

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

- **When using Windows 7**

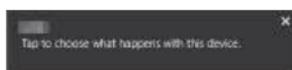
If the dialog shown on the right is displayed, follow the steps below to select Nikon Transfer 2.

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



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

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



- **When using OS X or macOS**

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

If the memory card contains a large number of images, it may take a while for Nikon Transfer 2 to start. Wait until Nikon Transfer 2 starts.

Notes About Connecting the USB Cable

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

Using ViewNX-i

Consult online help for more information.



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



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

3 Terminate the connection.

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

Capture NX-D

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

<http://downloadcenter.nikonimglib.com>



Using the Menu

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Menu Operations

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

-  Shooting menu^{1, 2}
-  Movie menu¹
-  Playback menu³
-  Network menu
-  Setup menu

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

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

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

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

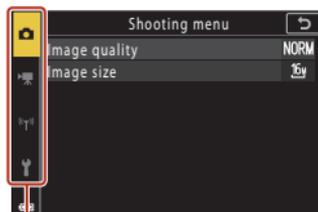
- The menu is displayed.



2 Press the multi selector



- The current menu icon is displayed in yellow.



Menu icons

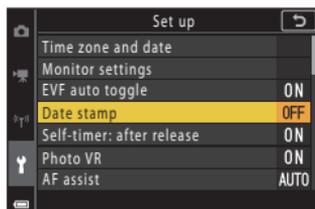
3 Select a menu icon and press the **OK** button.

- The menu options become selectable.



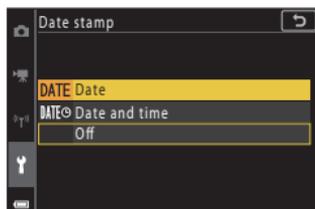
4 Select a menu option and press the **OK** button.

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



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

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



Command Dial or Multi Selector Operation When a Menu Is Displayed

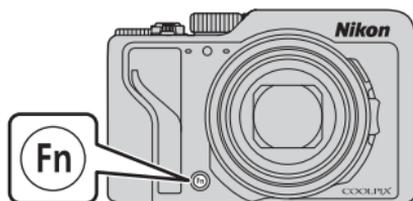
When a menu or setting items are displayed, you can select a menu option also by rotating the command dial or multi selector.

Operating the Touch Panel on Menus

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

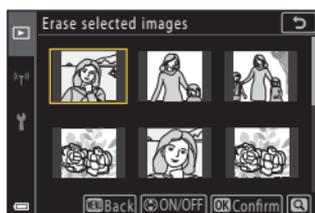
Using the **F_n** (Function) Button

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



The Image Selection Screen

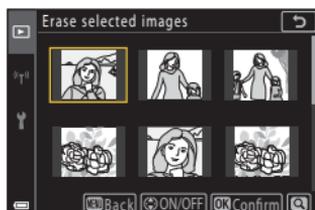
When an image selection screen such as the one shown on the right is displayed while operating the camera menu, follow the procedures described below to select the images.



1 Use the multi selector ◀▶ or rotate it to select the desired image.

- Move the zoom control (📐) toward **T** (🔍) to switch to full-frame playback, or **W** (🖼️) to switch to thumbnail playback.
- Only one image can be selected for **Rotate image**.

Proceed to step 3.



2 Use ▲▼ to select **ON** or **OFF**.

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



3 Press the **OK** button to apply the image selection.

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



Menu Lists

The Shooting Menu

Enter shooting mode → MENU button

Common Options

Option	Default setting	
Image quality*	Normal	127
Image size*	 4608×3456	129

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

For P, S, A, and M Modes

Option	Default setting	
White balance*	Auto (normal)	130
Metering*	Matrix	133
Continuous*	Single	134
ISO sensitivity*	Auto	137
Exposure bracketing	<ul style="list-style-type: none">• Number of shots: Bracketing off• Bracketing increment: ±0.3	138
AF area mode*	Target finding AF	139
Autofocus mode	Pre-focus	142
Noise reduction filter	Normal	143
M exposure preview	On	143

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



The Movie Menu

Enter shooting mode → MENU button →  menu icon →  button

Option	Default setting	
Movie options	 1080/30p or  1080/25p	144
Autofocus mode	Single AF	148
Movie VR	On (hybrid)	149
Wind noise reduction	Off	150
Frame rate	–	150

The Playback Menu

Press the  button (playback mode) → MENU button

Option	
Mark for upload ¹	151
Quick retouch ²	89
D-Lighting ²	89
Red-eye correction ²	90
Glamour retouch ²	90
Filter effects	92
Slide show	152
Protect ¹	153
Rotate image ¹	153
Copy ¹	154
Sequence display	155

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

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



The Network Menu

Press the **MENU** button → “” menu icon →  button

Option	
Airplane mode	156
Choose connection	156
Connect to smart device	156
Connection to remote	156
Send while shooting	156
Wi-Fi	157
Bluetooth	157
Restore default settings	157



The Setup Menu

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

Option	
Time zone and date	159
Monitor settings	161
EVF auto toggle	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

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



The Shooting Menu (The Common Shooting Options)

Image Quality

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

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

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

The setting is also applied to other shooting modes.

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

Notes About Image Quality

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

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

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



RAW Images of This Camera

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

Saving of RAW and JPEG Images at the Same Time

- The RAW image and the JPEG image that are saved at the same time have the same file number but with their own extensions, “.NRW” and “.JPG” (📖203).
- When playing back on the camera, only the JPEG image is displayed.
- Note that when the JPEG image is deleted, the RAW image that was saved at the same time is also deleted.

Number of Images That Can Be Saved

- The approximate number of images that can be saved can be checked on the screen when shooting (📖23).
- Note that due to JPEG compression, the number of images that can be saved may vary greatly depending on the image content, even when using memory cards with the same capacity and the same image quality and image size settings. In addition, the number of images that can be saved may vary depending on the make of the memory card.
- If the number of exposures remaining is 10,000 or more, the number of exposures remaining display shows “9999.”



Image Size

Enter shooting mode → MENU button → Image size →  button

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

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

The setting is also applied to other shooting modes.

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

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

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

Notes About Printing Images at 1:1 Aspect Ratio

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

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

Notes About Image Size

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



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

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

White Balance (Adjusting Hue)

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

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

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

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

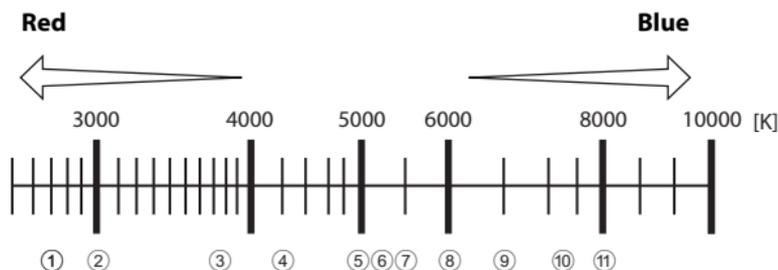
Notes About White Balance

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



Color Temperature

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



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



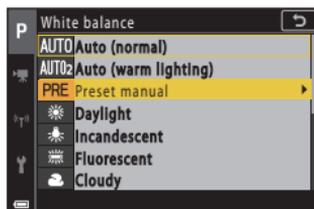
Using Preset Manual

Follow the procedures described below to measure the white balance value under the lighting used during shooting.

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

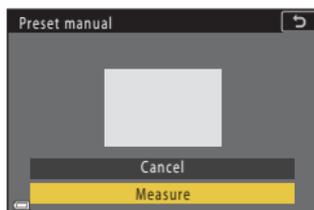
2 Use the multi selector ▲▼ to select **Preset manual**, and press the **OK** button.

- The lens extends to the zoom position for measurement.



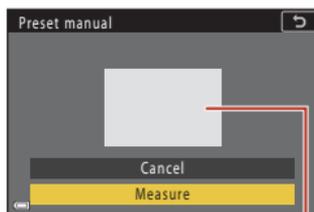
3 Select **Measure**.

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



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

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



Measuring window

✓ Notes About Preset Manual

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



Metering

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

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

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

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

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

Notes About Metering

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

Display on the Shooting Screen

When **Center-weighted** or **Spot** is selected, the metering range guide (12) is displayed (except when digital zoom is used).



Continuous Shooting

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

Option	Description
 Single (default setting)	One image is captured each time the shutter-release button is pressed.
 Continuous H	While the shutter-release button is held all the way down, images are captured continuously. <ul style="list-style-type: none"> The camera can capture up to about #10 images# continuously at a rate of about #10 fps# (when set to Normal (image quality) and  4608x3456 (image size)).
 Continuous M	While the shutter-release button is held all the way down, images are captured continuously. <ul style="list-style-type: none"> The camera can capture up to #about 200 images# continuously at a rate of #about 7 fps# (when set to Normal (image quality) and  4608x3456 (image size)). If the shutter-release button is held all the way down further, the frame rate becomes slower.
 Continuous L	While the shutter-release button is held all the way down, images are captured continuously. <ul style="list-style-type: none"> The camera can capture up to about #200 images# continuously at a rate of about #3 fps# (when set to Normal (image quality) and  4608x3456 (image size)). If the shutter-release button is held all the way down further, the frame rate becomes slower.
 Pre-shooting cache	Pre-shooting cache shooting begins when the shutter-release button is pressed halfway. When the shutter-release button is pressed all the way down, the camera saves the current image as well as the images captured immediately before the button is pressed ( 135). Pre-shooting cache makes it easy to capture perfect moments. <ul style="list-style-type: none"> The camera can capture up to about #10 images# continuously at a rate of about #15 fps# (including a maximum of #5 images# captured in the pre-shooting cache). The image quality is fixed at Normal and the image size is fixed at  4608x3456.
 Continuous H: 120 fps	Each time the shutter-release button is pressed all the way down, images are captured continuously at a high speed rate. <ul style="list-style-type: none"> The camera can capture up to about #60 images# continuously at a rate of about 120 fps. The image quality is fixed at Normal and the image size is fixed at  1600x1200.
 Continuous H: 60 fps	Each time the shutter-release button is pressed all the way down, images are captured continuously at a high speed rate. <ul style="list-style-type: none"> The camera can capture up to about #60 images# continuously at a rate of about 60 fps. The image quality is fixed at Normal and the image size is fixed at  1600x1200.



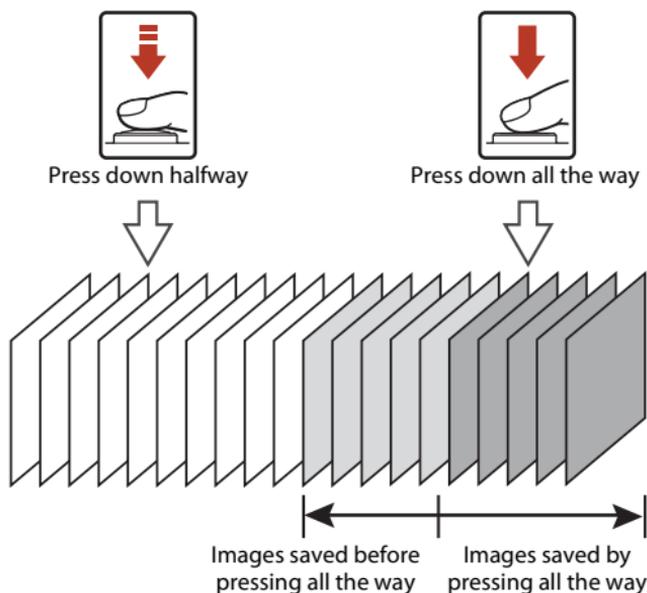
Option	Description
Intvl timer shooting	The camera automatically captures still images continuously at the specified interval (📖136).

✓ Notes About Continuous Shooting

- Focus, exposure and white balance are fixed at the values determined with the first shot in each series (except **Intvl timer shooting**).
- It may take some time to save the images after shooting.
- When ISO sensitivity increases, noise may appear in captured images.
- The frame rate may become slower depending on the image quality, image size, memory card type or shooting conditions (such as when saving RAW images).
- When using **Pre-shooting cache**, **Continuous H: 120 fps**, or **Continuous H: 60 fps**, banding or variance in brightness or hue may occur in images that were captured under lighting that flashes quickly at high speeds, such as fluorescent, mercury-vapor, or sodium-vapor lighting.
- This function may not be available to use in combination with other functions (📖80).

📎 Pre-shooting Cache

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



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

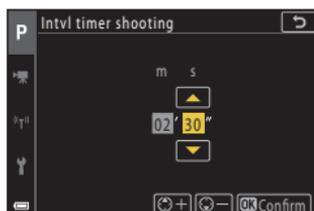


Interval Timer Shooting

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

1 Set the desired interval between each shot.

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



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

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

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



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

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

✓ Notes About Interval Timer Shooting

- To prevent the camera from turning off unexpectedly during shooting, use a sufficiently charged battery.
- If the EH-62F AC Adapter (available separately; 204) is used, this camera can be powered from an electrical outlet. Do not, under any circumstances, use an AC adapter other than the EH-62F. Failure to observe this precaution could result in overheating or damage to the camera.
- Do not rotate the mode dial to a different setting while performing interval timer shooting. Shooting will end.
- If the shutter speed is slow and saving an image takes time compared to the specified interval, some of the shots during Interval timer shooting may be canceled.



ISO Sensitivity

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

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

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

Option	Description
AUTO Auto (default setting)	Sensitivity is automatically selected from the range of ISO 100 to 1600.
ISO AUTO Fixed range auto	The range in which the camera automatically adjusts ISO sensitivity can be selected from ISO 100-400 or ISO 100-800 .
100, 200, 400, 800, 1600, 3200, 6400	ISO sensitivity is fixed at the specified value.

Notes About ISO Sensitivity

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

ISO Sensitivity Display on the Shooting Screen

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



Exposure Bracketing

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

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

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

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

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

Notes About Exposure Bracketing

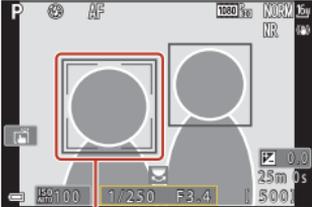
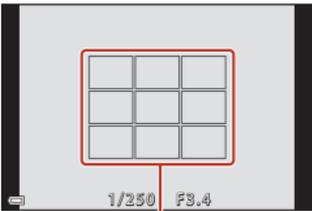
- **Exposure bracketing** is not available in **M** (manual) mode.
- When exposure compensation (66) and **±0.3**, **±0.7**, or **±1.0** in **Bracketing increment** are set simultaneously, the combined exposure compensation values are applied.
- This function may not be available to use in combination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



AF Area Mode

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

Set how the camera selects the focus area for autofocus.

Option	Description
 Face priority	<p>When the camera detects a human face, it focuses on that face. See "Using Face Detection" (📖75) for more information.</p>  <p>Focus area</p> <p>When framing a composition with no human subjects or detected faces, the camera automatically selects one or more of the nine focus areas containing the subject closest to the camera when the shutter-release button is pressed halfway.</p>  <p>Focus area</p>



Option	Description
<p>[] Manual (spot)</p> <p>[] Manual (normal)</p> <p>[] Manual (wide)</p>	<p>Use the multi selector ▲▼◀▶ to move the focus area to where you want to focus.</p> <p>To use the multi selector to configure the flash mode or other settings, press the OK button. To return to moving the focus area, press the OK button again.</p> <p>Scope of movable focus area</p> <div style="display: flex; justify-content: space-around;"> <div data-bbox="288 300 601 507"> <p>Focus area (centered)</p> </div> <div data-bbox="629 300 943 507"> <p>Focus area (moving)</p> </div> </div>
<p> Subject tracking</p>	<p>Use this function to take pictures of moving subjects. Register the subject on which the camera focuses. The focus area automatically moves to track the subject. See “Using Subject Tracking” (8141) for more information.</p> <div data-bbox="636 587 948 799"> </div> <p>Focus area</p>
<p> Target finding AF (default setting)</p>	<p>When the camera detects the main subject, it focuses on that subject.</p> <p>See “Using Target Finding AF” (8174) for more information.</p> <div data-bbox="636 869 948 1082"> </div> <p>Focus areas</p>

Notes About AF Area Mode

- When digital zoom is in effect, the camera focuses on the area in the center of the frame regardless of the **AF area mode** setting.
- This function may not be available to use in combination with other functions (8180).



Using Subject Tracking

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

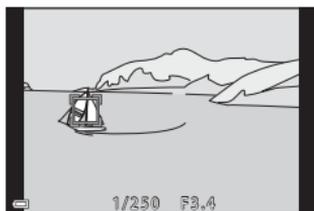
1 Register a subject.

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



2 Press the shutter-release button all the way to take the picture.

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



Notes About Subject Tracking

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



Autofocus Mode

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

Set how the camera focuses when shooting still images.

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

Notes About Autofocus Mode

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

Autofocus Mode for Short Movie Show Mode or Movie Recording

Autofocus mode for short movie show mode or movie recording can be set with **Autofocus mode** (148) in the movie menu.



Noise Reduction Filter

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

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

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

M Exposure Preview

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

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

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



The Movie Menu

Movie Options

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

Select the desired movie option to record. Select normal speed movie options to record at normal speed, or HS movie options ( 145) to record in slow or fast motion. The movie options that can be selected vary depending on the **Frame rate** setting ( 150).

- Memory cards with an SD Speed Class rating of 6 or faster are recommended for recording movies ( 213). 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.

Normal Speed Movie Options

Option (Image size/ Frame rate, File format)	Image size	Aspect ratio (horizontal to vertical)	Max. recording time per file (approx.)
 2160/30p (4K UHD)	3840 × 2160	16:9	# min
 2160/25p (4K UHD)			# min
 1080/30p	1920 × 1080	16:9	# min
 1080/25p (default setting)			# min
 1080/60p	1920 × 1080	16:9	# min
 1080/50p			# min
 720/30p	1280 × 720	16:9	# min
 720/25p			# min
 720/60p	1280 × 720	16:9	# min
 720/50p			# min

- Individual movie files cannot exceed 29 minutes in length, even when there is sufficient free space on the memory card for longer recording. The maximum size of a single movie file is 4 GB. If a file exceeds 4 GB even when you record for less than 29 minutes, it is split into multiple files and cannot be played back continuously.
- The actual remaining recording time may vary depending on the movie content, subject movement, or type of memory card.



HS Movie Options

Recorded movies are played back in fast or slow motion. While recording movies, the camera can be switched between normal speed movie recording and slow motion or fast motion movie recording.

See "Recording Movies in Slow Motion and Fast Motion (HS Movie)" (📖147).

Option	Image size Aspect ratio (horizontal to vertical)	Description
 HS 1080/4x	1920 × 1080 16:9	1/4-speed slow motion movies <ul style="list-style-type: none">Max. recording time: 7 minutes and 15 seconds (playback time: 29 minutes)
 HS 1080/2x	1920 × 1080 16:9	1/2-speed slow motion movies <ul style="list-style-type: none">Max. recording time: 14 minutes and 30 seconds (playback time: 29 minutes)
 HS 1080/0.5x	1920 × 1080 16:9	2× speed fast motion movies <ul style="list-style-type: none">Max. recording time: 29 minutes (playback time: 14 minutes and 30 seconds)

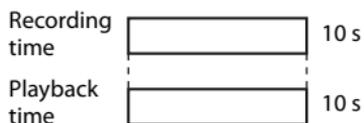
Notes About HS Movie

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



Playing Back in Slow Motion and Fast Motion

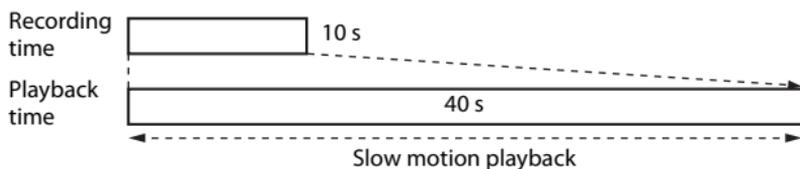
When recording at normal speed:



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

Movies are recorded at 4x normal speed.

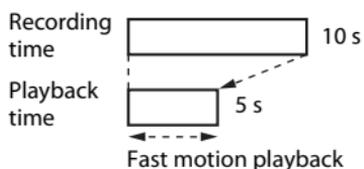
They are played back in slow motion at 4x slower speed.



When recording at $\frac{1080}{2160}$ HS 1080/0.5x:

Movies are recorded at 1/2 normal speed.

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



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

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

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

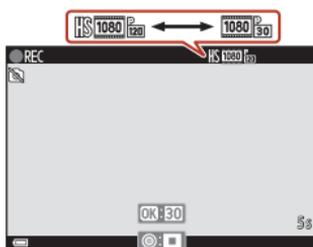
1 Use the multi selector  to select an HS movie option () and press the  button.

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



2 Press the  button to start recording.

- The camera starts recording an HS movie.
- The camera switches between normal speed movie recording and HS movie recording each time the  button is pressed.
- The movie options icon changes when switching between HS movie recording and normal speed movie recording.



3 Press the  button to end recording.



Autofocus Mode

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

Set how the camera focuses in short movie show mode or when recording movies.

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

Notes About Autofocus Mode

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



Movie VR

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

Select the vibration reduction setting used in short movie show mode or when recording movies.

Select **Off** when using a tripod to stabilize the camera during recording.

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

Notes About Movie VR

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



Wind Noise Reduction

Enter shooting mode → MENU button →  menu icon → Wind noise reduction →  button

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

Notes About Wind Noise Reduction

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

Frame Rate

Enter shooting mode → MENU button →  menu icon → Frame rate →  button

Select the frame rate used in time-lapse movie, short movie show mode, or when recording movies. When the frame rate setting is switched, options that can be set in **Movie options** ( 144) change.

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



The Playback Menu

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

Mark for Upload

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

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

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

- The size of images that are uploaded is restricted to 2 megapixels. To upload still images at their original size, use **Download pictures** in the SnapBridge app.
- RAW images and movies cannot be selected. To upload movies to a smart device, use **Download pictures** in the SnapBridge app.
- Note that when you select **Reset all** (📖176) in the setup menu or **Restore default settings** (📖157) in the network menu, the Mark for upload settings that you made are canceled.



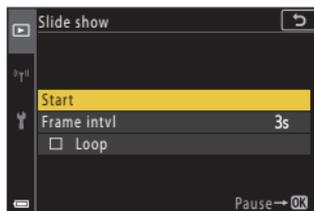
Slide Show

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

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

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

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



2 End or restart the slide show.

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



Operations During Playback

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



Protect

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

The camera protects selected images from accidental deletion.

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

Note that formatting the memory card or the camera's internal memory permanently deletes all data including protected files (170).

Rotate Image

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

Specify the orientation in which saved still images are displayed during playback. Select an image from the image selection screen (122). When the rotate image screen is displayed, use the multi selector  or rotate it to rotate the image 90 degrees.



Rotate 90 degrees
counterclockwise



Rotate 90 degrees
clockwise

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



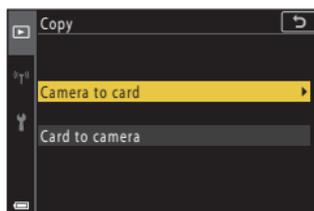
Copy (Copy Between the Memory Card and Internal Memory)

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

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

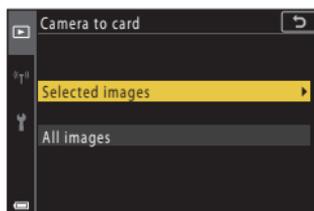
- When a memory card that contains no images is inserted and the camera is switched to playback mode, **Memory contains no images.** is displayed. In that case, press the MENU button to select **Copy**.

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



- 2 Select a copy option and press the  button.

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



Notes About Copying Images

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

Copying Images in a Sequence

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



Sequence Display

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

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

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

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



The Network Menu

Press the MENU button → “T” menu icon → OK button

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

- When you establish a wireless connection between the camera and a smart device with the SnapBridge app installed, you can upload images captured with the camera to the smart device or perform remote photography. See the included “SnapBridge Connection Guide” for the connection procedure.
- Some settings cannot be changed while a wireless connection is established. To change them, disconnect the wireless connection.

Option	Description
Airplane mode	Select On to turn off all wireless connections.
Choose connection	Select whether to connect the camera to a smart device or the ML-L7 Remote Control (available separately).
Connect to smart device	Select when using the SnapBridge app to connect the camera and a smart device. See the included “SnapBridge Connection Guide” for more information. <ul style="list-style-type: none">• Select Smart device in Choose connection before selecting this option.
Connection to remote	Select when connecting the ML-L7 Remote Control (available separately) with the camera. The camera waits for the connection to be established (📖207). <ul style="list-style-type: none">• Select Remote control in Choose connection before selecting this option.
Send while shooting	Set the conditions for automatically sending images to a smart device. <ul style="list-style-type: none">• The size of images that are uploaded is restricted to 2 megapixels. To upload still images at their original size, use Download pictures in the SnapBridge app.



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

* See “Operating the Text Input Keyboard” (📖158) for information on how to enter alphanumeric characters.

Bluetooth Communication Indicator on the Shooting Screen

- On: The camera is connected to a smart device via Bluetooth.
- Flashing: The camera is waiting for the connection to a smart device to be reestablished. It also flashes when Bluetooth communication is disconnected while uploading images (📖200).



Operating the Text Input Keyboard

- Use the multi selector ▲▼◀▶ to select alphanumeric characters. Press the **OK** button to enter the selected character in the text field and move the cursor to the next space.
- Select the change character type icon and press the **OK** button to change the character type.
- To move the cursor in the text field, rotate the command dial.
- To delete characters, move the cursor to the text field you want to delete and press the **Delete** button.
- To apply the setting, select ↵ on the keyboard and press the **OK** button.



Operating the Touch Panel on the Text Input Keyboard

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

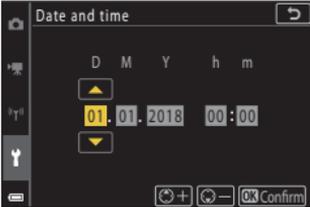


The Setup Menu

Time Zone and Date

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

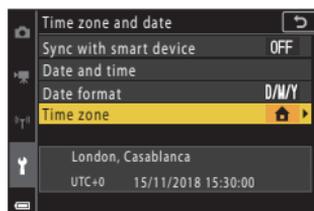
Set the camera clock.

Option	Description
Sync with smart device	Select On to synchronize the date and time setting with a smart device. Enable the clock synchronization function of the SnapBridge app.
Date and time*	<ul style="list-style-type: none">Select a field: Press the multi selector ◀▶.Edit the date and time: Press ▲▼. Date and time can also be changed by rotating the multi selector or command dial.Apply the setting: Select the minute field setting and press the OK button. 
Date format	Select Year/Month/Day , Month/Day/Year , or Day/Month/Year .
Time zone*	Set time zone and daylight saving time. <ul style="list-style-type: none">When Travel destination (🏠) is set after having set the home time zone (🏠), the time difference between the travel destination and the home time zone is automatically calculated, and the date and time are saved for the selected region.

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

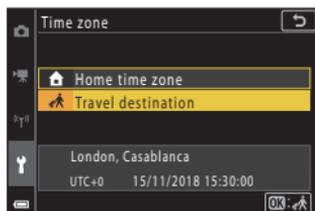
Setting the Time Zone

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

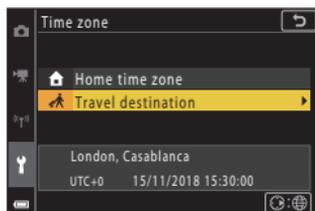


2 Select  **Home time zone** or  **Travel destination** and press the .

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



3 Press .



4 Use   to select the time zone.

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



Monitor Settings

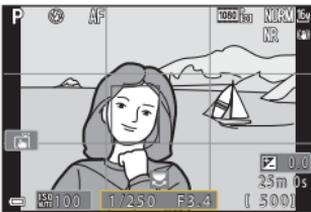
Press the MENU button →  menu icon → Monitor settings →  button

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

Photo info

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



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



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

Press the **MENU** button → **Y** menu icon → EVF auto toggle → **OK** button

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



Date Stamp

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

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



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

Notes About Date Stamp

- Stamped date and time form a permanent part of image data and cannot be deleted. The date and time cannot be stamped on images after they have been captured.
- The date and time cannot be stamped in the following situations:
 - When the scene mode is set to **Night portrait** (when set to **Hand-held**), **Night landscape** (when set to **Hand-held**), **Backlighting** (when **HDR** is set to **On**), **Easy panorama**, or **Multiple exp. Lighten**
 - When **Image quality** ( 127) is set to **RAW**, **RAW + Fine**, or **RAW + Normal**
 - When **Continuous** ( 134) is set to **Pre-shooting cache**, **Continuous H: 120 fps**, or **Continuous H: 60 fps**
 - When recording movies
 - When saving still images during movie recording
 - When extracting still images from a movie during movie playback
- The stamped date and time may be difficult to read when using a small image size.



Self-timer: After Release

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

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

Option	Description
Exit self-timer mode (default setting)	The self-timer is canceled after shooting.
Stay in self-timer mode	The self-timer photography continues after shooting. <ul style="list-style-type: none">• When the camera is turned off, self-timer is canceled.

Photo VR

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

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

Option	Description
 On (default setting)	Performs compensation for camera shake using lens shift VR.
Off	Compensation is not performed.

Notes About Photo VR

- After turning on the camera or after switching from playback mode to shooting mode, wait until the shooting screen is ready before taking pictures.
- Images on the screen may be displayed blurry immediately after shooting.
- Vibration reduction may be unable to completely eliminate the effects of camera shake in some situations.



AF Assist

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

Option	Description
AUTO Auto (default setting)	The AF-assist illuminator automatically lights up when you press the shutter-release button under dim lighting. The illuminator has a range of about #5.0 m (16 ft)# at the maximum wide-angle position and about #5.0 m (16 ft)# at the maximum telephoto position. <ul style="list-style-type: none">• The AF-assist illuminator may not light depending on the position of the focus area or the shooting mode.
Off	The AF-assist illuminator does not light.

Digital Zoom

Press the MENU button →  menu icon → Digital zoom →  button

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

Notes About Digital Zoom

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



Assign Side Zoom Control

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

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

Option	Description
ZOOM Zoom (default setting)	Adjust the zoom (📖70).
MF Manual focus ¹	When the focus mode is set to MF (manual focus), use the side zoom control to focus (📖64). <ul style="list-style-type: none">• Move the side zoom control toward T to focus on distant subjects.• Move the side zoom control toward W to focus on near subjects.
Aperture ²	Set the f-number (📖53).
ISO ISO sensitivity ³	Display the ISO sensitivity setting screen (📖137). Move the side zoom control while the setting screen is displayed to select an item.
Exposure compensation ⁴	Display the exposure compensation setting screen (📖66, 68). Move the side zoom control while the setting screen is displayed to select a compensation value.
WB White balance ⁵	Display the white balance setting screen (📖130). Move the side zoom control while the setting screen is displayed to select an item.
None	The side zoom control does not operate even if it is moved.

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

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

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

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

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



AE/AF Lock Button

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

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

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

Notes About AE/AF Lock Button

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



Sound Settings

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

Option	Description
Button sound	When On (default setting) is selected, the camera produces one beep when operations are performed, two beeps when focus is acquired on the subject, and three beeps when an error occurs. The welcome screen sound is also produced. <ul style="list-style-type: none">• Sounds are disabled when using Pet portrait scene mode.
Shutter sound	When On (default setting) is selected, the shutter sound is produced when the shutter is released. <ul style="list-style-type: none">• The shutter sound is not produced when recording movies or when using Easy panorama or Pet portrait scene mode.

Auto Off

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

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

Setting the Auto Off Function

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

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



Format Card/Format Memory

Press the **MENU** button → **Y** menu icon → Format card/Format memory → **OK** button

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

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

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

Formatting a Memory Card

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

Formatting the Internal Memory

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

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

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



Language

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

Select a language for display of camera menus and messages.

HDMI Output

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

Select the image resolution when outputting through HDMI.

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



Charge by Computer

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

Option	Description
AUTO Auto (default setting)	When the camera is connected to a computer that is running (☞110), the battery inserted into the camera is automatically charged using power supplied by the computer. <ul style="list-style-type: none">• The power-on lamp (charge lamp) slowly flashes while the battery is charging. When charging is complete, the power-on lamp (charge lamp) changes from flashing to on.
Off	The battery inserted into the camera is not charged when the camera is connected to a computer.

Notes About Charging with a Computer

- When connected to a computer, the camera turns on and starts charging. If the camera is turned off, charging stops.
- About # hours and ## minutes are required to charge a fully exhausted battery. Charging time increases when images are transferred while the battery is charging.
- The camera turns off automatically if there is no communication with the computer for 30 minutes after the battery has finished charging.

When the Power-on Lamp (Charge Lamp) Quickly Flashes

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

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

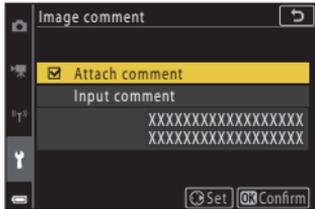


Image Comment

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

Attach a comment that was previously registered to images that will be captured. You can imprint the attached comment to images that will be sent to a smart device using the SnapBridge app. You must configure the SnapBridge app in advance. See SnapBridge app online help for more information.

You can also check the attached comment using ViewNX-i metadata.

Option	Description	
Attach comment	<p>A comment registered with Input comment is attached to images.</p> <ul style="list-style-type: none">• Select Attach comment, press ▶, and set the check box to on (✓). When you press the OK button, the setting is enabled, and the comment will be attached to the images captured afterwards.	
Input comment	<p>You can register a comment of up to 36 alphanumeric characters.</p> <ul style="list-style-type: none">• Select Input comment, press ▶, and the input screen is displayed. See "Operating the Text Input Keyboard" (📖158) for information about the input method.	

✓ Notes About Image Comments

Image comments cannot be attached to movies.

📎 Image Comments Display

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



Copyright Information

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

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

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

You can also check the attached copyright information using ViewNX-i metadata.

Option	Description
Attach copyright info	<p>Copyright information registered with Artist and Copyright is attached to images.</p> <ul style="list-style-type: none">Select Attach copyright info, press ▶, and set the check box to on (✓). When you press the OK button, the setting is enabled, and the copyright information will be attached to the images captured afterwards.
Artist	<p>You can register an artist name of up to 36 alphanumeric characters.</p> <ul style="list-style-type: none">Select Artist, press ▶, and the input screen is displayed. See “Operating the Text Input Keyboard” (📖158) for information about the input method.
Copyright	<p>You can register a copyright owner name of up to 54 alphanumeric characters.</p> <ul style="list-style-type: none">Select Copyright, press ▶, and the input screen is displayed. See “Operating the Text Input Keyboard” (📖158) for information about the input method.



✓ Notes About Copyright Information

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

📎 Copyright Information Display

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



Location Data

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

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

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

Toggle Av/Tv Selection

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

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

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



MF Peaking

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

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

Reset All

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

When **Reset** is selected, the camera's settings are restored to their default values.

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

Resetting File Numbering

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

Touch-screen Controls

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

Set whether to enable touch controls (📖7).

Default setting: **Enable**



Conformity Marking

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

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

Firmware Version

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

View the current camera firmware version.

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



Technical Notes

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Notices

Notices for Customers in the U.S.A.

IMPORTANT SAFETY INSTRUCTIONS - SAVE THESE INSTRUCTIONS.

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

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

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

Federal Communications Commission (FCC) Radio Frequency Interference Statement

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful

interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

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



CAUTIONS

Modifications

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



Interface Cables

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

Notice for Customers in the State of California

WARNING

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

Wash hands after handling.

Nikon Inc.,

1300 Walt Whitman Road, Melville, New York 11747-3064, U.S.A.

Tel: 631-547-4200

Notice for Customers in Canada

CAN ICES-3 B / NMB-3 B

Notices for Customers in Europe

CAUTIONS

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

DISPOSE OF USED BATTERIES ACCORDING TO THE INSTRUCTIONS.

This symbol indicates that electrical and electronic equipment is to be collected separately.

The following apply only to users in European countries:

- This product is designated for separate collection at an appropriate collection point. Do not dispose of as household waste.
- Separate collection and recycling helps conserve natural resources and prevent negative consequences for human health and the environment that might result from incorrect disposal.
- For more information, contact the retailer or the local authorities in charge of waste management.



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

The following apply only to users in European countries:

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



Notes About Wireless Communication Functions

Restrictions on Wireless Devices

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

Security

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

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

Personal Information Management and Disclaimer

- User information registered and configured on the product, including wireless LAN connection settings and other personal information, is susceptible to alteration and loss resulting from operational error, static electricity, accident, malfunction, repair or other handling. Always keep separate copies of important information. Nikon is not responsible for any direct or indirect damages or lost profits resulting from alteration or loss of content that is not attributable to Nikon.
- Before discarding this product or transferring it to another owner, perform **Reset all** in the setup menu (📖120) to delete all user information registered and configured with the product, including wireless LAN connection settings and other personal information.
- Nikon is not responsible for any damages resulting from unauthorized use of this product by third parties in the event that the product is stolen or lost.



Precautions when Exporting or Carrying This Product Abroad

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

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

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

Declaration of Conformity

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

FCC/ISED RF Exposure Statement

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

The available scientific evidence does not show that any health problems are associated with using low power wireless devices. There is no proof, however, that these low power wireless devices are absolutely safe. Low power Wireless devices emit low levels of radio frequency energy (RF) in the microwave range while being used. Whereas high levels of RF can produce health effects (by heating tissue), exposure of low-level RF that does not produce heating effects causes no known adverse health effects. Many studies of low-level RF exposures have not found any biological effects. Some studies have suggested that some biological effects might occur, but such findings have not been confirmed by additional research. This product has been tested and found to comply with FCC/ISED radiation exposure limits set forth for an uncontrolled environment and meets the FCC radio frequency (RF) Exposure Guidelines and RSS-102 of the ISED radio frequency (RF) Exposure rules. Please refer to the SAR test report that was uploaded to FCC website.



Notice for Customers in Europe

Declaration of Conformity (Europe)

Hereby, Nikon Corporation declares that the radio equipment type N1721 is in compliance with Directive 2014/53/EU.

The full text of the EU declaration of conformity is available at the following internet address: http://imaging.nikon.com/support/pdf/DoC_N1721.pdf.

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

Notice for Customers in Singapore

This device complies with radio-frequency regulations.

**Complies with
IMDA Standards
DA103423**



Caring for the Product

Observe the precautions described below in addition to the warnings in "For Your Safety" (vi-ix) when using or storing the device.

The Camera

Do Not Apply Strong Impact to the Camera

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

Keep Dry

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

Avoid Sudden Changes in Temperature

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

Keep Away from Strong Magnetic Fields

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

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

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

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

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



Notes About the Monitor

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

The Battery

Precautions for Use

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

Charging the Battery

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

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

Carrying Spare Batteries

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

Using the Battery When Cold

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



Battery Terminals

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

Charging an Exhausted Battery

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

Storing the Battery

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

Battery Life

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

Recycling Used Batteries

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

The Charging AC Adapter

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



Memory Cards

Precautions for Use

- Use only Secure Digital memory cards (📖213).
- Be sure to follow the precautions described in the documentation included with the memory card.
- If the write-protect switch of the memory card is locked, you cannot shoot, delete images, or format the memory card.
- Do not put labels or stickers on memory cards.



Formatting

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



Cleaning and Storage

Cleaning

Do not use alcohol, thinner, or other volatile chemicals.

Lens/ viewfinder	Avoid touching glass parts with your fingers. Remove dust or lint with a blower (typically a small device with a rubber bulb attached to one end that is pumped to produce a stream of air out the other end). To remove fingerprints or other stains that cannot be removed with a blower, wipe the lens with a soft cloth, using a spiral motion that starts at the center of the lens and working toward the edges. If this fails, clean the lens using a cloth lightly dampened with commercial lens cleaner.
Monitor	Remove dust or lint with a blower. To remove fingerprints and other stains, clean the monitor with a soft, dry cloth, being careful not to apply pressure.
Body	Use a blower to remove dust, dirt, or sand, then wipe gently with a soft, dry cloth. After using the camera at the beach or other sandy or dusty environment, wipe off any sand, dust, or salt with a dry cloth lightly dampened with fresh water and dry thoroughly. Note that foreign matter inside the camera could cause damage not covered by the warranty.

Storage

Remove the battery if the camera will not be used for an extended period. To prevent mold or mildew, take the camera out of storage at least once a month.

Turn the camera on and release the shutter a few times before putting the camera away again. Do not store the camera in any of the following locations:

- Places that are poorly ventilated or subject to humidity of over 60%
- Exposed to temperatures above 50°C (122°F) or below -10°C (14°F)
- Next to equipment that produces strong electromagnetic fields, such as televisions or radios

For storing the battery, follow the precautions in “The Battery” (📖185) in “Caring for the Product” (📖184).



Error Messages

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

Display	Cause/Solution	
Battery temperature is elevated. The camera will turn off.	The camera turns off automatically. Wait until the camera or battery temperature has cooled before resuming use.	-
The camera will turn off to prevent overheating.		
Memory card is write protected.	The write-protect switch is locked. Unlock it.	-
This card cannot be used.	An error occurred while accessing the memory card. <ul style="list-style-type: none"> • Use an approved memory card. • Check that the terminals are clean. • Confirm that the memory card is correctly inserted. 	16, 213
This card cannot be read.		
Card is not formatted. Format card?	The memory card has not been formatted for use in the camera. Formatting deletes all data saved on the memory card. If you need to keep copies of any images, make sure to select No and save the copies to a computer or other medium before formatting the memory card. Select Yes and press the  button to format the memory card.	16, 187
Out of memory.	Delete images or insert a new memory card.	16, 28
Image cannot be saved.	An error occurred while saving the image. Insert a new memory card or format the memory card or internal memory.	16, 170
	The camera has run out of file numbers. Insert a new memory card or format the memory card or internal memory.	16, 170
	There is insufficient space to save the copy. Delete images from the destination.	28
Image cannot be modified.	Check that the images can be edited.	88, 198
Cannot record movie.	A time-out error occurred while saving the movie on the memory card. Select a memory card with a faster write speed.	98, 213



Display	Cause/Solution	
Memory contains no images.	<p>There are no images in the internal memory or on the memory card.</p> <ul style="list-style-type: none"> Remove the memory card to play back images in the internal memory. To copy the images saved in the camera's internal memory to the memory card, press the MENU button to select Copy in the playback menu. 	16 120
File contains no image data.	<p>The file was not created or edited with this camera. The file cannot be viewed on this camera. View the file using a computer or the device used to create or edit this file.</p>	–
All images are hidden.	There are no images available for a slide show, etc.	–
This image cannot be deleted.	<p>The image is protected. Disable protection.</p>	153
The flash is lowered.	When the scene mode is Scene auto selector , you can take a picture even if the flash is lowered but the flash will not fire.	34
Raise the flash.	When the scene mode is Night portrait or Backlighting with HDR set to Off , you must raise the flash to take a picture.	35, 37
No card present.	When shooting time-lapse movies or the shooting mode is set to short movie show mode, insert a memory card.	–
Turn the camera off and then on again.	<p>An error occurred in lens operation. Do not apply excessive force on the lens. If you turn the camera off and then on again, lens operation will return to normal. If the error persists even after turning the camera off and then on again, contact your retailer or Nikon-authorized service representative.</p>	–
Communications error	<p>An error occurred while communicating with the printer. Turn the camera off and reconnect the USB cable.</p>	112
System error	<p>An error occurred in the camera's internal circuitry. Turn the camera off, remove and reinsert the battery, and turn the camera on. If the error persists, contact your retailer or Nikon-authorized service representative.</p>	192



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

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



Troubleshooting

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

Power, Display, Settings Issues

Problem	Cause/Solution	
The camera is on but does not respond.	<ul style="list-style-type: none"> • Wait for recording to end. • If the problem persists, turn the camera off. If the camera does not turn off, remove and reinsert the battery or batteries or, if you are using an AC adapter, disconnect and reconnect the AC adapter. <p>Note that although any data currently being recorded will be lost, data that have already been recorded will not be affected by removing or disconnecting the power source.</p>	–
The camera cannot be turned on.	<ul style="list-style-type: none"> • The battery is exhausted. • The power switch is enabled a few seconds after the battery is inserted. Wait a few seconds before pressing the power switch. 	16, 17, 185 –
The camera turns off without warning.	<ul style="list-style-type: none"> • The camera automatically turns off to save power (auto off function). • The camera and battery may not work properly at low temperatures. • The inside of the camera has become hot. Leave the camera off until the inside of the camera has cooled, and then try turning it on again. 	25 185 –
The monitor or viewfinder is blank.	<ul style="list-style-type: none"> • The camera is off. • The battery is exhausted. • The camera automatically turns off to save power (auto off function). • You cannot turn on both the monitor and viewfinder at the same time. It may take a while to switch between the monitor and viewfinder. • The camera is connected to a computer. • Interval timer shooting, or Time-lapse movie or Multiple exp. Lighten scene mode shooting is in progress. 	20 23 25 – – –
The camera becomes hot.	The camera may become hot when used for an extended period of time to record movies or send images, or when used in a hot environment; this is not a malfunction.	–



Problem	Cause/Solution	
<p>The battery inserted in the camera cannot be charged.</p>	<ul style="list-style-type: none"> • Confirm all connections. • When connected to a computer, the camera may not charge for any of the reasons described below. <ul style="list-style-type: none"> - Off is selected for Charge by computer in the setup menu. - Battery charging stops if the camera is turned off. - Battery charging is not possible if the camera's display language and date and time have not been set, or the date and time were reset after the camera's clock battery was exhausted. Use the Charging AC Adapter to charge the battery. - Battery charging may stop when the computer enters sleep mode. - Depending on the computer specifications, settings, and status, battery charging may not be possible. 	<p>17</p> <p>172</p> <p>–</p> <p>20</p> <p>–</p> <p>–</p>
<p>The monitor is hard to see.</p>	<ul style="list-style-type: none"> • The surrounding area is too bright. <ul style="list-style-type: none"> - Move to a darker place. - Use the viewfinder. • Adjust the screen brightness. 	<p>26</p> <p>161</p>
<p>The viewfinder is hard to see.</p>	<ul style="list-style-type: none"> • Adjust the diopter of the viewfinder. • Adjust the viewfinder brightness. 	<p>26</p> <p>161</p>
<p>The camera does not switch between the monitor and viewfinder.</p>	<ul style="list-style-type: none"> • The display does not switch in the following situations: <ul style="list-style-type: none"> - While operating the zoom when recording movies - During movie playback - When editing movies • The display may not switch while the camera is being operated. 	<p>–</p>
<p> flashes on the screen.</p> <hr/> <p>Date and time of recording are not correct.</p>	<ul style="list-style-type: none"> • If the camera clock has not been set,  flashes on the shooting screen, and images and movies saved before the clock is set are dated "00/00/0000 00:00" and "01/01/2018 00:00" respectively. Set the correct time and date for Time zone and date in the setup menu. • The camera clock is not as accurate as ordinary watches or clocks. Periodically compare the time of the camera clock with that of a more accurate timepiece and reset as required. 	<p>11, 159</p>



Problem	Cause/Solution	
No information displayed on the screen.	Hide info is selected for Photo info in Monitor settings in the setup menu.	161
Date stamp not available.	Time zone and date has not been set in the setup menu.	159
Date not stamped on images even when Date stamp is enabled.	<ul style="list-style-type: none"> • The date cannot be stamped with certain shooting modes or when using certain settings in other functions. • The date cannot be stamped on movies. 	80, 164
Screen for setting time zone and date is displayed when the camera is turned on.	<p>The clock battery is exhausted; all settings were restored to their default values. Configure the camera settings again.</p> <ul style="list-style-type: none"> • The internal clock battery is used to power the camera clock and to retain certain settings. Charging time of the clock battery takes about 10 hours when you insert the battery into the camera or connect the AC adapter (available separately) to the camera, and the clock battery operates for several days even after the camera battery is removed. 	-
The camera settings reset.		
The camera makes sound.	Depending on the Autofocus mode setting or the shooting mode, the camera may produce an audible focusing sound.	31, 142, 148
Unable to select a menu.	<ul style="list-style-type: none"> • Some functions cannot be used with other menu settings. • Some menus are not available while a wireless connection is established. Disconnect the wireless connection. 	80 -



Shooting Issues

Problem	Cause/Solution	
Cannot switch to shooting mode.	Disconnect the USB cable.	110
Cannot take pictures or record movies.	<ul style="list-style-type: none"> When the camera is in playback mode, press the  button, shutter-release button, or  button. When menus are displayed, press the MENU button. The flash is charging while  is flashing. Movies cannot be recorded when the camera is connected to the Charging AC Adapter. You cannot shoot while connected with an HDMI cable. Insert a memory card with sufficient free space into the camera. The battery is exhausted. 	2, 27 121 58 18 111 16 16, 17, 185
The camera cannot focus.	<ul style="list-style-type: none"> The subject is too close. Try shooting using the Scene auto selector or Close-up scene mode, or the macro close-up focus mode. Incorrect focus mode setting. Check or change the setting. The subject is hard to focus on. Set AF assist in the setup menu to Auto. The focus mode is set to MF (manual focus). Turn the camera off and then on again. 	33, 34, 36, 63 63 76 166 63, 64 –
Colored stripes appear on the screen when shooting.	Colored stripes may appear when shooting subjects with repeating patterns (such as window blinds); this is not a malfunction. The colored stripes will not appear in captured images or recorded movies. However, when using Continuous H: 120 fps or  HS 1080/4x , the colored stripes may be seen in the captured images and recorded movies.	–



Problem	Cause/Solution	
Images are blurred.	<ul style="list-style-type: none"> Use the flash. Increase the ISO sensitivity value. Enable Photo VR when shooting still images. Enable Movie VR when recording movies. Use a tripod to stabilize the camera (using the self-timer at the same time is more effective). 	58 137 149, 165 61
Bright specks appear in images captured with flash.	Flash is reflecting off particles in the air. Lower the flash, and set the flash mode setting to  (off).	58
Flash does not fire.	<ul style="list-style-type: none"> The flash is lowered. The flash does not fire with certain shooting modes or when using certain settings in other functions. 	25, 58 78, 80
Digital zoom cannot be used.	<ul style="list-style-type: none"> Digital zoom is set to Off in the setup menu. Digital zoom cannot be used with certain shooting modes or when using certain settings in other functions. 	166 82, 166
Image size not available.	Image size cannot be selected with certain shooting modes or when using certain settings in other functions.	80, 129
No sound when the shutter is released.	Off is selected for Shutter sound in Sound settings in the setup menu. No sound is produced with some shooting modes or settings, even when On is selected.	169
AF-assist illuminator does not light.	Off is selected for the AF assist option in the setup menu. AF-assist illuminator may not light depending on the position of the focus area or the current shooting mode, even when Auto is selected.	166
Images appear smeared.	The lens is dirty. Clean the lens.	188
Colors are unnatural.	White balance or hue is not adjusted properly.	36, 66, 130
Randomly spaced bright pixels ("noise") appear in image.	<p>The subject is dark and the shutter speed is too slow or ISO sensitivity is too high. Noise can be reduced by:</p> <ul style="list-style-type: none"> Using the flash Specifying a lower ISO sensitivity setting 	25, 58 137



Problem	Cause/Solution	
Images are too dark (underexposed).	<ul style="list-style-type: none"> The flash is lowered, or a shooting mode that restricts the flash is selected. The flash window is blocked. The subject is beyond the range of the flash. Adjust exposure compensation. Increase ISO sensitivity. The subject is backlit. Select Backlighting scene mode, or raise the flash and set the flash mode to  (fill flash/standard flash). 	25, 58, 78 23 210 66, 68 137 37, 58
Images are too bright (overexposed).	Adjust exposure compensation.	66, 68
Unexpected results when flash set to  (auto+red-eye reduction/red-eye reduction).	Use any shooting mode other than Night portrait , and change the flash mode to any setting other than  (auto+red-eye reduction/red-eye reduction) and try taking the picture again.	58, 78
Skin tones are not softened.	<ul style="list-style-type: none"> Under some shooting conditions, facial skin tones may not be softened. For images containing four or more faces, try using Skin softening in Glamour retouch in the playback menu. 	46 90
Saving images takes time.	<p>It may take more time to save images in the following situations:</p> <ul style="list-style-type: none"> When the noise reduction function is in operation, such as when shooting in a dark environment When the flash mode is set to  (auto+red-eye reduction/red-eye reduction) When capturing images in the following scene modes: <ul style="list-style-type: none"> Hand-held in Night portrait Hand-held in Night landscape HDR is set to On in Backlighting Easy panorama When Image quality is set to RAW, RAW + Fine, or RAW + Normal When the skin softening function is applied while shooting When using continuous shooting mode 	– 59 35 36 37 42 127 46 134



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

Playback Issues

Problem	Cause/Solution	
File cannot be played back.	• This camera may not be able to play back images saved with another make or model of digital camera.	–
	• This camera cannot play back RAW images or movies saved with another make or model of digital camera.	–
	• This camera may not be able to play back data edited on a computer.	–
	• Files cannot be played back during interval timer shooting.	135
Cannot zoom in on image.	• Playback zoom cannot be used with movies.	–
	• This camera may not be able to zoom in on images captured with another make or model of digital camera.	
	• When zooming in on a small-sized image, the magnification rate shown on the screen may differ from the actual magnification rate of the image.	
Cannot edit image.	• Some images cannot be edited. Images that have already been edited may not be edited again.	44, 88
	• There is not enough free space on the memory card or in the internal memory.	–
	• This camera is unable to edit images captured with other cameras.	–
	• Editing functions used for images are not available for movies.	–
Cannot rotate image.	This camera cannot rotate images captured with another make or model of digital camera.	–



External Device Issues

Problem	Cause/Solution	
Cannot establish a wireless connection with a smart device. ¹	<ul style="list-style-type: none"> • When establishing a wireless connection for the first time, refer to the instructions in the included “SnapBridge Connection Guide”. 	–
	<ul style="list-style-type: none"> • If a wireless connection is established, perform the following operations. <ul style="list-style-type: none"> - Turn the camera off and then on again. - Restart the SnapBridge app. - Cancel the connection and then establish a connection again. 	–
	<ul style="list-style-type: none"> • Check the Network menu settings in the camera. <ul style="list-style-type: none"> - Set Airplane mode to Off. - Set Bluetooth → Connection to Enable. - Set Choose connection to Smart device. 	156
	<ul style="list-style-type: none"> • If the camera is registered with two or more smart devices, select the smart device you want to connect in Network menu → Bluetooth → Paired devices in the camera. If two or more cameras are registered in the SnapBridge app, switch the connection on the app. 	157
	<ul style="list-style-type: none"> • Use a sufficiently charged battery. 	–
	<ul style="list-style-type: none"> • Insert a memory card with sufficient free space into the camera. 	16
	<ul style="list-style-type: none"> • Disconnect the HDMI cable or USB cable. 	110
	<ul style="list-style-type: none"> • Enable Bluetooth, Wi-Fi, and the location data functions on the smart device. • In the  tab of the SnapBridge app → Auto link options → turn on Auto link. If it is off, Download pictures and Remote photography can be used, but images cannot be downloaded automatically. 	–



Problem	Cause/Solution	
<p>Cannot upload images to a smart device that has a wireless connection established with the SnapBridge app.¹</p>	<ul style="list-style-type: none"> • Perform the operations described below when uploading automatically. <ul style="list-style-type: none"> - Set Network menu → Send while shooting → Still images in the camera to Yes. - In the  tab of the SnapBridge app → Auto link options → turn on Auto link. - In the  tab of the SnapBridge app → Auto link options → turn on Auto download. - If Network menu → Bluetooth → Send while off in the camera is set to Off, turn on the camera or change the setting to On. • When there is a large number of images to upload during Bluetooth communication, communication may be disconnected while uploading images. If you turn the camera off and then on again, the camera is reconnected to the smart device and image upload resumes in Send while shooting or Mark for upload. • You may not be able to upload images or uploading may be canceled while the camera is being operated. 	<p>156</p> <p>–</p> <p>–</p> <p>157</p> <p>–</p> <p>–</p>
<p>Cannot perform remote photography from a smart device that has a wireless connection established with the SnapBridge app.¹</p>	<ul style="list-style-type: none"> • You cannot perform remote photography when there is no free space in the internal memory or memory card. Delete unnecessary images or insert a memory card with sufficient free space. • You may not be able to perform remote photography while the camera is being operated. 	<p>–</p> <p>–</p>
<p>Cannot download still images at the original size in the SnapBridge app.¹</p>	<p>For Send while shooting and Mark for upload in the camera, the size of images that are downloaded is restricted to 2 megapixels. To download still images at their original size, use Download pictures in the SnapBridge app.</p>	<p>–</p>
<p>Communication quality is poor or image upload speed is extremely slow when using wireless connection with the SnapBridge app.¹</p>	<p>On the camera, try changing the channel in Network menu → Wi-Fi → Network settings.</p>	<p>157</p>



Problem	Cause/Solution	
The camera does not respond when operating the ML-L7 Remote Control. ²	<ul style="list-style-type: none"> The camera is not connected to the ML-L7 Remote Control (available separately). Press the power button on the remote control to establish the connection. If  is not displayed on the shooting screen, perform pairing again. The remote control can be used only for shooting operations. The Fn1/Fn2 buttons on the remote control cannot be used with this camera. 	207 205 205
Cannot be paired with the ML-L7 Remote Control. ²	<p>Check the Network menu settings in the camera.</p> <ul style="list-style-type: none"> Set Choose connection to Remote control. Set Airplane mode to Off. Set Bluetooth → Connection to Enable. 	156
Images saved in the camera are not displayed on a connected smart device or computer.	<p>If the number of images saved on a memory card in the camera exceeds 10,000, images captured thereafter may not be displayed in a connected device.</p> <ul style="list-style-type: none"> Reduce the number of images saved on the memory card. Copy the necessary images to a computer, etc. 	–
Images are not displayed on TV.	<ul style="list-style-type: none"> A computer or printer is connected to the camera. The memory card contains no images. Remove the memory card to play back images in the internal memory. 	– – 16
Nikon Transfer 2 does not start when the camera is connected to a computer.	<ul style="list-style-type: none"> The camera is off. The battery is exhausted. The USB cable is not correctly connected. The camera is not recognized by the computer. The computer is not set to start Nikon Transfer 2 automatically. For more information about Nikon Transfer 2, refer to help information contained in ViewNX-i. 	– 16, 17, 185 110, 116 – –
The PictBridge screen is not displayed when the camera is connected to a printer.	<p>With some PictBridge-compatible printers, the PictBridge startup screen may not be displayed and it may be impossible to print images when Auto is selected for Charge by computer in the setup menu. Set Charge by computer to Off and reconnect the camera to the printer.</p>	120, 172
Images to be printed are not displayed.	<ul style="list-style-type: none"> The memory card contains no images. Remove the memory card to print images in the internal memory. 	– 16



Problem	Cause/Solution	
Cannot select paper size with the camera.	<p>The camera cannot be used to select the paper size in the following situations, even when printing from a PictBridge-compatible printer. Use the printer to select the paper size.</p> <ul style="list-style-type: none"> • The printer does not support the paper sizes specified by the camera. • The printer automatically selects the paper size. 	-

¹ See the included “SnapBridge Connection Guide” and SnapBridge online help.

² Refer to the User’s Manual provided with the ML-L7 Remote Control (available separately).



File Names

Images or movies are assigned file names as follows.

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

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

Notes

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

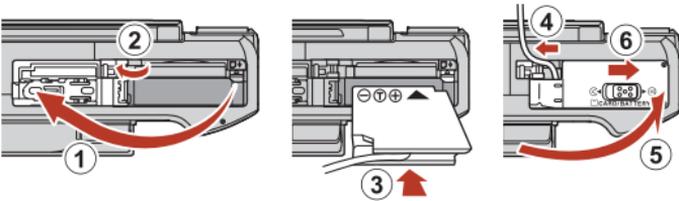
Folders for Storing Files

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

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



Accessories

Battery charger	MH-65 Battery Charger Charging time is about 2 hours and 30 minutes for a fully exhausted battery.
AC adapter	EH-62F AC Adapter (connect as shown)  <p>Make sure that the power connector cable is fully inserted in the power connector slot before inserting the AC adapter into the battery chamber. In addition, make sure that the power connector cable is fully inserted in the battery chamber slot before closing the battery-chamber/memory card slot cover. If part of the cable protrudes from the slots, the cover or cable may be damaged when the cover is closed.</p>
Remote control accessories	ML-L7 Remote Control See “ML-L7 Remote Control” (📖205) for information on how to use it.

Availability may vary with country or region.

See our website or brochures for the latest information.

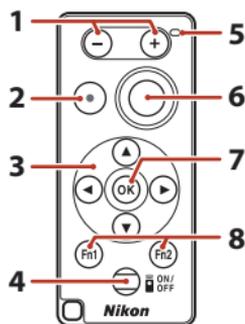


ML-L7 Remote Control

You can pair (📖207) the separately available ML-L7 Remote Control with the camera, and use it to operate the camera. The operations described in “Parts and Functions of the Remote Control (for N1721)” (📖205) can be performed when shooting with this camera.

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

Parts and Functions of the Remote Control (for N1721)



	Control	Function
1	- button/+ button	While the shooting screen is displayed, zooms out when the - button is pressed and zooms in when the + button is pressed.
2	Movie recording button	Starts recording a movie when the button is pressed, and stops recording when pressed again.
3	Multi selector	<ul style="list-style-type: none">• Functions similarly to the multi selector on the camera, enabling you to configure settings on the shooting screen, such as the flash mode (📖58), self-timer (📖61), focus mode (📖63), creative slider (📖66), and exposure compensation (📖68).• When using manual focus, the focus can be adjusted with ▲▼ (📖64).



	Control	Function
4	Power button	Press the button to turn on the remote control and search for a camera that has already been paired. Press and hold the button (for at least 3 seconds) to search for a new pairing camera. To turn off the remote control, press the button again.
5	Status lamp	Indicates the remote control status or shooting session status, based on the color and behavior of the lamp. See "Status Lamp on the Remote Control (for N1721)" (📖206) for more information.
6	Shutter-release button	Functions similarly to the shutter-release button on the camera. <ul style="list-style-type: none"> • Half-press and press-and-hold operations are not available. • When using the self-timer, you can press the button during the countdown to cancel shooting.
7	Ⓞ (apply selection) button	Applies the selected item. When adjusting manual focus, press this button to stop focusing.
8	Fn1 (Function 1) / Fn2 (Function 2) buttons	Cannot be used with this camera.

Status Lamp on the Remote Control (for N1721)

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



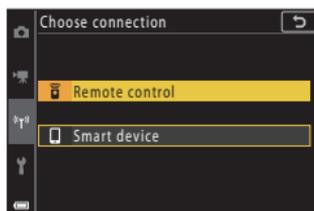
Pairing the Camera and Remote Control

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

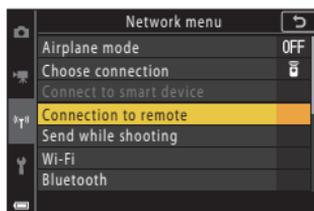
- 1 Press the **MENU** button on the camera.
- 2 Press the multi selector ◀, use ▲▼ to select the “T” menu icon, and press the OK button.
- 3 Select **Choose connection**, and press the OK button.



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



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



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

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



Switching the Connection to a Smart Device

- Switch the connection from **Remote control** to **Smart device** in **Choose connection** in the camera network menu ( 156, 207).
- When the SnapBridge app is launched on your smart device, and a connection is established between the camera and smart device,  is displayed on the shooting screen.
- When establishing a wireless connection with a smart device for the first time, see the included "SnapBridge Connection Guide".



Specifications

Nikon N1721 Digital Camera

Type	Compact digital camera
Number of effective pixels	16.04 million (Image processing may reduce the number of effective pixels.)
Image sensor	1/2.3-in. type CMOS; approx. 16.79 million total pixels
Lens	NIKKOR lens with 35x optical zoom
Focal length	4.3–151 mm (angle of view equivalent to that of 24–840 mm lens in 35mm [135] format)
f/-number	f/3.4–6.9
Construction	13 elements in 11 groups (4 ED lens elements)
Digital zoom magnification	Up to 4x (angle of view equivalent to that of approx. 3360 mm lens in 35mm [135] format)
Vibration reduction	Lens shift (still images) Combination of lens shift and electronic VR (movies)
Autofocus (AF)	Contrast-detect AF
Focus range	<ul style="list-style-type: none">• [W]: Approx. 50 cm (1 ft 8 in.)–∞, [T]: Approx. 2.0 m (6 ft 7 in.)–∞• Macro close-up: Approx. 1 cm (0.4 in.)–∞ (wide-angle position) (All distances measured from center of front surface of lens)
Focus-area selection	Face priority, manual (spot), manual (normal), manual (wide), subject tracking, target finding AF
Viewfinder	Electronic viewfinder, 0.5 cm (0.2-in.) approx. #1170#k-dot equivalent LCD with the diopter adjustment function (–4 – +4 m ⁻¹)
Frame coverage (shooting mode)	Approx. #98%# horizontal and vertical (compared to actual picture)
Frame coverage (playback mode)	Approx. #100%# horizontal and vertical (compared to actual picture)
Monitor	7.5 cm (3-in.), approx. #1140#k-dot, wide viewing angle TFT LCD (touch panel) with anti-reflection coating and 5-level brightness adjustment, tilting TFT LCD
Frame coverage (shooting mode)	Approx. #98%# horizontal and vertical (compared to actual picture)
Frame coverage (playback mode)	Approx. #100%# horizontal and vertical (compared to actual picture)



Storage		
Media	Internal memory (approx. ## MB), SD/SDHC/SDXC memory card	
File system	DCF and Exif 2.31 compliant	
File formats	Still images: JPEG, RAW (NRW) (Nikon's own format) Movies: MP4 (Video: H.264/MPEG-4 AVC, Audio: AAC stereo)	
Image size		
Still images	16 M 4608×3456 , 8 M 3264×2448 , 4 M 2272×1704 , 2 M 1600×1200 , 16:9 12 M 4608×2592 , 3:2 14 M 4608×3072 , 1:1 3456×3456	
Movies	2160/30p (4K UHD), 2160/25p (4K UHD), 1080/30p, 1080/25p, 1080/60p, 1080/50p, 720/30p, 720/25p, 720/60p, 720/50p, HS 1080/4x, HS 1080/2x, HS 1080/0.5x	
ISO sensitivity (Standard output sensitivity)		<ul style="list-style-type: none"> • ISO 100–1600 • ISO 3200, 6400 (available when using P, S, A, or M mode)
Exposure		
Metering mode	Matrix, center-weighted (digital zoom less than 2×), spot (digital zoom 2× or more)	
Exposure control	Programmed auto exposure with flexible program, shutter-priority auto, aperture-priority auto, manual, exposure bracketing, exposure compensation (–3.0 – +3.0 EV in steps of 1/3 EV)	
Shutter		Mechanical and CMOS electronic shutter
Speed	<ul style="list-style-type: none"> • 1/2000–1 s • 1/2000–8 s (S, A, or M mode) • 1/4000 s (maximum speed during high-speed continuous shooting) • 25 s (Star trails in Multiple exp. Lighten scene mode) 	
Aperture		Electromagnetic 3-blade iris diaphragm
Range	7 steps of 1/3 EV (W) (A , M mode)	
Self-timer		<ul style="list-style-type: none"> • 10 s, 3 s • 5 s (self-portrait timer)
Flash		
Range (approx.) (ISO sensitivity: Auto)	[W]: #0.5–6.0 m (1 ft 8 in.–19 ft)# [T]: #1.5–3.0 m (5 ft–9 ft 10 in.)#	
Flash control	TTL auto flash with monitor preflashes	



Interface	
USB connector	Micro-USB connector (Do not use any USB cable other than the included UC-E21 USB Cable.), Hi-Speed USB <ul style="list-style-type: none"> • Supports Direct Print (PictBridge)
HDMI output connector	HDMI micro connector (Type D)
Wi-Fi (Wireless LAN)	
Standards	IEEE 802.11b/g (standard wireless LAN protocol)
Operating frequency	2412–2462 MHz (channels 1-11)
Maximum output power	## dBm (EIRP)
Authentication	Open system, WPA2-PSK
Bluetooth	
Communication protocols	Bluetooth Specification Version 4.1
Operating frequency	Bluetooth: ####–#### MHz Bluetooth Low Energy: ####–#### MHz
Power sources	One EN-EL12 Rechargeable Li-ion Battery (included) EH-62F AC Adapter (available separately)
Charging time	Approx. # h ## min (when using EH-73P/EH-73PCH Charging AC Adapter and when no charge remains)
Battery life¹	
Still images	Approx. ### shots when using EN-EL12
Movie recording (actual battery life for recording) ²	Approx. # h ## min (when using EN-EL12 in 1080/30p) Approx. # h ## min (when using EN-EL12 in 1080/25p)
Tripod socket	1/4 (ISO 1222)
Dimensions (W × H × D)	Approx. #114.2 × 71.7 × 40.5 mm (4.5 × 2.9 × 1.6 in.)# (excluding projections)
Weight	Approx. #315 g (11.2 oz)# (including battery and memory card)
Operating environment	
Temperature	0°C–40°C (32°F–104°F)
Humidity	85% or less (no condensation)

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

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

² Individual movie files cannot exceed 29 minutes in length, even when there is sufficient free space on the memory card for longer recording. The maximum size of a single movie file is 4 GB. If a file exceeds 4 GB even when you record for less than 29 minutes, it is split into multiple files and cannot be played back continuously.



EN-EL12 Rechargeable Li-ion Battery

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

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

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

The symbols on this product represent the following:

~ AC, == DC,  Class II equipment (The construction of the product is double-insulated.)

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



Memory Cards That Can Be Used

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

- The camera supports UHS-I.
- Memory cards with an SD Speed Class rating of 6 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.
- If you use a card reader, make sure that it is compatible with your memory card.
- Contact the manufacturer for information on features, operation, and limitations on use.

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