Nikon

D3s Professional
Technical Guide

Table of Contents

Using the Menus

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

MENU *button*

⊛ *button* — *Multi selector*

▲: *Move cursor up* Center: *Select highlighted item*

◄: *Cancel and return to previous menu* ►: *Select highlighted item or display sub-menu*

▼: *Move cursor down*
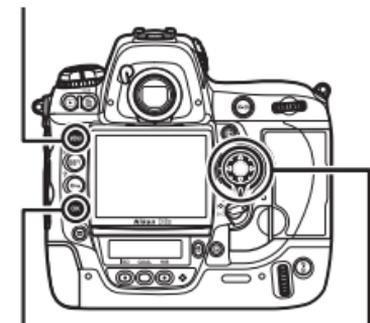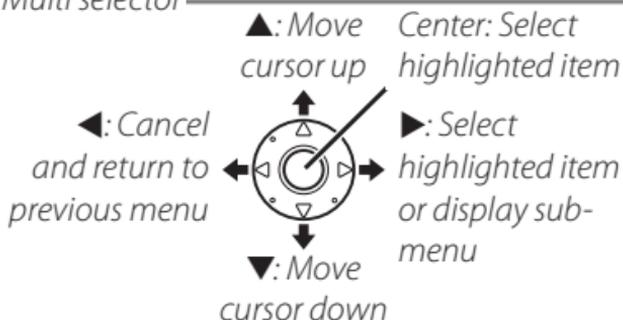
1 *Display the menus.*
Press the MENU button to display the menus.

2 *Highlight the icon for the current menu.*
Press ◄ to highlight the icon for the current menu.

SETUP MENU	
Format memory card	--
LCD brightness	0
Clean image sensor	--
Lock mirror up for cleaning	--
Image Dust Off ref photo	--
Video mode	NTSC
HDMI	AUTO
Flicker reduction	50Hz

1
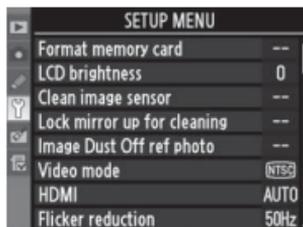
3 **Select a menu.**
Press ▲ or ▼ to select the desired menu.

PLAYBACK MENU	
Delete	🗑
Playback folder	NCD3S
Hide image	🖾
Display mode	--
Copy image(s)	--
Image review	OFF
After delete	🖾
Rotate tall	OFF
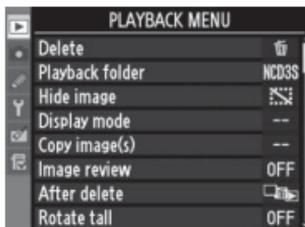
4 **Position the cursor in the selected menu.**
Press ▶ to position the cursor in the selected menu.

PLAYBACK MENU	
Delete	🗑
Playback folder	NCD3S
Hide image	🖾
Display mode	--
Copy image(s)	--
Image review	OFF
After delete	🖾
Rotate tall	OFF

5 **Highlight a menu item.**
Press ▲ or ▼ to highlight a menu item.

PLAYBACK MENU	
Delete	🗑
Playback folder	NCD3S
Hide image	🖾
Display mode	--
Copy image(s)	--
Image review	OFF
After delete	🖾
Rotate tall	OFF
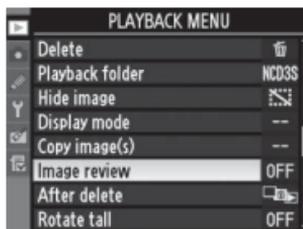
6 **Display options.**
Press ▶ to display options for the highlighted menu item.

Image review	
On	
Off	OK

2
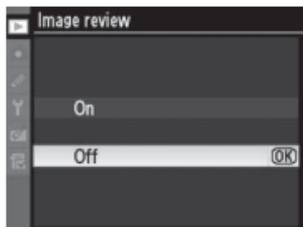
7 **Highlight an option.**
Press ▲ or ▼ to highlight an option.
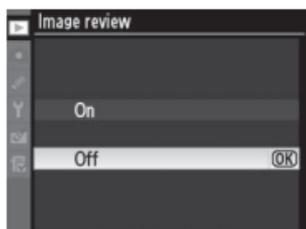
8 **Select the highlighted item.**
Press ⊛ to select the highlighted item (some items can also be selected by pressing ▶ or the center of the multi selector). To exit without making a selection, press the MENU button.

3
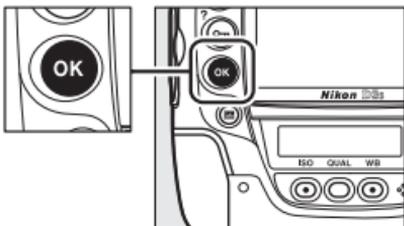
Autofocus: Focusing with Autofocus

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**: [⊹] (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.
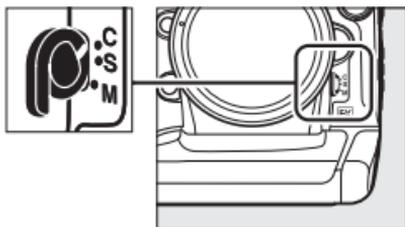
2 Select dynamic-area AF.

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

4
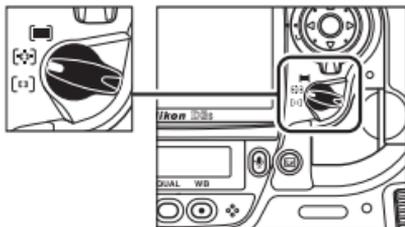
3 *Choose an option for Custom Setting a1.*

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

a Autofocus	
a1 AF-C priority selection	●
a2 AF-S priority selection	[▦]
a3 Dynamic AF area	[⊙] 9
a4 Focus tracking with lock-on	AF▤
a5 AF activation	ON
a6 Focus point illumination	▣
a7 Focus point wrap-around	OFF
a8 AF point selection	AF51
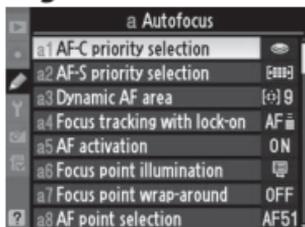
4 *Choose an option for Custom Setting a3.*

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.

a Autofocus	
a1 AF-C priority selection	●
a2 AF-S priority selection	[▦]
a3 Dynamic AF area	[⊙] 9
a4 Focus tracking with lock-on	AF▤
a5 AF activation	ON
a6 Focus point illumination	▣
a7 Focus point wrap-around	OFF
a8 AF point selection	AF51
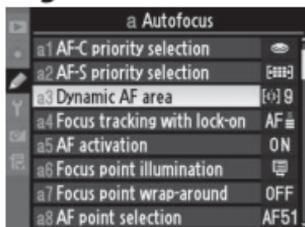
5 *Choose an option for Custom Setting a4.*

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

a Autofocus	
a1 AF-C priority selection	●
a2 AF-S priority selection	[▦]
a3 Dynamic AF area	[⊙] 9
a4 Focus tracking with lock-on	AF▤
a5 AF activation	ON
a6 Focus point illumination	▣
a7 Focus point wrap-around	OFF
a8 AF point selection	AF51
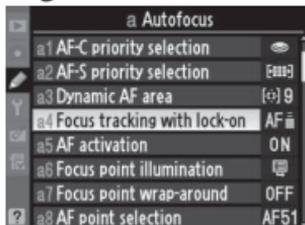
Focus Tracking with Lock-On

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.

Camera will wait before refocusing on objects behind the subject

Camera will track and focus on objects the same distance from the camera as the subject

Camera will wait before refocusing on objects in front of the subject
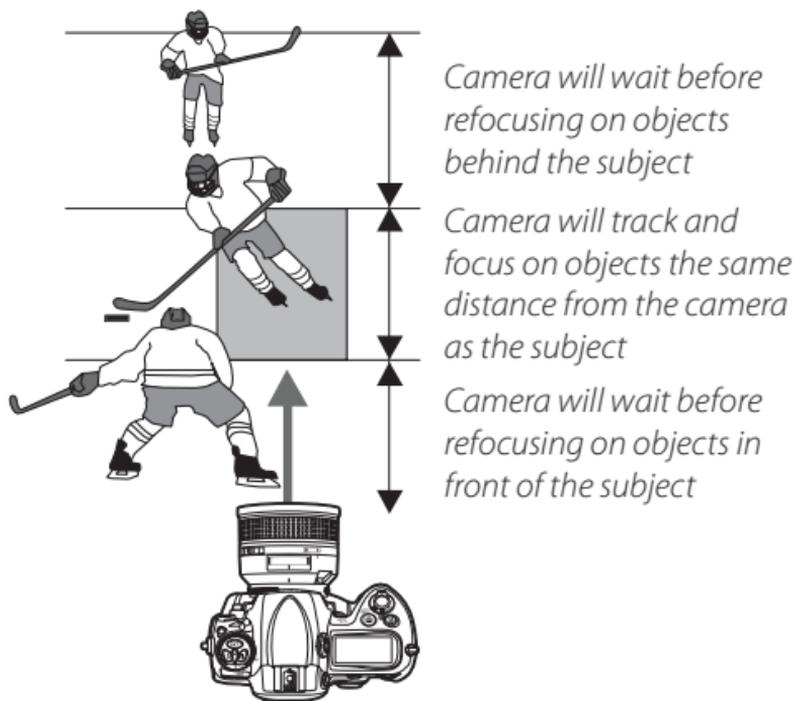
Behind the Goal

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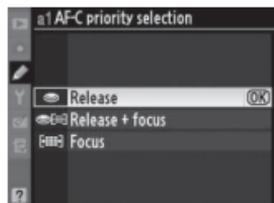
AF-C priority selection: **Release**

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

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

7
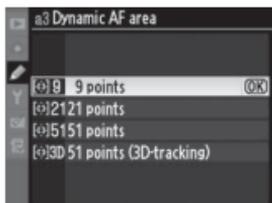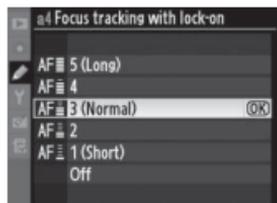
Pitcher or Runner?

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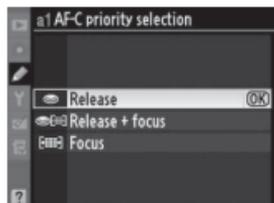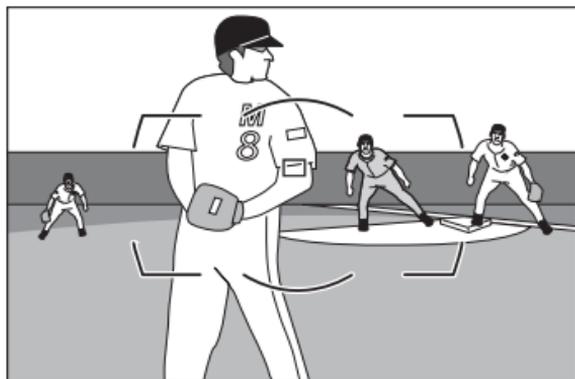

a1 AF-C priority selection	a3 Dynamic AF area	a4 Focus tracking with lock-on
Release (OK)	9 points (OK)	AF 5 (Long)
Release + focus	21 points	AF 4
Focus	51 points	AF 3 (Normal)
	3D 51 points (3D-tracking)	AF 2
		AF 1 (Short) (OK)
		Off

AF-C priority selection: Release
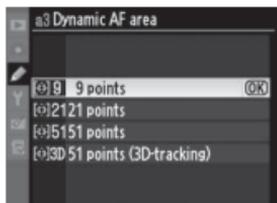
Dynamic AF area: 9 points *or* 21 points
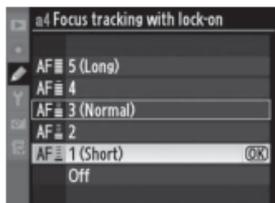
Focus tracking with lock-on: 1 (Short) *or* Off *(note that Off reduces effectiveness of dynamic-area AF)*

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.
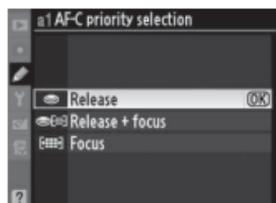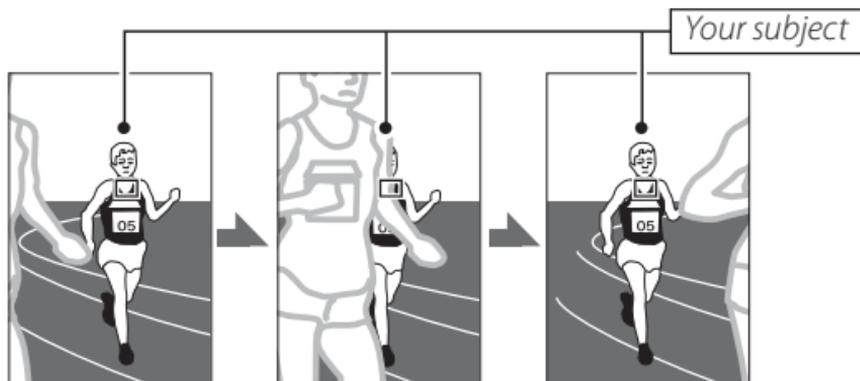
Your subject
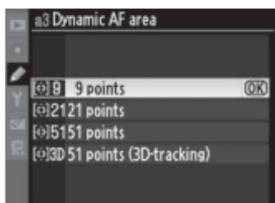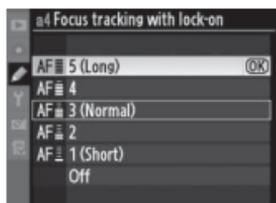
AF-C priority selection: Release	Dynamic AF area: 9 points *or* 21 points	Focus tracking with lock-on: 5 (Long)

At the Finish Line

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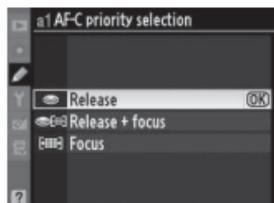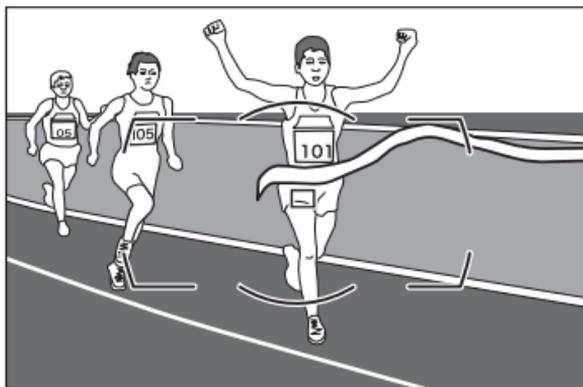

a1 AF-C priority selection	a3 Dynamic AF area	a4 Focus tracking with lock-on
Release (OK)	9 points (OK)	AF 5 (Long)
Release + focus	21 points	AF 4
Focus	51 points	AF 3 (Normal) (OK)
	3D 51 points (3D-tracking)	AF 2
		AF 1 (Short)
		Off
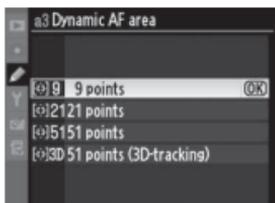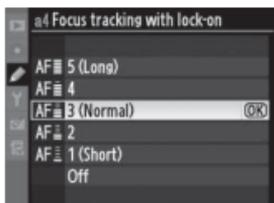
AF-C priority selection: Release   **Dynamic AF area**: 9 points *or* 21 points   **Focus tracking with lock-on**: 3 (Normal)

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.
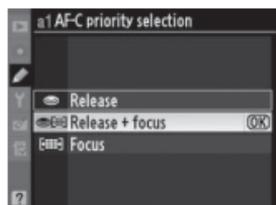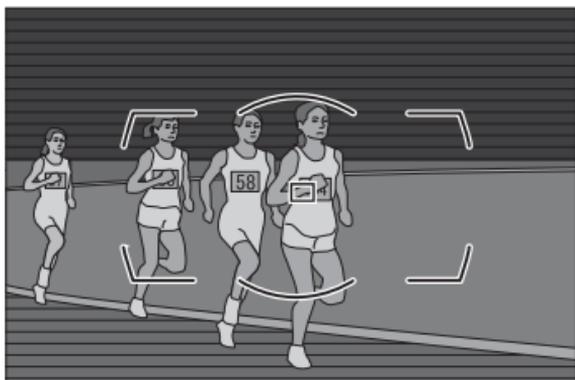
AF-C priority selection: **Release + focus**
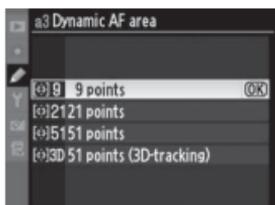
Dynamic AF area: **9 points** *or* **21 points**
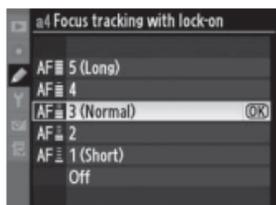
Focus tracking with lock-on: **3 (Normal)**

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

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Autofocus: Winter Sports

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

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

Event	Description
Ice hockey	Subjects are extremely fast-moving and frequently overlap.
Curling	Composition focuses on curlers.
Freestyle cross	Woods provide high-contrast background.
Freestyle aerial	Rapid, complicated movement.
Freestyle moguls (trick)	Subject is performing trick.
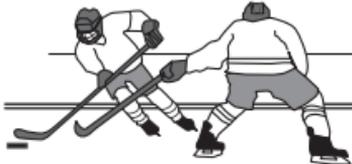
	AF-C priority selection	Dynamic AF area	Focus tracking with lock-on
		9 points	**Off–2**
		9 points, or select [ ] (single-point) for AF-area mode	**3 (Normal)**–**5 (Long)**
	Release	**9 points**	**1 (Short)**
		51 points	**3 (Normal)**
		21 points	

Event		Description
Freestyle moguls		Subjects move predictably between tricks.
Alpine skiing		Subjects are fast-moving but easy to frame.
Snowboard halfpipe		
Biathlon/ cross-country skiing		Subjects are easy to frame.
Ski jumping		Subject has left the ramp and is in the middle of the jump.
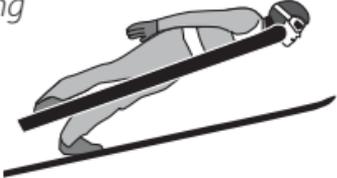
	AF-C priority selection	Dynamic AF area	Focus tracking with lock-on
	Release	**9 points**	**3 (Normal)**
		9 points or **21 points**	

Event		Description
Bobsleigh		
Skeleton		Subjects are sliding down a track.
Luge		
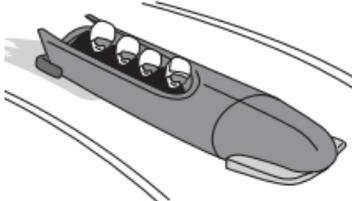
|	AF-C priority selection	Dynamic AF area	Focus tracking with lock-on
	Release	**9 points**	**3 (Normal)**

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.

Sunlight

Shade
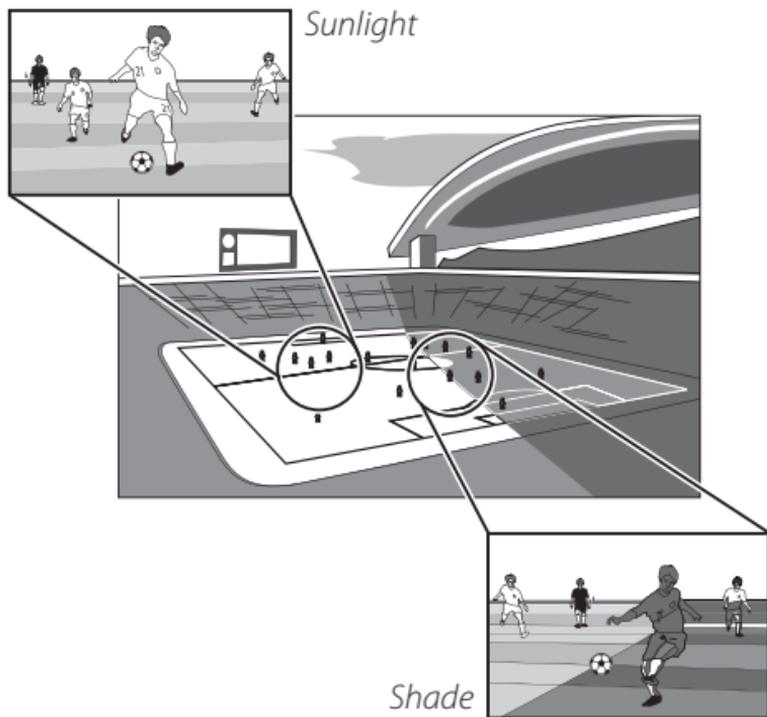
Choose the following ISO sensitivity settings:
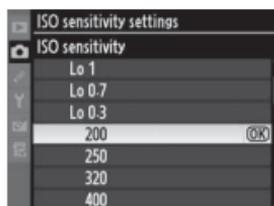
ISO sensitivity: **200**
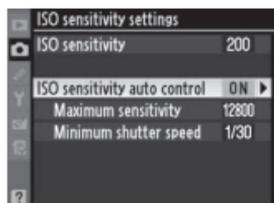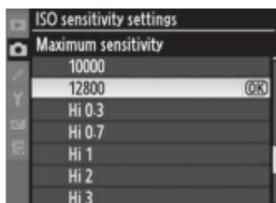
ISO sensitivity auto control: **On**	**Maximum sensitivity**: **12800**	**Minimum shutter speed**: **1/500 s**
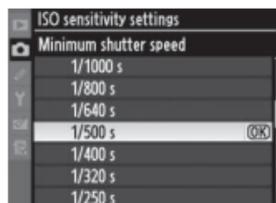
In this example, ISO sensitivity will automatically be raised to a maximum of ISO 12800 if optimal exposure can not be achieved at ISO 200. In modes P and A, sensitivity will be raised only if the shutter speed required for optimal exposure would be slower than 1/500 s (slower speeds will be used if 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.
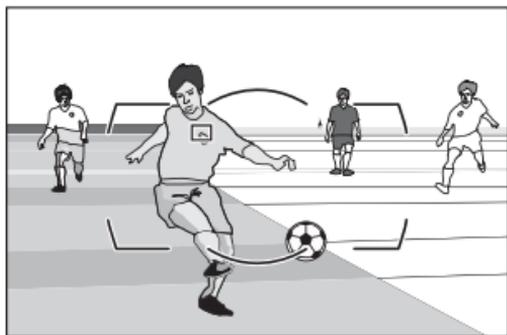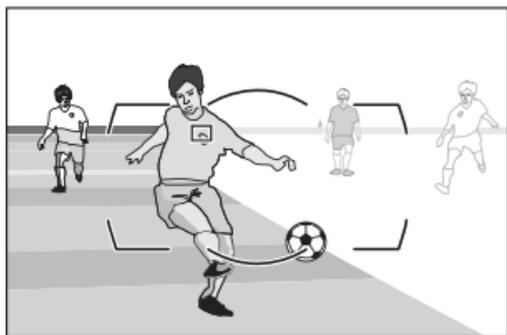
The following settings are recommended:

Active D-Lighting	**Auto**
Metering	Matrix[1]
Exposure mode	*P*, *S*, or *A*[2]
ISO sensitivity	ISO 3200 or less[3]
Memory card	UDMA-compliant memory card[4]

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.

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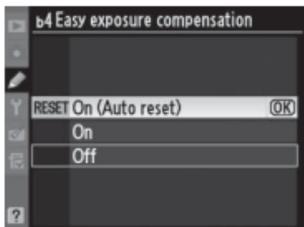
Note
Auto reset also resets exposure compensation when the exposure meters turn off. The length of time the exposure meters remain on is controlled with Custom Setting c2 (**Auto meter-off delay**).

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
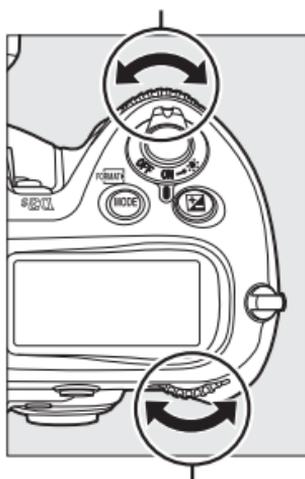
Main command dial

		Customize command dials > Change main/sub	
		Off	**On**
Exposure mode	P	Sub-command dial	
	S	Sub-command dial	Main command dial
	A	Main command dial	Sub-command dial
	M	N/A	

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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 ⊛.
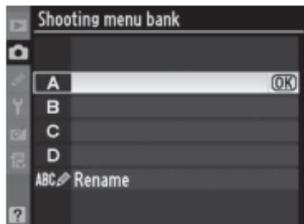
2 *Adjust settings for shooting menu bank A.*
Sample settings are listed below:
- **Image quality**: JPEG basic
- **Image size**: M
- **Image area**: FX (36 × 24) 1.0 ×
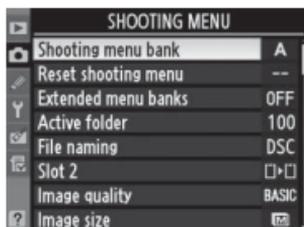
3 *Choose shooting menu bank B.*
In the shooting menu, select **Shooting menu bank**. Highlight bank B and press ⊛.

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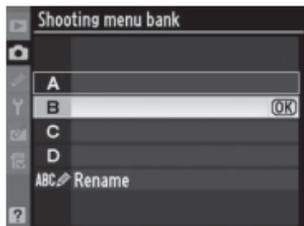
4 *Adjust settings for shooting menu bank B.*

For quality similar to that produced by the settings in Step 2, choose either (a) **JPEG normal**, size **M**, and **1.2×(30×20) 1.2×**, or (b) **JPEG fine**, size **L**, and **DX (24×16) 1.5×**.

| SHOOTING MENU	
Shooting menu bank	B
Reset shooting menu	--
Extended menu banks	OFF
Active folder	100
File naming	DSC
Slot 2	☐▸☐
Image quality	FINE
Image size	☐
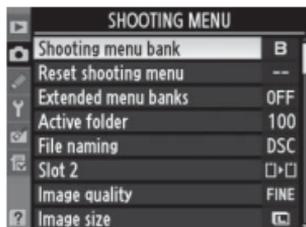
5 *Choose the role of the Fn button.*

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

f4 Assign Fn button	
Fn button + command dials	
⊞⅛ Choose image area	
⊙⊛ 1 step spd/aperture	
Non-CPU Choose non-CPU lens number	
[⊡] Focus point-selection	
SHOOT Shooting menu bank	OK
[⊹] Dynamic AF area	
None	
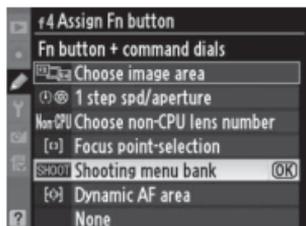
6 *Switch between shooting menu banks.*

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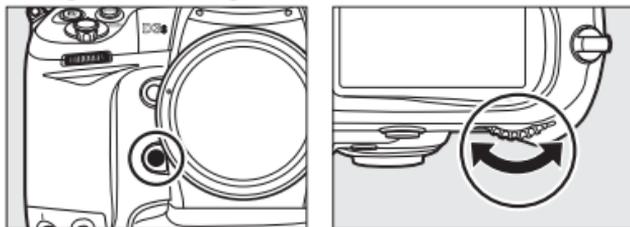
Note

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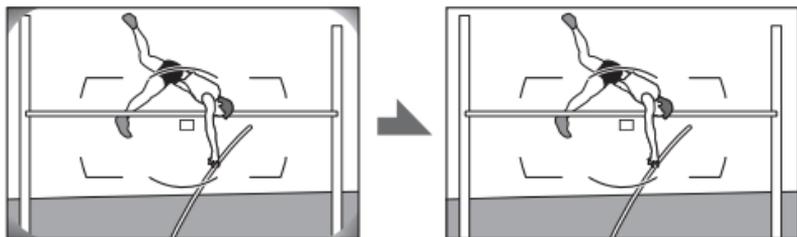
Selecting **Vignette control** in the shooting menu displays the options shown at right.

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 ▶.

SHOOTING MENU	
Vignette control	☐N
Long exp. NR	OFF
High ISO NR	NORM
ISO sensitivity settings	🖳
Live view mode	🖭
Multiple exposure	OFF
Movie settings	🖳
Interval timer shooting	OFF
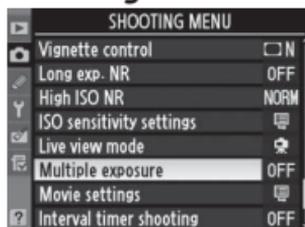
2 Select a mode.
Highlight **Multiple exposure mode** and press ▶.

Multiple exposure	
Multiple exposure mode	OFF ▶
Number of shots	2
Auto gain	ON
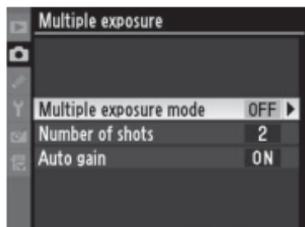
Highlight one of the following and press ⊛.

Multiple exposure	
Multiple exposure mode	
▣ᄃ On (series)	OK
▣ On (single photo)	
Off	

• **To take a series of multiple exposures**, select ▣ᄃ**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**.
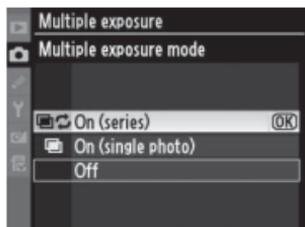
If **On (series)** or **On (single photo)** is selected, a ▣ icon will be displayed in the top control panel.

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3 *Choose the number of shots.*
Highlight **Number of shots** and press ▶.

	Multiple exposure	
	Multiple exposure mode	▣⟳
	Number of shots	2 ▶
	Auto gain	ON
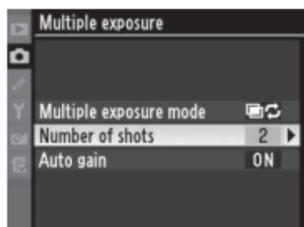
Press ▲ or ▼ to choose the number of exposures that will be combined to form a single photograph and press ⊛.

	Multiple exposure
	Number of shots
	▲
	2 ⟨OK⟩
	▼
	2 - 10
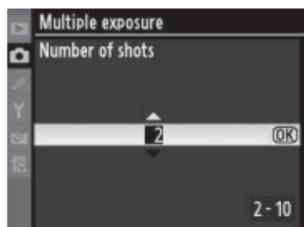
Column: The BKT *Button*

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: ▣⊾ appears when **On (series)** is selected and ▣ when **On (single photo)** is selected; no icon appears when multiple exposure is off.

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

Multiple exposure	
Multiple exposure mode	▣↺
Number of shots	2
Auto gain	ON ▶
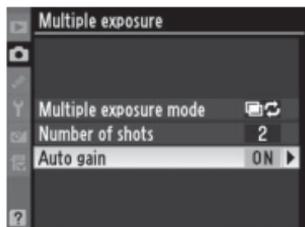
Highlight one of the following options and press ⊛.

Multiple exposure	
Auto gain	
On	OK
Off	

• **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.

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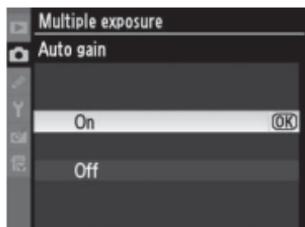
5 **Take photographs.**
Continue shooting until all exposures have been recorded; the ▣ icon will blink until shooting ends. If **On (single photo)** is selected, multiple exposure shooting ends automatically when the first multiple exposure is complete; if **On (series)** is selected, multiple exposure 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
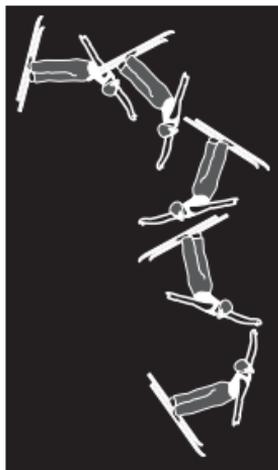
🔎 **Note**

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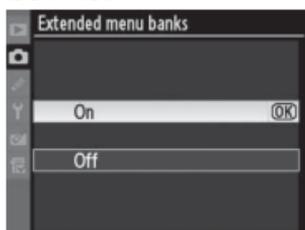
2 *Select a bank.*
Use the **Shooting menu bank** option in the shooting menu to select a bank.

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 5 (f/22), 1/15 s, (ISO 200)

Freeze frame
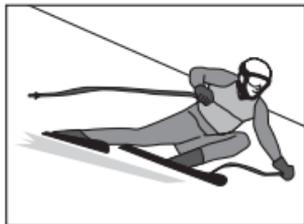
Exposure mode 5 (f/4), 1/1000 s, (ISO 200)

During match

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

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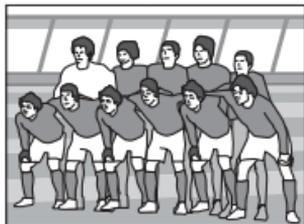
Exposure mode A f/8, (1/125 s), (ISO 1600)

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 ⊛ or the center of the multi selector.

Live view mode

Hand-held

Tripod (OK)
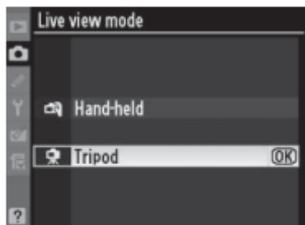
2 **Select mode M.**
Press the **MODE** button and rotate the main command dial to select mode M.

Mode button

Note
Choose a Picture Control and color space before starting live view.
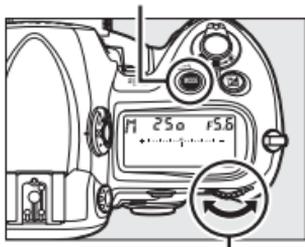
Main command dial

3 **Start live view.**
Press the ⬚ button to start live view.
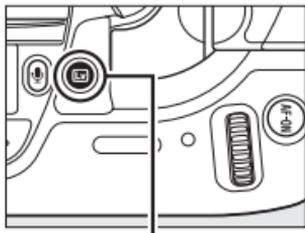
⬚ button

4 Preview exposure.

Press ⊛ 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 ±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 25o is selected for shutter speed, or the subject is very bright or very dark. Exposure preview is not available when ᏏᏕᏬᏐ 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.
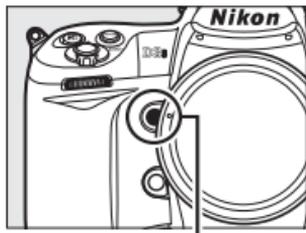
Pv *button*

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.

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📖 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 🔢ISO 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.

Quality	Choose a frame size.[1]
Microphone	Adjust microphone sensitivity.[2]
Destination	When using two memory cards, choose the card to which movies will be saved.[3]
High-sensitivity movie mode	If lighting is so poor that the subject is difficult to see with the naked eye, choose **On** to shoot at ISO sensitivities of ISO 6400 to Hi 3. Select **Off** 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 🔳 button.

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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 ⓞ. The options shown at right will be displayed.

2 *Select* **Save selected frame.**
Highlight **Save selected frame** and press ⓞ.

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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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 ⊗.
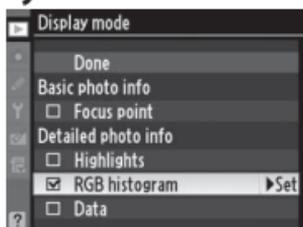
2 **Display the RGB histogram page.**
Display the RGB histogram page in the playback photo information display.
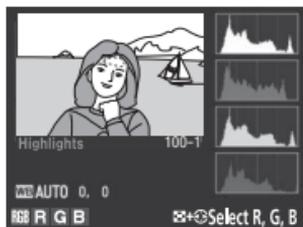
3 **Zoom in.**
Press the 🔍 button and rotate the main command dial left or right to choose the size of the zoom frame, then release the button to zoom in on the selected area. Use the multi selector to scroll to other areas of the image.

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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:
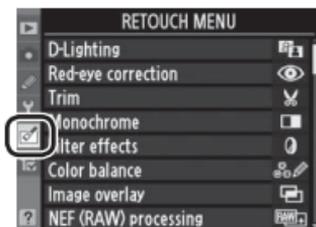
RETOUCH MENU
D-Lighting
Red-eye correction
Trim
Monochrome
Filter effects
Color balance
Image overlay
NEF (RAW) processing

- 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.

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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**).

🕲	**Preview**
🖪	**FV lock**
🔒	**AE/AF lock**
🔒	**AE lock only**
🔒👁	**AE lock (reset on release)**
🔒⊙	**AE lock (Hold)**
🔒	**AF lock only**
⊛	**Flash off**
BKT	**Bracketing burst**
⊡	**Matrix metering**
⊙	**Center-weighted metering**
⊡	**Spot metering**
⌂	**Virtual horizon**
▶	**Playback**
🔢	**Access top item in MY MENU**
	None (default)

f4 Assign Fn button

Fn button press — OFF ▶
Fn button + command dials —
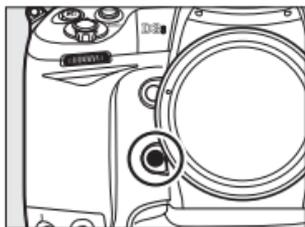
⊡	**Choose image area** (default)
⊙⊛	**1 step spd/aperture**
Non-CPU	**Choose non-CPU lens number**
[⊡]	**Focus-point selection**
SHOOT	**Shooting menu bank**
[⊕]	**Dynamic AF area**
	None

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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 ▶.

f Controls	
f1 Multi selector center button	
f2 Multi selector	OFF
f3 Photo info/playback	OFF
f4 Assign Fn button	
f5 Assign preview button	
f6 Assign AE-L/AF-L button	
f7 Assign BKT button	BKT
f8 Customize command dials	

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

f1 Multi selector center button	
Playback mode	
Thumbnail on/off	
View histograms	
Zoom on/off	▶

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 ▶.

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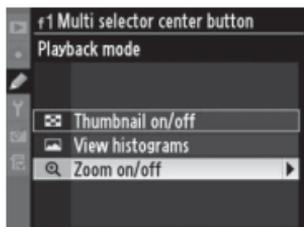
Using a GPS: GPS Timekeeping

To record GPS data with each photo-
graph taken, connect a GPS device
to the camera's ten-pin remote ter-
minal. 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 fol-
lowing options:

Position
Latitude : N 35°36.147′
Longitude : E139°43.490′
Altitude : 15m
Heading : ---. --°
UTC : 15/04/2009 01:26:13

- **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 cam-
era 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 **v**ibration **r**eduction (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
OFF	Moving subjects (e.g., shutter speeds of 1/500 s or faster)	—
NORMAL (ON)[1]	• Stationary subjects • Panning shots of moving subjects	Subjects moving too fast to frame using panning
ACTIVE[1]	Photographs taken from a car, boat, helicopter or other unstable platform.	Panning shots of moving subjects
TRIPOD	Photographs taken with a tripod.[2]	Monopod or hand-held photography
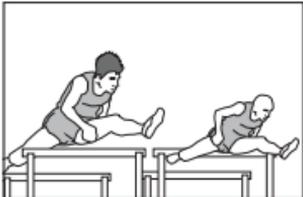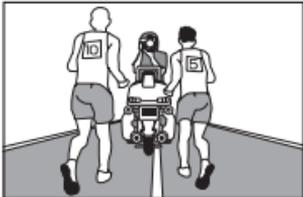
1. Can be used both for hand-held shots and with a monopod.
2. Choose **NORMAL** when using the tripod as a monopod.

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

Mode	Description
A/M (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.
M/A (autofocus with manual priority)	Manual focus is activated whenever the focus ring is used, making it easy to use manual focus in autofocus mode.
M (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 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).

SETUP MENU	
Image authentication	OFF
Copyright information	OFF
Save/load settings	--
GPS	--
Virtual horizon	--
Non-CPU lens data	No. 1
AF fine tune	--
Firmware version	--
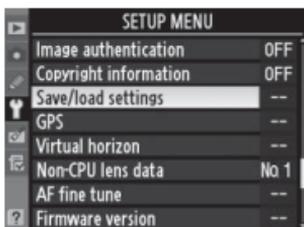
Computers: Computer Capture

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

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.

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