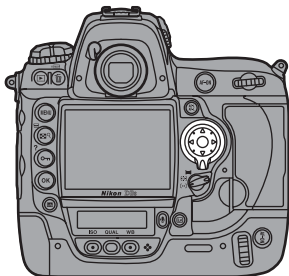


**Nikon**



# D3s Professional Technical Guide



En

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## **Tech Notes**

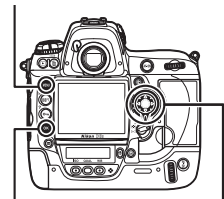
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# Using the Menus

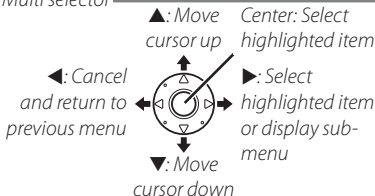
Use the MENU button,  button, and multi selector to navigate the menus.

MENU button



 button

Multi selector



## 1 Display the menus.

Press the MENU button to display the menus.

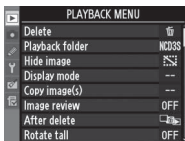
## 2 Highlight the icon for the current menu.

Press ◀ to highlight the icon for the current menu.



### 3 Select a menu.

Press ▲ or ▼ to select the desired menu.



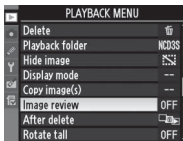
### 4 Position the cursor in the selected menu.

Press ► to position the cursor in the selected menu.



### 5 Highlight a menu item.

Press ▲ or ▼ to highlight a menu item.



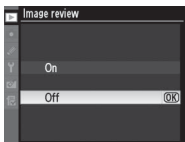
### 6 Display options.

Press ► to display options for the highlighted menu item.

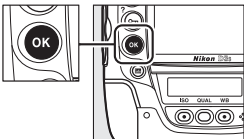


**7 Highlight an option.**

Press ▲ or ▼ to highlight an option.

**8 Select the highlighted item.**

Press **OK** to select the highlighted item (some items can also be selected by pressing ► or the center of the multi-selector). To exit without making a selection, press the **MENU** button.



# Autofocus: Focusing with Autofocus

This chapter details Custom Settings that can be used to frame moving subjects at sporting events:

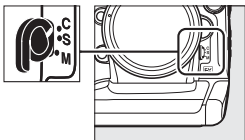
- a1 (**AF-C priority selection**)
- a3 (**Dynamic AF area**)
- a4 (**Focus tracking with lock-on**)

These options are best used at the following settings:

- **Focus mode:** **C** (continuous-servo AF)
- **AF-area mode:** [AF-ON] (dynamic-area AF)

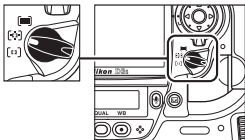
## 1 Select continuous-servo AF.

Rotate the focus-mode selector to **C**. The camera will continually adjust focus while the shutter-release button is pressed halfway.



## 2 Select dynamic-area AF.

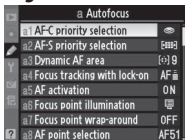
Rotate the AF-area mode selector to [AF-ON] (dynamic-area AF). If the subject briefly leaves the selected focus point, the camera will focus based on information from surrounding focus points.





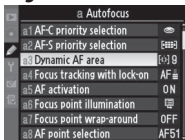
### 3 Choose an option for Custom Setting a1.

Choose whether the camera gives priority to focus or to shutter response in focus mode **C**.



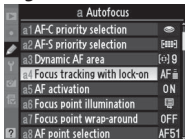
### 4 Choose an option for Custom Setting a3.

Choose the number of focus points used for dynamic-area AF. Select **9 points** or **21 points** for track-and-field events or for subjects that move unpredictably.



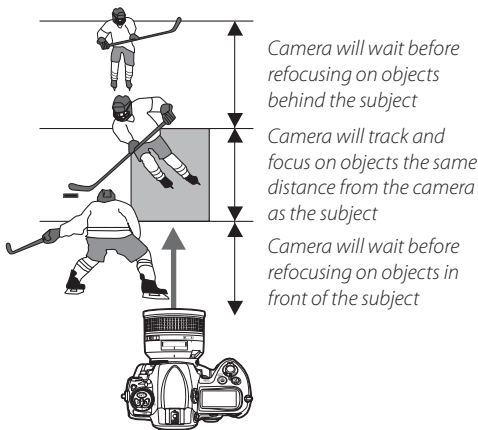
### 5 Choose an option for Custom Setting a4.

Choose how quickly the camera responds when an object moves between the subject and the camera.



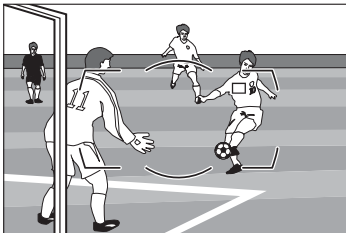
### Focus Tracking with Lock-On

By preventing the camera from refocusing when your subject is briefly obscured by another object, focus tracking with lock-on ensures that the camera will continue to track the main subject once the obstacle has moved away (focus mode **C** only). Choose the length of time before the camera refocuses from **5 (Long)**, **4, 3 (Normal)**, **2**, and **1 (Short)**. To refocus before lock-on ends, press the shutter-release button halfway or press the **AF-ON** button again.

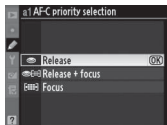


## Behind the Goal

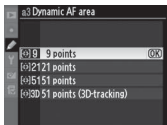
Photographers positioned behind the goal at a soccer match are faced with subjects that move unpredictably and that may be intermittently obscured by objects coming between the subject and the camera during framing.



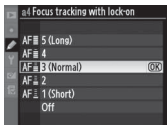
Choose the following focus options:



**AF-C priority selection: Release**



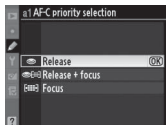
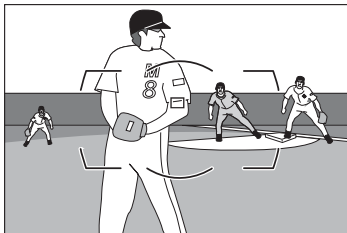
**Dynamic AF area: 9 points or 21 points**



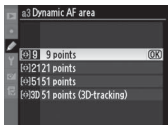
**Focus tracking with lock-on: 3 (Normal)**

## Pitcher or Runner?

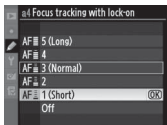
Choose lower lock-on times for improved focus response when you may have to switch quickly between subjects at different distances from the camera.



**AF-C priority selection: Release**



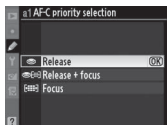
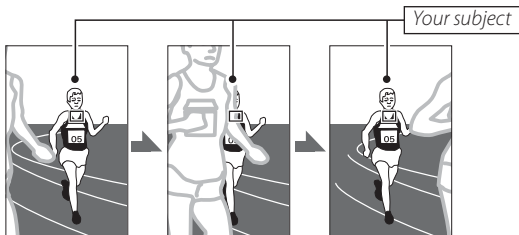
**Dynamic AF area: 9 points or 21 points**



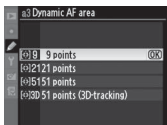
**Focus tracking with lock-on: 1 (Short) or Off** (note that **Off** reduces effectiveness of dynamic-area AF)

## The Inside Track

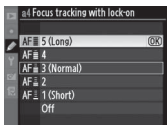
Choose longer lock-on times when photographing a runner on the inside track or in other situations in which your subject may be blocked for relatively long periods.



**AF-C priority selection: Release**



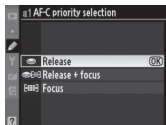
**Dynamic AF area: 9 points or 21 points**



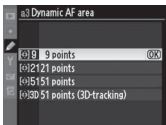
**Focus tracking with lock-on: 5 (Long)**

## At the Finish Line

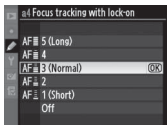
Selecting **Release** for Custom Setting a1 ensures a quick shutter response and faster frame advance rates.



**AF-C priority selection: Release**



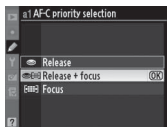
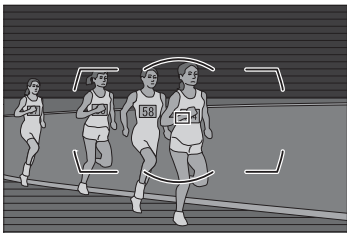
**Dynamic AF area: 9 points or 21 points**



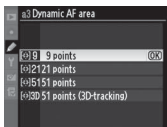
**Focus tracking with lock-on: 3 (Normal)**

## Poor Lighting or Bad Weather

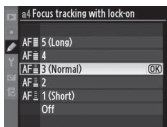
Select **Release + focus** for quick shutter response while slowing frame advance rates in continuous release mode for improved focus with scenes that are poorly lit or low contrast.



**AF-C priority selection:**  
**Release + focus**






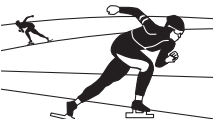

**Dynamic AF area:**  
**9 points or 21 points**



**Focus tracking with lock-on:**  
**3 (Normal)**

**Note:** If **Focus** is selected for Custom Setting a1, the shutter can only be released when the camera is in focus.

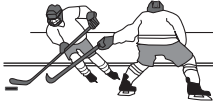




## Autofocus: Winter Sports

Event	Description
<p><i>Singles figure skating</i></p> 	<p>Subjects move rapidly with random change in speed.</p>
<p><i>Pairs figure skating/ice dance</i></p> 	<p>Subjects move rapidly and frequently overlap; normal framing may result in camera focusing on background.</p>
<p><i>Figure skating (from second-row seat)</i></p> 	<p>Ice surface appears in background.</p>
<p><i>Speed skating</i></p> 	<p>Subjects are fast-moving but easy to frame.</p>
<p><i>Short track speed skating</i></p> 	







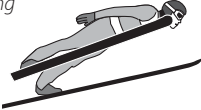
	AF-C priority selection	Dynamic AF area	Focus tracking with lock-on
	Release	9 points or 21 points	3 (Normal)
		21 points	5 (Long)
		9 points or 21 points	3 (Normal)
		9 points or 21 points	
		9 points	

## Autofocus

Event	Description
<p><i>Ice hockey</i></p> 	<p>Subjects are extremely fast-moving and frequently overlap.</p>
<p><i>Curling</i></p> 	<p>Composition focuses on curlers.</p>
<p><i>Freestyle cross</i></p> 	<p>Woods provide high-contrast background.</p>
<p><i>Freestyle aerial</i></p> 	<p>Rapid, complicated movement.</p>
<p><i>Freestyle moguls (trick)</i></p> 	<p>Subject is performing trick.</p>

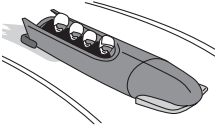


	AF-C priority selection	Dynamic AF area	Focus tracking with lock-on
	Release	9 points	Off-2
		9 points, or select [∞] (single-point) for AF-area mode	3 (Normal)–5 (Long)
		9 points	1 (Short)
		51 points	3 (Normal)
		21 points	

## Autofocus

Event	Description
<i>Freestyle moguls</i> 	Subjects move predictably between tricks.
<i>Alpine skiing</i> 	Subjects are fast-moving but easy to frame.
<i>Snowboard halfpipe</i> 	
<i>Biathlon/ cross-country skiing</i> 	Subjects are easy to frame.
<i>Ski jumping</i> 	Subject has left the ramp and is in the middle of the jump.

	<b>AF-C priority selection</b>	<b>Dynamic AF area</b>	<b>Focus tracking with lock-on</b>
	<b>Release</b>	<b>9 points</b>	<b>3 (Normal)</b>
		<b>9 points or 21 points</b>	

## Autofocus

Event	Description
<i>Bobsleigh</i> 	Subjects are sliding down a track.
<i>Skeleton</i> 	
<i>Luge</i> 	

	<b>AF-C priority selection</b>	<b>Dynamic AF area</b>	<b>Focus tracking with lock-on</b>
	<b>Release</b>	<b>9 points</b>	<b>3 (Normal)</b>

## Exposure: Auto ISO Sensitivity Control

Auto ISO sensitivity control automatically adjusts ISO sensitivity if optimal exposure can not be achieved at the value selected by the user.

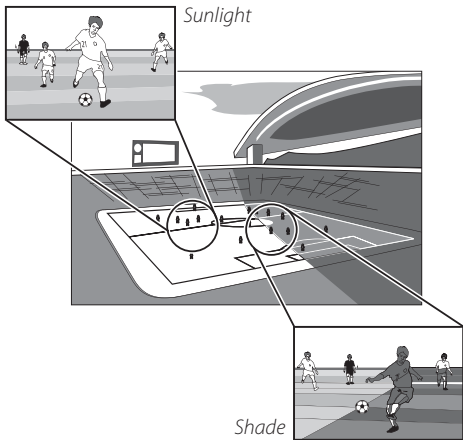
### Tip

Exposure compensation can be used with auto ISO sensitivity control. Matrix metering is recommended. In exposure mode **M**, enable ISO sensitivity auto control to ensure optimal exposure at the selected shutter speed and aperture.

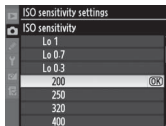


## A Daytime Stadium Match

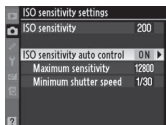
Auto ISO sensitivity control is ideal for scenes with large variations in brightness.



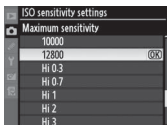
Choose the following ISO sensitivity settings:



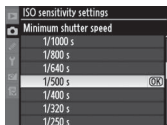
**ISO sensitivity: 200**



**ISO sensitivity auto control: On**



**Maximum sensitivity: 12800**



**Minimum shutter speed: 1/500 s**

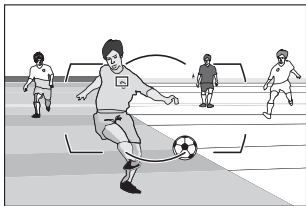
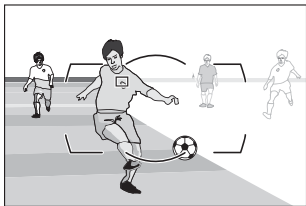
In this example, ISO sensitivity will automatically be raised to a maximum of ISO 12800 if optimal exposure can not be achieved at ISO 200. In modes *P* and *A*, sensitivity will be raised only if the shutter speed required for optimal exposure would be slower than 1/500 s (slower speeds will be used if a speed of 1/500 s would still result in underexposure at ISO 12800).

## Exposure: Active D-Lighting (ADL)

Active D-Lighting preserves details in highlights and shadows, creating photographs with natural contrast.

### A Daytime Stadium Match Revisited

Use Active D-Lighting for compositions that include areas of sharply contrasting brightness.



The following settings are recommended:



<b>Active D-Lighting</b>	<b>Auto</b>
<b>Metering</b>	Matrix <sup>1</sup>
<b>Exposure mode</b>	<i>P</i> , <i>S</i> , or <i>A</i> <sup>2</sup>
<b>ISO sensitivity</b>	ISO 3200 or less <sup>3</sup>
<b>Memory card</b>	UDMA-compliant memory card <sup>4</sup>

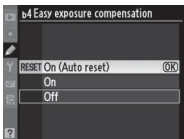
1. Active D-Lighting will not produce the desired effect when used with center-weighted or spot metering.
2. Active D-Lighting may not produce the desired results in mode *M*.
3. Noise may be more noticeable in photographs taken at higher values.
4. Choose cards with faster write times for quicker processing when taking large numbers of photographs.

### Winter Sports

Because they help to preserve details in bright areas of shots taken at the ski slope and in other snowy locations on sunny days, these settings are also recommended for winter sports photographs.

## Exposure: Easy Exposure Compensation

When **On** or **On (Auto reset)** is selected for Custom Setting b4 (**Easy exposure compensation**), exposure compensation can be set simply by rotating a command dial (at default settings, the sub-command dial is used for easy exposure compensation in exposure modes **P** and **S**, and the main command dial is used in exposure mode **A**). If **On (Auto reset)** is selected, exposure compensation will automatically be reset to 0 when the camera is turned off.



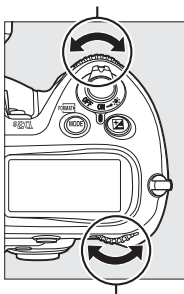
### Note

Auto reset also resets exposure compensation when the exposure meters turn off. The length of time the exposure meters remain on is controlled with Custom Setting c2 (**Auto meter-off delay**).

**Custom Setting f8**

The dial used to set exposure compensation when **On (Auto reset)** or **On** is selected for Custom Setting b4 (**Easy exposure compensation**) depends on the option selected for Custom Setting f8 (**Customize command dials**) > **Change main/sub.**

*Sub-command dial*






*Main command dial*

		<b>Customize command dials &gt; Change main/sub</b>	
		<b>Off</b>	<b>On</b>
<b>Exposure mode</b>	<b>P</b>	Sub-command dial	
	<b>S</b>	Sub-command dial	Main command dial
	<b>A</b>	Main command dial	Sub-command dial
	<b>M</b>	N/A	

## Shooting Tips: Image Area

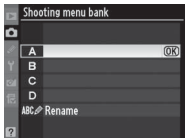
At default settings, image quality is not automatically adjusted when you choose a smaller image area. As a result, pictures taken using smaller image areas will not be the same quality as FX-format images when printed at the same size. You can however produce photos of similar quality to FX-format images by increasing the pixel count and/or reducing compression when choosing smaller image areas. The cells highlighted in white in the table below show how different combinations of settings can produce results of similar quality, as indicated by the pixel count in mega-pixels (M).

Compression and image size	Image area (dotted lines show angle of view)		
	 FX (36 × 24) 1.0 ×	 1.2 × (30 × 20) 1.2 ×	 DX (24 × 16) 1.5 ×
JPEG basic, size M	6.8 M	4.7 M	2.9 M
JPEG normal, size M	6.8 M	4.7 M	2.9 M
JPEG fine, size L	12.1 M	8.4 M	5.1 M

To switch rapidly from one image area to another while maintaining image quality, assign each combination of settings to a shooting menu bank and use the **Fn** button to switch between banks.

### 1 Choose shooting menu bank A.

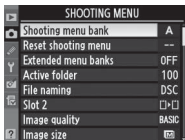
In the shooting menu, select **Shooting menu bank**. Highlight bank A and press **OK**.



### 2 Adjust settings for shooting menu bank A.

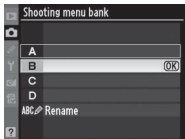
Sample settings are listed below:

- **Image quality:** JPEG basic
- **Image size:** M
- **Image area:** FX (36×24) 1.0×



### 3 Choose shooting menu bank B.

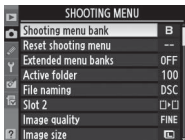
In the shooting menu, select **Shooting menu bank**. Highlight bank B and press **OK**.



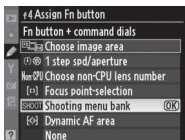


**4 Adjust settings for shooting menu bank B.**

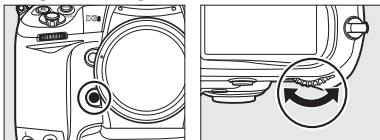
For quality similar to that produced by the settings in Step 2, choose either (a) **JPEG normal**, size **M**, and **1.2x (30x20) 1.2x**, or (b) **JPEG fine**, size **L**, and **DX (24x16) 1.5x**.

**5 Choose the role of the Fn button.**

In the Custom Settings menu, select Custom Setting f4 (**Assign Fn button**) > **Fn button + command dials**. Highlight **Shooting menu bank** and press **OK**.

**6 Switch between shooting menu banks.**

Press the **Fn** button and rotate a command dial to cycle through shooting menu banks as shown below.



### Note

Apart from image quality, image size, and image area, settings for banks A and B should be identical. Any changes to bank A should also be made to bank B. Note that although separate Picture Controls may be selected for each bank, modifications to Picture Control settings (including quick adjust and other manual adjustments) and changes to **Interval timer shooting**, **Multiple exposure**, and **Extended menu banks** apply to all banks.

### Frame Rate (Continuous High-Speed Release Mode)

The table below shows the maximum frame rate for continuous high-speed (CH) release mode.

DX (24×16) 1.5×	Other image areas
9–11 fps*	9 fps

\* Frame rate selected using Custom Setting d2 (**Shooting speed**) > **Continuous high-speed**. Note that at 10 and 11 fps, focus will be fixed at the setting for the first photograph in each series, and exposure may be fixed at the value for the first photograph in each series if the subject is poorly lit.

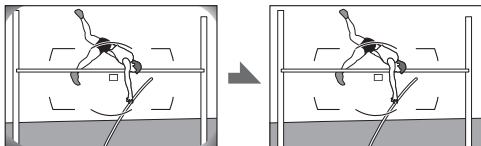
**Tips**

The camera has four shooting menu banks (A, B, C, and D). Different combinations of shooting menu settings can be stored in different banks, allowing the user to switch instantly from one combination to another using the **Shooting menu bank** option in the shooting menu or using the **Fn** button as described on the preceding pages. Menu bank selection can also be assigned to the **Pv** or **AE-L/AF-L** button using Custom Setting f5 (**Assign preview button**) or f6 (**Assign AE-L/AF-L button**).

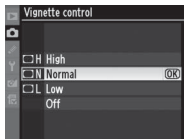
If the settings in bank C are the same as bank A and those in bank D the same as bank B, you will be able to identify the selected image area by the crop displayed in the viewfinder.

## Shooting Tips: Vignette Control

You may notice a drop in peripheral illumination (vignetting) with certain lenses, particularly at maximum aperture. This can be corrected using the **Vignette control** option in the shooting menu.



Selecting **Vignette control** in the shooting menu displays the options shown at right.



---

**Note**

**Vignette control** can be used type G and D lenses only (either alone or with AF-S/AF-I teleconverters) but is not available with DX-format or PC lenses or when FX-format lenses are used with the DX-format crop. It has no effect on movies, multiple exposures, or image overlay or when **DX (24 × 16) 1.5 ×** is selected for **Image area**. Although its effects are not visible in the live view display, vignette control does apply to photographs taken using live view.

## Shooting Tips: Multiple Exposures

Follow the steps below to record a series of two to ten exposures in a single photograph. While multiple exposures can be recorded at any image quality setting, they make use of RAW data from the camera image sensor to produce results with colors noticeably better than photographs combined in an imaging application.

### Creating a Multiple Exposure

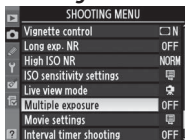
Note that shooting will end and a multiple exposure will be recorded automatically if no operations are performed for 30 s.

#### Extended Recording Times

For an interval between exposures of more than 30 s, extend the auto meter-off delay using Custom Setting c2 (**Auto meter-off delay**). The maximum interval between exposures is 30 s longer than the option selected for Custom Setting c2.

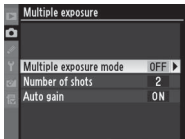
#### **1** Select Multiple exposure in the shooting menu.

Press the MENU button to display the menus. Highlight **Multiple exposure** in the shooting menu and press ►.



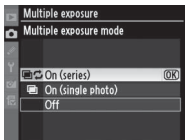
## 2 Select a mode.


Highlight **Multiple exposure mode** and press ►.

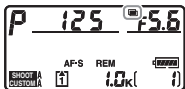


Highlight one of the following and press **OK**.

- **To take a series of multiple exposures**, select **On (series)**. Multiple exposure shooting will continue until you select **Off** for **Multiple exposure mode**.
- **To take one multiple exposure**, select **On (single photo)**. Normal shooting will resume automatically after you have created a single multiple exposure.
- **To exit without creating additional multiple exposures**, select **Off**.

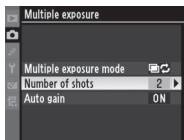


If **On (series)** or **On (single photo)** is selected, a  icon will be displayed in the top control panel.

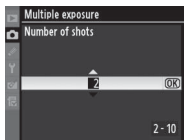


**3 Choose the number of shots.**

Highlight **Number of shots** and press ►.



Press ▲ or ▼ to choose the number of exposures that will be combined to form a single photograph and press **OK**.



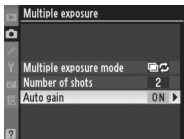
**Column: The BKT Button**

If **Multiple exposure** is selected for Custom Setting f7 (**Assign BKT button**), you can select the multiple exposure mode by pressing the **BKT** button and rotating the main command dial, and the number of shots by pressing the **BKT** button and rotating the sub-command dial. The mode and number of shots are shown in the top control panel: **■** **L** appears when **On (series)** is selected and **■** when **On (single photo)** is selected; no icon appears when multiple exposure is off.



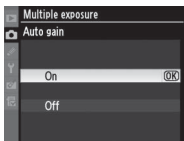
**4 Adjust gain.**

Highlight **Auto gain** and press **▶**.





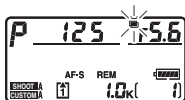
Highlight one of the following options and press **Ⓚ**.

- **On:** Gain is adjusted according to the number of exposures actually recorded (gain for each exposure is set to 1/2 for two exposures, 1/3 for three exposures, etc.).
- **Off:** Gain is not adjusted when recording multiple exposures. Recommended when shooting against a dark background.



**5** *Take photographs.*

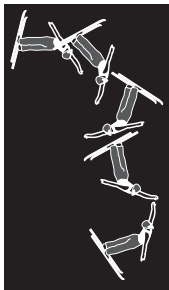
Continue shooting until all exposures have been recorded; the  icon will blink until shooting ends. If **On (single photo)** is selected, multiple exposure shooting ends automatically when the first multiple exposure is complete; if **On (series)** is selected, multiple exposure shooting will only end when **Off** is selected for multiple exposure mode. The  icon clears from the display when multiple exposure shooting ends.



### Column: Dark Backgrounds

The following settings are recommended when shooting a multiple exposure against a dark background:

- **Number of shots:** 2–10
- **Auto gain:** Off
- **Shooting speed:** 5–7 fps
- **Picture Control:** Standard, Contrast +1
- **Active D-Lighting:** Off



#### Note

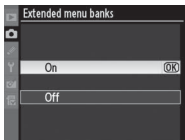
If **On** is selected for **ISO sensitivity settings** > **ISO sensitivity auto control** in the shooting menu, ISO sensitivity will be fixed at the value for the first shot in each multiple exposure.

## Shooting Tips: Extended Menu Banks

To store exposure mode, shutter speed, and/or aperture in a shooting menu bank:

### 1 Choose On for Extended menu banks.

Choose **On** for **Extended menu banks** in the shooting menu.



### 2 Select a bank.

Use the **Shooting menu bank** option in the shooting menu to select a bank.

### 3 Adjust settings.

Adjust exposure mode, shutter speed, and aperture as desired. These settings will then be recalled whenever the bank is selected.

Other combinations of exposure mode, shutter speed, and aperture can be stored in the remaining banks as long as **On** is selected for **Extended menu banks**; selecting **Off** for **Extended menu banks** restores all banks to the values in effect before **On** was selected.

## Sample Settings for Different Subjects

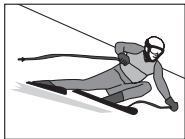
Sample settings shown in parentheses are not stored in extended shooting menu banks.

*Camera panned to blur background*



Exposure mode **S**  
(f/22, 1/15 s, (ISO 200))

*Freeze frame*



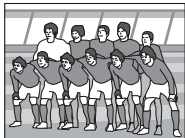
Exposure mode **S**  
(f/4, 1/1000 s, (ISO 200))

*During match*



Exposure mode **M**  
f/2.8, 1/1000 s, (ISO 1600)

*Team portrait*



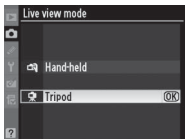
Exposure mode **A**  
f/8, (1/125 s), (ISO 1600)

## Movie Tips: M-Mode Movies

Movies can be recorded in exposure mode **M** (manual).

### 1 Select Tripod for Live view mode.

Select **Live view mode** in the shooting menu, highlight **Tripod**, and press **OK** or the center of the multi selector.



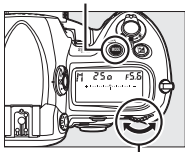
### 2 Select mode M.

Press the **MODE** button and rotate the main command dial to select mode **M**.

#### Note

Choose a Picture Control and color space before starting live view.

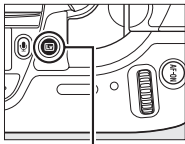
Mode button



Main command dial

### 3 Start live view.

Press the **Lv** button to start live view.



Lv button

#### 4 **Preview exposure.**

Press **OK** to preview exposure in the monitor. Adjust shutter speed and aperture and check the results in the preview display.



#### **Notes: Exposure Preview**

Always use the exposure preview to adjust shutter speed and aperture. Changes to these settings may not be reflected in the live view display.

Exposure is set using matrix metering and can be adjusted by  $\pm 5$  EV, although only values between  $-3$  and  $+3$  EV are reflected in the preview display. Note that the preview may not accurately reflect exposure at ISO sensitivities below ISO 200 or above ISO 12800, at shutter speeds slower than  $1/25$  s, or when an optional flash unit is attached, Active D-Lighting or bracketing is in effect, **x 250** is selected for shutter speed, or the subject is very bright or very dark. Exposure preview is not available when **b u l b** is selected for shutter speed.

#### **Tip**

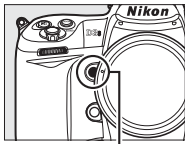
To prevent flicker, choose shutter speeds of  $1/125$  s,  $1/60$  s, or  $1/30$  s if the local AC power supply is 60 Hz, or  $1/100$  s,  $1/50$  s, or  $1/25$  s if the power supply is 50 Hz.

**5** *Focus.*

Press the **AF-ON** button to focus. Note that focus can be improved by selecting small apertures (high f-numbers) for increased depth of field.

**6** *Start recording.*

Press the **Pv** button or the center of the multi selector to start recording.



**Pv** button

**7** *End recording.*

Press the **Pv** button or the center of the multi selector again to end recording.


**Column: Ending with a Photo**

To end recording and take a still picture in live view, press the shutter-release button all the way down. There may be a slight delay before the photo is taken. If **On** is selected for **Image review** in the playback menu, the photo will be displayed after shooting; press **▶** to return to live view.

Exposure may differ from live view. Check exposure in the exposure preview before shooting.



 **Notes**

If **On** is selected for **ISO sensitivity settings > ISO sensitivity auto control** in the shooting menu, ISO sensitivity will automatically be adjusted for optimal exposure at the shutter speed selected in the exposure preview. A  icon in the monitor indicates that **On** is selected for **Movie settings > High-sensitivity movie mode**. **Off** is recommended in most situations. To switch quickly between normal ISO sensitivity and high-sensitivity movie mode, use My Menu.

Noise reduction is not available during movie recording.

If you exit live view while the exposure preview is displayed, the preview will be displayed the next time you start live view. Changes to settings in the exposure preview remain in effect when you exit live view.

**AE Lock**

AE lock can be used during exposure preview to lock exposure at the current value or to reduce variations in exposure. Assigning **AE lock (Reset on release)** or **AE lock (Hold)** to the **AF-ON**, **Fn**, **Pv**, or **AE-L/AF-L** button allows you to lock exposure while leaving your hands free for other tasks.

## Changing Movie Settings

The **Movie settings** menu offers the following options. Adjust settings before recording.

<b>Quality</b>	Choose a frame size. <sup>1</sup>
<b>Microphone</b>	Adjust microphone sensitivity. <sup>2</sup>
<b>Destination</b>	When using two memory cards, choose the card to which movies will be saved. <sup>3</sup>
<b>High-sensitivity movie mode</b>	If lighting is so poor that the subject is difficult to see with the naked eye, choose <b>On</b> to shoot at ISO sensitivities of ISO 6400 to Hi 3. Select <b>Off</b> to shoot at ISO sensitivities between ISO 200 and ISO 12800.

- 1 A frame size of **1280 × 720 (16:9)** is available only when **FX (36 × 24) 1.0×** is selected for **Image area**.
- 2 When an external microphone with its own sensitivity adjustment controls is attached, adjust sensitivity on both the microphone and camera. Note that the built-in microphone and monaural external microphones record only the left channel.
- 3 Movies will not be recorded to the remaining card even when the card in the selected slot is full. When two memory cards are inserted, photographs are recorded to the card in Slot 1; movies and photographs can be recorded to separate cards by selecting **Slot 2** for **Destination**.

**Note**

Because the live view display does not have the same aspect ratio as the movie frame, the top and bottom portions of the area visible in the live view display will not be recorded in movies.

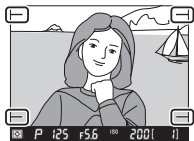


*Live view*



*Actual movie*

The movie crop can be previewed by pressing the **info** button.



## Movie Tips: Movie Stills

Selected frames from movies can be saved as JPEG stills.

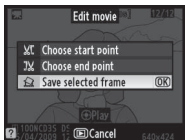
### 1 *Display movie retouch options.*

Display the movie in full-frame playback and press **OK**. The options shown at right will be displayed.



### 2 *Select Save selected frame.*

Highlight **Save selected frame** and press **OK**.



### 3 *Choose a frame.*

Press the center of the multi-selector to start or resume playback, **▼** to pause, and **◀** or **▶** to rewind or advance (pause to rewind or advance one frame at a time). With the movie paused on the desired frame, press **▲**.



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### Notes

Stills are the same dimensions as the original movie frame and include the following Exif data: date of creation, date modified, file size, image size, aspect ratio, date of recording, camera name, lens name, color space, and a tag that identifies the image as a movie still when it is displayed in Capture NX 2 version 2.2.3 or later or View NX version 1.5.1 or later.

Movie stills can not be retouched or used as source images for white balance.

### **Tip**

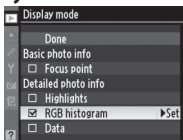
When recording movies with the intent of creating stills, shoot at high shutter speeds in exposure mode **S** or **M**. This will produce stills with relatively little blur.

# Playback Tips: Histograms

The histogram in the playback photo information display shows only the data for the portion of the image selected for playback zoom.

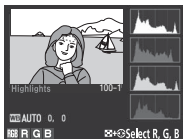
## 1 Select RGB histogram for Display mode.

Select **Detailed photo info** > **RGB histogram** for **Display mode** in the playback menu and then highlight **Done** and press **OK**.



## 2 Display the RGB histogram page.

Display the RGB histogram page in the playback photo information display.





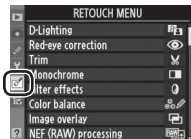
## 3 Zoom in.

Press the **Q** button and rotate the main command dial left or right to choose the size of the zoom frame, then release the button to zoom in on the selected area. Use the multi selector to scroll to other areas of the image.



## Playback Tips: Photo Retouch

The  (retouch) menu can be used to create retouched copies of existing photographs. To display the retouch menu, press the MENU button and select the  tab. The following options are available:



 **D-Lighting\***

 **Red-eye correction\***

 **Trim**

 **Monochrome\***

 **Filter effects\***

 **Color balance\***

 **Image overlay**

 **NEF (RAW) processing**

 **Resize**

 **Side-by-side comparison**

 **Edit movie**

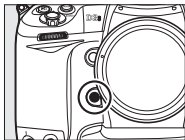
\* Not available with photographs taken with **Monochrome** selected for **Set Picture Control**.

### **Note**

Most options can be applied to copies created using other retouch options, although with the exceptions of **Image overlay** and **Edit movie > Choose start point/Choose end point** each option can be applied only once. Images created with **Save selected frame** can not be retouched.

## Button Tips: The Fn Button

Custom setting f4 (**Assign Fn button**) is used to choose the role played by the **Fn** button, either by itself (**Fn button press**) or when used in combination with the command dials (**Fn button + command dials**).



	<b>Choose image area (default)</b>
	<b>1 step spd/aperture</b>
	<b>Non-CPU Choose non-CPU lens number</b>
	<b>Focus-point selection</b>
	<b>SHOOT Shooting menu bank</b>
	<b>Dynamic AF area</b>
	<b>None</b>

	<b>Preview</b>
	<b>FV lock</b>
	<b>AE/AF lock</b>
	<b>AE lock only</b>
	<b>AE lock (reset on release)</b>
	<b>AE lock (Hold)</b>
	<b>AF lock only</b>
	<b>Flash off</b>
	<b>BKT Bracketing burst</b>
	<b>Matrix metering</b>
	<b>Center-weighted metering</b>
	<b>Spot metering</b>
	<b>Virtual horizon</b>
	<b>Playback</b>
	<b>Access top item in MY MENU</b>
	<b>None (default)</b>



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**Note**

Most of the functions listed in the table on the previous page can also be assigned to the **Pv** and **AE-L/AF-L** buttons using Custom Settings f5 (**Assign preview button**) and f6 (**Assign AE-L/AF-L button**). Additionally, the **AE-L/AF-L** button can be assigned the **AF-ON** function. Note, however, that **Focus point-selection** can not be assigned to either the **Pv** or the **AE-L/AF-L** button, and that **1 step spd/aperture** can not be assigned to the **AE-L/AF-L** button.

### Quick Menu Access

Use the **Fn** button for quick access to a frequently-used menu item that you have assigned to the top item in My Menu.

#### 1 Select Custom Setting f4.

Highlight Custom Setting f4 (**Assign Fn button**) in the Custom Settings menu and press **▶**. The options shown at right will be displayed.



#### 2 Select Access top item in MY MENU.

Select **Access top item in MY MENU** for **Fn button press**.



## One-Handed Playback

Use the **Fn** button for playback when your left hand is busy supporting a telephoto lens, making the **▶** button hard to press.

### 1 Select Custom Setting f4.

Highlight Custom Setting f4 (**Assign Fn button**) in the Custom Settings menu and press **▶**. The options shown at right will be displayed.



### 2 Select Playback.

Select **Playback** for **Fn button press**.



## Button Tips: Checking Focus

If **Zoom on/off** is assigned to the center of the multi selector, you can press the center of the multi selector to zoom in on the active focus point and check focus during playback or live view. Press the center of the multi selector again to cancel zoom.

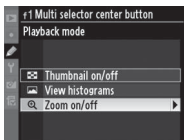
### 1 Select Custom Setting f1.

Highlight Custom Setting f1 (**Multi selector center button**) in the Custom Settings menu and press ►.



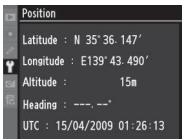
### 2 Select Zoom on/off.

Select **Live view** > **Zoom on/off** to use the center of the multi selector to zoom in on the active focus point during live view, **Playback mode** > **Zoom on/off** to use the center of the multi selector to zoom in on the active focus point during playback (including thumbnail playback). To choose from low, medium, and high zoom ratios, highlight **Zoom on/off** and press ►.



## Using a GPS: GPS Timekeeping

To record GPS data with each photograph taken, connect a GPS device to the camera's ten-pin remote terminal. The camera clock can also be synchronized with the time provided by the GPS unit. The **GPS** item in the camera setup menu offers the following options:



- **Auto meter off:** Choose whether the exposure meters will turn off automatically while a GPS unit is connected.
- **Position:** View the latitude, longitude, altitude, Coordinated Universal Time (UTC), and heading (if supported) reported by the GPS device (the optional GP-1 GPS unit does not provide the compass heading).
- **Use GPS to set camera clock:** Select **Yes** to synchronize the camera clock with the time reported by the GPS device each time the camera is turned on. Select **No** to set the camera clock independently of the GPS device.

## Lens Options: Vibration Reduction

The D3S supports vibration reduction (VR) with VR lenses. Turn vibration reduction off when shooting at fast shutter speeds. Other vibration reduction settings may result in slower frame advance rates and increased shutter lag.

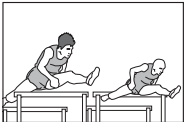
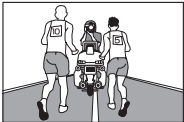
The table on the following page lists the recommended settings for different subjects. **ACTIVE** and **TRIPOD** vibration reduction are available with the following lenses; other VR lenses support only **ON** and **OFF**:

### ACTIVE

- AF-S DX NIKKOR 18–200 f/3.5–5.6G ED VR II
- AF-S VR Zoom-Nikkor ED 70–200 mm f/2.8G (IF)
- AF-S NIKKOR 70–200 mm f/2.8G ED VR II
- AF-S VR Zoom-Nikkor ED 200–400 mm f/4G (IF)
- AF-S VR Nikkor ED 200 mm f/2G (IF)
- AF-S VR Nikkor ED 300 mm f/2.8G (IF)
- AF-S NIKKOR 300mm f/2.8G ED VR II

### TRIPOD

- AF-S NIKKOR 400 mm f/2.8G ED VR
- AF-S NIKKOR 500 mm f/4G ED VR
- AF-S NIKKOR 600 mm f/4G ED VR




VR mode	Suggested for	Not suggested for
<b>OFF</b>	Moving subjects (e.g., shutter speeds of 1/500 s or faster) 	—
<b>NORMAL (ON)</b> <sup>1</sup>	<ul style="list-style-type: none"> <li>• Stationary subjects</li> <li>• Panning shots of moving subjects</li> </ul>	Subjects moving too fast to frame using panning
<b>ACTIVE</b> <sup>1</sup>	Photographs taken from a car, boat, helicopter or other unstable platform. 	Panning shots of moving subjects
<b>TRIPOD</b>	Photographs taken with a tripod. <sup>2</sup>	Monopod or hand-held photography

1. Can be used both for hand-held shots and with a monopod.
2. Choose **NORMAL** when using the tripod as a monopod.

## Lens Options: Long Lenses

The table below describes the focus modes available with the following lenses:

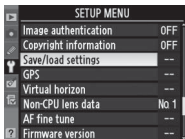
- AF-S NIKKOR 70–200mm f/2.8G ED VR II
- AF-S NIKKOR 300mm f/2.8G ED VR II
- AF-S NIKKOR 400 mm f/2.8G ED VR
- AF-S NIKKOR 500 mm f/4G ED VR
- AF-S NIKKOR 600 mm f/4G ED VR

Mode	Description
<b>A/M</b>  (autofocus priority)	Choose when focusing primarily with autofocus. Manual focus will only be activated if the focus ring is rotated a large amount. Prevents manual focus from being activated accidentally.
<b>M/A</b>  (autofocus with manual priority)	Manual focus is activated whenever the focus ring is used, making it easy to use manual focus in autofocus mode.
<b>M</b>  (manual focus)	The lens can only be focused manually.



## Sharing Settings: Save/Load Settings

Select **Save/load settings > Save settings** in the setup menu to save current camera settings to the memory card in Slot 1 (if the memory card is full, an error message will be displayed). Saved settings can be loaded into any D3S camera using **Save/load settings > Load settings**, allowing the same settings to be shared among multiple cameras (note that **Load settings** is only available if the memory card in Slot 1 contains saved settings).



# Computers: Computer Capture

Use optional Camera Control Pro 2 software to capture new pictures on a computer as they are being saved to the camera memory card.

## 1 Open the Storage tab.

Start Camera Control Pro 2 and click the **Storage** tab.

## 2 Select PC + CARD.

Select **PC + CARD** for **Record to**.



### "PC + Card"

IPTC information and ICC profiles are not included in the pictures saved to the memory card. No pictures can be taken when no memory card is inserted, when the card is full, or while the card is being formatted. Insert another memory card or select **PC** for **Record to**.

The computer will display a warning if the destination for pictures captured to the computer is nearly full. Follow the on-screen instructions to choose another destination.

## Tech Notes: D3S Versus D3

In addition to the options listed in these pages, the D3S offers the following new features and improvements:

	D3S	D3
<b>Focus tracking with lock-on</b>	5 levels	3 levels <sup>1</sup>
<b>ISO sensitivity</b>	200–12800	200–6400
<b>EV steps above max. ISO sensitivity (ISO equivalent)</b>	Hi 0.3–3 (ISO 102400)	Hi 0.3–2 (ISO 25600)
<b>Quiet shutter-release mode</b>	✓	—
<b>Active D-Lighting</b>	4 levels + <b>Auto</b>	3 levels
<b>ADL bracketing</b>	✓	—
<b>Camera clock can be synchronized with GPS unit</b>	✓	— <sup>2</sup>
<b>EV steps for ISO sensitivity auto control &gt; Maximum sensitivity</b>	1/3 EV	1 EV <sup>3</sup>
<b>Fn button can be used to select number of points for dynamic-area AF</b>	✓	— <sup>2</sup>
<b>Fn button can be used for playback</b>	✓	— <sup>2</sup>

1 Five levels supported from firmware version 2.02.

2 Supported from firmware version 2.02.

3 1/3 EV steps available from firmware version 2.02.

***Nikon***