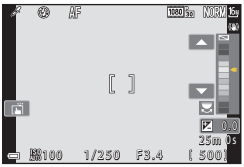
Focus Area

- 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 ➔ 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	Use to capture the flow of car lights against a night landscape background. • 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	Use to capture the motion of stars with a night landscape in the frame. • 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	Use to capture the motion of stars. • 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.

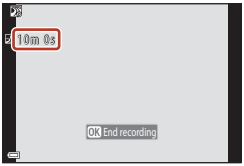
- The screen may turn off during the shooting interval. The power-on lamp turns on while the screen is off.
- To end shooting before it automatically ends, press the OK button.
- When you have obtained the desired trails, end shooting. If you continue shooting, details in the composited areas may be lost.

Notes About Multiple Exp. Lighten

- The camera cannot capture images when a memory card is not inserted.
- Do not rotate the mode dial or insert a new memory card until shooting ends.
- Use a sufficiently charged battery to prevent the camera from turning off unexpectedly.
- Exposure compensation cannot be used (68).
- 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 (165) in the setup menu.

Time Remaining

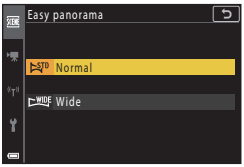
You can check the time remaining until shooting automatically ends on the screen.



Shooting with Easy Panorama

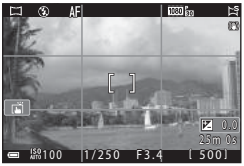
Rotate the mode dial to SCENE ➔ MENU button ➔ Easy panorama ➔ OK button

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.

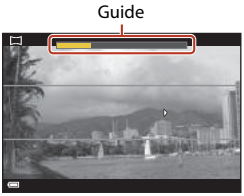


3 Press the shutter-release button all the way, and then remove your finger from the shutter-release button.

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

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

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



Example of Camera Movement

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

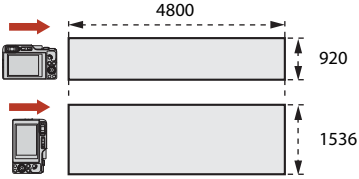
Notes About Easy Panorama Shooting

- The range of the image seen in the saved image is narrower than that seen on the screen at the time of shooting.
- If the camera is moved too quickly or shaken too much, or if the subject is too uniform (e.g. walls or darkness), an error may occur.
- If shooting is stopped before the camera reaches the half-way point in the panorama range, a panorama image is not saved.

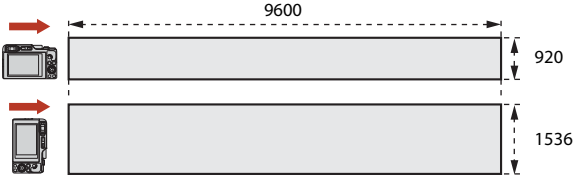
Image Size of Easy Panorama

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

When STD Normal is set



When WIDE Wide is set



Playback with Easy Panorama

Switch to playback mode (📖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.

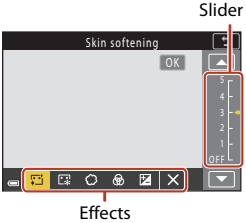
Shooting with Smart Portrait (Enhancing Human Faces When Shooting)

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

Rotate the mode dial to SCENE ➔ MENU button ➔ Smart portrait ➔ OK 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 OK button to apply them.



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

Notes About Smart Portrait

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 (📖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, and 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).

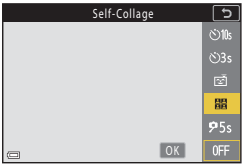
Rotate the mode dial to SCENE ➔ MENU button ➔ Smart portrait ➔ OK button ➔ Self-Collage ➔ OK button

1 Set self-collage.

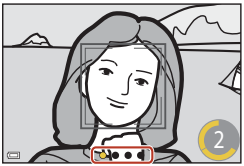
- **Number of shots**: Set the number of shots that the camera automatically captures (number of captured images for an aggregated image). **4** (default setting) or **9** can be selected.
- **Interval**: Set the interval time between each shot. **Short**, **Medium** (default setting), or **Long** can 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 OK 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 OK 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.

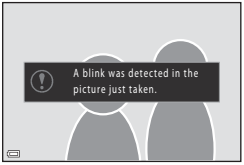
Notes About Self-Collage

- 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** (📖164), 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 ➔ OK button ➔ Blink proof ➔ OK button

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

Notes About Blink Proof

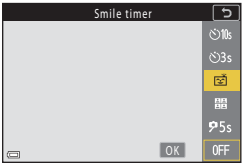
This function may not be available to use in combination with other functions (80).

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 ➔ OK button ➔ MENU button

Press the multi selector ◀ to select **Smile timer** and press the OK 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).

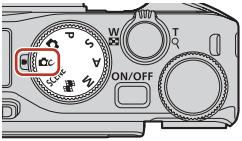
When the Self-timer Lamp Flashes

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**.

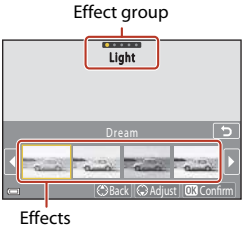


1 Press the OK button.

- The effect selection screen is displayed.

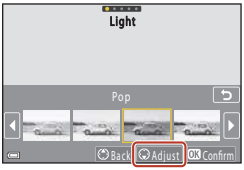
2 Use the multi selector ◀ ▶ to select an effect.

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



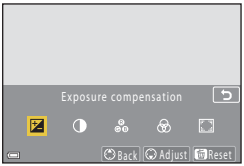
3 To adjust the effect, press ▼.

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

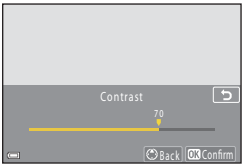


4 Use ◀ ▶ to highlight the desired option and then press ▼.

- 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.



6 Press the shutter-release button or the ● (movie-record) 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

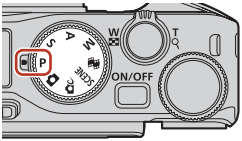
You can also select an effect group by pressing the MENU button when the screen in step 1 is displayed.

Functions Available in Creative Mode

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

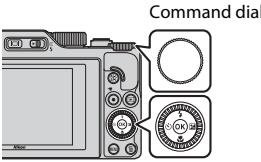
P, S, A, and M Modes (Setting the Exposure for Shooting)

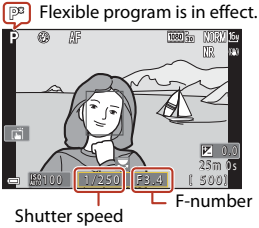
In P, S, A, and M modes, you can set exposure (combination of shutter speed and f-number) according to the shooting conditions. Also, you can achieve greater control when shooting images by setting the shooting menu options (📖120).



Shooting mode	Description
P Programmed auto	You can let the camera adjust the shutter speed and f-number. • 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).





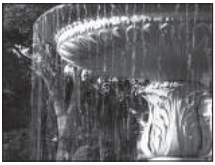
Tips for Setting Exposure

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

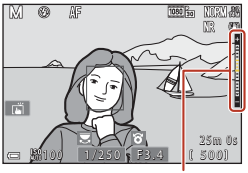
When the subject is too dark or too bright, it may not be possible to obtain the appropriate exposure. In such cases, the shutter speed indicator or f-number indicator flashes (in P, S, and A modes), or the exposure indicator is displayed in red (in M mode) when the shutter-release button is pressed 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 (–3 to +3 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.

<table>
<tr><th colspan="2" rowspan="2">Setting</th><th colspan="4">Control range (second)</th></tr>
<tr><th>P mode</th><th>S mode</th><th>A mode</th><th>M mode</th></tr>
<tr><td rowspan="4">ISO sensitivity[1] (📖137)</td><td>Auto[2]</td><td rowspan="4">1/2000–1 s</td><td colspan="3" rowspan="3">1/2000–8 s</td></tr>
<tr><td>ISO 100-400[2]
ISO 100-800[2]</td></tr>
<tr><td>ISO 100, 200, 400, 800, 1600</td></tr>
<tr><td>ISO 3200, 6400</td><td colspan="3">1/2000–#8 s#</td></tr>
<tr><td rowspan="5">Continuous (📖134)</td><td>Continuous H, Continuous M, Continuous L</td><td colspan="4">1/2000–1 s</td></tr>
<tr><td>Pre-shooting cache</td><td colspan="4">1/4000–1/125 s</td></tr>
<tr><td>Continuous H: 120 fps</td><td colspan="4">1/4000–1/120 s</td></tr>
<tr><td>Continuous H: 60 fps</td><td colspan="4">1/4000–1/60 s</td></tr>
<tr><td>Intvl timer shooting</td><td colspan="4">Same as when Single is set</td></tr>
</table>

[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 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).

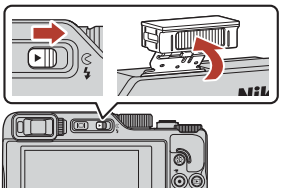
The functions that can be set vary depending on the shooting mode.

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.

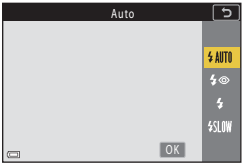
- When the flash is lowered, flash operation is disabled and ⊘ is displayed.



2 Press the multi selector ▲ (⚡).

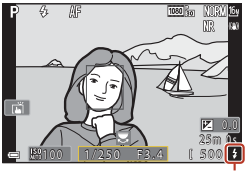
3 Select the desired flash mode (📖59) and press the OK button.

- If the setting is not applied by pressing the OK 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 when you press the shutter-release button halfway.



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		📷, 📷c	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, 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:

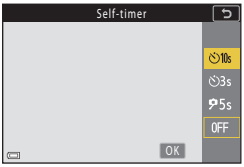
- More time than usual is required to save images.
- Red-eye reduction may not produce the desired results in some situations.
- In rare cases, red-eye reduction may be applied to areas of an image unnecessarily. In these cases, select another flash mode and take the picture again.

Self-timer

The camera releases the shutter when the set number of seconds elapses after you press the shutter-release button. Set **Photo VR** (📖165) 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.

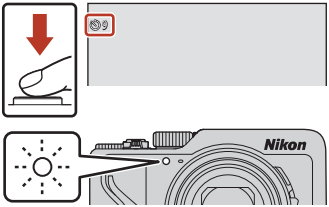


- **10s** (10 seconds): Use on important occasions, such as weddings.
- **3s** (3 seconds): Use to prevent camera shake.
- **5s** (5 seconds, self-portrait timer): Use for self-portraits.
- If the setting is not applied by pressing the OK button, the selection will be canceled.

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.
- When the shutter is released, the self-timer is set to OFF.
- 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).

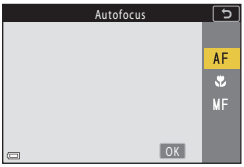
Focus Mode

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 Ⓚ button.

- If the setting is not applied by pressing the Ⓚ 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 (6.6 ft) 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

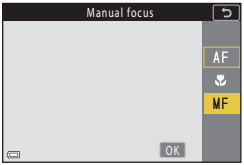
- The setting may not be available with some shooting modes (📖64).
- For shooting modes P, S, A, and M, the setting is saved in the camera's memory even after the camera is turned off.

Using Manual Focus

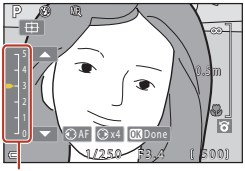
Available in the following shooting modes.

- 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.



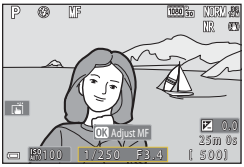
2 Use the multi selector to adjust the focus while checking the enlarged view.



Peaking level

- An enlarged view of the center area of the image is displayed. Press ▶ to switch the view between 2×, 4×, and 1×.
- 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.

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 OK button on the remote control, you can lock the camera to the set focus.

Using the Creative Slider

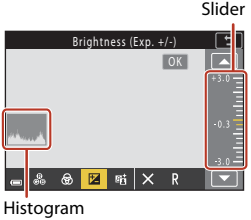
When the shooting mode is set to P, S, A, or M mode, you can adjust the brightness (exposure compensation), vividness, hue, and Active D-Lighting when shooting.

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 H (High), N (Normal), L (Low) for the amount of effect.

3 Use ▲▼ to adjust the level.



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

4 Press the OK button when setting is complete.

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

Creative Slider Settings

- When the shooting mode is set to M mode, **Brightness (Exp. +/-)** cannot be used.
- **Active D-Lighting** reduces the loss of details in highlights and shadows even when recording movies, but the effect level does not change even if you attempt to change it.
- **Active D-Lighting** is not applied to movies recorded with **Movie options** set to **HS 1080/4×**.
- 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.

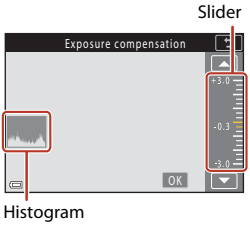
Exposure Compensation (Adjusting Brightness)

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 OK 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 OK 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

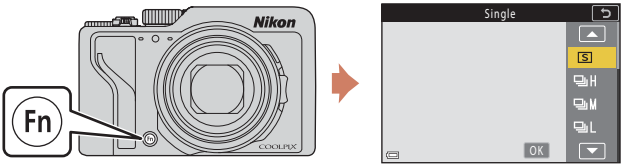
If you press the Fn button in P, S, A, or M mode, you can quickly configure the pre-saved menu options.

- The menu options listed below can be saved.

Image quality (📖127)	Continuous (📖134)
Image size (📖129)	ISO sensitivity (📖137)
White balance (📖130)	AF area mode (📖139)
Metering (📖133)	Photo VR (📖165)

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 button** can be selected.



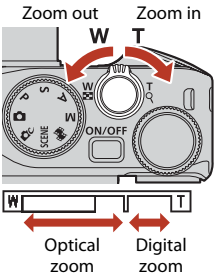
2 Use the multi selector to select a setting and press the OK button.

- 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 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 4× the maximum optical zoom ratio, can be activated by moving and holding the zoom control or side zoom control toward **T** when the camera is zoomed in to the maximum optical zoom position.
- 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** (📖167) 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.

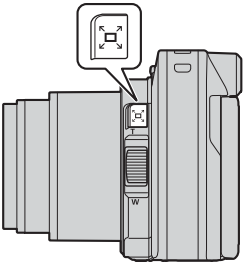
Digital Zoom

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 may not change to blue when using certain continuous shooting settings or other settings.

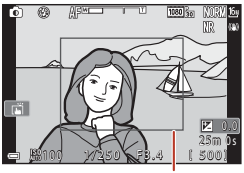
Using the Snap-back Zoom

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 change the visible area, move the zoom control or side zoom control while pressing the ⤢ button.

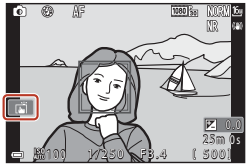
- Release the ⤢ button to return to the original zoom position.
- Snap-back zoom is not available during movie recording.



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. • 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: • In P, S, A, or M mode, **AF area mode** (139) 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.
OFF 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.
- Only one image is captured even when continuous shooting is set. To capture images continuously, press the shutter-release button.
- Still images cannot be saved during movie recording with **Touch shutter**.

Focusing

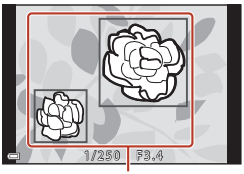
The Shutter-release Button

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

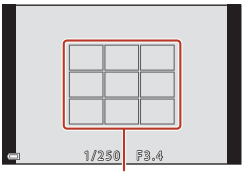
When **AF area mode** (139) is set to **Target finding AF** in P, S, A, or M mode, the camera focuses in the manner described below when you press the shutter-release button halfway.

- 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.

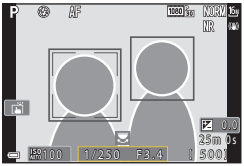


Focus areas

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 **White balance** settings.
- The camera may not detect the main subject appropriately in the following situations:
  - When the subject is very dark or bright
  - When the main subject lacks clearly defined colors
  - When the shot is framed so that the main subject is 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)
- When **AF area mode** (139) 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:

- 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.
- When **AF area mode** is set to **Face priority**, the camera selects the focus area containing the subject closest to the camera.

Notes About Face Detection

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

Subjects Not Suitable for Autofocus

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

- Subject is very dark
- Objects of sharply differing brightness are included in the shooting conditions (e.g. the sun behind the subject makes that subject appear very dark)
- No contrast between the subject and surroundings (e.g. a portrait subject wearing a white shirt is standing in front of a white wall)
- 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

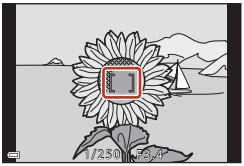
In the situations noted above, try pressing the shutter-release button halfway to refocus several times, or focus on another subject positioned at the same distance from the camera as the actual desired subject, and use focus lock (📖77).

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

Focus Lock

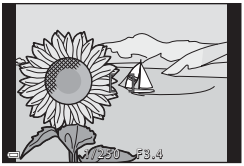
Use focus lock to capture creative compositions even when the focus area is set to the center of the frame.

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** (139) 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 focus instead of pressing and holding the shutter-release button halfway (168).

Default Settings (Flash, 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 (📖138)	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 (📖139)	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)	• 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 size	Image quality (📖127)	• When **RAW** is selected, **Image size** is fixed at 16M **4608×3456**. • When **RAW + Fine** or **RAW + Normal** is selected, **Image size** of JPEG images can be set. However, 16:9 12M **4608×2592**, 3:2 12M **4608×3072**, or 1:1 **3456×3456** cannot be selected.
	Continuous (📖134)	**Image size** is set as follows depending on the continuous shooting setting: • **Pre-shooting cache**: 16M **4608×3456** • **Continuous H: 120 fps**: 2M **1600×1200** • **Continuous H: 60 fps**: 2M **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.
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)	When a setting other than **Single** is selected, **Exposure bracketing** cannot be used.
AF area mode	Focus mode (□63)	When MF (manual focus) is set, **AF area mode** cannot be set.
	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.
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.

Restricted function	Option	Description
Digital zoom	Image quality (📖127)	When **RAW**, **RAW + Fine**, or **RAW + Normal** is selected, digital zoom cannot be used.
	AF area mode (📖139)	When **Subject tracking** is selected, digital zoom cannot be used.
Shutter sound	Exposure bracketing (📖138)	Shutter sound is disabled.

Notes About Digital Zoom

- Depending on the shooting mode or the current settings, digital zoom may not be available (📖166).
- When digital zoom is in effect, the camera focuses in the center of the frame.

Playback Features

Playback Zoom.....84

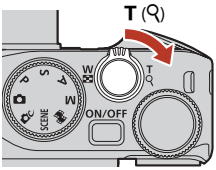
Thumbnail Playback/Calendar Display.....85

Viewing and Deleting Images in a Sequence.....86

Editing Images (Still Images).....88

Playback Zoom

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



Full-frame Playback

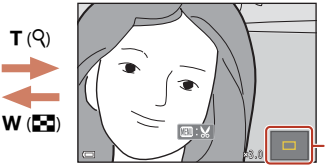


Image is zoomed in.

Displayed area guide

- You can change the magnification rate by moving the zoom control toward **W** ( ) or **T** ( ). 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 OK button to return to full-frame playback mode.

Cropping Images

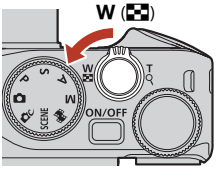
When a zoomed image is displayed, you can press the MENU button to crop the image to include only the visible portion and save it as a separate file (94).

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 | Thumbnail Playback | Calendar Display

- You can change the number of thumbnails displayed by moving the zoom control toward **W** (▦) or **T** (Q).
- While using thumbnail playback mode, press the multi selector ▲▼◀▶ 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, 2018.

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

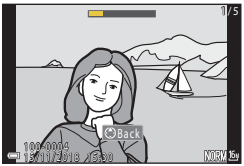
Images captured continuously or with the self-collage function are saved as a sequence.

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** (📖155) 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 (📖151).
- 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

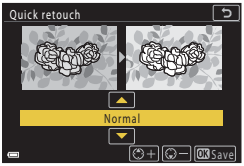
- RAW images cannot be edited.
- A JPEG can be edited up to 10 times. A still image created by editing a movie can be edited up to 9 times.
- You may not be able to edit images of a certain size or with certain editing functions.

Quick Retouch: Enhancing Contrast and Saturation

Press the ▶ button (playback mode) ➔ Select an image ➔ MENU button ➔ Quick retouch ➔ OK button

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

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

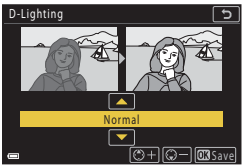


D-Lighting: Enhancing Brightness and Contrast

Press the ▶ button (playback mode) ➔ Select an image ➔ MENU button ➔ D-Lighting ➔ OK button

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

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

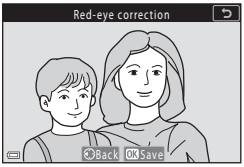


Red-eye Correction: Correcting Red-eye When Shooting with the Flash

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

Preview the result and press the OK button.

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



Notes About Red-eye Correction

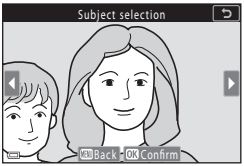
- Red-eye correction can only be applied to images when red-eye is detected.
- Red-eye correction can be applied to pets (dogs or cats) even if their eyes are not red.
- Red-eye correction may not produce the desired results in some images.
- In rare cases, red-eye correction may be applied unnecessarily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

Glamour Retouch: Enhancing Human Faces

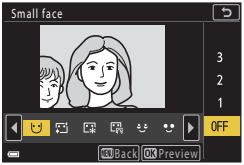
Press the ▶ button (playback mode) ➔ Select an image ➔ MENU button ➔ Glamour retouch ➔ OK button

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

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

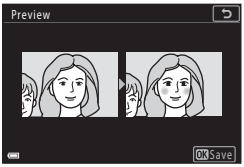


2 Use ◀▶ to select the effect, use ▲▼ to select the effect level, and press the OK button.



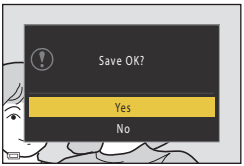
- You can simultaneously apply multiple effects. Adjust or check the settings for all effects before pressing the OK button.
  Small face, **Skin softening**, **Foundation makeup**, **Glare reduction**, **Hide eye bags**, **Big eyes**, **Whiten eyes**, **Eye shadow**, **Mascara**, **Whiten teeth**, **Lipstick**,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

3 Preview the result and press the OK button.



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

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



- An edited copy is created.

Notes About Glamour Retouch

- Only one face at a time can be edited. To apply glamour retouch to another face, edit the edited image again.
- Depending on the direction in which faces are looking, or the brightness of faces, the camera may be unable to accurately detect faces, or the glamour retouch function may not perform as expected.
- If no faces are detected, a warning is displayed and the screen returns to the playback menu.
- The glamour retouch function is available only for images captured at an ISO sensitivity of 1600 or lower, and the image size of 640 × 480 or larger.

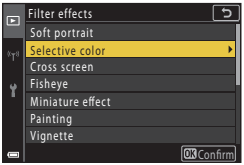
Filter Effects: Applying Digital Filter Effects

Press the ▶ button (playback mode) ➔ Select an image ➔ MENU button ➔ Filter effects ➔ OK button

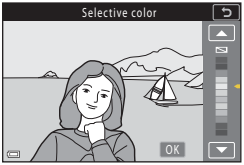
Option	Description
Soft portrait	Blurs the background of human subjects. When no human subjects are detected, keeps the area in the center of the frame in focus and blurs the surrounding area.
Selective color	Keeps only a selected color and makes other colors black-and-white.
Cross screen	Produces star-like 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 OK button.

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

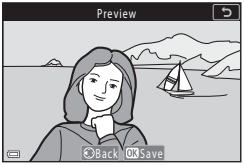


2 Use ▲▼ to select the color to keep and press the OK button.



3 Preview the result and press the OK button.

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



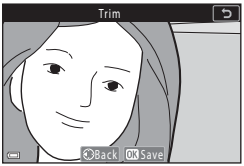
Crop: Creating a Cropped Copy

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** (Q) or **W** (▦) to adjust the magnification rate. Set a magnification rate at which MENU: ✂ is displayed.
- Use the multi selector ▲▼◀▶ to scroll to the portion of the image that you want to display.

3 Confirm the area that you want to keep, and press the OK button.



- To 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

Basic Operations of Movie Recording and Movie Playback.....96

Capturing Still Images While Recording Movies.....100

Shooting Time-lapse Movies.....101

Short Movie Show Mode (Combining Movie Clips to Create Short Movies)...103

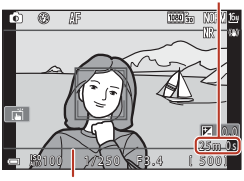
Operations During Movie Playback.....106

Editing Movies.....107

Basic Operations of Movie Recording and Movie Playback

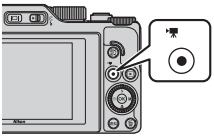
1 Display the shooting screen.

- 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).

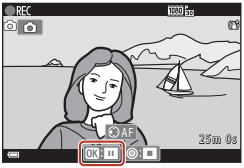


2 Press the ● (🎥 movie-record) button to start movie recording.

- The camera focuses in the center of the frame.



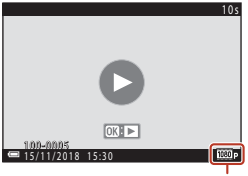
- Press the OK button to pause recording, and press the OK button again to resume recording (except when an HS movie option is selected in **Movie options**). Recording automatically ends if it remains paused for about five minutes.
- You can capture a still image by pressing the shutter-release button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

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



Movie Frame

- Set **Photo info** in **Monitor settings** (📖161) 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** (📖142) 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/AF-L button during movie recording, the exposure or focus is locked. To unlock, press the AE-L/AF-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** (📖167) in the setup menu to **Manual focus** to focus by using the side zoom control.
- Continue to set the exposure while recording movies. When you press the AE-L/AF-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** (📖168) 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 (📖144).

- 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 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 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

- The zoom indicator is not displayed during movie recording.
- 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** (📖149) 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.

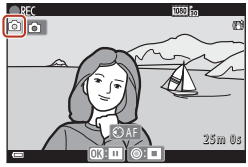
Notes About Autofocus for Movie Recording

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.



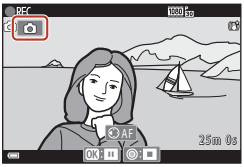
- A still image can be captured when 📷 is displayed on the screen. When 🚫 is displayed, a still image cannot be captured.
- The size of the captured still image is the same as the movie image size (📖144). The image quality is fixed at **Normal**.

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** (📖144) 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.

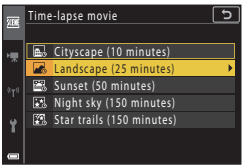
- When the **Frame rate** setting of the movie menu is set to **30 fps (30p/60p)**, 300 images are captured and saved with **1080/30p**. When set to **25 fps (25p/50p)**, 250 images are captured and saved with **1080/25p**.

Rotate the mode dial to SCENE ➔ MENU button ➔ Time-lapse movie ➔ OK 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 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.

1 Use the multi selector ▲▼ to select a type, and press the OK button.

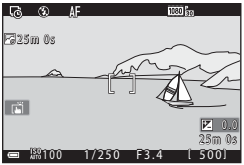


2 Select whether or not to fix exposure (brightness), and press the OK button (except **Star trails (150 minutes)** and **Night sky (150 minutes)**).

- 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.



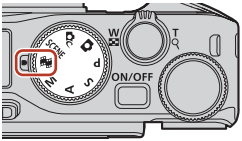
- Set exposure compensation (📖68) before releasing the shutter for the first image. Exposure compensation cannot be changed after the first image is captured. Focus and hue are fixed when the first image is captured.
- The shutter is automatically released for the second and subsequent images.
- The 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

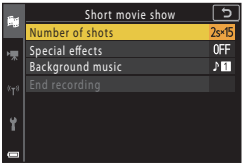
- The camera cannot capture images if a memory card is not inserted. Do not exchange the memory card until shooting is complete.
- Use a sufficiently charged battery to prevent the camera from turning off unexpectedly.
- Time-lapse movies cannot be recorded by pressing the ● (🎥) button.
- Do not rotate the mode dial to a different setting until shooting is complete.
- Vibration reduction is disabled regardless of the **Photo VR** setting (📖165) 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 (1080 P 30 **1080/30p** or 1080 P 25 **1080/25p**) by recording and automatically combining multiple movie clips that are several seconds long.

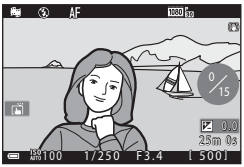


1 Press the MENU (menu) button and configure the settings for recording movies.



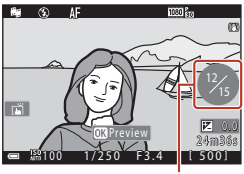
- **Number of shots**: Set the number of movie clips that the camera records and the recording time for each movie clip. By default, the camera records 15 movie clips that are 2 seconds each to create a 30-second short movie.
- **Special effects** (104): Apply various effects to movies when shooting. Effects can be changed for each movie clip.
- **Background music**: Select the background music. Move the zoom control (2) toward **T** (Q) 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.



Number of movie clips recorded

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

4 Save the short movie show.

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

Special Effects

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.
TOY1 Toy camera effect 1	Gives the entire image a yellowish hue and darkens the image periphery.
TOY2 Toy camera effect 2	Decreases the color saturation of the entire image and darkens the image periphery.
Mirror	Reflects the left half of the image from the center to create a symmetric image.
Off (default setting)	No effect is applied to the image.

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

Operations During Movie Clip Playback

To adjust the volume, move the zoom control 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 12M **4608×2592** 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 (□144)

Operations During Movie Playback

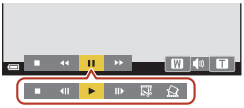
To adjust the volume, move the zoom control while a movie is playing (□2).

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.

Editing Movies

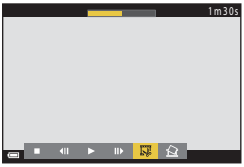
When editing movies, use a sufficiently charged battery to prevent the camera from turning off during editing. When the battery level indicator is ▭, movie editing is not possible.

Extracting Only the Desired Portion of a Movie

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

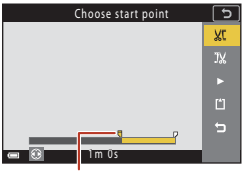
1 Play back a desired movie and pause at the start point of the portion that you want to extract (📖106).

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



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

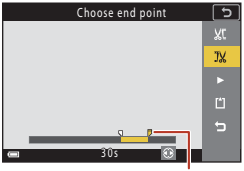
- Use ◀▶ or rotate the command dial to move the start point. You can also adjust it by sliding the start point icon (📖7).
- To cancel editing, select ↩ (back), and press the OK button.



Start point

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

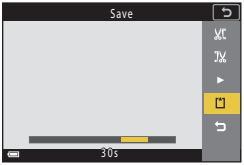
- Use ◀▶ or rotate the command dial to move the end point. You can also adjust it by sliding the end point icon.
- To preview the specified portion, use ▲▼ to select ▶ and then press the OK button. Press the OK button again to stop previewing.



End point

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

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



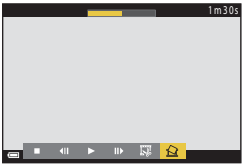
Notes About Movie Extracting

- 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 (144).

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

Utilizing Images 110

Viewing Images on a TV 111

Printing Images Without a Computer 112

Transferring Images to a Computer (ViewNX-i) 116

Utilizing Images

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

Viewing Images on a TV

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

Printing Images Without a Computer

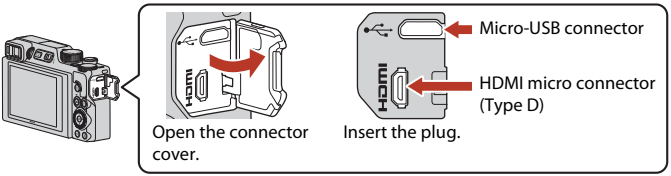
If you connect the camera to a PictBridge-compatible printer, you can print images without using a computer.
Connection method: Connect the camera directly to the printer's USB port with the USB cable.

Transferring Images to a Computer (ViewNX-i)

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

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

Notes About Connecting Cables to the Camera

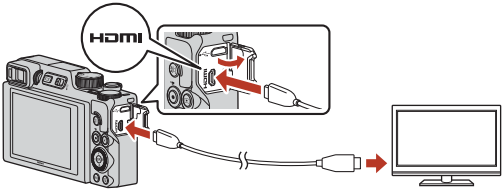


- Make sure to turn the camera off before connecting or disconnecting cables. Check the shape and direction of the plugs and do not insert or remove the plugs at an angle.
- Make sure that the camera battery is sufficiently charged. If the EH-62F AC Adapter (available separately) is used, this camera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

Viewing Images on a TV

1 Turn off the camera and connect it to the TV.

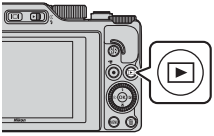
- Check the shape and direction of the plugs and do not insert or remove the plugs at an angle.



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.
- No information is displayed on the screen for HDMI output.

Printing Images Without a Computer

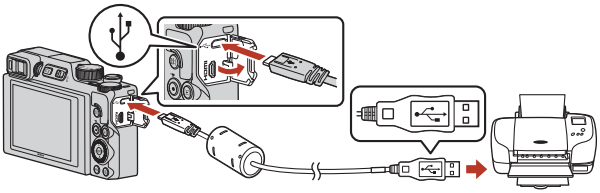
Users of PictBridge-compatible printers can connect the camera directly to the printer and print images without using a computer.

Connecting the Camera to a Printer

1 Turn on the printer.

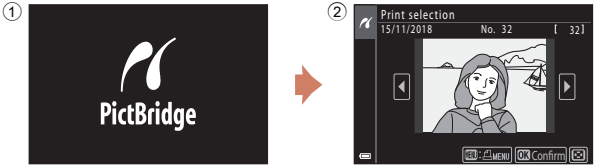
2 Turn off the camera and connect it to the printer using the USB cable.

- 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).



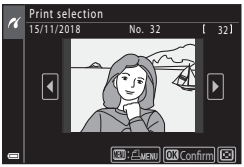
If the PictBridge Startup Screen Is Not Displayed

When **Auto** is selected for **Charge by computer** (📖172), 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

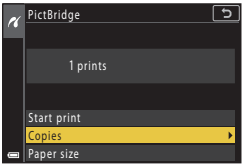
1 Use the multi selector ◀▶ to select the desired image and press the OK button.

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



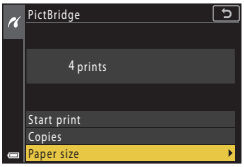
2 Use ▲▼ to select **Copies** and press the OK button.

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



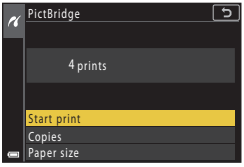
3 Select **Paper size** and press the OK button.

- 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.



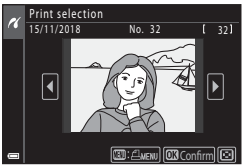
4 Select **Start print** and press the OK button.

- Printing starts.



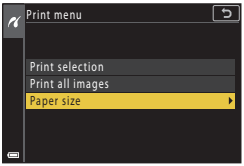
Printing Multiple Images

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

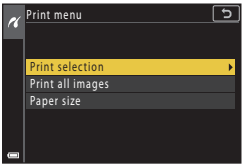


2 Use the multi selector ▲▼ to select **Paper size** and press the OK button.

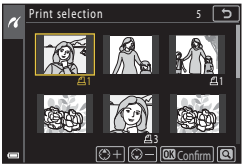
- Select the desired paper size and press the OK button.
- To print with the paper size setting configured on the printer, select **Default**.
- The paper size options available on the camera vary depending on the printer that you use.
- To exit the print menu, press the MENU button.



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.

http://downloadcenter.nikonimglib.com

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

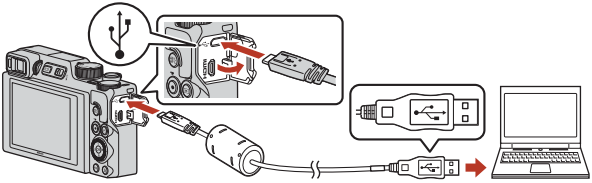
Transferring Images to a Computer

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.