Nikon

Z6III Reference Guide

(Supplement for Firmware Version 2.00)

En

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Changes with “C” Firmware Version 2.00

Features Available with “C” Firmware Version 2.00

The *Z6III Reference Guide* is for “C” firmware version 1.10 (the latest version of the *Z6III Reference Guide* is available from the Nikon Download Center). This chapter details the new features and changes introduced with camera “C” firmware version 2.00. The two documents are to be read together.

“Firmware Version”

To view the camera firmware version or update the camera firmware, select [**Firmware version**] in the setup menu.

Update your camera as follows:

- **Download firmware from the Nikon Download Center using a computer**: Check the Nikon Download Center for new firmware. For more information, see the firmware download page. https://downloadcenter.nikonimglib.com/
- **Download firmware via the SnapBridge app on a smart device**: If the smart device has been paired with the camera using the SnapBridge app, the app will automatically notify you when updates become available, and you can then download the update to a camera memory card via the smart device. For more information, see the SnapBridge app’s online help. SnapBridge may not display the notification at the same time that updates are made available on the Nikon Download Center.
- **Download firmware to the camera from Nikon Imaging Cloud**: If the camera receives a firmware version update notification from Nikon Imaging Cloud, [**Update now (Nikon Imaging Cloud)**] appears in the [**Firmware version**] menu. Highlight [**Update now (Nikon Imaging Cloud)**] > [**On**] and press ⊛ to download the firmware to the camera via the Internet. The update will start automatically after the download is complete.

Changes Made with “C” Firmware Version 2.00

The features added or updated with camera “C” firmware version 2.00 are summarized below. More information is available on the pages listed.

Still Photography

- New AF Subject Detection Option: “**Birds**” (📖 8)
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Custom Settings Menu Numbers

Some Custom Settings menu numbers have been altered due to the addition and reordering of menus accompanying the version update. This document uses the numbers as they appear after these changes.

New AF Subject Detection Option: “Birds”

[**Birds**] has been added to the subject detection options for autofocus and electronic rangefinding available in [**AF/MF subject detection options**] in the photo shooting and video recording menus.

- In the case of the video recording menu, the choice of subject is made via [**AF/MF subject detection options**] > [**Subject detection**]. Separate subject types can be selected for photo and video modes.

- If a bird is detected when [**Birds**] is selected, the focus point will appear over the face of the bird in question. If the camera detects the subject’s eyes, the focus point will instead appear over one or the other of their eyes. If the camera can detect neither face nor eyes, it will display a focus point over the detected bird.

Cautions: Bird-Detection AF

- Subject detection may not perform as expected if:
  - the subject’s face is too large or small relative to the frame,
  - the subject’s face is too brightly or dimly lit,
  - the subject’s face or eyes are obscured by feathers or the like,
  - the subject’s face and eyes are of similar colors, or
  - the subject moves excessively during shooting.
- The camera may display a border around subjects that are not birds but which resemble them. If the camera often mistakenly detects the subjects other than birds, changing to an AF-area mode with smaller focus points may improve focus performance.
- Flickering is more likely to occur if photos are taken under fluorescent, mercury-vapor, or similar lighting, compared to other environments.
  - Selecting [**ON**] for [**Photo flicker reduction**] in the photo shooting menu reduces flickering effects.
  - We recommend selecting [**OFF**] for [**Photo flicker reduction**] in the photo shooting menu if there is no flickering.
- The light from the AF-assist illuminator may adversely affect the eyes of birds; when using autofocus, select [**OFF**] for Custom Setting a11 [**Built-in AF-assist illuminator**].

New Release Mode Option: “C15”

[**C15**] has been added to the release mode options. You can shoot using high-speed frame capture + at 15 frames per second.

- To shoot with high-speed frame capture + at 15 fps, hold the ⧉ (⊶) button and rotate the main command dial to choose [**C15**].
- Photos can be taken at the following settings:
  - Shutter speed: $^{1}/_{16000}$–$^{1}/_{60}$ s
  - [**Image area**]: [**FX (36×24)**] or [**DX (24×16)**]
  - [**Image size**]: Fixed at [**Large**]
- Pre-Release Capture is also supported.

New Image Quality Item Added for High-Speed Frame Capture + Shooting

The name of the [**Image quality**] item in the photo shooting menu has been changed to [**Image quality settings**], and the image quality for high-speed frame capture + can now be configured separately from other release modes.

Option	Description
[**Image quality**]	Configure the image quality for the [**Single frame**], [**Continuous L**], [**Continuous H**], [**Continuous H (extended)**], and [**Self-timer**] release modes. Functions the same as the [**Image quality**] menu in earlier versions of the camera firmware.
[**Image quality (HSFC)**]	Configure the image quality for high-speed frame capture + release modes [**C15**] through [**C120**]. • The image quality can be set to [**JPEG fine**] or [**JPEG normal**].

If any of the actions below are performed, the setting for [**Image quality (HSFC)**] will be changed with a release mode of [**C15**] through [**C120**], and with other release modes, the setting for [**Image quality**] will be changed.

- The main command dial is rotated while pressing the button assigned the role of [**Image quality/size**] in Custom Setting f2 [**Custom controls (shooting)**].
- Changes are made to the *i* menu [**Image quality**] settings in photo mode.

New Item for “Focus Shift Shooting” in Photo Shooting Menu: “Options”

[**Options**] is added under [**Focus shift shooting**] in the photo shooting menu to enable [**Pixel shift shooting**]. Select [**Pixel shift shooting**] to pixel shift at each focus shift interval to take higher resolution shots that will later be combined using focus stacking.

Highlighting [**Options**] and pressing ▶ displays the following options.

Option	Description
[**Pixel shift shooting**]	Highlight [**Pixel shift shooting**] and press OK to display the [**Number of shots**] and [**Interval until next shot**] items. • [**Number of shots**]: Select the number of pixel shift shots taken at each focus shift interval. Long series require more time to record but produce better-quality results when merged into a single image. • [**Interval until next shot**]: Choose the interval between pixel shift shots, in seconds.
[**Off**]	Perform focus shift shooting without pixel shift.

- Select [**Focus shift shooting**] in the photo shooting menu, highlight [**Start**], and press OK; Focus flashes in the control panel and shooting starts after about 5 s.
- To end shooting before all shots have been taken, press the shutter-release button halfway or press the OK button between shots.

Cautions: “Options” > “Pixel Shift Shooting”

- Take photos at the interval set by [**Pixel shift shooting**] > [**Interval until next shot**] rather than [**Focus shift shooting**] > [**Interval until next shot**].
- The focus mode for autofocus is fixed at **AF-S**. If the option currently selected for AF-area mode is available only with **AF-C**, the AF-area mode will switch to single-point AF.

Pixel Shift Shooting Additions and Changes

The [**Options**] and [**Starting storage folder**] items have been added to [**Pixel shift shooting**] in the photo shooting menu. You can now set [**Pixel shift shooting**] options when the self-timer mode is selected.

Added Features

The settings for [**Options**] and [**Starting storage folder**] are as follows.

Options

Highlighting [**Options**] and pressing ▶ displays the following options.

Option	Description
[**AE bracketing**]	Select [**AE bracketing**] and press ⊛ to choose values for [**Number of shots**] and [**Increment**] for exposure bracketing performed in each pixel shift shooting sequence.
[**Off**]	Perform pixel shift shooting without bracketing.

Starting Storage Folder

Highlight [**Starting storage folder**] and press ▶ to display the following options. Highlight options and press OK or ▶ to select (☑) or deselect (☐).

Option	Description
[**New folder**]	Selecting (☑) this option automatically creates a new folder for each new sequence.
[**Reset file numbering**]	Selecting (☑) this option resets file numbering to 0001 whenever a new folder is created. • This option only takes effect when [**New folder**] is selected (☑).

Pixel Shift Shooting with Self-Timer

[**Pixel shift shooting**] options can be set while [**Self-timer**] release mode is selected.

- Note that [**Self-timer**] is disabled until pixel shift shooting ends when an option other than [**Off**] is selected for [**Pixel shift shooting**] > [**Pixel shift shooting mode**].

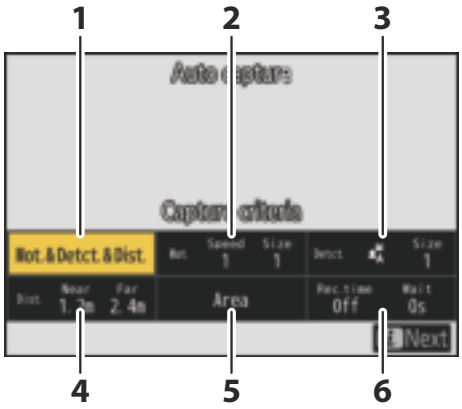
New Menu Item: “Auto Capture”

[**Auto capture**] items have been added to the photo shooting and video recording menus. These items are used to shoot bursts or record video automatically when the camera detects that the subject meets certain conditions, for example that it is in the frame, within a certain range of distances, and moving in a certain direction. They can even help photographers take photographs or record videos automatically without being present.

Option	Description
[**Set**]	Display auto capture settings (📖 15) and adjust auto capture criteria. After reviewing the selected criteria in the settings confirmation dialog to determine whether they will behave as predicted, press the video-record button to initiate auto capture.
[**Select user preset**]	• Auto capture criteria can be saved to user presets [**User preset 1**] through [**User preset 5**]. Highlighting a preset and pressing ⊕ displays a menu where you can rename the preset and view settings or copy them to another preset. - [**View settings**]: View the settings in the selected preset. - [**Rename**]: Rename the preset. Preset names can be up to 19 characters long. - [**Copy**]: Highlight the destination and press ⓞ to copy settings to the selected preset. • To immediately initiate auto capture using the criteria in a previously-saved preset, select the preset then choose [**Set**].

The Auto Capture Settings Display

Selecting [**Set**] for [**Auto capture**] in the photo shooting or video recording menu displays the auto capture settings, allowing you to set conditions for automatic burst shooting or video recording. Highlight items and press ⓚ to display options for the selected item.



1 [**Capture criteria**]
2 [**Advanced: Motion**]
3 [**Advanced: Subject detection**]
4 [**Advanced: Distance**]
5 [**Target area**]
6 [**Timing options**]

Option	Description
[**Capture criteria**]	• Adjust auto capture criteria. - [**Motion**]: Select (☑) this option to include the direction the subject is moving as one of the criteria that must be satisfied to trigger the start of auto capture shooting. - [**Subject detection**]: Select (☑) this option to include detection of a subject as one of the criteria that must be satisfied to trigger the start of auto capture shooting. - [**Distance**]: If this option is selected (☑), shooting will continue while the subject is within the specified range of distances. • Auto capture will be triggered only if all the selected criteria are satisfied.

Option	Description
[**Advanced: Motion**]	This option will take effect only if [**Motion**] is selected (☑) for [**Capture criteria**]. It is used to choose the direction of motion, size, and speed of subjects that will trigger auto capture (🕮 25).
[**Advanced: Subject detection**]	This option will take effect only if [**Subject detection**] is selected (☑) for [**Capture criteria**]. It is used to choose the type and size of subjects that will trigger auto capture (🕮 28).
[**Advanced: Distance**]	This option will take effect only if [**Distance**] is selected (☑) for [**Capture criteria**]. It is used to choose the range of distances at which the presence of a subject will trigger auto capture (🕮 30). Shooting will continue while the subject is within the specified range of distances.
[**Target area**]	Choose the area used for subject detection when [**Auto-area AF**] is selected for AF-area mode. Auto capture will be triggered if a subject that meets the trigger conditions is detected in any of the target areas (points). Target-area selection can be used to disable the areas of the frame that are blocked by obstacles or can otherwise be ignored for purposes of subject detection, ensuring that the desired subject can be detected more reliably.
[**Timing options**]	Choose values for [**Recording time selection**] and [**Wait after shooting**]. • [**Recording time selection**]: Choose how long the camera will shoot once auto capture is triggered. Shooting will continue for the selected time even if the trigger conditions are no longer met. - Depending on camera settings, shooting may end before the expiration of the selected time. • [**Wait after shooting**]: Choose the minimum time the camera will wait after each shot. Once the shot is complete, the camera will pause shooting for the selected duration even if the trigger conditions are met.

Taking Pictures Using Auto Capture

Before Shooting

- For uninterrupted shooting, use a fully-charged battery, an optional charging AC adapter, or an optional AC adapter and power connector.
- Only the [**FX (36×24)**] and [**DX (24×16)**] image area options are available. Auto capture cannot be used when [**1:1 (24×24)**] or [**16:9 (36×20)**] is selected.

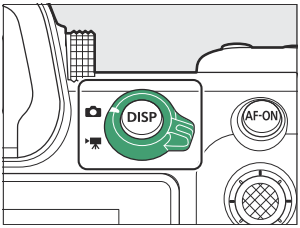
1 **Mount the camera on a tripod or take other measures to keep it steady.**

Fix the camera in place after framing the shot.

Tip: Framing the Shot

We recommend that you choose a wider angle than usual until you have grown used to auto capture.

2 **Select the desired mode (photo or video) using the photo/video selector.**



3 **If you are using auto capture for photographs, select a continuous release mode: [Continuous L], [Continuous H], [Continuous H (extended)], [C15], [C30], [C60], or [C120].**

- If you are using auto capture to record videos, proceed to Step 4.
- If you selected [**Continuous L**], choose the frame advance rate from 1 to 7 fps before proceeding. Selecting [**Continuous H**] will fix the frame advance rate at 7 fps.
  - Note that when shooting at 7 fps, the frame advance rate may drop below the set speed depending on conditions if [**Auto**] is selected for Custom Setting d6 [**Shutter type**] and the camera is using the mechanical shutter, or if [**Mechanical shutter**] is selected.

4 **Position the focus point.**

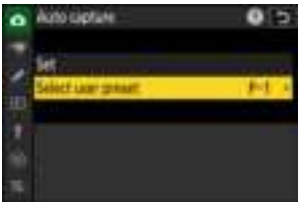
Choose an AF-area mode and position the focus point in the area of the frame in which you anticipate the subject will appear.

- If autofocus is enabled, the camera will temporarily switch to focus mode **AF-C** during auto capture.
- Adjust the focus position manually when using manual focus.

5 **Highlight [Auto capture] in the photo shooting or video recording menu and press ▶.**

6 **Choose [Select user preset], then highlight a destination preset for the auto capture settings and press ⊛.**

Choose a destination from presets [**User preset 1**] through [**User preset 5**].



7 **Highlight [Set] and press ⓚ.**

Auto capture settings will be displayed.

8 **Highlight [Capture criteria] and press ⓚ.**

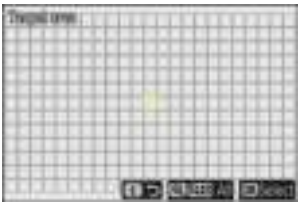
- Adjust auto capture criteria. Highlight options and press ⓚ to select (☑) or deselect (☐).
- Press ⍰ to save changes and return to the auto capture settings display.

9 **Adjust settings for each of the criteria selected for [Capture criteria].**

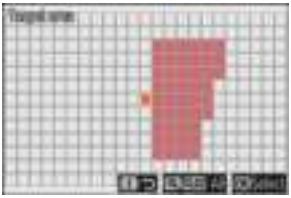
- For information on the criteria available when [**Motion**] is enabled (☑), see '"**Capture Criteria**" > "**Motion**"' (🕮 25).
- For information on the criteria available when [**Subject detection**] is enabled (☑), see '"**Capture Criteria**" > "**Subject Detection**"' (🕮 28).
- For information on the criteria available when [**Distance**] is enabled (☑), see '"**Capture Criteria**" > "**Distance**"' (🕮 30).
- Although multiple [**Capture criteria**] can be used together, we recommend that you enable (☑) only one criterion at a time until you have grown used to auto capture.

10 Highlight [Target area] and press ⓞ.

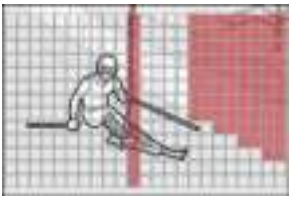




- Choose the subject detection area when [**Auto-area AF**] is selected for AF-area mode in autofocus mode or when using manual focus. Target-area selection is not available in AF-area modes other than [**Auto-area AF**]. If another mode is selected, proceed to Step 11.
- The target area selection guide is only displayed once.
- Press ⓞ to prevent the current points being used for subject detection (disabled points are displayed in red). Press ⓞ again to clear (re-enable) the points.



- Disabling areas that do not require subject detection or are blocked by obstacles provides more accurate subject detection.



- Press ⊕ to enable all points.
- Press ⊠ (**?**) to disable all points.
- Points can be enabled and disabled nine at a time (in 3 × 3 grids) by tapping the monitor.
- Press **i** to save changes and return to the auto capture settings display.

Disabled Areas

Subjects meeting the [**Capture criteria**] will be detected only in the vicinity of the selected target area. For example, the camera will ignore motion in disabled areas (points) even when [**Motion**] is enabled (☑).

Cautions: Focusing Manually

Target-area selection is not available when [**Capture criteria**] > [**Distance**] is enabled (☑).

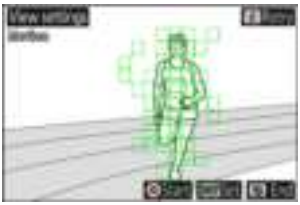
11 Highlight [Timing options] and press ⓚ.

- Use [**Recording time selection**] to choose the length of each individual burst or video recording; options include [**OFF**] (no limit) and values of from 1 second to 30 minutes. When an option other than [**OFF**] is selected, shooting will continue for the selected time even if the trigger conditions are no longer met.
- The minimum length of time the camera will wait before beginning shooting again can be selected using [**Wait after shooting**], which offers a choice of values of from 0 seconds to 30 minutes.
- Press ⓚ to save changes and return to the auto capture settings display.

12 Press the *i* button.

- The settings confirmation dialog will be displayed.
- The currently selected (☑) [**Capture criteria**] are listed in the top left corner of the dialog.

13 **Check that the camera can detect subjects as desired using the selected criteria.**



- Subjects detected by the camera are shown by green boxes in the settings confirmation dialog.
- You can choose the focus point when an option other than [**Auto-area AF**] is selected for AF-area mode.
- If green boxes are not displayed as expected, press the **i** button and repeat Steps 9 and 10 until the desired results are achieved.

14 **Press the DISP button to set the date and time to start auto capture.**

- Pressing the **DISP** button on the settings confirmation dialog allows you to configure the date and time to start auto capture.
- To start auto capture without setting a date and time, proceed to Step 15.
- Select [**Yes**] for [**Set start day/time**] to perform auto capture shooting for the configured duration starting on the set date and time.
- Select [**Start day/time**] to specify the date, hour, and minute to start shooting.
- Select [**Shooting duration**] to set the duration to perform auto capture from [**No limit**], [**1 hour**], [**2 hours**], and [**3 hours**]. If [**No limit**] is selected, auto capture will continue until it is terminated manually.

Caution: Starting Date and Time

When setting the shooting date and time, ensure that the camera clock is set to the correct time and date in [**Time zone and date**] in the setup menu.

15 Initiate auto capture.

- Auto capture starts when the video-record button is pressed in the settings confirmation dialog or at the date and time set in Step 14.
- Shooting will begin when a subject that meets the selected criteria is detected and continue while the criteria are met.
- A red border will appear around the shooting display when the camera detects a subject and while shooting is in progress.
- Auto capture will be triggered only if all the options selected for [**Capture criteria**] are satisfied.
- The shooting display will turn off to save power if no operations are performed for about three minutes, but auto capture will remain active. The display can be reactivated by pressing the **DISP** button or pressing the shutter-release button halfway.

The "Single Frame" and "Self-Timer" Release Modes

If single-frame or self-timer mode is selected, the camera will temporarily switch to [**Continuous H**] and the frame advance rate will be fixed at 7 fps when auto capture begins.

- Note that the frame advance rate may drop below 7 fps depending on conditions if [**Auto**] is selected for Custom Setting d6 [**Shutter type**] and the camera is using the mechanical shutter, or [**Mechanical shutter**] is selected.

The Auto Capture Standby Display

- "**A-CAP**" will flash in the control panel.

- An A-CAP icon will flash in the shooting display. A yellow border will appear around the shooting display if the camera does not detect a subject that meets the configured criteria after starting auto capture.

Tip: Pre-Release Capture

The settings selected for Custom Setting d3 [**Pre-Release Capture options**] apply when [**C15**], [**C30**], [**C60**], or [**C120**] is selected for release mode.

Tip: Silent Mode

Silent mode can be enabled by selecting [**ON**] for [**Silent mode**] in the setup menu.

“Capture Criteria“ > “Motion”

This option is used to choose the direction of motion, size, and speed of subjects that will trigger auto capture.

1 **Highlight [Advanced: Motion] in the auto capture settings display and press ⓚ.**

The motion settings display will appear.

2 **Press the ⍰ (?) button and select directions.**

- Direction criteria will be displayed.
- Highlight directions and press ⓚ to select (☑) or deselect (☐).
- Press ⍰ to save changes and return to the motion settings display.

3 Rotate the sub-command dial to choose the subject speed.

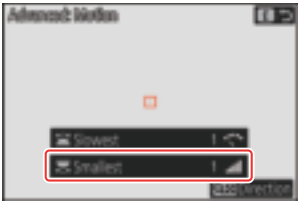
Rotate the sub-command dial to set [**Slowest**] to a value from [**1**] to [**5**]. Choose higher values to restrict subject detection to faster-moving subjects, lower values to include subjects moving at slower speeds.

Tip: Size and Speed

- Subjects that meet the criteria for [**Smallest**] and [**Slowest**] are shown by green boxes in the motion settings display.
- Set [**Slowest**] according to the time required for the subject to cross the frame horizontally. The approximate time for each value is listed below. Subjects that are moving too quickly may not be detected.
  - [**1**]: About 5 s or less
  - [**2**]: About 4 s or less
  - [**3**]: About 3 s or less
  - [**4**]: About 2 s or less
  - [**5**]: About 1 s or less
- Selecting [**1**] for both [**Smallest**] and [**Slowest**] makes it easier for the camera to detect subjects of a variety of sizes moving at a variety of speeds. We recommend that you begin from low values and then gradually raise them while checking the display of green boxes in the motion settings display or taking test pictures until subject detection functions as desired.

4 Rotate the main command dial to choose the subject size.

Rotate the main command dial to set [**Smallest**] to a value from [**1**] to [**5**]. Choose lower values to include smaller subjects, higher values to restrict subject detection to larger subjects.



Tip: Size Options

- Subjects that meet the criteria for [**Smallest**] and [**Slowest**] are shown by green boxes in the motion settings display.
- The apparent subject size (measured in points) for each [**Smallest**] option is listed below.
  - [**1**]: 4 points or larger
  - [**2**]: 8 points or larger
  - [**3**]: 14 points or larger
  - [**4**]: 24 points or larger
  - [**5**]: 34 points or larger

Subject detected in 14 points

Tip: "Smallest"

If both [**Motion**] and [**Subject detection**] are selected for [**Capture criteria**], the [**Smallest**] selected for the former will have no effect on the [**Smallest**] selected for the latter. Changing the [**Smallest**] selected in the subject detection display has no effect on the [**Smallest**] selected in the motion settings display. The two conditions will be assessed separately, but only subjects that meet the criteria for both will trigger auto capture.

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5 Press the *i* button.

The camera will save the changes and return you to the auto capture settings display.

“Capture Criteria” > “Subject Detection”

This option is used to choose the types and sizes of subject that trigger auto capture.

1 **Highlight [Advanced: Subject detection] in the auto capture settings display and press ⓚ.**

The subject detection display will appear.

2 **Press the ⍰ (?) button and select the desired subject types.**

- Your choices are auto, people, animals, vehicles and airplanes.
- Press ⓚ to save changes and return to the subject detection display.

3 Rotate the main or sub-command dial to choose the subject size.

Set [**Smallest**] to a value from [**1**] to [**5**]. Choose lower values to include smaller subjects, higher values to restrict subject detection to larger subjects.

Tip: Size Options

- Subjects that meet the criterion for [**Smallest**] are shown by green boxes in the subject detection display.
- The apparent subject size (as a percentage of the angle of view) for each setting is listed below.
  - [**1**]: 2.5% or more
  - [**2**]: 5% or more
  - [**3**]: 10% or more
  - [**4**]: 15% or more
  - [**5**]: 20% or more

Subject detected at size of 20%

- Selecting [**1**] for [**Smallest**] makes it easier for the camera to detect subjects of different sizes. We recommend that you begin from a low value and then gradually raise it while checking the display of green boxes in the subject detection display or taking test pictures until subject detection functions as desired.

Tip: "Smallest"

If both [**Motion**] and [**Subject detection**] are selected for [**Capture criteria**], the [**Smallest**] selected for the former will have no effect on the [**Smallest**] selected for the latter. Changing the [**Smallest**] selected in the motion settings display has no effect on the [**Smallest**] selected in the subject detection display. The two conditions will be assessed separately, but only subjects that meet the criteria for both will trigger auto capture.

4 Press the *i* button.

The camera will save the changes and return you to the auto capture settings display.

Caution: Subject Detection

If "auto" or "people" is selected, auto capture will begin when human portrait subjects are detected, whether or not they are facing the camera.

“Capture Criteria“ > “Distance”

Choose the maximum and minimum distances at which the camera will detect subjects for auto capture. Auto capture shooting will continue while the subject is within the specified range of distances.

“Advanced: Distance”

You can use the [**Advanced: Distance**] feature when a NIKKOR Z lens is attached. It may not function with other lenses.

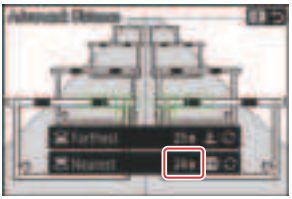
1 Highlight [Advanced: Distance] in the auto capture settings display and press ⓚ.

- The distance settings display will appear.
- A focus-point target will appear in the distance settings display.

Focus-point target

2 Choose the nearest and farthest distances at which the camera will detect subjects for auto capture.

- Choose the nearest distance at which the camera will detect subjects for auto capture. Place the target over a subject at the nearest distance for auto capture subject detection and press the **AF-ON** button to set the minimum distance, which will appear in the display as [**Nearest**]. The minimum distance can be fine-tuned by rotating the main command dial.



- Choose the farthest distance at which the camera will detect subjects for auto capture. Place the target over a subject at the farthest distance for auto capture subject detection and press the shutter-release button halfway to set the maximum distance, which will appear in the display as [**Farthest**]. The maximum distance can be fine-tuned by rotating the sub-command dial.

Tip: Fine-Tuning the Distances for "Nearest" and "Farthest"
Fine-tuning is available exclusively with Nikon Z mount lenses, but not with the NIKKOR Z 58mm f/0.95 S Noct.

Tip: Supported Distances for "Nearest" and "Farthest"
We recommend that you configure [**Nearest**] and [**Farthest**] within the range of values indicated by the numbers in white. Setting these options to the values indicated in yellow may reduce the accuracy with which the camera can detect the distance to the subject.

Tip: The "Nearest" and "Farthest" Displays
The distances for [**Nearest**] and [**Farthest**] are displayed in meters only. They will not be displayed in feet even when [**Feet (ft)**] is selected for [**Distance units**] in the setup menu.

3 Press the *i* button.

The camera will save the changes and return you to the auto capture settings display.

Cautions: Focusing Manually
- Pressing the **AF-ON** button or the shutter-release button to set the distance in manual focus saves the current focus position. Before pressing either button, adjust the focus position by rotating the focus or control ring on the lens.
- The accuracy of camera distance detection may drop and prevent the camera from shooting as intended if the subject is significantly out of focus.

Pausing and Ending Auto Capture

- To pause auto capture and return to the settings confirmation dialog, press the video-record button. Auto capture can be resumed by pressing the button again.
- To end auto capture and exit to the shooting display, press the 🗑 button.

Cautions: Auto Capture

- During auto-capture standby, the camera focuses as described below.
  - [**Capture criteria**] > [**Distance**] enabled (☑): The camera focuses at the distance selected for [**Farthest**].
  - [**Capture criteria**] > [**Distance**] disabled (☐): The camera focuses at the distance in effect when auto capture began.
- The camera may fail to detect subjects in the [**Target area**] when there are multiple subjects in the frame.
- Falling rain and snow may interfere with subject detection. Auto capture may be triggered by falling snow, heat haze, or other weather phenomena.
- Auto capture may end automatically to prevent the camera overheating when the ambient temperature is high or the camera has been used to shoot for extended periods.

During Auto Capture

All controls other than shutter-release button half-presses and the **DISP**, video-record, and 🗑 buttons are disabled while auto capture shooting is in progress. End auto capture before attempting to adjust camera settings.

Auto Capture: Restrictions

Auto capture cannot be combined with some camera features, including:

- long time-exposures (“Bulb” or “Time”),
- the self-timer,
- bracketing,
- multiple exposures,
- HDR overlay,
- interval-timer photography,
- time-lapse video recording,
- focus shift,
- electronic VR, and
- focus limiter.

Tip: Adding to the i Menu

[**Auto capture**] can now be assigned to the i menu in Custom Settings f1 and g1 [**Customize i menu**]. This allows you to display the auto capture settings and set conditions for automatic burst shooting or video recording.

Profoto A10 Now Usable as AF-Assist Illuminator

The Profoto A10's continuous LED light can now be used as an AF-assist illuminator when the Profoto A10 (on-camera flash) is attached to the camera. When a Profoto A10 configured to act as an AF-assist illuminator is attached, it will light regardless of the setting for Custom Setting a11 [**Built-in AF-assist illuminator**].

- If the Profoto A10 is not configured to act as an AF-assist illuminator, the camera's AF-assist illuminator will light in accordance with the setting set for Custom Setting a11.
- To use the Profoto A10 as an AF-assist illuminator, you will need to install the latest firmware version for the Profoto A10. Refer to the documentation for the Profoto A10 for instructions on how to update the firmware and use the Profoto A10.

Changes to Hi-Res Zoom

The Hi-Res Zoom function for videos has been changed.

In-Focus Indicator

During Hi-Res Zoom, green in-focus indicators will appear in the four corners of the shooting display when the subject is in focus.

Sub-selector Operation Enabled

Hi-Res Zoom operations can now be performed by tilting the sub-selector to the left or right in addition to ◀ or ▶ on the multi selector.

Changes to *i*-Menu "Select for Upload" Options

Changes have been made to the behavior of the [**Select for upload to computer**] and [**Select for upload (FTP)**] items in the playback *i* menu.

- These options are displayed only if the camera is connected to a computer or FTP server.
- While in earlier versions of the camera firmware, choosing [**Select for upload to computer**] or [**Select for upload (FTP)**] would mark the current picture for priority upload (⬏) and begin upload immediately, from "C" firmware version 2.00 these options simply mark the picture for upload (⬏). Pictures with this marking will be added to the end of the upload queue and will not begin uploading until all other pictures have uploaded.

Priority Upload Options Added to *i* Menu

[**Select for priority upload to computer**] and [**Select for priority upload (FTP)**] items have been added to the playback *i* menu.

- These options are displayed only if the camera is connected to a computer or FTP server.
- To mark the current picture for priority upload (⬈) and begin upload immediately, press the *i* button, highlight [**Select for priority upload to computer**] or [**Select for priority upload (FTP)**], and press ⊛. Pictures marked for priority upload will be uploaded before pictures marked for upload using other means.

New Video Playback *i* Menu Items

New items have been added to the video playback *i* menu.

Video Loop Playback

A [**Loop playback**] item has been added to the video playback *i* menu while playback is paused. Repeat a specified section of footage by selecting the start and end points in the video.

1 **Display a video full frame.**

2 **Pause the video on the desired opening frame.**

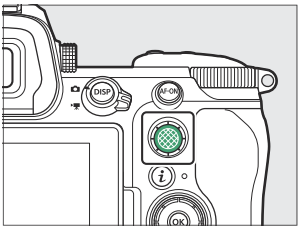
- Press ⊛ to start playback. Press ⊛ to pause.
- Your approximate position in the video can be ascertained from the video progress bar.
- Rotate the sub-command dial one stop to skip ahead or back 10 s.
- Rotate the main command dial one stop to skip ahead or back 10 frames.
- Press ◀ or ▶ to advance or rewind one frame at a time.

3 **Press the *i* button, highlight [Loop playback] and press ▶.**

4 **Choose [Start point].**

To set a loop that begins with the current frame, highlight [**Start point**] and press ⊛.

5 Choose the end point of the loop.



- Press the center of the sub-selector to switch to the end-point selection tool (⊽).
- Use the command dials to select the desired closing frame of the loop.
  - Rotate the sub-command dial one stop to skip ahead or back 10 s.
  - Rotate the main command dial one stop to skip ahead or back 10 frames.
  - Press ◀ or ▶ to advance or rewind one frame at a time.

6 Press ▲ to set the loop.

- The camera will initiate loop playback.
- Press ▲, highlight [**Yes**], and press OK to end the loop playback. To create a new loop, reset the start and end points.

Changing Video Playback Speeds

A [**Playback speed**] item has been added to the video playback ℹ menu. Select the video playback speed from [**Original speed**], [**1/2× speed**], and [**1/4× speed**]. Playback will proceed in slow motion at ½× speed or ¼× speed if [**1/2× speed**] or [**1/4× speed**] is selected, respectively. Additionally, video playback speed can be changed during playback when the video is paused, using [**Playback speed**] in the playback ℹ menu.

Tip: Changing the Playback Speed Using the Main and Sub-command Dials

A [**Playback speed**] item has also been added to Custom Setting f3 [**Custom controls (playback)**]. When assigned to the main or sub-command dial, the playback speed can be changed during video playback by turning the command dial (📖 60).

Tip: Changing the Playback Speed

- If the playback speed is changed via the ℹ menu, the new playback speed will apply to all video playbacks.
- If the playback speed is changed using a command dial to which [**Playback speed**] is assigned via Custom Setting f3 [**Custom controls (playback)**], the new playback speed only applies to the current video playback.

“Customize Retouch Options” Added to “Retouch” Playback *i* Menu

[**Customize retouch options**] has been added to [**Retouch**] in the playback *i* menu. This allows you to configure the retouch options displayed in the [**Retouch**] menu.

- Highlight options and press ⊛ to select (☑) or deselect (☐). Only items marked with a check (☑) will appear in the [**Retouch**] menu.
- Press ⊛ to save the changes.

“Date” Added to “Filtered Playback Criteria” Item in Playback Menu and Playback *i* Menu

[**Date**] has been added to the options available for [**Filtered playback criteria**] in the playback menu and playback *i* menu. Selecting (☑) [**Date**] includes the pictures taken on the selected date with [**Select date**] in filtered playback.

- Highlight [**Date**] and press ⊛ to select (☑) or deselect (☐).
- Highlight [**Select date**] and press ⊕ to select a date as the filtered playback criteria.
- If the date is not specified using [**Select date**], selecting (☑) [**Date**] will show the pictures with the most recent shooting date in filtered playback.
- To complete the operation, press MENU.

New Item for “Series Playback” in the Playback Menu: “Auto Series Playback Options”

[**Auto series playback options**] has been added to the options available for [**Series playback**] in the playback menu. Choose options for viewing bursts when [**Auto series playback**] is set to [**ON**].

Option	Description
[**Loop playback**]	If [**ON**] is selected, the current series will playback repeatedly.
[**Wait before playback**]	Choose the time until auto series playback begins once the first picture in the series is displayed: [**Normal**], [**Long**], [**Short**], or [**Start immediately**].
[**Auto series playback speed**]	Select the playback speed for auto series playback. • [**5 fps**], [**15 fps**], [**30 fps**]: Playback proceeds at the selected speed. • [**At current release mode speed**]: Playback speed varies depending on the current release mode. - Single frame, self-timer: Approx. 3 fps - Continuous low-speed: Approx. 5 fps - Continuous high-speed, continuous high-speed (extended), [**C15**]: Approx. 10 fps - [**C30**], [**C60**], [**C120**]: Approx. 30 fps

New Playback Menu Item: “Record Camera Orientation”

A [**Record camera orientation**] item has been added to the playback menu.

- When set to [**ON**], the orientation information of the camera at the time of shooting is stored in pictures. When viewed on a camera or computer, the pictures are automatically rotated according to the stored orientation information.

- When set to [**OFF**], the orientation information of the camera at the time of shooting is not stored in pictures. As such, pictures will not be automatically rotated during playback and always displayed in landscape (wide) orientation.

Caution: Record Camera Orientation

Camera orientation may not be correctly recorded in photos taken with the camera pointing up or down or while panning.

“Auto-Rotate Pictures” in the Playback Menu

- When [**Auto-rotate pictures**] is set to [**OFF**], images are always displayed in landscape (wide) orientation when played back on the camera, regardless of whether [**Record camera orientation**] is set to [**ON**] or [**OFF**].
- If [**Auto-rotate pictures**] is set to [**ON**] while [**Record camera orientation**] is set to [**OFF**], pictures will not be automatically rotated during playback and always displayed in landscape (wide) orientation.

New Playback Menu Item: “Auto-Rotate During Playback”

An [**Auto-rotate during playback**] item has been added to the playback menu.

- Select [**ON**] to automatically match the orientation of the displayed pictures to the rotation of the camera during playback.
- Selecting [**OFF**] prevents pictures from rotating with the camera during playback.

“Auto-Rotate Pictures” in the Playback Menu

If you select [**OFF**] for [**Auto-rotate pictures**], images displayed during playback will always be in landscape (wide) orientation, regardless of whether you select [**ON**] or [**OFF**] for [**Auto-rotate during playback**].

“Focus Point Border Width” Added to Custom Setting a10 “Focus Point Display”

[**Focus point border width**] has been added to Custom Setting a10 [**Focus point display**]. This option allows you to configure the thickness of the focus point border from [**1**] to [**3**].

New Custom Setting: a13 “Maximum Aperture Lv”

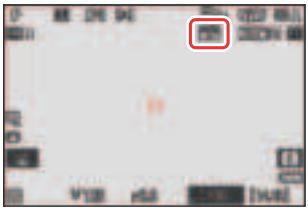
A [**Maximum aperture Lv**] item has been added to the Custom Settings menu at position a13. When set to [**On**], the shooting display in the viewfinder or monitor is always displayed with the maximum aperture. When you press the shutter-release button all the way down, the aperture will adjust to the configured aperture value before shooting.

Cautions: When “Maximum Aperture Lv” Is Set to “On”

- The lens will always be at maximum aperture regardless of aperture setting. Avoid pointing the camera at the sun or other powerful light sources. Failure to observe this precaution could damage the camera’s internal circuitry.
- The timing of the shutter release may be slightly delayed. Shutter release timing delays are more likely to occur when [**Silent mode**] is set to [**ON**] in the setup menu.
- Flickering may appear on the shooting display under the following conditions:
  - just before or after the shutter is released, or
  - when pressing a control assigned the role of [**Preview**] in Custom Setting f2 [**Custom controls (shooting)**].

New Custom Setting: a15 “Focus Limiter Setting”

A [**Focus limiter setting**] item has been added to the Custom Settings menu at position a15. You can now limit the camera focus to the selected range.

Option	Description
[**Focus limiter**]	Select [**ON**] to limit the camera focus to the range selected with [**Limit range**]. • The shooting display shows a focus limit icon when [**ON**] is selected. 
[**Limit range**]	Specify the camera focus range. • Select [**Nearest**] for the minimum distance and [**Farthest**] for the maximum distance. • Set the distance values between 0.1 and 999 m.

Limiting the Focus Range

Select the near and far limits of the camera focus range.

1 **Highlight [Limit range] and press ⊛.**

- The range setting display will appear.
- A focus-point target will appear in the range setting display.

Focus-point target

2 **Select the minimum and maximum focus distances.**

- Place the focus point over a subject at the nearest distance and press the **AF-ON** button to set the minimum distance. Rotate the main command dial or keep the **AF-ON** button pressed while rotating the lens focus ring to fine-tune the minimum distance.

- Place the focus point over a subject at the farthest distance and press the shutter-release button halfway to set the maximum distance. Rotate the sub-command dial or keep the shutter-release button pressed halfway while rotating the lens focus ring to fine-tune the maximum distance.

Tip: Supported Distances for "Nearest" and "Farthest"

We recommend that you configure [**Nearest**] and [**Farthest**] within the range of values indicated by the numbers in white. Setting these options to values indicated in yellow may reduce the accuracy with which the camera can detect the distance to the subject.

3 **Press ⓞⓚ.**

End range setting and return to the shooting display.

☑ Caution: Changing Lenses

Changing from the lens used to set [**Limit range**] to another lens disables the set focus range.

- Reset the [**Limit range**] setting to use the focus limiter function with the new lens.
- If the [**Limit range**] setting is not reset with the new lens, re-attaching the original lens allows focusing within the set focus range.

☑ Using Lenses with the Focus Limit Switch

When using a lens with a focus limit switch for the [**Limit range**] setting, set the lens focus limit switch to **FULL**.

Resetting the Focus Range

Press the 🗑 button to reset the values set for [**Nearest**] and [**Farthest**].

“Minimum” Added to Custom Setting c2 “Self-timer” > “Interval Between Shots”

[**Minimum**] has been added to Custom Setting c2 [**Self-timer**] > [**Interval between shots**]. Selecting [**Minimum**] allows the self-timer shooting at intervals shorter than 0.5 seconds when [**Number of shots**] is more than 1.

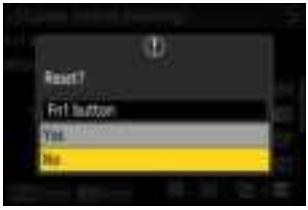
New Custom Settings: d19/g18 “Half-Press to Cancel Zoom (MF)”

A [**Half-press to cancel zoom (MF)**] item has been added to the Custom Settings menu at positions d19 and g18. If [**ON**] is selected while focus mode is set to manual focus and the view through the lens is zoomed in, zoom can be cancelled by pressing the shutter-release button halfway.

New Options for Custom Settings f2 “Custom Controls (Shooting)” and g2 “Custom Controls”

Additions have been made to the roles available and the controls to which they can be assigned for Custom Setting f2 [**Custom controls (shooting)**] and g2 [**Custom controls**]. Custom controls can now also be reset.

New Reset Option



You can now reset selected controls to their default roles in the control-selection displays for Custom Settings f2 [**Custom controls (shooting)**] and g2 [**Custom controls**].

- Highlight the desired control and press 🗑 to display a confirmation dialog where you can reset the control to its default role by highlighting [**Yes**] and pressing ⊛.
- Pressing and holding the 🗑 button for about three seconds when a control is highlighted displays a confirmation dialog where you can reset all controls to their default roles by highlighting [**Yes**] and pressing ⊛.

Newly Customizable Controls

You can now customize the ⚄ [**Illuminator button**].

New Roles Available via Custom Setting f2 “Custom Controls (Shooting)”

Option		Description
FOCUS LIMIT	[**Focus limiter**]	Press the control to toggle between [**ON**] and [**OFF**] for Custom Setting a15 [**Focus limiter setting**] > [**Focus limiter**]. Hold the control to jump to the [**Limit range**] settings display (🕮 48).
	[**Cycle AF-area mode**]	Press the control to cycle the AF-area mode. • To choose the AF-area modes to be cycled, highlight [**Cycle AF-area mode**] and press ▶. • Highlight options and press OK or ▶ to select (☑) or deselect (☐). Only items marked with a check (☑) will be cycled when the control is pressed.
	[**Recall shooting functions**]	Hold the control to recall previously-stored settings for still photography (including shooting mode and metering) in modes **P**, **S**, **A**, or **M**. • To choose the settings recalled, press ▶ when [**Recall shooting functions**] is highlighted. - Highlight items using ▲ or ▼ and press OK to select (☑) or deselect (☐). Only items marked with a check (☑) will be recalled while the control is pressed. - Highlight items using ▲ or ▼ and press ▶ to view options. Press OK to save changes and exit. - To store current camera settings for later recall using this option, select [**Save current settings**]. • Settings such as shutter speed and aperture can be changed by holding the control and rotating a command dial. - In mode **P**, you can adjust flexible program settings. - If an option other than [**Off**] is selected for Custom Setting b3 [**Easy exposure compensation**], exposure compensation can be adjusted by rotating a command dial.

Option		Description
	[**Recall shooting functions (hold)**]	Press the control to recall previously-stored settings for still photography (including shooting mode and metering) in modes **P**, **S**, **A**, or **M**. Pressing the control a second time restores the settings in effect before stored settings were recalled. • To choose the settings recalled, press ⊛ when [**Recall shooting functions (hold)**] is highlighted. The settings that can be stored are the same as for [**Recall shooting functions**]. [**Recall shooting functions (hold)**] cannot, however, be used to save or recall settings for [**AF-ON**]. • A icon will appear in the shooting display while stored settings are in effect. • Shutter speed and aperture can be changed by rotating the command dials while stored settings are in effect. - In mode **P**, you can adjust flexible program settings. - If an option other than [**Off**] is selected for Custom Setting b3 [**Easy exposure compensation**], exposure compensation can be adjusted by rotating a command dial. • The exposure compensation value can be changed by pressing the ⊠ button (or the control to which the exposure compensation role is assigned) and rotating the command dials while the stored settings are in effect. The changed value will be retained with the [**Recall shooting functions (hold)**] item if [**Exposure compensation**] is selected (☑) in the dialog where settings to be recalled are selected. • Adjust white balance settings by pressing **Fn1** button (or the control to which the white balance role is assigned) and rotating the command dials while the stored settings are in effect. The changed setting will be retained with the [**Recall shooting functions (hold)**] item if [**White balance**] is selected (☑) in the dialog where settings to be recalled are selected.
	[**Cycle monitor mode**]	Press the control to cycle through the monitor modes.
	[**LCD illumination**]	Press the control to light the control panel. Press it again to turn it off.
	[**Content Credentials**]	Press the control to toggle between [**ON**] and [**OFF**] for [**C2PA/ Content Credentials**] > [**Content Credentials**] in the setup menu (🕮 64).

New Roles Available via Custom Setting g2 “Custom Controls”

Option		Description
FOCUS LIMIT	[**Focus limiter**]	Press the control to toggle between [**ON**] and [**OFF**] for Custom Setting a15 [**Focus limiter setting**] > [**Focus limiter**]. Hold the control to jump to the [**Limit range**] settings display (🕮 48).
[+]	[**Cycle AF-area mode**]	Press the control to cycle the AF-area mode. • To choose the AF-area modes to be cycled, highlight [**Cycle AF-area mode**] and press ▶. • Highlight options and press OK or ▶ to select (☑) or deselect (☐). Only items marked with a check (☑) will be cycled when the control is pressed.
	[**Cycle monitor mode**]	Press the control to cycle through the monitor modes.
	[**LCD illumination**]	Press the control to light the control panel. Press it again to turn it off.

New Roles for Custom Setting f3 “Custom Controls (Playback)”

Additions have been made to the roles available for Custom Setting f3 [**Custom controls (playback)**]. Custom controls can now also be reset.

New Reset Option

You can now reset selected controls to their default roles in the Custom Setting f3 [**Custom controls (playback)**] control-selection display.

- Highlight the desired control and press 🗑 to display a confirmation dialog where you can reset the control to its default role by highlighting [**Yes**] and pressing ⊛.
- Pressing and holding the 🗑 button for about three seconds when a control is highlighted displays a confirmation dialog where you can reset all controls to their default roles by highlighting [**Yes**] and pressing ⊛.

Newly Customizable Controls

The following controls can now be customized:

- [**Exposure compensation button**]
- [**Illuminator button**]
- [**ISO sensitivity button**]

New Roles

Additional roles can now be assigned to buttons or the command dials.

Roles Available for Buttons

Option		Description
	[**Delete**]	Press the control once to display a confirmation dialog. Press the control again to delete the current picture and return to playback.
	[**LCD illumination**]	Press the control to light the control panel. Press it again to turn it off.
	[**Jump to the source image**]	Press the control to jump to a source image from its retouched copy.

Option		Description
	[**RAW processing (current picture)**]	Press the control to display retouch options for the assigned role.
	[**RAW processing (multiple pictures)**]	
	[**Trim**]	
	[**Resize (current picture)**]	
	[**Resize (multiple pictures)**]	
	[**D-Lighting**]	
	[**Straighten**]	
	[**Distortion control**]	
	[**Perspective control**]	
	[**Monochrome**]	
	[**Overlay (add)**]	
	[**Lighten**]	
	[**Darken**]	
	[**Motion blend**]	

Roles Available for “Main Command Dial”/“Sub-Command Dial”

Option	Description
[**Frame advance zoom position**]	[**Prefer focus point (face priority)**]: Center the display on the focus point active when the photograph was taken. However, if a person's face is detected in the photograph, playback zoom will be performed with the face at the center.
[**Playback zoom face selection**]	If [**ON**] is selected, when multiple faces are detected in the picture during playback zoom, the sub-command dial can be rotated to switch between the detected faces. • This role can only be assigned to the [**Sub-command dial**].

New Roles Available Via “Main Command Dial”/“Sub-command Dial” > “Frame Advance”

Option	Description
[**Uploaded to FTP**]	Skip to the next or previous picture that has been uploaded to an FTP server.
[**Uploaded to computer**]	Skip to the next or previous picture that has been uploaded to a computer.

New Roles Available Via “Main Command Dial”/“Sub-command Dial” > “Video Playback”

Option	Description
[**Playback speed**]	Choose the video playback speed. You can toggle between the original speed, $^1/_2\times$ speed, and $^1/_4\times$ speed.

Changes to the “Move Focus Point” Function in Custom Setting f4 “Touch Fn”

You can now select the operation performed by double-tapping the touch Fn area in the monitor when [**Move focus point**] is assigned to touch Fn via Custom Setting f4 [**Touch Fn**] > [**Assign touch Fn**]. Highlight [**Move focus point**] and press ⊛ on the multi selector to select the options.

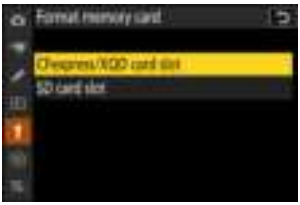
Option	Description
[**Select center focus point**]	The focus point is positioned to the center of the viewfinder.
[**Set absolute focus position**]	The touch Fn area represents the entire viewfinder, and the focus point is repositioned to the corresponding position in the viewfinder by double-tapping the desired location.

Changes in Full Formatting Procedures for “Format Memory Card” in the Setup Menu

Changes have been made to how a full format is performed with [**Format memory card**] in the setup menu when using a CFexpress memory card compatible with full format.

1 **Highlight [Format memory card] in the setup menu and press ▶.**

2 **Highlight [CFexpress/XQD card slot] and press ▶.**



3 **Press 🗑 to proceed when the options are displayed.**

4 **Highlight [Yes] and press OK.**

Updates to “Non-CPU Lens Data”

The camera offers additional features to [**Non-CPU lens data**] in the setup menu.

- You can now enter values in the [**Focal length (mm)**] and [**Maximum aperture**] options.

- Names can now be assigned to lenses with a [**Lens number**] of from [**1**] to [**20**]. To enter a name of up to 36 characters, highlight [**Lens name**] and press ⊛.
  - The lens names assigned above are recorded in the Exif data stored in pictures.

New Setup Menu Item: “C2PA/Content Credentials”

A [**C2PA/Content Credentials**] item has been added to the setup menu.

- Use the "content provenance recording" feature (🕮 65) by importing to your camera a digital certificate that is issued by a digital certificate vendor in accordance with the Coalition for Content Provenance and Authenticity (C2PA) standards.
- Content provenance recording allows you to record information in photos such as the camera used, shooting date and time, and the photographer in a format that is difficult to tamper with.
- You can view provenance information in Nikon Imaging Cloud's Nikon Authenticity Service. Enhance the credibility of your content by using provenance information.

Option	Description
[**Content Credentials**]	If [**ON**] is selected, the camera records provenance information on photos.
[**Manage certificates**]	• [**Import certificate (from Nikon Imaging Cloud)**]: Import a digital certificate from Nikon Imaging Cloud. • [**Delete certificate**]: Delete the digital certificate from the camera.

Displaying “C2PA/Content Credentials” in the Camera Setup Menu

To add [**C2PA/Content Credentials**] to your camera, you must first apply for the Nikon Authenticity Service on Nikon Imaging Cloud, then connect your camera to Nikon Imaging Cloud.
https://imagingcloud.nikon.com

Using Content Provenance Recording

Follow the steps below to use the content provenance recording feature. Provenance information is only recorded on photos taken when [**SDR**] is selected for [**Tone mode**] in the photo shooting menu.

1 Apply for the Nikon Authenticity Service on Nikon Imaging Cloud.

You can apply through the Nikon Authenticity Service page on Nikon Imaging Cloud to use the service.

2 Connect the Camera to Nikon Imaging Cloud.

- See the camera *Reference Guide* for detailed instructions.
- When the camera is connected to Nikon Imaging Cloud, [**C2PA/Content Credentials**] will appear in the camera setup menu.

3 Import a digital certificate (📖 66).

- Import a digital certificate issued by a digital certificate vendor in accordance with the C2PA standards to your camera via Nikon Imaging Cloud.
- Nikon does not issue digital certificates.

4 Take Photos with Content Provenance (📖 68).

The camera records provenance information on photos.

Importing a Digital Certificate

Before using content provenance recording on your camera for the first time, you must import a digital certificate from Nikon Imaging Cloud.

1 **Connect the Camera to Nikon Imaging Cloud.**

2 **Highlight [C2PA/Content Credentials] in the setup menu and press ▶.**

3 **Select [Manage certificates], highlight [Import certificate (from Nikon Imaging Cloud)], and press ⓚ.**

The camera will import the digital certificate.

Deleting a Digital Certificate from the Camera

Select [**Manage certificates**], highlight [**Delete certificate**], and press ⓚ to delete the digital certificate.

- Delete the digital certificate before discarding the camera or transferring ownership to another person.
- The digital certificate will also be deleted if the default settings are restored using the [**Reset all settings**] item in the setup menu.
- Deleting the digital certificate disables content provenance recording.

Cautions: Deleting Digital Certificates

Deleting a digital certificate from the camera and attempting to import a new one will revoke the old digital certificate stored in Nikon Imaging Cloud and will issue a new certificate for import to the camera. Digital certificates can be issued up to three times. If you exceed this limit, you will no longer be able to issue digital certificates. When deleting a digital certificate from your camera, pay attention to the number of digital certificates you have issued.

Tip: Revoking a Digital Certificate Imported to a Camera

To revoke the certificate imported to your camera, first perform the certificate revocation procedure in Nikon Imaging Cloud. See the Nikon Imaging Cloud online help for detailed instructions. Connecting your camera to Nikon Imaging Cloud after revoking the digital certificate will also revoke the digital certificate on the camera. Delete the revoked digital certificate from the camera.

- If you do not connect your camera to Nikon Imaging Cloud after revoking the digital certificate, the camera will still display the certificate as valid, but the provenance information cannot be viewed since the certificate is no longer valid.

Taking Photos with Content Provenance

1 **Highlight [C2PA/Content Credentials] in the setup menu and press ▶.**

2 **Select [ON] for [Content Credentials].**

- Content provenance recording is enabled.

- A icon will appear in the shooting display.

3 **Take pictures.**

Content provenance recording is available for still photography modes such as single-frame or burst shooting.

- Pictures with provenance information are indicated by a icon.

Cautions: Shooting Bursts with Content Provenance Recording

- The memory buffer capacity may drop.
- It will take time for the frame rate to recover if the rate drops and "r000" appears in the shooting display.

View Content Provenance

You can view provenance information on Nikon Imaging Cloud. See the Nikon Imaging Cloud online help to upload pictures from the camera and view provenance information.

Tip: Adding to the i Menu

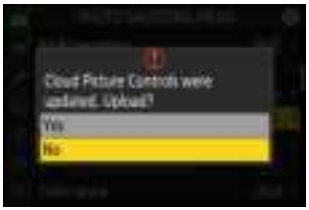
[**Content Credentials**] can now be assigned to the i menu in Custom Setting f1 [**Customize i menu**]. Content provenance recording can be set to [**ON**] or [**OFF**].

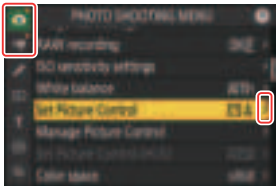
- This item will not appear in the functions that can be assigned to i menu via Custom Setting f1 [**Customize i menu**] until [**C2PA/Content Credentials**] is displayed in the setup menu.

New Method for Adding Picture Controls from Nikon Imaging Cloud

When all of the following conditions are met, pressing the MENU button to display the menus will show a confirmation dialog asking whether you want to add Picture Controls to your camera:

- The camera is connected to Nikon Imaging Cloud.
- You have selected Picture Controls in Nikon Imaging Cloud to add to your camera that have not yet been registered on the camera.



Option	Description
[**Yes**]	When you connect your camera to Nikon Imaging Cloud, Picture Controls are sent from Nikon Imaging Cloud and imported to your camera. These imported Picture Controls will not yet be displayed on the camera. Selecting [**Yes**] registers the imported Picture Controls to the camera and adds them to the [**Set Picture Control**] list.
[**No**]	Picture Controls sent from Nikon Imaging Cloud and imported to your camera are not registered to the camera; instead, the camera returns to the menu. In this case, notification marks will appear on the photo shooting and video recording menu tabs and on the [**Set Picture Control**] item in the camera menu.  • To manually register Picture Controls to the camera, select [**Set Picture Control**] > [**Add Cloud Picture Control files**] in either the photo shooting or video recording menu. • If you select [**No**], the confirmation dialog will not appear the next time a menu is displayed. However, selecting new Picture Controls to be added to the camera in Nikon Imaging Cloud will display the confirmation dialog.

Shooting Display Maximum Zoom Now 400%

While in earlier versions of the camera firmware, the maximum shooting display zoom was 200%, from “C” firmware version 2.00 the maximum magnification is 400%. Use the 🔍 and 🔍 (**?**) buttons to zoom in and out.

New Setup Menu Item: “Automatic Monitor Display Switch”

An [**Automatic monitor display switch**] item has been added to the setup menu.

- Selecting [**On**] will result in the same behavior as in earlier versions of the camera firmware.
- Selecting [**On (when monitor docked)**] disables automatic switching of the viewfinder and monitor displays when the monitor is open and not in its storage position. Placing your eye to the viewfinder will not turn the viewfinder on; the monitor is always used for shooting.

Changes and Additions to “Connect to FTP Server”

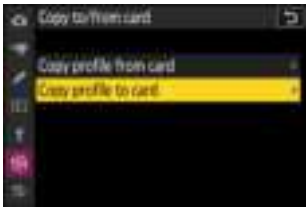
Changes and additions have been made to the [**Connect to FTP server**] item in the network menu.

Configurable Port Number for FTP Server Connection

Port numbers can now be specified when configuring an FTP server connection via the connection wizard in [**Connect to FTP server**] in the network menu. After entering the FTP server address, press the ? button to connect the camera to the FTP server. When the connection is successfully established, you will be prompted to enter a port number.

- A value between 0 and 65535 can be configured.
- After entering the port number, press OK to display the screen to select the login method.

Increased Profile Storage



The number of network profiles that can be saved using [**Connect to FTP server**] > [**Network settings**] > [**Copy to/from card**] > [**Copy profile to card**] has been increased from 1 to 99.

- Highlight [**Copy profile to card**] and press ▶, and then highlight a profile you wish to save and press ▶ again. Select the destination (1–99) and press OK to copy the profile to the memory card.

Image Conversion to HEIF Format for FTP Server Uploads

[**Upload in HEIF format**] has been added to [**Connect to FTP server**] > [**Options**] in the network menu.

- The options are [**High compression**], [**Medium compression**], [**Low compression**], and [**Off**]. For settings other than [**Off**], the captured RAW or JPEG image will be converted to HEIF format with the specified compression ratio before it is uploaded to the FTP server.
- Converted HEIF images are not stored on the memory card.

Auto Reconnect on Error

[**Keep connection**] has been added to the options available for [**Connect to FTP server**] > [**Options**] in the network menu. If the connection is lost due to a wireless, TCP/IP, or FTP error when [**ON**] is selected, the camera will automatically attempt to reconnect after about 15 seconds. The camera will attempt to reconnect repeatedly until the connection is re-established.

- The standby timer will not expire when [**ON**] is selected, regardless of the option selected for Custom Setting c3 [**Power off delay**] > [**Standby timer**]. Note that this increases the drain on the battery.

Changes to Synchronized Release

A [**Group settings**] item has been added under [**Connect to other cameras**] in the network menu. Cameras can be grouped for synchronized release and remote camera settings adjusted separately for each group. Switching groups also switches the remote cameras that the master camera controls.

- The addition of [**Group settings**] changes how cameras are configured for synchronized release. The procedure described below replaces that described under "Synchronized Release" in the "Connecting to Other Cameras" chapter of the *Reference Guide*.
- Remote cameras can now be grouped. [**Remote camera list**] has consequently been moved from its former location directly under [**Connect to other cameras**] in earlier firmware versions and placed in [**Connect to other cameras**] > [**Group settings**] > (group name) > [**Remote camera list**].

Configuring and Using Synchronized Release

Follow the steps below to create host profiles for synchronized release. Each camera saves the pictures it takes to its own memory card. Repeat the process to create identical profiles for each camera.

Wireless LAN

To create host profiles when connecting via wireless LAN:

1 **Select [Connect to other cameras] in the network menu, then highlight [Network settings] and press ▶.**

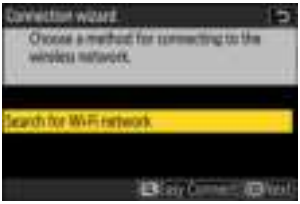
2 **Highlight [Create profile] and press OK.**

3 Name the new profile.

- To proceed to the next step without changing the default name, press ⊕.
- Whatever name you choose will appear in the network menu [**Connect to other cameras**] > [**Network settings**] list.
- To rename the profile, press ⓚ. Press ⊕ to proceed after entering a name.

4 Highlight [Search for Wi-Fi network] and press ⓚ.

The camera will search for networks currently active in the vicinity and list them by name (SSID).



"Easy Connect"

To connect without entering an SSID or encryption key, press ⊕ in Step 4. Next, highlight one of the following options and press ⓚ. After connecting, proceed to Step 7.

Option	Description
[**Push-button WPS**]	For routers that support push-button WPS. Press the WPS button on the router and then press the camera ⓚ button to connect.
[**PIN-entry WPS**]	The camera will display a PIN. Using a computer, enter the PIN on the router. For more information, see the documentation provided with the router.

5 **Choose a network.**

- Highlight a network SSID and press ⓚ.
- The SSIDs containing characters that cannot be entered on the camera will not be displayed.
- The band on which each SSID operates is indicated by an icon.
- Encrypted networks are indicated by a 🔒 icon. If the selected network is encrypted (🔒), you will be prompted to enter the encryption key. If the network is not encrypted, proceed to Step 7.
- If the desired network is not displayed, press 🔍 to search again.

Hidden SSIDs

Networks with hidden SSIDs are indicated by blank entries in the network list.

- To connect to a network with a hidden SSID, highlight a blank entry and press ⓚ. Next, press ⓚ; the camera will prompt you to provide an SSID.
- Enter the network name and press 🔍. Press 🔍 again; the camera will now prompt you to enter the encryption key.

6 Enter the encryption key.

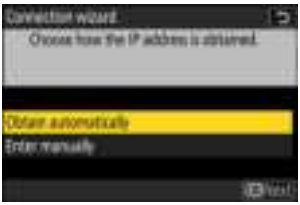
- Press ⓞⓚ and enter the encryption key for the wireless router.

- For more information, see the documentation for the wireless router.
- Press ⊕ when entry is complete.

- Press ⊕ again to initiate the connection. A message will be displayed for a few seconds when the connection is established.

7 **Obtain or select an IP address.**

Highlight one of the following options and press OK.



Option	Description
[**Obtain automatically**]	Select this option if the network is configured to supply the IP address automatically. A "configuration complete" message will be displayed once an IP address has been assigned. • It is recommended that you note the remote camera IP address, as you will need it in subsequent steps.
[**Enter manually**]	Enter the IP address and sub-net mask manually. • Press OK; you will be prompted to enter the IP address. • Rotate the main command dial to highlight segments. • Press ◀ or ▶ to change the highlighted segment and press OK to save changes. • Next, press ⊕; a "configuration complete" message will be displayed. Press ⊕ again to display the sub-net mask. • Press ▲ or ▼ to edit the sub-net mask and press OK; a "configuration complete" message will be displayed.

8 **Press OK to proceed when the "configuration complete" message is displayed.**

The profile name is displayed when a connection is established.

9 **Highlight [Master/remote] and press ▶.**

Choose a role for each camera from "master" and "remote".

- [**Master camera**]: Pressing the shutter-release button on the master camera releases the shutters on the remote cameras. Each group can have only one master. If the group has multiple master cameras, only the first to connect to the network will actually serve in that capacity.
- [**Remote camera**]: The shutters on the remote cameras are synchronized with the shutter on the master camera.

10 **Repeat Steps 1 through 9 for the remaining cameras.**

When configuring remote cameras, be sure to select [**Remote camera**] in Step 9.

11 **On the master camera, highlight [Group settings] and press ▶.**

12 **Highlight [New] and press OK.**

13 **Enter a group display name.**

- Set a group display name to add remote cameras. Display names can be up to 32 characters long.
- Press ⊛ to proceed once entry is complete.

14 Highlight [Group name], press ⊛, and enter a group name.

Enter a group name for the synchronized cameras. Group names can be up to eight characters long.

Assigning Remote Cameras a "Group Name"

The group name selected on the remote cameras must match that chosen for the master camera. Choose the name using [**Connect to other cameras**] > [**Group name**] in the network menu.

15 Highlight [Remote camera list] and press ⊛.

Add remote cameras to the group. The master camera can store information for up to 16 remote cameras in slots [**01**] through [**16**].

16 Highlight the desired slot and press ⊛.

Remote camera options will be displayed.

17 Highlight [Address] and press ⊛.

You will be prompted to enter an IP address.

18 Enter the remote camera IP address.

Enter the remote camera IP address you noted in Step 7.

- Rotate the main command dial to highlight segments.
- Press ◀ or ▶ to change the highlighted segment and press OK to save changes.
- Press ⊕ to add the remote camera to the master camera remote camera list and establish a connection.

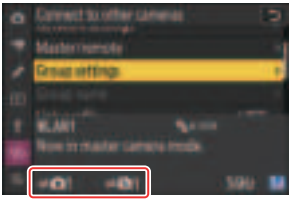
Tip: Viewing Remote Camera IP Addresses

To view a remote camera's IP address, select [**Connect to other cameras**] > [**Network settings**] in the camera's network menu, highlight a synchronized release host profile, press ▶, and select [**TCP/IP**].

---

19 Add the remaining remote cameras.

- When connecting to wireless networks, the cameras will display the band used by the selected SSID.
- The master camera shows the number of remote cameras connected and not yet connected.



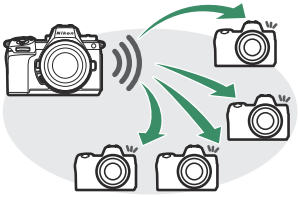
- A ⇌📷 icon appears in the master camera shooting display together with the number of remote cameras connected.

Connection Errors

In the event of remote camera connection errors, the remote camera count in the master camera shooting display will turn red and instead show the number of remote cameras that failed to connect.

20 Take pictures.

Pressing the shutter-release button on the master camera releases the shutters on the remote cameras.



Ethernet

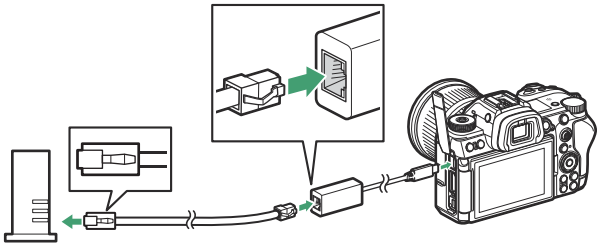
Follow the steps below to create host profiles for Ethernet connections. A USB (Type-C) to Ethernet adapter (available separately from third-party sources) is required for Ethernet connections. Be sure to connect the adapter to the camera's USB connector. The following USB-to-Ethernet adapters have been tested and approved for use:

- Anker A83130A1 PowerExpand USB-C to Gigabit Ethernet adapters
- Anker A83130A2 PowerExpand USB-C to Gigabit Ethernet adapters

Connect to other cameras via a third-party USB (Type-C) to Ethernet adapter connected to the camera's USB connector.

1 **Attach a third-party USB-to-Ethernet adapter to the camera's USB connector and then connect to a router using an Ethernet cable.**

- Connect the Ethernet cable to the USB-to-Ethernet adapter. Do not use force or attempt to insert the connectors at an angle.
- Connect the other end of the cable to a router.



- Connect the remaining cameras to the router using Ethernet cables.

2 **Select [USB-LAN] for [USB] in the network menu.**

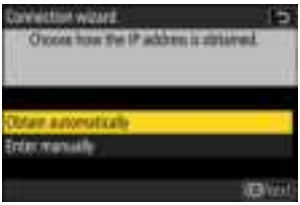
3 **Select [Connect to other cameras] in the network menu, then highlight [Network settings] and press ▶.**

4 **Highlight [Create profile] and press OK.**

5 **Name the new profile.**

- To display IP address options without changing the default name, press ?.
- Whatever name you choose will appear in the network menu [**Connect to other cameras**] > [**Network settings**] list.
- To rename the profile, press OK. Press ? to proceed after entering a name.
- There may be a delay before the camera detects the USB-to-Ethernet adapter. If the camera is unable to detect an Ethernet connection, the wizard will be configured to begin creation of a wireless LAN profile with the default name "WLAN1". Tap ↩ or press ◀ to return to Step 4, wait about 10 seconds, and then try again.

6 Obtain or select an IP address.



Highlight one of the following options and press OK.

Option	Description
[**Obtain automatically**]	Select this option if the network is configured to supply the IP address automatically. A "configuration complete" message will be displayed once an IP address has been assigned. • It is recommended that you note the remote camera IP address, as you will need it in subsequent steps.
[**Enter manually**]	Enter the IP address and sub-net mask manually. • Press OK; you will be prompted to enter the IP address. • Rotate the main command dial to highlight segments. • Press ◀ or ▶ to change the highlighted segment and press OK to save changes. • Next, press ⊕; a "configuration complete" message will be displayed. Press ⊕ again to display the sub-net mask. • Press ▲ or ▼ to edit the sub-net mask and press OK; a "configuration complete" message will be displayed.

7 Press OK to proceed when the "configuration complete" message is displayed.

The camera will initiate the connection. The profile name is displayed when a connection is established.

8 **Highlight [Master/remote] and press ▶.**

Choose a role for each camera from “master” and “remote”.

- [**Master camera**]: Pressing the shutter-release button on the master camera releases the shutters on the remote cameras. Each group can have only one master. If the group has multiple master cameras, only the first to connect to the network will actually serve in that capacity.
- [**Remote camera**]: The shutters on the remote cameras are synchronized with the shutter on the master camera.

9 **Repeat Steps 1 through 8 for the remaining cameras.**

When configuring remote cameras, be sure to select [**Remote camera**] in Step 8.

10 **On the master camera, highlight [Group settings] and press ▶.**

11 **Highlight [New] and press ⊛.**

12 Enter a group display name.

- Set a group display name to add remote cameras. Display names can be up to 32 characters long.
- Press ⊛ to proceed once entry is complete.

13 Highlight [Group name], press ▶, and enter a group name.

Enter a group name for the synchronized cameras. Group names can be up to eight characters long.

Assigning Remote Cameras a "Group Name"

The group name selected on the remote cameras must match that chosen for the master camera. Choose the name using [**Connect to other cameras**] > [**Group name**] in the network menu.

14 Highlight [Remote camera list] and press ▶.

Add remote cameras to the group. The master camera can store information for up to 16 remote cameras in slots [**01**] through [**16**].

15 **Highlight the desired slot and press ▶.**

Remote camera options will be displayed.

16 **Highlight [Address] and press ▶.**

You will be prompted to enter an IP address.

17 **Enter the remote camera IP address.**

Enter the remote camera IP address you noted in Step 6.

- Rotate the main command dial to highlight segments.
- Press ◀ or ▶ to change the highlighted segment and press OK to save changes.
- Press Q to add the remote camera to the master camera remote camera list and establish a connection.

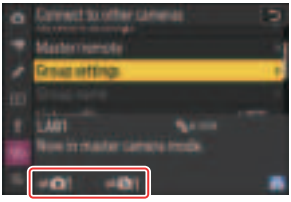
Tip: Viewing Remote Camera IP Addresses

To view a remote camera's IP address, select [**Connect to other cameras**] > [**Network settings**] in the camera's network menu, highlight a synchronized release host profile, press ▶, and select [**TCP/IP**].

---

18 Add the remaining remote cameras.

- The master camera shows the number of cameras in the group currently connected or not connected.



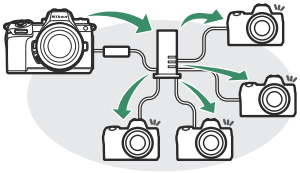
- A ⇌📷 icon appears in the master camera shooting display together with the number of remote cameras connected.

Connection Errors

In the event of remote camera connection errors, the remote camera count in the master camera shooting display will turn red and instead show the number of remote cameras that failed to connect.

19 Take pictures.

Pressing the shutter-release button on the master camera releases the shutters on the remote cameras.



Tip: Suspending Synchronized Release

To temporarily disable synchronized release without ending the camera's connection to the network, select [**OFF**] for [**Connect to other cameras**] > [**Synchronized release**] in the network menu.

Tip: Viewing Remote Camera Status

To view remote camera status, go to [**Connect to other cameras**] > [**Group settings**] > (group display name) in the master camera network menu, highlight [**Remote camera list**], and press ⊛.

- Remote cameras are identified by IP address.
- Remote camera status is displayed as follows:
  - [**Connected**]: Normal connection.
  - [**Busy**]: The camera is being controlled from another master camera.
  - [**Error**]: One of the following errors has been detected:
    - The remote camera standby timer has expired.
    - The remote camera is off.
    - The remote camera is not in the same group as the master camera.
    - The IP address is incorrect.
  - [**OFF**]: Either
    - no remote camera has been assigned to the slot, or
    - [**OFF**] is selected for [**Connect to remote camera**] on the camera in question.
- Highlighting a remote camera with the [**Connected**] label and pressing ⊛ displays the number of pictures awaiting upload from the camera via FTP, FTP connection status, the battery level, and the number of exposures remaining.
- The entries for the remote cameras previously used for synchronized release will show the time of the most recent shot.

- To edit remote camera settings from the master camera, highlight the camera in the remote camera list and press ⊛.
  - To temporarily suspend the connection to the selected camera, select [**OFF**] for [**Connect to remote camera**].
  - To temporarily suspend synchronized release on the selected camera, select [**OFF**] for [**Synchronized release**].
  - If desired, you can then edit the camera's IP address by highlighting [**Address**] and pressing ⊛. To reconnect, select [**ON**] for [**Connect to remote camera**]. No connection will be established if no remote camera exists at the specified address.

Tip: Saving Group Settings to a Memory Card

Navigate to [**Connect to other cameras**] > [**Group settings**] > [**Copy to/from card**] in the network menu, highlight [**Copy to card**], press ▶, and then highlight group settings you wish to save and press ▶ again. Select the destination (1–99) and press OK to copy the group settings to the memory card. Saved group settings can be loaded using [**Copy from card**].

New “Overwrite Copyright Info” Option for Master Cameras

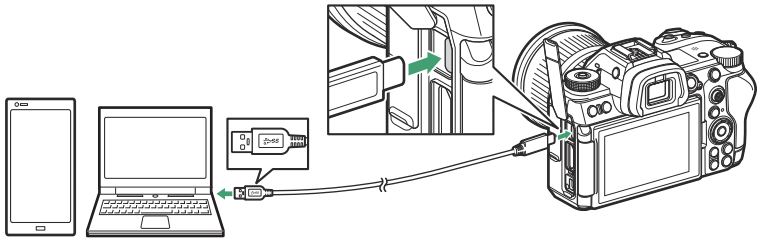
[**Overwrite copyright info**] has been added to the options available for [**Connect to other cameras**] in the network menu. Selecting this option overwrites the copyright information on any remote cameras currently connected with the copyright information stored on the master camera.

New Option for “USB” in Network Menu: “USB Streaming (UVC/UAC)”

[**USB streaming (UVC/UAC)**] has been added to [**USB**] in the network menu. You can use live streaming software and web conferencing applications on the computer or smart device connected to the camera via the supplied USB cable to live stream the video and audio recorded with the camera.

1 **Camera: Select [USB] in the network menu, highlight [USB streaming (UVC/UAC)], and press ⓞ.**

2 **Connect the camera and computer/smart device using the supplied USB cable.**



- The camera will enter streaming standby mode, and a message prompting you to start streaming and an STBY icon will be displayed in the shooting display.
- The video mode shooting display will appear regardless of the photo/video selector setting. The video mode settings including white balance and Picture Control will be applied to the streaming image.

3 Computer/smart device: Start streaming via a live streaming application.

- The camera will start streaming and a LIVE icon will be displayed in the shooting display.

- Streaming video is generated as follows.
  - Frame size/frame rate: 1080/60p, 1080/30p, 720/60p, 720/30p (settings available in the application/software vary depending on the model and specifications of the computer or smart device)
  - Video format: MJPEG
  - Audio format: PCM, 16-bit, stereo

Cautions: Live Streaming

- Install live streaming software or web conferencing applications on your computer/smart device in advance.
- Streaming will end automatically if:
  - [**USB**] in the network menu changes from [**USB streaming (UVC/UAC)**],
  - the USB cable is removed to terminate the connection, or
  - the camera is turned off.
- Some functions and settings cannot be used while streaming, including:
  - video recording,
  - display zoom,
  - HDMI connection,
  - communications with the computer/smart device other than the streaming software (for example, using software such as NX Studio),
  - time-lapse video recording,
  - focus shift, and
  - auto capture.
- Some menus can be set while streaming, but a gray image will be streamed while operating the menu.
- Depending on the operating system or model of the computer or smart device, you may need a connection application/software in addition to the application/software used for streaming.
- We do not guarantee that streaming is available with all computers/smart devices.

Using AirGlu Accessories While MC-N10 Remote Grips Connected

In earlier versions of the camera firmware, all Bluetooth functions were disabled while an MC-N10 was connected to the camera, but from “C” firmware version 2.00, Atomos UltraSync BLUE AirGlu accessories can be used via Bluetooth.

Time Code Display Remains Without an AirGlu Connection

In earlier versions of the camera firmware, the time code shown in the shooting display would switch to “TC:--:--:--:--” about 60 seconds after the wireless connection to an Atomos UltraSync BLUE AirGlu accessory ended. Starting in “C” firmware version 2.00, the time code remains in the shooting display after the wireless connection to the UltraSync BLUE is lost. The "TC” portion of the time code in the shooting display will be highlighted in red.

Post-Upgrade Specifications for “C” Firmware Version 2.00

Product specifications following upgrade to “C” firmware version 2.00 are listed below.

Type	
Type	Digital camera with support for interchangeable lenses
Lens mount	Nikon Z mount
Lens	
Compatible lenses	• Z mount NIKKOR lenses • F mount NIKKOR lenses (mount adapter required; restrictions may apply)
Effective pixels	
Effective pixels	24.5 million
Image sensor	
Type	35.9 × 23.9 mm CMOS sensor (full-frame/FX-format)
Total pixels	26.79 million
Dust-reduction system	Image sensor cleaning, Image Dust Off reference data (requires NX Studio)

Storage	
Image size (pixels)	• **[FX (36 × 24)] selected for image area**: - 6048 × 4032 (Large: 24.4 M) - 4528 × 3024 (Medium: 13.7 M) - 3024 × 2016 (Small: 6.1 M) • **[DX (24 × 16)] selected for image area**: - 3984 × 2656 (Large: 10.6 M) - 2976 × 1992 (Medium: 5.9 M) - 1984 × 1328 (Small: 2.6 M) • **[1:1 (24 × 24)] selected for image area**: - 4032 × 4032 (Large: 16.3 M) - 3024 × 3024 (Medium: 9.1 M) - 2016 × 2016 (Small: 4.1 M) • **[16:9 (36 × 20)] selected for image area**: - 6048 × 3400 (Large: 20.6 M) - 4528 × 2544 (Medium: 11.5 M) - 3024 × 1696 (Small: 5.1 M)
File format (image quality)	• **NEF (RAW)**: 14 bit; choose from lossless compression, high efficiency★, and high efficiency options • **JPEG**: JPEG-Baseline compliant with fine (approx. 1:4), normal (approx. 1:8), or basic (approx. 1:16) compression; size-priority and optimal-quality compression available • **HEIF**: Supports fine (approx. 1:4), normal (approx. 1:8), or basic (approx. 1:16) compression; size-priority and optimal-quality compression available • **NEF (RAW)+JPEG**: Single photograph recorded in both NEF (RAW) and JPEG formats • **NEF (RAW)+HEIF**: Single photograph recorded in both NEF (RAW) and HEIF formats

Storage	
Picture Control System	Auto, Standard, Neutral, Vivid, Monochrome, Flat Monochrome, Deep Tone Monochrome, Portrait, Rich Tone Portrait, Landscape, Flat, Creative Picture Controls (Dream, Morning, Pop, Sunday, Somber, Dramatic, Silence, Bleached, Melancholic, Pure, Denim, Toy, Sepia, Blue, Red, Pink, Charcoal, Graphite, Binary, Carbon); selected Picture Control can be modified; storage for Custom Picture Controls * Note: Choice of Picture Controls is restricted to Standard, Monochrome, and Flat when HLG is selected for tone mode during still photography.
Media	CFexpress (Type B), XQD, SD (Secure Digital), and UHS-II compliant SDHC and SDXC memory cards
Dual card slots	Either card can be used for overflow or backup storage, for separate storage of NEF (RAW) and JPEG or HEIF pictures, or for storage of duplicate JPEG or HEIF pictures at different sizes and image qualities; pictures can be copied between cards.
File system	DCF 2.0, Exif 2.32, MPEG-A MIAF
Viewfinder	
Viewfinder	1.27-cm/0.5-in. approx. 5760k-dot UXGA OLED electronic viewfinder with color balance and auto and 19-level manual brightness controls; high frame-rate display available
Frame coverage	Approx. 100% horizontal and 100% vertical
Magnification	Approx. 0.8× (50 mm lens at infinity, −1.0 m^{-1})
Eyepoint	21 mm (−1.0 m^{-1}; from rearmost surface of viewfinder eyepiece lens)
Diopter adjustment	−4–+2 m^{-1}
Eye sensor	Automatically switches between monitor and viewfinder displays

Monitor	
Monitor	8-cm/3.2-in., approx. 2100k-dot vari-angle TFT touch-sensitive LCD with 170° viewing angle, approximately 100% frame coverage, and color balance and 15-level manual brightness controls
Shutter	
Type	Electronically-controlled vertical-travel focal-plane mechanical shutter; electronic front-curtain shutter; electronic shutter
Speed *	$1/8000$ – 30 s (choose from step sizes of $1/3$, $1/2$, and 1 EV, extendable to 900 s in mode **M**), bulb, time * When using an electronic shutter, the shutter speed can be set up to $1/16000$ s.
Flash sync speed *	Flash synchronizes with shutter at speeds of $1/200$ s or slower; faster sync speeds are supported with auto FP high-speed sync * When using an electronic shutter, flash synchronizes with the shutter at speeds of $1/60$ s or slower; and auto FP high-speed sync cannot be used.
Release	
Release mode	Single frame, continuous low-speed, continuous high-speed, continuous high-speed (extended), high-speed frame capture + with Pre-Release Capture, self-timer
Approximate frame advance rate *	• **Continuous low-speed**: Approx. 1 – 7 fps • **Continuous high speed**: Approx. 8.1 fps (when using the electronic shutter and image quality settings other than NEF (RAW) and NEF (RAW) +: approx. 16 fps) • **Continuous high speed (extended)**: Approx. 14 fps (with electronic shutter: Approx. 20 fps) • **High-speed frame capture + (C15)**: Approx. 15 fps • **High-speed frame capture + (C30)**: Approx. 30 fps • **High-speed frame capture + (C60)**: Approx. 60 fps • **High-speed frame capture + (C120)**: Approx. 120 fps * Maximum frame advance rate as measured by in-house tests.
Self-timer	2 s, 5 s, 10 s, 20 s; 1–9 exposures at intervals of minimum, 0.5, 1, 2, or 3 s

Exposure	
Metering system	TTL metering using camera image sensor
Metering mode	• **Matrix metering** • **Center-weighted metering**: Weight of 75% given to 12 or 8 mm circle in center of frame or weighting can be based on average of entire frame • **Spot metering**: Meters circle with a diameter of approximately 4 mm centered on selected focus point • **Highlight-weighted metering**
Range *	−4 – +17 EV * Figures are for ISO 100 equivalent and f/2.0 lens at 20 °C/68 °F
Mode	AUTO: auto, **P**: programmed auto with flexible program, **S**: shutter-priority auto, **A**: aperture-priority auto, **M**: manual
Exposure compensation	−5 – +5 EV (choose from step sizes of 1/3 and 1/2 EV)
Exposure lock	Luminosity locked at detected value
ISO sensitivity (Recommended Exposure Index)	ISO 100–64000 (choose from step sizes of 1/3 and 1 EV); can also be set to approx. 0.3, 0.7, or 1 EV (ISO 50 equivalent) below ISO 100 or to approx. 0.3, 0.7, 1, or 1.7 EV (ISO 204800 equivalent) above ISO 64000; auto ISO sensitivity control available * Note: ISO sensitivity is limited to 400–64000 when HLG is selected for tone mode.
Active D-Lighting	Auto, Extra high, High, Normal, Low, and Off
Multiple exposure	Add, average, lighten, darken
Other options	HDR overlay, photo mode flicker reduction, high-frequency flicker reduction

Autofocus	
Type	Hybrid phase-detection/contrast AF with AF assist
Detection range *	−10 – +19 EV * Measured in photo mode at ISO 100 equivalent and a temperature of 20 °C/68 °F using single-servo AF (**AF-S**) and a lens with a maximum aperture of f/1.2
Lens servo	• **Autofocus (AF)**: Single-servo AF (**AF-S**); continuous-servo AF (**AF-C**); full-time AF (**AF-F**; available only in video mode); predictive focus tracking; focus limiter • **Manual focus (M)**: Electronic rangefinder can be used
Focus points *	273 focus points (single-point AF), 299 focus points (auto-area AF) * Number of focus points available in photo mode with FX selected for image area
AF-area mode	Pinpoint (available in photo mode only), single-point, dynamic-area (S, M, and L; available in photo mode only), wide-area (S, L, C1, and C2), and auto-area AF; 3D-tracking (available in photo mode only); subject-tracking AF (available in video mode only)
Focus lock	Focus can be locked by pressing shutter-release button halfway (single-servo AF/**AF-S**) or by pressing the center of the sub-selector
Vibration reduction (VR)	
Camera on-board VR	5-axis image sensor shift
Lens on-board VR	Lens shift (available with VR lenses)

Flash	
Flash control	**TTL**: i-TTL flash control; i-TTL balanced fill-flash is used with matrix, center-weighted, and highlight-weighted metering, standard i-TTL fill-flash with spot metering
Flash mode	Front-curtain sync, slow sync, rear-curtain sync, red-eye reduction, red-eye reduction with slow sync, off
Flash compensation	−3 – +1 EV (choose from step sizes of ⅓ and ½ EV)
Flash-ready indicator	Lights when optional flash unit is fully charged; flashes as underexposure warning after flash is fired at full output
Accessory shoe	ISO 518 hot-shoe with sync and data contacts and safety lock
Nikon Creative Lighting System (CLS)	i-TTL flash control, radio-controlled Advanced Wireless Lighting, optical Advanced Wireless Lighting, modeling illumination, FV lock, Color Information Communication, auto FP high-speed sync, unified flash control
White balance	
White balance	Auto (3 types), natural light auto, direct sunlight, cloudy, shade, incandescent, fluorescent (3 types), flash, choose color temperature (2500–10,000 K), preset manual (up to 6 values can be stored), all with fine-tuning
Bracketing	
Bracketing	Exposure and/or flash, white balance, and ADL

Other options for still photography	
Other options for still photography	Vignette control, diffraction compensation, auto distortion control, skin softening, portrait impression balance, interval-timer, focus-shift, and pixel-shift photography, auto capture, and content provenance recording
Video	
Metering system	TTL metering using camera image sensor
Metering mode	Matrix, center-weighted, or highlight-weighted
Frame size (pixels) and frame rate	• 5376 × 3024 (5.4K): 60p/50p/30p/25p/24p • 3840 × 2160 (4K UHD): 120p/100p/60p/50p/30p/25p/24p • 1920 × 1080: 240p/200p/120p/100p/60p/50p/30p/25p/24p • 1920 × 1080 (slow-motion): 30p ×4/25p ×4/24p ×5 * Note: Actual frame rates for 240p, 200p, 120p, 100p, 60p, 50p, 30p, 25p, and 24p are 239.76, 200, 119.88, 100, 59.94, 50, 29.97, 25, and 23.976 fps respectively.
Frame size (pixels) and frame rate (RAW video)	• 6048 × 3402: 60p/50p/30p/25p/24p • 4032 × 2268: 60p/50p/30p/25p/24p • 3984 × 2240: 120p/100p/60p/50p/30p/25p/24p * Note: Actual frame rates for 120p, 100p, 60p, 50p, 30p, 25p, and 24p are 119.88, 100, 59.94, 50, 29.97, 25, and 23.976 fps respectively.
File format	NEV, MOV, MP4
Video compression	N-RAW (12 bit), Apple ProRes RAW HQ (12 bit), Apple ProRes 422 HQ (10 bit), H.265/HEVC (8 bit/10 bit), H.264/AVC (8 bit)
Audio recording format	Linear PCM (48 KHz, 24 bit, for videos recorded in NEV or MOV format) or AAC (48 KHz, 16 bit, for videos recorded in MP4 format)

Video	
Audio recording device	Built-in stereo or external microphone can be used; external audio devices can be used via line input, audio input sensitivity adjustable; attenuator, frequency response, and wind noise reduction functions
Exposure compensation	−3 – +3 EV (choose from step sizes of 1/3 and 1/2 EV)
ISO sensitivity (Recommended Exposure Index)	• **Mode M**: Manual selection (ISO 100–51200; choose from step sizes of 1/6, 1/3, and 1 EV); with additional options available equivalent to approximately 0.3, 0.7, 1, or 2 EV (ISO 204800 equivalent) above ISO 51200; auto ISO sensitivity control (ISO 100–Hi 2.0) available with selectable upper limit * Note: ISO sensitivity is limited to 400–51200 when HLG is selected for tone mode. * Note: ISO sensitivity is limited to Lo 0.3–2.0 and 800–51200 when N-Log is selected for tone mode. • **Modes P, S, A**: Auto ISO sensitivity control (ISO 100–Hi 2.0) with selectable upper limit • AUTO mode: Auto ISO sensitivity control (ISO 100–51200)
Active D-Lighting	Extra high, High, Normal, Low, and Off
Other options for video	
Other options for video	Time-lapse video recording, electronic vibration reduction, time codes, N-Log and HDR (HLG) video, wave-form display, red REC frame indicator, video recording display zoom (50%, 100%, 200%, and 400%), extended shutter speeds (modes **S** and **M**), dual-format (proxy-video) recording for RAW video, option to view video recording info via **i** menu, Hi-Res Zoom, and auto capture

Playback	
Playback	Full-frame and thumbnail (up to 4, 9, or 72 pictures) playback with playback zoom, playback zoom cropping, video playback, loop playback, video playback speed adjustment, slide shows, histogram display, highlights, photo information, location data display, auto picture rotation, picture rating, filtered playback, voice memo recording and playback, IPTC information embedding and display, skip to first shot in series, series playback, save consecutive frames, and motion blend
Interface	
USB	Type-C SuperSpeed USB connector; connection to built-in USB ports is recommended
HDMI output	Type A HDMI connector
External audio input	Stereo mini-pin jack (3.5 mm diameter; plug-in power and line input supported)
Audio output	Stereo mini-pin jack (3.5 mm diameter)
Accessory terminal	Built-in (can be used with MC-DC2 remote cords and other optional accessories)

Wi-Fi/Bluetooth	
Wi-Fi	• **Standards** : - IEEE 802.11b/g/n/a/ac (Europe, Africa, the Middle East, Asia, Oceania, U.S.A., Canada, and Mexico) - IEEE 802.11b/g/n/a (The Americas, other than U.S.A., Canada, and Mexico) • **Operating frequency** : - Europe (other than Ukraine), Israel, Turkey and India: 2412–2472 MHz (channel 13) and 5180–5825 MHz (5180–5700 MHz and 5745–5825 MHz) - Algeria, Egypt, Morocco, the Republic of Congo, and Ukraine: 2412–2462 MHz (channel 11) and 5180–5320 MHz - Africa (other than Algeria, Egypt, Morocco, and the Republic of Congo), Asia (other than Turkey), and the Middle East (other than Israel): 2412–2462 MHz (channel 11) and 5745–5805 MHz - U.S.A., Canada, Mexico, Australia, New Zealand, the Republic of Fiji, and Papua New Guinea: 2412–2462 MHz (channel 11) and 5180–5825 MHz (5180–5580 MHz, 5660–5700 MHz, and 5745–5825 MHz) - Other countries in the Americas: 2412–2462 MHz (channel 11) and 5180–5805 MHz (5180–5320 MHz and 5745–5805 MHz) • **Maximum output power (EIRP)** : - 2.4 GHz band: 3.8 dBm - 5 GHz band: 9.5 dBm • **Authentication** : Open system, WPA2-PSK, WPA3-SAE
Bluetooth	• **Communication protocols**: Bluetooth Specification version 5.0 • **Operating frequency**: - Bluetooth: 2402–2480 MHz - Bluetooth Low Energy: 2402–2480 MHz • **Maximum output power (EIRP)**: - Bluetooth: −1.7 dBm - Bluetooth Low Energy: −3.2 dBm

Power source	
Battery	One EN-EL15c rechargeable Li-ion battery * * EN-EL15b and EN-EL15a batteries can be used in place of the EN-EL15c. Note, however, that fewer pictures can be taken on a single charge than with the EN-EL15c. EH-8P AC adapters can be used to charge EN-EL15c and EN-EL15b batteries only.
Battery pack	MB-N14 power battery packs (available separately) taking two EN-EL15c * batteries * EN-EL15b and EN-EL15a batteries can be used in place of the EN-EL15c. Note, however, that fewer pictures can be taken on a single charge than with the EN-EL15c.
AC adapter	• EH-8P AC adapters (available separately); require supplied USB cable featuring Type-C connectors at both ends • EH-5d, EH-5c, and EH-5b AC adapters; requires EP-5B power connector (available separately)
Tripod socket	
Tripod socket	0.635 cm (¼ in., ISO 1222)
Dimensions/weight	
Dimensions (W × H × D)	Approx. 138.5 × 101.5 × 74 mm/5.5 × 4 × 3 in.
Weight	Approx. 760 g (1 lb. 10.9 oz.) with battery and memory card but without body cap and accessory shoe cover; approx. 670 g/1 lb. 7.7 oz. (camera body only)

Operating environment	
Temperature	–10 °C– 40 °C (+14 °F – 104 °F)
Humidity	85% or less (no condensation)

- Unless otherwise stated, all measurements are performed in conformity with Camera and Imaging Products Association (CIPA) standards or guidelines.
- All figures are for a camera with a fully-charged battery.
- Throughout this document, “FX format” and “FX” are used in reference to an angle of view equivalent to that of a 35 mm format (“full frame”) camera and “DX format” and “DX” to an angle of view equivalent to that of an APS-C camera.
- The sample images displayed on the camera and the images and illustrations in this document are for expository purposes only.
- Nikon reserves the right to change the appearance, specifications, and performance of the product described in this document at any time and without prior notice. Nikon will not be held liable for damages that may result from any mistakes that this document may contain.

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